



Issue - Complete Information

Complete Issue Information

Issue ID: 15
Subject: under the owner drop down data window/list - inconsistency

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	12/28/1998 10:19:19 PM
Modified By: administrator	6/19/2008 3:56:51 PM
Priority: Low	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Open		
	Resolved		
	Resubmit		Enhancement
Duray, Jim	Resubmit	Low	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
15.9398	Resubmit	under the owner drop down data window/list - inconsistency

Complete Issue Information

Description

I noticed under the drop down data window for owner code (NBI), that some of the values contained the NBI value and description and others only contained a description. I would really think it would be best to have all of the items contain the value and description.

AND then sorted by the value. They're currently not sorted by the value.

FROM:jihnat DATE:12/29/1998 09:23:09

Owner information is maintained on the Configuration Browser (double-click on "Parameters", then select "Ownership" in the "Selection Criteria" dropdown list).

Todd Thompson 12-30-1998

yes the information is stored there, and can be edited there. But where does one change so that the sort order is more organized?

FROM:jduray DATE:02/15/1999 17:09:42

We are sorting on parmvalue. The data is from the Pontis paramtrs table.

FROM todd thompson 2/25/1999 Bete Build 3

Does appear to sort correctly now.

BUT how does one enter the parmvalue in the configuration module?

Or how does one copy the data from the pontis paramtrs table to the virtis database?

We need some mechanism so a state can enter their county names and values.

Right now we seem to be missing this.

FROM:hlee DATE:7/10/2006 8:37:47 AM

Changed Project to Support Center.

Issue ID: 69
Subject: Agency Defined Concrete Library - missing suggested values.

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Teal, Dean 1/8/1999 7:24:39 PM
Modified By: administrator 6/19/2008 3:56:47 PM
Priority: Low
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	Low	Enhancement
	Closed		

4/19/2016 3:12:36 PM

HRS AASHTO

2

Complete Issue Information

Duray, Jim	Closed	Low	Enhancement
------------	--------	-----	-------------

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
71.9345	System Test	Library - Appurtenances - (Parapet, Median, Railing & Generic), use of term weight in the SI system

Description

The Density (for ODL), Density (for Modulus of Elasticity), Posson's Ratio & Modulus of Rupture do not have calculated suggested values like the Modulus of Elasticity does.

FROM:kkennelly DATE:03/29/2000 11:37:13

For 3.0 release, poisson's ratio and modulus of rupture are calculated for you based on the f'c you enter. The density's are solely input items, we can't calculate them for the user.

FROM: dteal DATE: 12/7/2000 11:17 AM

FROM:hlee DATE:7/10/2006 9:53:10 AM

Changed Project from Beta Testing/GUI to Support Center.

Issue ID: 71

Subject: Library - Appurtenances - (Parapet, Median, Railing & Generic), use of term weight in the SI system

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

4/19/2016 3:12:37 PM

HRS AASHTO

3

Complete Issue Information

Submitted By: Teal, Dean	1/11/1999 2:12:39 PM
Modified By: administrator	6/19/2008 3:56:47 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Information Needed		
	Assigned		
	Suspended		
	Assigned		
	Suspended		
	Resolved		Enhancement
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
82.9334	Resolved	Bridge Workspace - need commands to expand and collapse all children

Description

This is the first ral opportunity to review the GUI for SI. There is no "Weight" in the SI system, only Mass and Force. So "Rail Weight" is named incorrectly. It is really "Rail Force" in N/m or "Rail Mass" in kg/m. Both are cumbersome. In place of "Rail Weight" our office would use "Rail Loading", works for both US & SI.

FROM:jduray DATE:01/12/1999 11:26:27
 Good suggestion!
 Krisha - please check where else this applies and let me know.

4/19/2016 3:12:37 PM

HRS AASHTO

4

Complete Issue Information

FROM:kkennelly DATE:01/15/1999 15:22:22

The parapet and median in the Library and at the Bridge level have "Unit Weight" and "Total Weight" on the screen regardless of the unit system selected.

Library and Bridge railing has "Railing Weight", Library and Bridge generic appurt. has "Barrier Weight".

Library Vehicle grid has "Axle Weight" and Library Shapes have "Nominal Weight".

Steel shape selection dialog grids say "Weight".

FROM:dteal DATE:Monday, January 27, 2003 9:37:38 AM

There is no such thing as "weight" in the SI system??? Loads, Forces & Mass is what's used in place of weight.

FROM:hlee DATE:7/10/2006 9:55:19 AM

Changed Project from Beta Testing/GUI to Support Center.

Issue ID: 82
Subject: Bridge Workspace - need commands to expand and collapse all children

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	1/11/1999 10:41:40 PM
Modified By: administrator	6/19/2008 3:56:46 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

1-11-1999 tst

Is there a way to open all branches in a tree or close all branches in a tree like in the old file manager?

4/19/2016 3:12:37 PM

HRS AASHTO

Complete Issue Information

After spending a day using the bridge explorer, it seems that one spends a lot of time opening and closing various parts of the tree.

FROM:jduray DATE:01/12/1999 10:25:40

We have the tree fixed so that we can control how it expands (Beta 1 has a bug that causes the tree to open differently each time depending on where the mouse pointer is when the view opens).

How would you like to be able to control the tree expansion/collapse? We currently have programed the tree to open completely.

We have another arrangement coded but disabled that opens the bridge, structure definitions and members. Perhaps we should activate this and add to the right mouse button menu the ability to open/close the current node and all its children.

1-12-1999 TST

I sure would like to see the right mouse menu ability to open/close the current node and all its children. While it is alright to have it act like it does now,

I think this added feature would add to the funtionality of the Bridge Explorer as sometimes one would like to open all the branches for a given alternative

without having to go to each little node. Like the old File Manager had the ability to open or close a given branch...

FROM:jihnmat DATE:12/22/2005 8:16:24 AM

Right-click Expand/Collapse Branch implemented for version 5.4.0 (Beta 4).

FROM:xli DATE:3/23/2006 1:30:14 PM

Tested with 5.4 Beta 7. Resolved.

Issue ID: 85
Subject: Length of Each Text entry locations within Bridge ID GUI

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	1/12/1999 3:58:23 PM
Modified By: administrator	6/19/2008 3:56:46 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Assigned		

4/19/2016 3:12:37 PM

HRS AASHTO

6

Complete Issue Information

	Suspended		High	Enhancement
Duray, Jim	Suspended		High	Enhancement
	Discard			
Duray, Jim	Discard		High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
111.9305	Discard	Creation of other Folders in the Library Explorer (for vehicles)

Description

I was not able to enter longer names within Bridge Name, Location, Facility Carried and Features intersected.

FROM:jduray DATE:02/15/1999 17:04:32
Joe - make these bigger.

FROM:jihnmat DATE:02/16/1999 07:52:45
The little bucket dictates to the GUI the length of the string that is allowed to be entered.

FROM:jduray DATE:4/28/2008 2:33:28 PM
Discarded by TAG 12/07.

Issue ID: 111
Subject: Creation of other Folders in the Library Explorer (for vehicles)

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	1/20/1999 3:10:50 PM
Modified By: administrator	6/19/2008 3:56:44 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Suspended		
quinn, r	Assigned	High	
	System Test		
	Resolved		
	Closed		Enhancement
quinn, r	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
131.9285	Closed	Import/Export of VIRTIS data

Description

1-13-1999 TST

Can one create additional folders in the Library Explorer?

My example would be for vehicles. It would be nice to be able to create either a separate folder (or a subfolder under agency) that would be used for Permit Vehicles.

FROM:jduray DATE:01/20/1999 10:10:30

4/19/2016 3:12:37 PM

HRS AASHTO

8

Complete Issue Information

Not at this time.

FROM: tthompson DATE: 10/11/2000 1:40 PM

Please rebumit as an enhancement for Task Force and/or User consideration and possible approval.

FROM: jduray DATE: 12/18/2000 10:42:03

FROM: jduray DATE: 4/28/2008 2:33:23 PM

Discarded by TAG 12/07.

Issue ID: 131
Subject: Import/Export of VIRTIS data

Folder: /Virtis/Support Center	
Primary Contact: quinn, r	
Submitted By: Thompson, Todd	1/14/1999 2:28:35 PM
Modified By: administrator	6/19/2008 3:56:43 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

1-14-1999 TST

Currently there is no mechanism to import/export "VIRTIS" data. Is there a plan for the future to do this?

I can see many uses to have the ability to import/export VIRTIS data including user support when reporting problems. Also for any states that hire consultants to do inspections and/or analysis, there is no mechanism for the consultant to analyze the data using

4/19/2016 3:12:38 PM

HRS AASHTO

9

Complete Issue Information

VIRTIS and then submit the data to the state for inclusion in a master database. (I don't see many, if any, State IT/IS departments allowing consultants access to a client/server database).

Until we have the import/export capability, I don't see us being very successful at marketing to consultants.....

FROM:jduray DATE:01/14/1999 10:24:56
There has been some discussion about this but no plan yet.

FROM:jduray DATE:05/03/1999 10:39:37
We have added the ability to export the data to an ASCII file.

Task Force authorized this for version 2.1.
For version 2.1 we need to enhance this to export to a binary file and add the ability to import the file.
We also need to deal with the library items that are referenced.
120 hours est. (incl. testing)

FROM:rdquinn DATE:07/14/1999 14:26:18
Export added to BWS and Import added to BWS and Bridge Explorer.

FROM:jduray DATE:04/06/2000 16:30:44
Further enhanced for 3.0 Release.

FROM:hlee DATE:7/10/2006 9:57:39 AM
Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 142
Subject: Uniformity in using m or mm

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	1/14/1999 5:52:40 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	Medium	
	Resubmit		
Kennelly, Krisha	Duplicate		Enhancement
	Suspended		

Complete Issue Information

Duray, Jim	Assigned	High	High	Medium	High	Enhancement
	Suspended					
Duray, Jim	Discard					
Duray, Jim	Discard	High				Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
154.9262	Discard	Unable to start Virtis under low Disk space conditions - add check

Description

D Teal 1/14/99

Bracing Ranges use "m" for everything

Stiffener Ranges use "m" for Start Distance and "mm" for spacing. To be uniform, spacing here should be in "m" also.

From: jduray 1/15/99

WE need to get feedback from others regarding this.

FROM: D Teal

Are there others using SI????

FROM: dteal DATE: 8/13/1999 1:10 PM

We still have diaphragm spacing in "m" and stiffener spacing in "mm". Need to be more uniform.

FROM: dteal DATE: 1/20/2000 11:50 AM

No Responses???

FROM: dteal DATE: 3/17/2000 2:42 PM

FROM: jduray DATE: 03/23/2000 09:40:27

FROM: kkennelly DATE: 7/2/01 8:33:06 AM

4/19/2016 3:12:38 PM

HRS AASHTO

11

Complete Issue Information

duplicate of 942. No other users have requested this.

FROM:dteal DATE:Tuesday, October 26, 2004 11:33:42 AM

FROM:jihnata DATE:10/26/2004 3:08:34 PM

Deleted "Please Close" from Track field and changed Status to Closed.

Issue ID: 154
Subject: Unable to start Virtis under low Disk space conditions - add check

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: quinn, r	1/14/1999 10:36:28 PM
Modified By: administrator	6/19/2008 3:56:41 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:rdquinn DATE:01/14/1999 17:28:01

When virtis is started under low disk space conditions it asks for login and attempts to start DB and then closes down. There should be a message box letting the user know that virtis could not be started and why. About 16MB of disk space is used during startup of system, most likely due to DB startup. Note sure if disk space use is the same for Oracle.

FROM:jduray DATE:4/28/2008 2:33:17 PM

Discarded by TAG 12/07.

4/19/2016 3:12:38 PM

HRS AASHTO

12

Complete Issue Information

Issue ID: 162
 Subject: Improve Point of Interest data entry to make it more efficient

Folder: /Virtis/Support Center
 Primary Contact: Duray, Jim
 Submitted By: Teal, Dean 1/20/1999 2:14:24 PM
 Modified By: administrator 6/19/2008 4:38:35 PM
 Priority: High
 Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resubmit	High	
		Medium	
	Suspended		
	Assigned	High	
	Suspended		Enhancement
Duray, Jim	Suspended	High	Enhancement

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
186.9231	Discard	Schematic - Profile view - Show distance from first/last support to end of beam

Description

D Teal 1/15/99

When putting in P.O.I. locations for each span. Lets say you want a POI at the .5 span for each of 4 spans. Select span #1 - tab - .5 - APPLY
Then select span #2 - tab - .5 APPLY

The second one overrides the first. You have to select OK, which closes the window, then select POI to re-open again for the second, and so on.

FROM:jduray DATE:01/20/1999 09:13:56

It sounds like it is behaving the way it is supposed to, however, seems like we need a POI wizard to hel generate POI quickly.

FROM D Teal 2/25/99

It would save time to do POI for all spans on one screen instead of clicking OK and reopening the screen again and again. With an 8 span structure, this could get old in a hurry.

FROM:jduray DATE:02/25/1999 15:20:48

We need a wizard for this. We will be sure to get it in for P/S. Doubtful for steel. I'll see what we can do!

FROM:jduray DATE:4/14/2005 3:45:18 PM

address in 5922

Issue ID: 186

Subject: Schematic - Profile view - Show distance from first/last support to end of beam

Folder: /Virtis/Support Center

Primary Contact: Generated, cclancy

Submitted By: Western, Kevin

1/19/1999 4:38:53 PM

Modified By: administrator

6/19/2008 3:56:38 PM

4/19/2016 3:12:39 PM

HRS AASHTO

14

Complete Issue Information

Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
239.9180	Suspended	Library Explorer - no tree item menu available using right mouse click

Description

k western date:1/19/99

The schematic profile view of the beam should show the distance from the CL of bearing to the end of the beam.

The information is input under the bearing stiffener window.

FROM:jduray DATE:4/28/2008 2:32:52 PM

Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 239
Subject: Library Explorer - no tree item menu available using right mouse click

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	1/25/1999 3:34:19 PM
Modified By: administrator	6/19/2008 3:56:34 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

D Teal 1/25/99

"NEW" should be availabel with a right mouse click on Agency?

Complete Issue Information

Issue ID: 242
Subject: Rating Results Summary - Request additional output data

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	1/25/1999 4:24:41 PM
Modified By: administrator	6/19/2008 3:56:34 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Change Request
	Assigned		
	Suspended		
	Resubmit		
	Resolved		
Duray, Jim	Resolved	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

4/19/2016 3:12:39 PM

HRS AASHTO

17

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
247.9172	Assigned	No default value for Modulus of Elasticity of a new Reinforcing Steel library item

Description

FROM: todd thompson 1/25/1999
 Can we add to or replace the current controlling location?
 The current location only by distance from end isn't very clear for a quick summary report.
 I would like to see the Span Point either be added or replace the distance for this report.
 To me the Rating Results Summary should be a report to quickly tell the engineer the capacity, what controlled and where it controlled so that in a quick glance he/she knows what he has.

FROM Todd Thompson 4/14/1999
 This item was requested at the VIRTIS training.
 I believe Task Force member Barnhill requested this, so I'm asking that this be looked at again.

FROM:kkennelly DATE:6/29/01 3:27:53 PM
 This feature currently exists in Version 4.0, not sure when it was originally added. Rating Results Summary now includes span and percentage of span in addition to distance from end.

FROM:hlee DATE:7/10/2006 8:42:28 AM
 Changed Project to Support Center.

Issue ID: 247
Subject: No default value for Modulus of Elasticity of a new Reinforcing Steel library item

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	1/25/1999 8:12:33 PM
Modified By: administrator	6/19/2008 3:56:33 PM
Priority: Low	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:12:39 PM

HRS AASHTO

18

Complete Issue Information

Teal, Dean	New	Low	
Generated, cclancy	Assigned		
Duray, Jim	New	Low	
Ihnat, Joseph	Assigned		
	Development		
Generated, task force		Medium	
	System Test		
Ihnat, Joseph	Resolved		
	Accepted		
	Closed		
Ihnat, Joseph	Closed	Medium	Change Request Change Request

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
270.9149	Closed	Tab key problems

Description

D Teal 1/25/99

Materials Library - Agency. There is no suggested value for the Modulus of Elasticity. AASHTO only gives us one value to assume it as.

US = 29,000 KSI

SI = 200 000 MPa

FROM:jduray DATE:01/25/1999 16:21:00

Chad - Can we default to these values in the GUI?

FROM: cmclancy 2/4/99

Jim - Isn't this the job of axedit with the values taken from abw_sys_data_dictionary?

FROM:jduray DATE:02/24/1999

Complete Issue Information

Rick - Does this work?

FROM:rdquinn DATE:03/01/1999 14:40:13

There is a GetDefaultValue() on the IDe_____ Interfaces. The function can be used to populate controls in the GUI for new items. The data dictionary may need to be populated with a useful value.

FROM:hlee DATE:7/10/2006 10:02:58 AM

Changed Project from Beta Testing/GUI/Library Explorer to Support Center.

Issue ID: 270
Subject: Tab key problems

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	1/26/1999 1:03:15 PM
Modified By: administrator	6/19/2008 3:56:31 PM
Priority: Medium	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

D Teal 1/26-99

Several screens have tab key problems

- Bridge Alternative Structure window, Skips to OK before the fields are filled in.
- Member Alt. Description
- Cross Section Details (only when using a new input screen)
- Bearing Stiffener Location

FROM:jihnat DATE:02/02/1999 12:53:01

Bearing Stiffener Location is fixed for Beta build 3.

4/19/2016 3:12:40 PM

HRS AASHTO

20

Complete Issue Information

From: J. Duray 3/8/99

Windows with tabs on them have this behavior and it is because of the way the window and tabs were implemented. It is not a bug. Perhaps it is a design flaw, however, we have commercial applications that we use that behave the same way (probably for the same reasons) and have assumed that is acceptable. We are investigating ways to improve the behavior.

We need to know if this is something that has to be changed before acceptance of the product. If not changed the user will have to use the mouse to navigate to certain parts of the windows.

FROM:jduray DATE:05/03/1999 11:11:56
Task Force authorized this for version 2.1.
60 hours est. (incl. testing)

FROM:jihnata DATE:12/27/1999 08:11:21
Accepted by dteal via email.

FROM:hlee DATE:7/10/2006 9:58:25 AM
Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 287
Subject: Viewing BWS report: Edit/Find is difficult to use

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, dgroff	1/27/1999 12:58:52 AM
Modified By: administrator	6/19/2008 3:56:30 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Assigned		
	Suspended		
	Assigned	High	
	Suspended		
			Enhancement

4/19/2016 3:12:40 PM

HRS AASHTO

21

Complete Issue Information

	Discard		
Duray, Jim	Discard	High	Enhancement
Duray, Jim	New	Low	
	Assigned	High	
	Suspended		
			Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
288.9132	Discard	Viewing BWS report lacks navigation aids

Description

Dick Groff, 1/26/99

When viewing the BWS report for a Member or a Structure Definition, which can be lengthy, it would be useful to be able to search easily for a string (for example, for "warning"). The Edit/Find menu option brings up a Find dialog but a found string is not highlighted until the dialog is canceled. This makes repeated use of the "Find Next" button impossible. For a string that occurs often within the report, the user is forced into many extra steps, repeatedly re-invoking the menu option from scratch and canceling the dialog again and again in order to see the results of the search. At the very least, the user should be able to see highlighted search results without closing the dialog (or a "Not Found" message), as is done in Word. Further, it would be useful to be able to use the Ctrl-F key option in place of the 2-step Edit/Find on the menu.

FROM:jduray DATE:7/5/01 2:47:18 PM

This incident was originally entered during 3.0 development.

FROM:jduray DATE:7/5/01 2:48:22 PM

Consider adding the canned BWS report to the Report Tool as a canned report.

FROM:hlee DATE:4/30/2008 2:13:31 PM

Discarded by TAG 12/07.

Issue ID: 288

Complete Issue Information

Subject: Viewing BWS report lacks navigation aids			
Folder: /Virtis/Support Center			
Primary Contact: Duray, Jim			
Submitted By:	Generated, dgroff	1/27/1999 1:13:29 AM	
Modified By:	administrator	6/19/2008 3:56:30 PM	
Priority: High			
Category: Enhancement			

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Ihnat, Joseph	Assigned		
Duray, Jim	Suspended	High	Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
299.9121	Discard	No logical order of units shown within tooltip

Description

Dick Groff, 1/26/99

When viewing the BWS report for a Member or a Structure Definition, which can be a lengthy document, it would be useful to have some expected navigation tools to move about, such as Ctrl-Home, Ctrl-PgUp, Ctrl-PgDn and Ctrl-End, as in Word. Also, when the Up and Down arrows reach the ends of the visible page, they do not cause scrolling of the page as expected.

Complete Issue Information

FROM:jduray DATE:7/5/01 2:50:02 PM
This incident was originally entered during 2.0 beta testing.

FROM:hlee DATE:4/30/2008 2:13:47 PM
Discarded by TAG 12/07.

Issue ID: 299
Subject: No logical order of units shown within tooltip

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 1/27/1999 2:51:30 AM
Modified By: administrator 6/19/2008 3:56:29 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

Vinacs: As we discussed in Denver, the order of the units should be set so that it appears in the order that is commonly used. For example: pressure units should be set in the following order: ksi,psi, MPa, KPa,....

FROM:jihnat DATE:01/29/1999 16:38:13

4/19/2016 3:12:41 PM

HRS AASHTO

Complete Issue Information

The tooltip text comes from CSysUnits::GetEquivConvString(), which appears to just loop through all the units in the unit category.

FROM:hlee DATE:4/30/2008 2:13:57 PM
Discarded by TAG 12/07.

Issue ID: 303
Subject: Parapet: Tool tips at dimension location does not apper.

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 1/27/1999 3:04:04 AM
Modified By: administrator 6/19/2008 3:56:29 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
Duray, Jim			

Complete Issue Information

	Suspended			
				Enhancement
Duray, Jim	New		High	
Ihnat, Joseph	Assigned			
vinayagamoorthy, vinacs	Information Needed			
Duray, Jim				
Ihnat, Joseph	Assigned			
	Closed - Inactive			
				Enhancement
Ihnat, Joseph	Closed - Inactive		High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
325.9095	Closed - Inactive	Grid behavior not consistent when tabbing through cells

Description

Vinacs: Tool tips does not appear when I hover the mouse over the dimension texts. When I copied a section from Library, it appears within the GUI depending on the established unit. I needed to change the units to see the dimension. Tooltip would be the best choice to see the dimension to verify the correct dimensions. Therefore, I would like to have tool tips over dimension.

FROM:jduray DATE:01/29/1999 14:16:29
Tool tips don't appear for bridge parapets.

FROM:jihnmat DATE:01/29/1999 16:12:08
These fields do not have unit text associated with them. Instead, the view says "All units are in ...". These windows would have to be redone in order for them to have tooltips. When creating the tooltip text, the OCX reads its unit text for the unit conversion. So unitless OCXs cannot have tooltips. Library and Bridge Appurtenance windows are both this way. Also Library shapes.

FROM:jduray DATE:04/21/1999 13:57:04

FROM:hlee DATE:4/30/2008 2:14:07 PM
Discarded by TAG 12/07.

4/19/2016 3:12:41 PM

HRS AASHTO

26

Complete Issue Information

Issue ID: 325
Subject: Grid behavior not consistent when tabbing through cells

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: vinayagamoorthy, vinacs 1/27/1999 7:15:36 AM
Modified By: administrator 6/19/2008 3:56:27 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	Enhancement
	Open		
	Suspended		
Duray, Jim	Discard	High	Enhancement
	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
388.9033	Discard	Potential conflicting dimensions for stiffener clip dimension - calculate clip or check if it is a valid dimension

Description

Vinacs: Typically, when I use Tab keys to move around within cells, program highlights the numbers and back color becomes blue. However, the program did not behave that way.

FROM:jihnat DATE:01/27/1999 17:18:17

4/19/2016 3:12:41 PM

HRS AASHTO

27

Complete Issue Information

Pressing F2 will cause the current cell to go into Edit mode, with highlighted text and a blue background. This behavior is like Microsoft Excel.

Do you mind if I ask, where do you "Typically" see this behavior?

Vinacs: As you mentioned pressing F2 is causing the current cell and changes to blue background. However, When you tab to reach the next cell, it does not change the background to blue. Also note that I do not need to press F2 to change the values of the table. Also note that there are a lot GUIs in which the backcolor automatically change to blue (see connector, Median GUIs) within this Virtis program.. I have also noticed the back ground color does not change at allin some of the tables. In otherwords, we have inconsistently within the program. I have seen in several programs (In house SMART, Visual Analysis, Risa3-D, Microsoft Access) that when you tab to reach a cell, it highlights the whole text and ch

FROM:jduray DATE:03/05/1999 08:33:28
Joe - Vinacs indicates we are inconsistent. I think we need to fix all grids to be consistent (unless a particular grid needs special bahavior). My preference is have the cell become editable when entered (text selected). However, I think there is still a problem with the grid control isn't there and therefore we can't implement that feature at this time???

FROM:rdquinn DATE:04/21/1999 13:50:57
Within LFD and LRFD tables: Tab and its behavior (original subject)

FROM:jduray DATE:01/10/2000 12:25:14
This was resolved in version 2.1.

FROM:hlee DATE:7/10/2006 9:55:41 AM
Changed Project from Beta Testing/GUI to Support Center.

Issue ID: 388
Subject: Potential conflicting dimensions for stiffener clip dimension - calculate clip or check if it is a valid dimension

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Generated, shida 1/29/1999 5:34:13 PM
Modified By: administrator 6/19/2008 3:56:23 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
390.9031	Closed	Need better GUI for input of cross-frames, especially on a skewed bridge

Description

S. Hida 1/29/99

If the top flange plate and stiffener widths, and the web thickness are all given, the necessary corner clip dimension can be calculated. If the user provides this dimension, it could be conflicting information and confuse the software.

FROM:jduray DATE:02/23/1999 15:50:54

Perhaps in a future release we should check for this condition.

FROM:hlee DATE:4/30/2008 2:14:56 PM

Discarded by TAG 12/07.

Issue ID: 390

Subject: Need better GUI for input of cross-frames, especially on a skewed bridge

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Generated, shida

1/29/1999 5:45:06 PM

4/19/2016 3:12:42 PM

HRS AASHTO

29

Complete Issue Information

Modified By: administrator	6/19/2008 3:56:23 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	Enhancement
	Suspended		
	Open		
	Suspended		
	Closed		
Duray, Jim	Closed	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
391.9030	Closed	Ability to add stiffener relative to cross-frames and check stiffener location against cross-frames

Description

S. Hida 1/29/99

When locating the crossframe on a skewed bridge, I have to use my pocket calculator to determine how far out the crossframes are on the left vs. the right girder. After doing so, there is no check that I gave the distances resulting in perpendicular connections. When going on to the next bay, there is no check that I have "lined-up" with the previous bay.

FROM:hlee DATE:7/10/2006 8:39:10 AM
Changed Project to Support Center.

Complete Issue Information

Issue ID: 391
Subject: Ability to add stiffener relative to cross-frames and check stiffener location against cross-frames

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, shida	1/29/1999 6:33:34 PM
Modified By: administrator	6/19/2008 3:56:22 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

S. Hida 1/29/99

It would be real nice to input stiffeners with respect to the cross-frames. I think designers/detailers usually locate the cross-frames first, and then subdivide the space between the crossframe with so-many stiffeners. Presently, there is no indication if you've placed a stiffener on top of, or too close to, a cross-frame.

FROM:hlee DATE:7/10/2006 8:39:35 AM
Changed Project to Support Center.

4/19/2016 3:12:42 PM

HRS AASHTO

31

Complete Issue Information

Issue ID: 463

Subject: Grid does not check for improper values (example: extra decimal place)

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 2/8/1999 7:58:59 PM

Modified By: administrator 6/19/2008 3:56:17 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
Duray, Jim	Investigation		
	Suspended		
	Duplicate		Enhancement
	Suspended		
	Resolved		

4/19/2016 3:12:42 PM

HRS AASHTO

32

Complete Issue Information

Duray, Jim	Resolved	High	Enhancement
------------	----------	------	-------------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
473.8949	Resolved	Non Numerical Entries - No warning when moving to another control using mouse or clicking on Apply

Description

Vinacs: When I entered Length within the Girder profile (Plate girder), I entered 12..78 (instead of 12.78). Program should have warned me here. This is similar to the Incident 322.

FROM:jduray DATE:02/08/1999 17:17:54

Joe - I think this is beyond what we can do in the grid. What do you think?

FROM:jihnata DATE:02/11/1999 07:49:04

Grid currently does no checking for this. We could add a validation function for each view, to be called when the user tries to save their data. That would be a good bit of work, but I think it may be the simplest to implement (as opposed to some sort of keyboard input screening).

FROM:kkennelly DATE:6/29/01 3:40:59 PM

FROM:kkennelly DATE:6/29/01 3:42:36 PM

FROM:jduray DATE:7/5/01 2:54:19 PM

This incident was originally entered during 2.0 beta testing.

FROM:jihnata DATE:6/14/2004 3:02:26 PM

Keyboard input screening was added some time ago (Virtis 4.0?)

Issue ID: 473
Subject: Non Numerical Entries - No warning when moving to another control using mouse or clicking on Apply

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: vinayagamoorthy, vinacs	2/9/1999 8:14:21 PM
Modified By: administrator	6/19/2008 3:56:17 PM
Priority: High	

4/19/2016 3:12:43 PM

HRS AASHTO

33

Complete Issue Information

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krisha	Assigned	Medium	
	Suspended		
	Closed		Enhancement
Kennelly, Krisha	Closed	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
482.8940	Closed	Member Loads GUI: Concentrate Tab - No warning for negative distances values off member

Description

Vinacs: When I use 12,,12 or c2 within a numerical data field and use mouse to another field, or click APPLY, program does not warn the user about the non-numerial values error message. However, if I use tab key to move to the next cell, it prompts the warning.

FROM:rdquinn DATE:04/21/1999 13:29:11
Problem found on Structure Typical Section: Deck (based original subject text)

FROM:jihnat DATE:6/14/2004 3:22:32 PM
Keyboard input validation (see 463) was added some time ago (Virtis 4.0?), so it is no longer possible to enter non-numeric data as described above.

Complete Issue Information

Issue ID: 482
Subject: Member Loads GUI: Concentrate Tab - No warning for negative distances values off member

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: vinayagamoorthy, vinacs	2/9/1999 10:16:55 PM
Modified By: administrator	6/19/2008 3:56:16 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

Vinacs: For simple span bridge, whenever I enter a distance longer than the bridge length, program provides an error message. However, when I enter a negative distance, although the point is outside of bridge surface, program did not warn me.

FROM:hlee DATE:7/10/2006 8:39:49 AM
Changed Project to Support Center.

Complete Issue Information

Issue ID: 498
Subject: Ability to copy items that are part of member alternative

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Generated, dglandt	2/10/1999 5:29:31 AM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Suspended		
Ihnat, Joseph	Assigned	High	
	Suspended		Enhancement
	Resolved		
Ihnat, Joseph	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
556.8867	Resolved	Member Rating Results window opens too narrow

Description

It would be handy to be able to copy more data from alternative to alternative such as cross section ranges and transverse stiffener spacings. Cross sections worked ok.

FROM:jduray DATE:05/03/1999 10:35:28

Add the ability to copy the following:

Load Case Descriptions

Member Loads

Live Load Distribution Factors

Stiffener Ranges

120 hours est. (incl. unit testing)

FROM:jduray DATE:05/11/1999 10:39:05

FROM:jduray DATE:5/22/02 8:51:56 AM

FROM:jduray DATE:7/19/2003 10:08:30 AM

Will be released in 5.0.1 and 5.1.

Issue ID: 556

Subject: Member Rating Results window opens too narrow

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Generated, dgroff 2/20/1999 1:03:40 AM

Modified By: administrator 6/19/2008 3:56:11 PM

Priority: High

Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	

4/19/2016 3:12:44 PM

HRS AASHTO

37

Complete Issue Information

	Suspended			
Duray, Jim	New		Medium	
	Suspended			
	Resubmit			
Ordoobadi, Mehrdad	Assigned		High	Bug
	Duplicate			
Ordoobadi, Mehrdad	Duplicate		High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
557.8866	Duplicate	Viewing Bridge, Structure, Member Rating results windows on top of each other

Description

Dick Groff, 2/19/99

When opened from the Structure Rating Results window, the Member Rating Results window opens too narrow to view all the fields. Seems like there ought to be enough room at the lowest resolution for this.

FROM:jduray DATE:04/21/1999 14:01:46

FROM:jduray DATE:7/5/01 2:32:09 PM
This incident was originally entered during 2.0 beta testing.

FROM:mordoobadi DATE:8/2/01 10:30:54 AM
The windows are resizeable now.

Issue ID: 557
Subject: Viewing Bridge, Structure, Member Rating results windows on top of each other

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Generated, dgroff	2/20/1999 1:06:53 AM
Modified By: administrator	6/19/2008 3:56:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Generated, cclancy	New	High	
	Assigned		
Kennelly, Krisha	Information Needed		
	Resubmit		
Generated, cclancy			
Kennelly, Krisha	Information Needed		
Generated, cclancy			
Kennelly, Krisha			
Generated, cclancy	Assigned		
Duray, Jim			
Campbell, Jeff			
Generated, cclancy	Suspended		Enhancement
Generated, cclancy	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1

Documents

Name	Resource Identifier	Description

Tasks

Name	Current State	Summary
565.8858	Suspended	Profile Schematic w/ overlapping stiffeners or diaphragms causes dimensioning to be upside down

Complete Issue Information

Description

Dick Groff, 2/19/99

From the Bridge Explorer, viewing the Bridge Rating Results window, when the user clicks on the "View Structure Rating Results" button, that window opens up in the same position with the same size, covering up the first window. Similarly, viewing the Structure Rating Results window, when the user clicks on the "View Member Rating Results" button, that window opens up in the same position with the same size, covering up the previous 2 windows. This is confusing to the user who doesn't realize that 3 different results windows have been opened (they look very similar). It would be better if each of these results windows were opened in "cascade" fashion (so each window title is visible), or tiled fashion, if there is enough room.

Dick Groff, 2/23/99

While I can understand many of your "suspends", I'm having a hard time accepting your dismissal of this one and #558. To leave these windows inoperative and stacked invisibly one behind the other is really strange windows behavior. It is misleading and frustrating to the user and leaves the impression that program development is not complete. Please reconsider.

FROM:jduray DATE:7/5/01 2:30:00 PM

This incident was originally entered during 3.0 beta testing.

FROM:mordoobadi DATE:8/2/01 4:38:21 PM

Related to 3255.

Issue ID: 565
Subject: Profile Schematic w/ overlapping stiffeners or diaphragms causes dimensioning to be upside down

Folder: /Virtis/Support Center	
Primary Contact: Generated, cclancy	
Submitted By: Kennelly, Krisha	2/23/1999 2:37:41 PM
Modified By: administrator	6/19/2008 3:56:10 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:12:44 PM

HRS AASHTO

40

Complete Issue Information

Tasks

Name	Current State	Summary
572.8851	Resolved	POI engine properties - default BRASS LFD to detailed output

Description

FROM:kkennelly DATE:02/23/1999 09:27:51

When I enter 2 ranges of transverse stiffeners that overlap each other or 2 ranges of diaphragms that overlap each other, I get an upside down dimension in the profile schematic.

Example:

Say my member is 150' long
Transverse stiffener ranges

Start Dist (ft)	Num Spaces	Spacing (in)
0	30	60
10	3	72

In the profile I get the # 140'-0" showing upside down under the stiffener spacing dimensions. Same thing happens for diaphragm spacings.

FROM: cclancy 2/24/99 The schematic for the profile was attempting to dimension the gap between adjacent ranges of stiffeners/diaphragms (for the case where the starting point for the range is not the same as the ending point for the last range). A check was added to ensure that this is only done for the cases where the starting point is greater than the end point for the previous range.

However, when the stiffener ranges overlap, the dimensions still may be confusing because they overlap also. I'm not sure why one would want to define overlapping stiffener ranges - should we allow it? It would be a good idea to check to see if BRASS interprets the overlapping stiffener and diaphragm ranges as expected.

FROM:kkennelly DATE:02/24/1999 10:14:16

Brian is making the changes in BRASS for overlapping stiffener and diaphragm ranges. The users want the ability to enter 1 range of stiffeners that are the connection plates for the diaphragms and then another range for other stiffeners between the cross frames.

FROM: cclancy 2/24/99 This should be ok for the schematic as long as the diaphragm/cross frame ranges don't overlap with themselves and the stiffener ranges don't overlap with themselves. They are drawn/dimensioned separately in the schematic so there shouldn't be any problem with overlapping dimensions. Will the Virtis GUI check to see that this doesn't happen (i.e. warn the user if they overlap)?

I'm assuming that BRASS will combine the ranges of cross-frame connection plates and stiffeners when it comes to determining stiffener spacing for shear analysis/design.

Let me know if I am missing anything in my assumptions.

4/19/2016 3:12:44 PM

HRS AASHTO

41

Complete Issue Information

FROM:jduray DATE:02/24/1999 11:14:53

The ranges may overlap with themselves.

FROM:cclancy 2/25/99

Do we want to change how overlapping ranges are dimensioned? If so, how?

FROM:jduray DATE:03/03/1999 16:33:49

FROM:jduray DATE:03/05/1999 08:18:32

Jeff - What do you think about this?

FROM:jduray DATE:03/08/1999 09:00:32

Jeff says leave it the way it is for now, enhance in a future release if necessary.

Issue ID: 572
Subject: POI engine properties - default BRASS LFD to detailed output

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Barnhill, Gale	2/23/1999 5:51:57 PM
Modified By: administrator	6/19/2008 3:56:10 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Change Request
	Assigned		
	Suspended		
	Resolved		
Duray, Jim	Resolved	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
608.8815	Discard	Girder Profile Schematic - Additional Feature - Display support type

Description

From Gale 23 Feb - BETA 3

In order to compare Virtis & BARS rating results, I need the expanded BRASS output provided by the STEEL-1 command (the last parameter, Intermediate Output)

It would save time, if the POI engine properties for BRASS LFD were defaulted to provide the DETAILED OUTPUT REPORT.

FROM:kkennelly DATE:6/29/01 3:49:14 PM

This feature exists in 4.0, don't know when it was added.

FROM:hlee DATE:7/10/2006 8:44:45 AM

Changed Project to Support Center.

Issue ID: 608

Subject: Girder Profile Schematic - Additional Feature - Display support type

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: quinn, r

12/20/1998 9:07:32 PM

Modified By: administrator

6/19/2008 3:56:06 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Generated, cclancy	Assigned	Medium	
	Development		

4/19/2016 3:12:45 PM

HRS AASHTO

43

Complete Issue Information

Duray, Jim	Assigned	High	
	Suspended		
Duray, Jim	Q/A	High	
	Assigned		
	Suspended		
			Enhancement
	Closed		
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
638.8786	Closed	Question: Brass files within Disk - Deleted structures still have BRASS files on drive

Description

FROM:rdquinn DATE:12/20/1998 16:06:45

It would nice if the profile included a graphical representation of the supports.

FROM:hlee DATE:4/30/2008 2:15:08 PM
Discarded by TAG 12/07.

Issue ID: 638
Subject: Question: Brass files within Disk - Deleted structures still have BRASS files on drive

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim

4/19/2016 3:12:45 PM

HRS AASHTO

44

Complete Issue Information

Submitted By: vinayagamoorthy, vinacs	2/24/1999 9:40:34 PM
Modified By: administrator	6/19/2008 3:56:03 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Q/A	High	
	Assigned		
Goodrich, Brian			
Duray, Jim	Suspended		
	Assigned		
	Suspended		
			Enhancement
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
648.8776	Discard	Ability to set location of directory for BRASS files

Description

Vinacs:

1. When we place this program in a server, will the BRASS files written in the server location? Won't that be a problem for the server when we have approximately 20,000 bridges?
2. When I was working on a bridge, I created several structure definitions and reated those structures. Later, I erased them from Virtis database. However, when I looked at the disk, I noticed all of the previously erased strcutures are still stored in the disk. Whose will take the responsibility to erase all of the unnecessary BRASS files? This question needs to be addressed by the system manager, if we place the program in a server.

4/19/2016 3:12:45 PM

HRS AASHTO

45

Complete Issue Information

JDuray 2/24/99:

As it is right now the files go into a subdirectory under the virtis installation. I don't think we have any options on that because that's the way BRASS works. Perhaps we should cleanup the files when we are finished with an analysis?

Vinacs: we can definitely delete all the subfolders for the structural definitions that are not available within Virtis. we need to keep it other subfolders(for the existing structural definitions) because user need those files to view or print the BRASS files. Note that the user has no option to print out the BRASS input and output from Virtis.

I don't know the solution, but I know the disk storage will be a problem for administrators.

FROM:jduray DATE:5/21/02 9:11:25 AM

Part 1 has not been addressed yet. Incident 648 is the same.

Part 2 has been implemented.

Since part 1 is a duplicate of 648 and Part 2 is completed, I am closing this incident.

FROM:hlee DATE:7/10/2006 8:45:21 AM

Changed Project to Support Center.

Issue ID: 648
Subject: Ability to set location of directory for BRASS files

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	2/25/1999 5:11:17 PM
Modified By: administrator	6/19/2008 3:56:02 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

4/19/2016 3:12:46 PM

HRS AASHTO

46

Complete Issue Information

Name	Current State	Summary
------	---------------	---------

Description

Vinacs: Can we allow the users to select the location of BRASS files. This option will allow the users (who are working in a network environment) to write the analysis results in their local machines. Furthermore, this option will somewhat solves the disk space problem for the network administrators.

FROM:jduray DATE:03/03/1999 16:07:06
Brian - can BRASS accomodate this?

FROM:bgoodrich DATE:03/03/1999 19:43
A Virtis/Opis preferences window needs to be modified, so the user can specify a directory to which engine data files to be written. The incident category is being changed to an enhancement as this is not an urgent requirement.

FROM:hlee DATE:4/30/2008 2:15:16 PM
Discarded by TAG 12/07.

Issue ID: 652

Subject: Structure Defintion: Analysis Tab - Can program defaults LFD Specification

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 2/25/1999 5:27:25 PM

Modified By: administrator 6/19/2008 3:56:02 PM

Priority: Medium

Category: Change Request

4/19/2016 3:12:46 PM

HRS AASHTO

47

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
	Suspended		
Duray, Jim	Resubmit		
Generated, task force			
	Duplicate		Enhance BRASS
Generated, task force	Duplicate	High	Enhance BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
745.8679	Duplicate	BRASS: Change point is within 0.099' of tenth point

Description

Vinacs: Can we set the program automatically select the 1st available spec for LFD specification?

FROM:kkennelly DATE:03/30/2000 09:08:46

Window has been revised since this incident. If you check the override factor box, the first available spec will show up in the list box.

FROM:hlee DATE:7/10/2006 8:46:01 AM

Changed Project to Support Center.

Complete Issue Information

Issue ID: 745
Subject: BRASS: Change point is within 0.099' of tenth point

Folder: /Virtis/Support Center	
Primary Contact: Generated, task force	
Submitted By: vinayagamoorthy, vinacs	3/2/1999 7:25:19 PM
Modified By: administrator	6/19/2008 3:55:55 PM
Priority: High	
Category: Enhance BRASS	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
	Assigned		
	Suspended		
			Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
787.8638	Suspended	Behavior of Tree within BWS - Which folders are opened or closed not remembered

Description

Vinacs: When I tried to rate a girder, BRASS stated that the change point is withing 0.099' of tenth point. Export program supposed to catch this error and make adjustment to the BRASS input file. User has idea of the BRASS program when he creates the bridge geometry.

Complete Issue Information

FROM: bgoodrich DATE: 03/02/1999 17:30:00

The BRASS computational program generates the bridge model (nodes & elements), so it would be difficult for the export to detect when an element is too small. The BRASS user was required to adjust the cross section changes, etc. to correspond to the model. Virtis collects the description of the bridge which should not be modified to conform to an engine. In this case, the engine must conform to the Virtis data. The best place to address this issue is in the BRASS engine itself where the model is generated internally.

Vinacs: BRASS export program is specifically created to create an BRASS input file and therefore, I beleive this error could be handled by either inside the BRASS or in the BRASS export program. I don't agree with the point that BRASS export belongs to Virtis--it actually belongs to the third party developer-BRASS.

Typically, BRASS creates the nodes at every tenth points and section changing locations. If the export program can merge a section change location (if it too close to the tenth point) to a tenth point, this will solve this error. I think that it should be take care of now. Otherwise, at this point, we may have unhappy many campers.

FROM: jduray DATE: 03/03/1999 15:55:36

We need direction from the Task Force on this incident.

FROM: bgoodrich DATE: 08/10/2001 18:44:45

This is a duplicate of 545.

FROM: hlee DATE: 7/10/2006 8:46:16 AM

Changed Project to Support Center.

Issue ID: 787
Subject: Behavior of Tree within BWS - Which folders are opened or closed not remembered

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	3/5/1999 9:21:44 PM
Modified By: administrator	6/19/2008 3:55:52 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
830.8596	Discard	Framing Plan Schematic - Show transvere stiffeners

Description

Vinacs: I am not sure how to explain it because of lack of understanding of some technical terms. In the Bridge Tree, at a collapsed state one could see only the folder. (If I am wrong, please correct me. I will continue further with this assumption).

I was able to made to see all the branches in the tree. Later I wanted to collapse some of the folder to minimize the size of the tree. I can do that in the Virtis. However, I am not able to save that tree.

Whenever, I close the bridge and reopen the bridge, it shows the full tree. (CONFUSED. Sorry about this. IF you don't make sense, please give me a call.)

In a nutshell, What I would like to have here is that program opens up the bridge tree exactly similar to the one that the user left off at the end of the bridge entry.

FROM:jduray DATE:03/06/1999 11:33:36

We do not save the tree. The tree differs for each bridge and to save it to the registry (the usual approach) for each bridge would be unreasonable. Perhaps as an enhancement we could devise a way to save the tree for a bridge to a file and only save the most recent ones. If the tree opens and differs from the contents of the file the default would apply. There are a lot of complications to this and the likelihood of opening the tree the way the user last used it is low unless noone else worked on the bridge between sessions.

FROM:kkennelly DATE:03/29/2000 11:04:13
duplicate of 2052

Issue ID: 830

Subject: Framing Plan Schematic - Show transvere stiffeners

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: puckett, jay

3/12/1999 12:43:36 PM

4/19/2016 3:12:47 PM

HRS AASHTO

51

Complete Issue Information

Modified By: administrator	6/19/2008 3:55:50 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
	Assigned		
	System Test		
	Resolved		
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
831.8595	Resolved	Girder Profile Schematic - Add cross frame mark in profile

Description

FROM:jduray DATE:03/12/1999 07:42:59

From Jay:

Show transverse stiffeners in framing plan ???

FROM:hlee DATE:4/30/2008 2:15:29 PM

Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 831
Subject: Girder Profile Schematic - Add cross frame mark in profile

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	3/12/1999 12:47:49 PM
Modified By: administrator	6/19/2008 3:55:50 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:03/12/1999 07:47:39

From Jay:

Show cross frame mark in profile (I know that this is non standard but it could helpful)

FROM:jduray DATE:05/03/1999 11:07:12

Task Force authorized this for version 2.1.

8 hours est. (incl. testing)

FROM:hlee DATE:7/10/2006 9:59:30 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

4/19/2016 3:12:47 PM

HRS AASHTO

53

Complete Issue Information

Issue ID: 834

Subject: Grid behavior change requests and enhancements

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: puckett, jay

3/12/1999 12:57:21 PM

Modified By: administrator

6/19/2008 4:38:35 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
	Duplicate		
Duray, Jim	Duplicate	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

4/19/2016 3:12:47 PM

HRS AASHTO

54

Complete Issue Information

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
835.8591	Resolved	Add Diaphragm Wizard to system

Description

FROM:jpuckett DATE:03/12/1999 07:56:57

1) Enhancement: When entering a tab with a grid put the user on the first line of the grid ready to enter data. If canceled then do nothing.

2) Enhancement: Grid behavior. Tab to end of line, then tab to create a new line in the table, see Access.

3) Right mouse: for grid row options, cut, copy, paste.

FROM:jduray DATE:4/14/2005 3:36:42 PM
Include in 5442

Issue ID: 835
Subject: Add Diaphragm Wizard to system

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: puckett, jay	3/12/1999 1:00:29 PM
Modified By: administrator	6/19/2008 3:55:49 PM
Priority: High	
Category: New Feature	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	
	Resolved		Enhancement
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
836.8590	Resolved	New Bridge - Have default materials and barrier available

Description

FROM:jpuckett DATE:03/12/1999 07:59:57

Add a typical cross frame generation option/wizard. Enter the frame spacing (or number spaces per span) hit go. It adds frames on skew at ends, build table for interior frame. User can then edit.

FROM:jduray DATE:05/03/1999 11:20:36

Task Force authorized this for version 2.1
120 hours est. (incl. testing)

FROM:jduray DATE:05/03/1999 11:37:51

FROM:kkennelly DATE:06/08/1999 10:11:06

Done. Added to Virtis 3.0 and tested as 3.0. Shared and pinned to 2.1

FROM:kkennelly DATE:06/14/1999 10:28:07

Add stiffeners.

FROM:kkennelly DATE:06/22/1999 09:34:30

Apply at Diaphragms... button added to Transverse Stiffeners Range window. Added to Virtis 3.0 and tested as 3.0. Shared and pinned to 2.1

FROM:hlee DATE:7/10/2006 9:59:59 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Complete Issue Information

Issue ID: 836
Subject: New Bridge - Have default materials and barrier available

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	3/12/1999 1:01:56 PM
Modified By: administrator	6/19/2008 3:55:49 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ihnat, Joseph	Assigned	High	
		Medium	
	Suspended		Enhancement
		High	
Ihnat, Joseph	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
844.8582	Suspended	Data validation message formatting

Description

FROM:jpuckett DATE:03/12/1999 08:01:34

Starting a new bridge, default materials and barrier should be available. This is a hassle now but maybe I'm missing something.

FROM:jduray DATE:5/23/02 4:28:04 PM

Start the new bridge from a template.

4/19/2016 3:12:48 PM

HRS AASHTO

57

Complete Issue Information

Issue ID: 844
Subject: Data validation message formatting

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: quinn, r	3/12/1999 10:20:25 PM
Modified By: administrator	6/19/2008 3:55:49 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:rdquinn DATE:03/12/1999 17:15:33

When the edit control validates the value entered by user and finds it is out of range a message box is display showing the valid ranges. Since the min and max values in the data dictionary are for the stored

4/19/2016 3:12:48 PM

HRS AASHTO

58

Complete Issue Information

unit type the number might not be a round number. Example: the max mile post is 9999 KM which displays as 6123.09055105187 miles . I think the message box should apply an edit mask, or in some way round the number off to something less the 10 decimal places.

Issue ID: 858	
Subject: Profile View: Bottom Cover PL. is showing in the schematic, but it isn't called out in the text (size/description)	
Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, bbeerman	3/15/1999 6:02:13 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Generated, cclancy	Assigned		

4/19/2016 3:12:48 PM

HRS AASHTO

59

Complete Issue Information

	Investigation			
	Suspended			
Duray, Jim	New		High	
Goodrich, Brian	Assigned			
	Information Needed			
Duray, Jim	Development			
	Suspended			
				Enhancement
	Discard			
Duray, Jim	Discard		High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Benjamin Beerman	Modjeski & Masters, Inc.	bbeerman@wvinter.net	304.965.1870

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
860.8566	Discard	Program Output: Rating Report Summary - Add additional information

Description

FROM: cclancy 3/18/99 - This is being taken under consideration. The dimensioning of the cover plates on the profile is difficult given the flexibility Virtis allows in adding multiple cover plates. There can be multiple stacked cover plates and gaps between sets of cover plate sets (i.e., different variations of cover plated and non cover plated ranges) and combinations of these configurations. Given this, a general dimensioning procedure would be rather complex.

Issue ID: 860
Subject: Program Output: Rating Report Summary - Add additional information

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: Generated, bbeerman	3/15/1999 6:14:23 PM
Modified By: administrator	6/19/2008 3:55:48 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Martin, Ed	New	High	Enhancement
	Assigned		
	Suspended		
Martin, Ed	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
	0770037.dat	

Tasks

Name	Current State	Summary
883.8543	Discard	2.0 BETA 4 - Remove effective slab properties from non-composite section definitions during BARS import

Description

I entered 1/10 points from 0.0 to 1.0 and only got the 0.4 and 1.0 points in the Rating Report Summary.

Also, it would be nice if the program automatically showed the the critical point / lowest rating value when performing a rating.

FROM: bgoodrich DATE: 03/16/1999

A single vehicle defined in Virtis may be split into an "Axle" vehicle and a "Lane" vehicle for use by BRASS. The Rating Results Summary show the critical rating factor and location for each vehicle

4/19/2016 3:12:49 PM

HRS AASHTO

61

Complete Issue Information

(axle, lane, etc. separately). Are you wanting the critical rating factor for every vehicle or the critical rating factor for the axle/lane entries from a single Virtis vehicle? It seems like the 0.4 and 1.0 points were just the critical points for the specified vehicles. Please attach the BRASS data file and output file. Also, if you could attach some screen dumps of the Results Summary windows with some indication of what you think is incorrect, it would help.

FROM: bbeeran 3/17/99

Attached is Virtis02s.db, look in the "Beta Build 4.0" FILE at BRIDGE ID "Matrix No. 4 - 4". Then go to STRUCTURE DEFINITION

2 spans @ 75' - Cross Section Based
MEMBERS
G2
MEMBER ALTERNATIVES
Member Alternative 01

Also, attached is a screen shot of the results summary in file "Comment411"

The .4 and 1.0 are, as you said, the critical points. However, if a user doesn't specify (or doesn't know what point to specify) in the POINTS OF INTEREST he won't see what is controlling.

Suggestion(s):

In the Summary Table - MEMBER ALTERNATIVE highlighted: capacity, loads, and rating values for bending, shear, etc... of each vehicle specified at each 1/10 point (as well as any other specified point by the user) and the controlling 1/10 point value highlighted.

In the Summary Table - STRUCTURE DEFINITION highlighted: The controlling member in the Girder System with corresponding rating values.

For whatever reason, I can't attach the files. Let me try to e-mail them.

FROM: bgoodrich DATE: 03/17/1999

Jim - There is nothing wrong with the GUI or the export because the Rating Results Summary was designed to show the most critical inventory/operating rating factors and their corresponding locations. The data Ben would like to see is not available in the results object, so it is not shown in the GUI. The BRASS output could be opened to get some of this information. I think this issue would be an enhancement.

FROM:jduray DATE:7/5/01 1:38:07 PM
This incident was originally entered during 2.0 beta testing.

FROM:hlee DATE:4/30/2008 2:15:50 PM
Discarded by TAG 12/07.

Issue ID: 883 Subject: 2.0 BETA 4 - Remove effective slab properties from non-composite section definitions during BARS import

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Barnhill, Gale	3/16/1999 9:33:21 PM
Modified By: administrator	6/19/2008 3:55:46 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
Duray, Jim	Development		
Campbell, Jeff		Urgent	
Duray, Jim	Suspended		
	Resubmit		
	Investigation		
Goodrich, Brian	Assigned		
	Resolved		Enhancement
Goodrich, Brian	Resolved	Urgent	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
911.8515	Resolved	Steel-Girder Control Command - Issues related to composite/non-composite regions

Description

From Gale 16 March BETA 4

4/19/2016 3:12:49 PM

HRS AASHTO

63

Complete Issue Information

This came from Illinois today. They coded one section definition with composite properties. They coded the ranges as non-composite or composite and always used section one. Import creates two sections (one called non-c & the other comp) and correctly identifies the non-c/comp ranges, but includes the effective slab width & thickness on the COMPOSITE TAB of both sections. The export to BRASS includes the effective properties in all ranges and therefore creates a stiffer section in the non-composite ranges for Stage 2 & 3. Manually deleting the effective dimensions for the non-composite section gets the same RF as BARS. I know it's kind of late in the game, but can we have IMPORT omit the effective dimensions for the sections designated as non-composite ??

FROM:jduray DATE:03/17/1999 10:26:51

Can we do this within our time schedule (ie. by Monday) without impacting other code and opening a can of worms? We should not be adding new features at this time. Let's discuss this.

FROM:jduray DATE:7/5/01 1:39:50 PM

This incident was originally entered during 2.0 beta testing.

FROM:hlee DATE:4/30/2008 2:16:26 PM

Discarded by TAG 12/07.

Issue ID: 911
Subject: Steel-Girder Control Command - Issues related to composite/non-composite regions

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: fulton, keith	3/17/1999 5:55:48 PM
Modified By: administrator	6/19/2008 3:55:43 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Complete Issue Information

Description

From: kfulton Date 3/17/99

On a structure that is composite only in the positive moment regions, the steel-girder-control command created by the program is placing a 5 in the last field for the non-composite areas.

FROM: bgoodrich DATE: 03/22/1999

Jim - The 5 Keith is referring to is the section type as entered on the STEEL-GIRDER-CONTROL schedule command. Currently, the export uses the contraflexure locations to determine regions of positive or negative moment. The export then determines if the member alt is composite or not, to determine the section type. The export generates the STEEL-GIRDER-CONTROL command using 1) the non-composite section type codes (2 or 3) if the BRASS sequence type is one-stage non-composite or 2) the composite section type codes (4 or 5) if the BRASS sequence type is multi-stage composite. The export does not mix the two based on the cross sections input or the schedule of shear connectors (composite regions). What would you like me to do? I am checking with Dan Glandt to see what effect a section type of 5 would have for a non-composite cross section analysis.

FROM: jduray DATE: 03/24/1999 08:53:32

Jeff - we need to discuss this with Jay ASAP.

FROM: jduray DATE: 03/30/1999 12:34:33

Discussed with Brian. Requires changes to BRASS LFD to override schedules with POI data. Section type 5 will work for this build.

From: kfulton Date 4/7/99

There is no way to change the 4 parameter of this card. This causes a problem for composite structures that qualify as compact. Currently the value is set to a 4 which will cause brass to only use the moment at first yield for the capacity instead of M_p .

From: Jay Puckett

Keith is correct and this was illustrated in the short course example problems.

If the section at the piers are compact then full M_p can be achieved in the M_+ region -- parameter 41. We have this flag in the GUI in the engine tab to indicate compactness for the pier region. Also, I think that it should be assumed that all simple-span structures can be "compact" at pier in order to achieve a M_p hinge. This would solve this issue with a lot of structure and could be address w/i the export.

FROM: bgoodrich DATE: 10/12/2000 4:29 PM

At some point, we modified the export to use a 41 code for simple spans. We have done nothing for continuous spans. Jay indicated that we have a flag in the GUI in the engine tab to indicate compactness for the pier region, but that is only for BRASS-LRFD. I think we need modify Abxbrass2 so the compactness indicator is available for BRASS-LFD also.

FROM: jduray DATE: 10/13/2000 9:11 AM

Do it!

FROM: bgoodrich DATE: 10/17/2000 3:27 PM

I modified Abobrass, Abxbrass2, and Abxbrass to address the compactness issue for BRASS-LFD. I have also modified the BRASS-LFD engine properties help file. Fixed for version 4.0.

4/19/2016 3:12:49 PM

HRS AASHTO

65

Complete Issue Information

FROM:hlee DATE:7/10/2006 10:00:13 AM
 Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 914
Subject: Duplicate Names Within BWS - Add "Copy of..." to name of items being copied

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: vinayagamoorthy, vinacs 3/17/1999 6:24:36 PM
Modified By: administrator 6/19/2008 3:55:43 PM
Priority: High
Category: Change Request

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
Ihnat, Joseph		Medium	
		High	
	Suspended		
	Resolved		Change Request
	System Test		
	Accepted		
	Closed		
Ihnat, Joseph	Closed	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

4/19/2016 3:12:49 PM

HRS AASHTO

66

Complete Issue Information

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
919.8507	Closed	Schematic Profile View - Printing

Description

Vinacs: I was able to save materials, members, structures with duplicate names. Copy and paste results with DUPLICATE name material, member, member alternative, structure, structure alternative, structure definition.

Two things should have happened:

1. It should have warned the user about the duplicate name when he/she creates a new item with "duplicate name". Wake error messages (eg: "error updating database record") should be avoided.
2. Program should have automatically placed "Copy of" when a user uses copy and paste or drag and drop command within a bridge.

FROM:jduray DATE:03/19/1999 08:38:45

Joe - Add "Copy of..." when doing a copy. This is a lower priority than most of the other "High" priority incidents.

FROM:jihnat DATE:05/27/1999 08:48:07

Reminder: When this task is done, add new item notification after Copy/Paste. (This is not currently being done.)

FROM:jihnat DATE:4/6/01 3:40:19 PM

Completed for Version 4.1

FROM:jihnat DATE:10/16/2001 12:56:35 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:27:10

Accepted

Issue ID: 919

Subject: Schematic Profile View - Printing

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

3/17/1999 6:41:08 PM

Modified By: administrator

6/19/2008 3:55:43 PM

Priority: High

4/19/2016 3:12:50 PM

HRS AASHTO

67

Complete Issue Information

Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Suspended		
Ordoobadi, Mehrdad	Assigned		
	Resolved		
	System Test		Change Request
	Accepted		
	Closed		
Ordoobadi, Mehrdad	Closed	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
920.8506	Closed	COPY from Library: Leave copied item selected in grid after pressing Apply button

Description

3/17/99 D Teal

I can view the girder on the screen just fine, used zoom & scroll bars. I tried a print preview. It will not advance to the next page. All I can ever print is starting at the left end of the girder to what ever fits on one sheet. I can do a fit view and get a tiny image.

FROM: cclancy 3/18/99 - This is a known problem with the schematic views. A couple of things you

4/19/2016 3:12:50 PM

HRS AASHTO

68

Complete Issue Information

can do to work around this problem until we can better address it are as follows:

* Try setting your page setup to landscape and reducing the margins prior to printing. This will give you more space for the girder profile.

* Copy the bitmap to the clipboard (using standard Windows copy keystrokes) or from the edit menu. This bitmap can be pasted into another application and printed from there. Note that the bitmap is copied at the resolution corresponding to the current zoom level. Therefore, if you want a more detailed bitmap, zoom in first and then copy it to the clipboard. The entire bitmap will be copied, including the portions outside the viewable area.

I know that neither of these solutions is ideal and we will try to remedy this problem as soon as possible.

FROM: dteal DATE: 9/1/1999 10:43 AM

I don't believe this work around was provided to users who received the release version 2.0?

FROM:jduray DATE:09/01/1999 16:57:14

We should make this description available on our web site.

FROM:jihnata DATE:1/23/2002 2:52:23 PM

Print/PrintPreview fixed for version 4.1.1 and 4.2.0

FROM:dteal DATE:Tuesday, April 02, 2002 3:23:49 PM

Incident #1411 seems to be relevant and part of this problem, was that fixed also?

FROM:jihnata DATE:4/3/2002 8:22:20 AM

This incident dealt specifically with schematic printing and print preview. I don't see the connection to 1411. Incident 1411 is the place to ask about incident 1411.

FROM:jduray DATE:4/4/02 2:47:18 PM

Accepted by Gale (informed via email).

Issue ID: 920
Subject: COPY from Library: Leave copied item selected in grid after pressing Apply button

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: vinayagamoorthy, vinacs	3/17/1999 6:43:35 PM
Modified By: administrator	6/19/2008 3:55:43 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

4/19/2016 3:12:50 PM

HRS AASHTO

69

Complete Issue Information

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
935.8491	Suspended	Closing output, graph, log, etc. windows does not close other windows

Description

Viancs; When I highlighted a row to copied from the Library and then clicked on APPLY, program copied the row, and then refresh the Libray table and remove the highlight. I like to see the highlighted row even after I press APPLY button.

Vinacs: I like to see this feature implemented in every GUI where Copy from Libary is used.

FROM:mordoobadi DATE:05/27/1999 13:25:40

The row is still selected after the user hits Apply, but the grid does not have focus.

Fixed for 3.0.

FROM:jihnat DATE:10/16/2001 12:58:22 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:27:43

Accepted

Issue ID: 935

Subject: Closing output, graph, log, etc. windows does not close other windows

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: McCaffrey, Brian	3/18/1999 1:21:49 PM
Modified By: administrator	6/19/2008 3:55:42 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Suspended		
	Resolved		Enhancement
	Closed		
Duray, Jim	Closed	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
937.8489	Closed	Bracing - Stiffener Ranges - Redundancy - Automatically add stiffeners at diaphragm locations

Description

When changing from viewing output to reviewing graphs or log files the window you leave does not close, which ties up system resources. If you are in a session for an extended period of time these open windows will eventually cause the computer to lock up.

FROM:jduray DATE:03/19/1999 08:23:50

We did not plan for them to close. The way it is implemented allows you to view multiple forms of

4/19/2016 3:12:50 PM

HRS AASHTO

71

Complete Issue Information

output for multiple members in multiple bridges. It is the most flexible. Perhaps a future enhancement would be to change this (based on a user preference).

Issue ID: 937
Subject: Bracing - Stiffener Ranges - Redundancy - Automatically add stiffeners at diaphragm locations

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	3/18/1999 2:31:51 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

3/18/99 D Teal

A very early on incident (build 1 or 2), I can't seem to locate the incident to read about it's resolution. When bracing ranges are entered, it seems very redundant to have to locate a stiffener in the same location. You have to connect a x-frame to a stiffener, therefore the stiffener should placed automatically at x-frame locations. Much time would be saved. Keep in mind that in doing a new design from scratch, which most designers do, you are not importing anything.

4/19/2016 3:12:51 PM

HRS AASHTO

72

Complete Issue Information

FROM:kkennelly DATE:03/29/2000 10:41:31

We now have an "Apply at Diaphragms" button on the Transverse Stiffener Ranges window that lets you pick which stiffeners to apply at the diaphragms and the end diaphragms. So I'm marking this as resolved. (was added in 2.1)

FROM: dteal DATE: 11/15/2000 1:45 PM

FROM:hlee DATE:7/10/2006 9:55:55 AM

Changed Project from Beta Testing/GUI to Support Center.

Issue ID: 956
Subject: Bridge Explorer - Allow right mouse click to open bridge workspace

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Teal, Dean 3/22/1999 1:31:03 PM
Modified By: administrator 6/19/2008 3:55:40 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
	Q/A		
	Resubmit		
	Suspended		
		High	Enhancement

Complete Issue Information

Duray, Jim	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
962.8464	Suspended	Database Disconnect - add reconnect feature and timed disconnect-reconnect

Description

3-22-99 D Teal

When selecting a Bridge, we have no Rt click to open it (which there should be). You have to rely on double clicking. More than half the time I try I get a small dithered box next to my mouse pointer. In order to open that bridge I will have to click off the requested bridge someplace to unhighlight it and go back and try double clicking again. I went to my control panel to check my double click rate. I tested my settings many many times and never once did I fail to click too fast or too slow. We don't need to frustrate new users any more than we have to.

FROM:jduray DATE:03/22/1999 10:45:22

I assume you are referring to the Bridge Explorer. There are three ways to open a BWS for a bridge: 1) double click (works best if you point to the center of a row so you don't get the copy cursor); 2) select a bridge and select File/Open; 3) select a bridge and click the toolbar Open button. You can also use the up and down keys to scroll the list of bridges and in the next build you can use the Tab key to navigate between the folders and the list and Enter will open (same as double-click) the BWS for the selected bridge.

3/23/99 D Teal

I pointed at the center of the row the best I can and still get the copy cursor 75% of the time. It's frustrating! And I am using a 19" monitor. Maybe the rows are too small. If we can't fix the double click then I propose we utilize the mouse right click function. This is where most users would look anyway. When I look for faster easier methods, I always check out the rt click.

FROM: dteal DATE: 3/17/2000 3:38 PM

4/19/2016 3:12:51 PM

HRS AASHTO

74

Complete Issue Information

See 1483

FROM:jduray DATE:03/23/2000 09:41:51

You don't have to rely on double clicking. You can click on the bridge and hit the Enter key or use the mouse and click OPEN on the toolbar or select File/Open.

Issue ID: 962
Subject: Database Disconnect - add reconnect feature and timed disconnect-reconnect

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	3/22/1999 4:23:19 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:03/22/1999 12:03:49

The first release has a partial implementation of the database disconnect. However, beta testing uncovered a problem that we could not fix correctly prior to release and since only NY requested the feature we decided to disable the feature for that release. The following describes how it is currently implemented (but disabled) and what needs to be done to fix it.

The LRESULT CMainFrame::OnStartDbDisconnectTimer(WPARAM wParam, LPARAM lParam)

function is called when the mainframe opens. It creates a timer

The void CMainFrame::OnTimer(UINT nIDEvent) function gets the message when the timer expires and

calls CMainFrame::Disconnect() which calls CDbConnectionMgr::DisconnectPrimary().

CDbConnectionMgr::DisconnectPrimary() calls BOOL CDbConnectionMgr::Disconnect(short iKey)

which calls BOOL CDbConnection::Disconnect(). BOOL CDbConnection::Disconnect() calls BOOL

4/19/2016 3:12:51 PM

HRS AASHTO

75

Complete Issue Information

CDbDatabase::Disconnect() which checks that there are no pending transactions and no recordsets created. Recordsets are put into a list held by CDatabase. There are added to the list when created (not opened) and removed when closed.

The timer is restarted in void CUiDescDtopGridView::SetDbDisconnectTimer(). This needs to be done anywhere we access the database or perhaps it should be done in the OnIdle function. This may need to be more sophisticated to prevent disconnect during processing and will require significant testing.

To make this feature more robust and less dependent on the db we need to store more in memory. All access to the system tables and the library cause a reconnect.

The code is disabled with #if 0 and commented with // ##### Database disconnect.

Two functions were overridden (and then if-defed) in CDbDatabase because the CDatabase::Connect() function queries for the top level window. Dialogs using abocfg had a problem with this and assert. The OpenEx() function calls Connect and it too was overridden but not changed. We need to find why this problem exists and correct it. Maybe the override is the only way but we need to be certain of that since it will be a maintenance problem as new versions of MFC are delivered. I removed the reference to the window oin the overridden Connect function and it seemed to work. Didn't test it much though.

To make this work we need to do the following:

- 1) buffer more of the library in memory
- 2) buffer much of the system tables in memory
- 3) find a better way (OnIdle or something similar) to reactivate the timer after the database is reconnected
- 4) fix the problem with the dialogs that access abocfg objects ()and test that there are not other similar situations)
- 5) find a way to detect a lost connection and reconnect
- 6) provide a way to refresh the buffered data

FROM:jduray DATE:4/14/2005 3:34:31 PM

An alternative to this is to tickle the db by querying the db based on a timer event. Should add enable/disable and the time interval to the preferences.

Issue ID: 967

Subject: DL distribuion

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 3/22/1999 6:49:07 PM

Modified By: administrator 6/19/2008 3:55:39 PM

Priority: High

Category: Enhancement

History

4/19/2016 3:12:51 PM

HRS AASHTO

76

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
	Open		
	Suspended		
	Assigned		
	Development		
	Suspended		
	Resolved		Enhancement
Ordoobadi, Mehrdad	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
969.8457	Resolved	Save Results from toolbar needs a dialog to control which results sets are saved

Description

Vinacs: Within Structure loads window, one can let the program options to calculate the dead loads on each girder using "transverse simple beam analysis" or "transverse continuous-beam analysis." In one of our example, we played with this option and found out that program always uses the continuous option to estimate the dead load on girders. Please someone check this. This could be attributed to BRASS export program

FROM:jduray DATE:03/22/1999 15:59:11

Brian - I think I remember another incident relative to this. Are we informing the user in the export of how we are treating this? If we are, perhaps we need to think about making these kinds of really important assumptions more obvious to the user.

FROM: bgoodrich 03/29/1999

Jim - I added a Warning Summary window that is shown after the error window. Only the "important" warnings are logged right now. I will have to add all the warnings at some point. Before or after this release? Note there are about 100 warnings that are issued. See new source code.

4/19/2016 3:12:51 PM

HRS AASHTO

77

Complete Issue Information

FROM: bgoodrich DATE: 9/22/1999 2:19 PM

The BRASS-GIRDER computational program is currently being enhanced to address the other distribution methods (tributary area, transverse simple-beam, and uniformly distributed). The same dead load distribution module from BRASS-GIRDER(LRFD) is being utilized. A new BRASS-GIRDER DLL will be available shortly, but it will only work with Version 3.0.

FROM: bgoodrich DATE: Thursday, May 23, 2002 10:27:53 AM

The various dead load distribution methods discussed above have been implemented. From the comments, it appears that this was fixed for version 3.0.

FROM: hlee DATE: 7/10/2006 10:03:38 AM

Changed Project from Beta Testing/GUI/Installation to Support Center.

Issue ID: 969
Subject: Save Results from toolbar needs a dialog to control which results sets are saved

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: quinn, r	3/22/1999 7:00:30 PM
Modified By: administrator	6/19/2008 3:55:39 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: rdquinn DATE: 03/22/1999 14:42:20

The BWS command Save Results saves all result sets in memory. If someone made 20 design runs all of them would be saved. Is this ok? The help for the tool bar button does not indicate that all result sets are saved.

Complete Issue Information

Possible solution a dialog with tree control listing analysis events with bridge components analyzed should as child of each event.

FROM:jduray DATE:03/23/1999 07:50:37

I think we should improve this for the first maintenance release in July. I would like Mehrdad to write a description and mockup (basically a spec) for a dialog (Event Browser) that allows the user to save selective events and parts of events. I also would like for the user to be able to cancel the save after an individual event and member alt has been saved. This spec should also address events in general and provide for a better way for the user to understand what events are in memory and in the database. We also need to address maintenance of the events in the database and provide a way for the user and the administrator to remove events. We need to add to the results the option to save the BWS report as a text blob. I would like to be able to save part of the results instead of all or nothing.

Perhaps we need an Event Browser in Configuration too. We have other events that are being logged to the databae but have no way to view them.

I think for the current release we should warn the user that there are x events in memory and give him an opportunity to cancel. We should tell him (in the dialog) that he can open the Analysis Events dialog for each member alt and save the results individually.

FROM:mordoobadi DATE:03/23/1999 12:01:24

A dialog box is added to warn the user and to give him an opportunity to cancel when there are multiple unsaved results in memory.

I change the category of this incident to enhancement to work on it later (for July build).

FROM:mordoobadi DATE:03/23/1999 14:03:29

FROM:mordoobadi DATE:03/24/1999 13:28:23

FROM:mordoobadi DATE:03/26/1999 13:09:56

Fixed for Beta Build 5.

A specification document created for Event Browser (EventBrowser.doc in sourcesafe)

Issue ID: 981

Subject: Pedestrian Load: rating values don't include the combination of truck live load with pedestrian load

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Generated, bbeerman 3/23/1999 4:00:05 PM

Modified By: administrator 6/19/2008 3:55:38 PM

Priority: High

Category: Enhance BRASS

History

4/19/2016 3:12:52 PM

HRS AASHTO

79

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Duray, Jim	New	High	
Kennelly, Krisha	Assigned	Urgent	
	Suspended		
Duray, Jim	Assigned		
Kennelly, Krisha	Suspended	High	
	Assigned		
	Suspended		
	Assigned		
	System Test		
	Resolved		
	Closed		
			Enhancement
Kennelly, Krisha	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
984.8442	Closed	Check for interference when computing Live load distribution factor for user

Description

In the Rating Results Summary, there should be two rating values. One with truck and pedestrian as live load, the other with the truck only as live load.

FROM:jduray DATE:03/23/1999 15:33:45
 Brian - do we get this info from BRASS?

FROM: bgoodrich DATE: 03/23/1999

Complete Issue Information

BRASS treats the pedestrian load like a vehicular lane load and does not combine the pedestrian load with any other live load.

FROM:jduray DATE:7/5/01 1:42:50 PM
This incident was originally entered during 2.0 beta testing.

FROM:hlee DATE:4/30/2008 2:16:49 PM
Discarded by TAG 12/07.

Issue ID: 984
Subject: Check for interference when computing Live load distribution factor for user

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Kennelly, Krisha	3/23/1999 7:27:25 PM
Modified By: administrator	6/19/2008 3:55:38 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

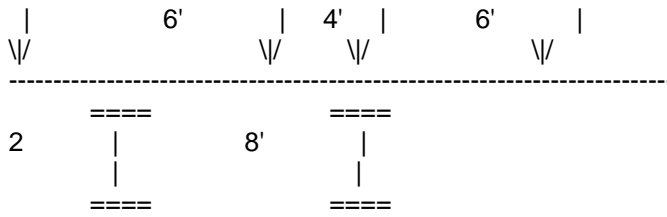
Description

FROM:kkennelly DATE:03/23/1999 15:18:13
When calculating simple beam df for interior beam, code does not check if adjacent wheel of truck is outside of the travelway.

example, * wheel can't be there cause it's other wheel is in parapet, outside of travelway. but my code doesn't currently check if other wheel of truck is outside travelway, it just checks if other wheel is within the girder bay and if it is, it is included in calculating the df. I'm afraid this will take more than a couple of lines to fix.

*

Complete Issue Information



FROM:jduray DATE:03/23/1999 15:44:21
Let's discuss.

FROM:kkennelly DATE:03/23/1999 16:28:55
as per our discussion, warning message added when user hits Compute button.
status left as suspended so it can be done later.

FROM:kkennelly DATE:03/24/1999 16:15:58
I've put checks and warnings in if lane interferes with appurtenances. I'd like someone else to also test this.

FROM:kkennelly DATE:06/30/1999 11:12:19
Ready for system test in 3.0 and 2.1. I tested under 3.0

FROM:hlee DATE:7/10/2006 10:00:45 AM
Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 985
Subject: Bridge Explorer toolbar does not have corresponding menu items

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: Duray, Jim 3/24/1999 12:17:51 PM
Modified By: administrator 6/19/2008 3:55:38 PM
Priority: Medium
Category: Requirement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Assigned	High	
Ihnat, Joseph		Medium	
	Resolved		Requirement
	System Test		

Complete Issue Information

Duray, Jim	Accepted	New	High	
	Information Needed			
	Resubmit			
Ordoobadi, Mehrdad	Assigned			Bug
	Resolved			
Ordoobadi, Mehrdad	Resolved		High	Bug

Contacts

Name	Company	Email 1	Phone 1
Benjamin Beerman	Modjeski & Masters, Inc.	bbeerman@wvinter.net	304.965.1870

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1028.10351	Resolved	In Reports: It's "kip-ft." not "kip.ft"

Description

FROM:jihnat DATE:10/19/1999 14:21:09
Add under Bridge: Rate, Find, Refresh, Retrieve All, Retrieve Next
Add under View: Rating Results

FROM:jihnat DATE:2/2/01 1:05:23 PM
Fixed for Version 4.1

FROM:jihnat DATE:10/16/2001 12:58:51 PM
Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:24:51
Is there supposed to be Rating Results under "View"? I didn't see any in version 4.1 beta 2
The items under Bridge are OK

Issue ID: 1028
Subject: In Reports: It's "kip-ft." not "kip.ft"

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Generated, bbeerman	3/29/1999 7:45:23 PM
Modified By: administrator	6/19/2008 3:59:48 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Generated, cclancy	Assigned		
		High	
Ordoobadi, Mehrdad	System Test		
	Resolved		
	Accepted		
	Closed		
			Change Request
Ordoobadi, Mehrdad	Closed	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1064.10315	Closed	Results Graph - Design Ratio Y Scale should always include value of 1

Description

FROM:jduray DATE:03/29/1999 16:10:32

4/19/2016 3:12:53 PM

HRS AASHTO

84

Complete Issue Information

Specifically where are you finding this?

FROM:bbeerman 3/30/99

In the results reports, graphs and tables

FROM:jduray DATE:6/25/01 4:11:58 PM

Change from 2.0 Beta to 4.0 Release and Support Center.

FROM:mordoobadi DATE:8/8/01 1:46:32 PM

Fixed for 4.1.

Issue ID: 1064
Subject: Results Graph - Design Ratio Y Scale should always include value of 1

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	4/7/1999 12:31:52 PM
Modified By: administrator	6/19/2008 3:59:46 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/6/99 D Teal

The "Y" axis scale should always contain "1" as part of the scale. This is the ratio where resistance equals applied force effects. Would look a lot cleaner than, say, .9 or some other fractional value

FROM:jduray DATE:05/06/1999 15:17:20

Task Force authorized this for version 2.1.

4/19/2016 3:12:53 PM

HRS AASHTO

85

Complete Issue Information

FROM:jduray DATE:07/08/1999 10:02:18

Changed the grid lines to appear at 1.0, 2.0, 3.0... instead of drawing a line at 1.0.

FROM:hlee DATE:7/10/2006 10:01:00 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 1093
Subject: Auto Save w/Timer

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: quinn, r	4/13/1999 6:04:55 PM
Modified By: administrator	6/19/2008 3:59:44 PM
Priority: High	
Category: New Feature	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
	Assigned		
	Open		
	System Test		

Complete Issue Information

	Resolved			
Duray, Jim	New	High		New Feature
	Suspended			
	Assigned			
	Suspended			
Duray, Jim	Suspended	High		Enhancement Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1094.10285	Suspended	Ability to sort ranges in grids after new range is added out of order w/o reopening window

Description

FROM:rdquinn DATE:04/13/1999 14:04:21
Need an Auto Save feature with Timer.

FROM:jduray DATE:05/03/1999 11:17:12
Task Force authorized this for version 2.1.
20 hours est. (incl. testing)

This will use the binary export not the database.

The export is finished.
Need to do the import.

FROM:hlee DATE:7/10/2006 10:01:15 AM
Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 1094
Subject: Ability to sort ranges in grids after new range is added out of order w/o reopening window

Folder: /Virtis/Support Center

4/19/2016 3:12:54 PM

HRS AASHTO

87

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: quinn, r	4/13/1999 6:11:48 PM
Modified By: administrator	6/19/2008 3:59:43 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	
	Resolved		Enhancement
	System Test		
	Accepted		
	Closed		
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1101.10278	Closed	Bridge Explorer - warn user deleting bridge from Deleted Bridges folder is permanent

Description

FROM:rdquinn DATE:04/13/1999 14:09:04
 Need ability to sort ranges (plates, stiffeners, etc.).

Complete Issue Information

Issue ID: 1101
Subject: Bridge Explorer - warn user deleteing bridge from Deleted Bridges folder is permanent

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	4/13/1999 7:18:18 PM
Modified By: administrator	6/19/2008 3:59:43 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:04/13/1999 15:17:23

Warn the user that delete (from Deleted Bridges folder) will permanently remove the bridge from the database.

FROM:jihnath DATE:10/16/2001 12:59:30 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:29:30

4/19/2016 3:12:54 PM

HRS AASHTO

89

Complete Issue Information

Accepted

Issue ID: 1131
Subject: Lateral Support Window

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Goodrich, Brian	5/1/1999 8:46:49 PM
Modified By: administrator	6/19/2008 3:59:41 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Urgent	
	Assigned		
	Suspended		
	Discard		Enhancement

4/19/2016 3:12:54 PM

HRS AASHTO

90

Complete Issue Information

Duray, Jim	Discard	Urgent	Enhancement
------------	---------	--------	-------------

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Bill Smyers	Michael Baker Jr.,Inc.	wsmyers@mbakercorp.com	(412) 269-7940

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1134.10245	Rejected by TAG	Charts - Legend

Description

FROM: bgoodrich DATE: 5/1/1999 1:45 PM

The lateral support window needs to read the shear connector set and add lateral support ranges to this window that correspond to the shear connector ranges. The user should not be allowed to edit these ranges and the ranges should not be saved to the database. These ranges should only be shown by the GUI to assist the engineer interpret the lateral support of the top flange.

FROM:hlee DATE:4/30/2008 2:16:56 PM

Discarded by TAG 12/07.

Issue ID: 1134
Subject: Charts - Legend

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/3/1999 12:19:16 PM
Modified By: administrator	6/19/2008 3:59:41 PM
Priority: High	

4/19/2016 3:12:54 PM

HRS AASHTO

91

Complete Issue Information

Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Resolved		
	Closed		
Ihnat, Joseph	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1147.10233	Closed	Check-in,check-out - Headings for grid tables don't update when display units changed

Description

FROM:jduray DATE:05/03/1999 08:18:43
From Dean Teal

When you select several things to be charted at one time, the legend falls off the bottom of the window. Resizing the window doesn't help, it still stays hidden behind the tabulated numbers window.

FROM:jduray DATE:11/24/1999 08:45:01
Joe - did you fix this when you were working on the chart?

FROM:jihnmat DATE:11/24/1999 11:56:21
No. (Same problem as 1030)

FROM: dteal DATE: 4/21/2000 2:52 PM
Something should really be done here to clean this up!

FROM: dteal DATE: 11/16/2000 9:27 AM
Same problem as #2667

4/19/2016 3:12:55 PM

HRS AASHTO

92

Complete Issue Information

FROM:jduray DATE:1/5/01 12:00:22 PM

The legend is automatically produced by the charting tool we are using (Objective Chart). We need to submit this to the developer.

Joe - please submit to StingRay or whoever they are.

FROM:jihnath DATE:1/5/01 1:09:30 PM

Here's what I wrote on 5/24/2000 in Incident 2667:

"This is not a Stingray problem. As originally written, the chart only gives a fixed percentage (15%) of the window for displaying the legend."

Someone's going to have to spend some time redesigning our chart implementation for this to get fixed.

Issue ID: 1147
Subject: Check-in,check-out - Headings for grid tables don't update when display units changed

Folder: /Virtis/Support Center	
Primary Contact: Ihnath, Joseph	
Submitted By: Barnhill, Gale	5/5/1999 1:43:29 PM
Modified By: administrator	6/19/2008 3:59:40 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: gbarnhill DATE: 5/5/1999 8:41 AM

With check-in, check-out turned on. Open a BWS that is not checked out (read-only), open a window with a grid table in it (Member), change the window unit display. The numbers in the grid and other edit boxes change, the unit indicators for the edit boxes change. The unit indicators in the grid do not change.

Complete Issue Information

FROM:jihnat DATE:06/09/1999 09:26:26
Fixed for Versions 2.1 and 3.0

FROM: gbarnhill DATE: 8/26/1999 1:16 PM
OK for R2.1 Beta 2

Issue ID: 1148
Subject: Schematic Profile View - Splices not shown

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Barnhill, Gale 5/5/1999 6:07:33 PM
Modified By: administrator 6/19/2008 3:59:40 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	On Hold		
			Bug - GUI 2

4/19/2016 3:12:55 PM

HRS AASHTO

94

Complete Issue Information

Duray, Jim	Suspended		Enhancement
	New	High	
	Assigned		
Duray, Jim	Suspended		
	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1149.10231	Suspended	Schematic Profile View - Hinge locations not available

Description

FROM: gbarnhill DATE: 5/5/1999 1:01 PM
Field Splice is checked on the DRAWING LEVEL CONTROL. Splice locations are not shown on the profile view.

FROM:hlee DATE:4/30/2008 2:17:03 PM
Discarded by TAG 12/07.

Issue ID: 1149
Subject: Schematic Profile View - Hinge locations not available

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Barnhill, Gale	5/5/1999 6:09:07 PM

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:40 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Assigned	High	
	Resolved		
Wilson, Ken	Assigned		
	Resolved		
Wilson, Ken	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1155.10225	Resolved	Configuration Browse

Description

FROM: gbarnhill DATE: 5/5/1999 1:12 PM

There is no item to select Hinge locations on the DRAWING LEVEL CONTROL.

Complete Issue Information

Issue ID: 1155
Subject: Configuration Browse

Folder: /Virtis/Support Center	
Primary Contact: Wilson, Ken	
Submitted By: Duray, Jim	5/11/1999 4:45:33 PM
Modified By: administrator	6/19/2008 3:59:40 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:05/11/1999 12:44:20

r

Trying to edit/add KDOT's terminology.

Example 1: In the Owner/Maintainer Name fields I am trying to put Kansas Dept. of Transportation for ID #1. I can put in KDOT or Kansas Dept. of Transpor (if I put anything more after the "r" it will not save.

Example 2: In Functional Class, I am trying to put in Other Freeways & Expressways, If I leave the word OTHER out it will save.

It appears to have a string length parameter. But if this length is exceeded, nothing will be saved (all

4/19/2016 3:12:56 PM

HRS AASHTO

97

Complete Issue Information

work in that window will be lost and you'll need to start over). HELP does not mention a limit to the length. No warnings as to field length on the Parameters input screen.

Mehrdad - When you finish assign to Ken to add string limit to help.

FROM:mordoobadi DATE:05/27/1999 16:38:11

Code added to check string lengths for parmvalue and description and warn the user if the string is longer than expected.

FROM:mordoobadi DATE:06/02/1999 08:56:01

Ken - Please add these string length limits to the help.
for ID the maximum number of characters is 8
for description the maximum number of characters is 24

FROM:kwilson DATE:06/11/1999 16:51:15

I added the above limitations to the help topic for the Parameters window.

Issue ID: 1158
Subject: Stiffeners

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Duray, Jim	5/12/1999 12:11:39 PM
Modified By: administrator	6/19/2008 3:59:39 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krisha	Assigned		
	Suspended		Enhancement
	Discard		
Kennelly, Krisha	Discard	High	Enhancement

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1161.10219	Closed	Parameters

Description

FROM:jduray DATE:05/12/1999 08:10:59

The following is from an e-mail from Ken Hurst:

I also noted that the intermediate stiffeners had only one option (cut short). How about another with clips T&B and welds Tor B.

FROM:jduray DATE:06/08/1999 10:17:56

Krishna - Let's discuss this.

FROM:kkennelly DATE:07/20/1999 16:16:12

Transverse stiffeners already has top & bottom welds on it. Clips aren't really applicable for transverse stiffeners like they are for bearing stiffeners since the transverse stiffeners do not get designed for bearing.

FROM:jduray DATE:7/5/01 1:46:10 PM

This incident was originally entered during 3.0 development.

FROM:hlee DATE:4/30/2008 2:17:11 PM

Discarded by TAG 12/07.

Issue ID: 1161

Subject: Parameters

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

5/14/1999 5:50:17 PM

Modified By: administrator

6/19/2008 3:59:39 PM

Priority: High

Category: Bug

4/19/2016 3:12:56 PM

HRS AASHTO

99

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ordoobadi, Mehrdad	Assigned	High	
	Resolved		
	Assigned		
	Open		
Duray, Jim	Assigned		
Ordoobadi, Mehrdad			
Duray, Jim	Resolved		
	Accepted		
	Closed		Education
Duray, Jim	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1162.10218	Closed	Configuration Browser

Description

FROM: dteal DATE: 5/14/1999 12:51 PM

When I modified the County list in the Parameters I found an unexpected ordering of the numbers. When I reached numbers 101 and over, they did not remain after the number 100. Instead they were moved to come after the number 10.

FROM:mordoobadi DATE:06/16/1999 14:17:59

Code added to sort numeric and alphabetic parmvalues separately. Fixed for both versions 2.1 and 3.0.

4/19/2016 3:12:56 PM

HRS AASHTO

100

Complete Issue Information

FROM: dteal DATE: 8/6/1999 3:06 PM

The county numbering in the "as sent" data base in 2.1 Beta was -2,-1,01,02,03,.....
45,46,111,222,333,777.

I added 101,102 and 201.

They were put at the top of the list instead of being put in numerical order. Now the numbering is 101,
102, 201, -2,-1,01,02,03,.....45,46,111,222,333,777.

FROM:jduray DATE:08/09/1999 08:36:15

This is a list of strings and is sorted as such. This is coming from Pontis and I don't think there is anything we can do about this problem. If you want to use 3 digits the number 1 should be input as 001 and 10 should be 010, etc. This will allow for proper sorting.

FROM:mordoobadi DATE:08/09/1999 09:04:07

This is because the sorting is done by misvalflg (missing value flag) first and then the ID. The current records in the parameters table in the sample database have a non-null misvalflg. So when we sort, those original records are put at end of the list.

FROM: dteal DATE: 8/9/1999 8:33 AM

Keeping in mind that the numbering order shown above is found in the listing when you look at the "Parameters". The following is the ordering you find when you look in the BWS – Description (Cont'd) tab. 01, 02, 03, ...10, 101, 102, 11, 111, 12, ... 19, 20, 201, 202, 21, ... 33, 333, 34, etc. Shouldn't the numbering be the same between the Description tab and the parameters window?

I don't know anything about "non-null misvalflg", but I do know we all were taught how to count properly at an early age.

Being HELP does not address this, a user may input county numbering in logical order using 1 or 2 digits. Now, when the user finds out he has to use at least a 3 digits number to define there 105 counties, he will go back and find that you can NOT EDIT the ID numbers. You have to delete them and re-type all 105 counties over again! There is going to be some frustrated users.

FROM:jduray DATE:08/09/1999 10:45:28

Mehrdad - please check the Pontis help file and let me know how they describe the entry of parameters.

Also, these two windows should show the same order.

FROM:mordoobadi DATE:08/09/1999 11:45:17

The drop down lists in Bridge Description/Cont'd tab sort the data. We should disable sorting on those drop down lists.

FROM:jihnat DATE:08/09/1999 13:24:15

Sorting has been disabled.

FROM: dteal DATE: 8/9/1999 12:46 PM

What about being able to edit the ID name so the entire entry doesn't have to be re-entered?

FROM:mordoobadi DATE:08/09/1999 15:39:02

The IDs are not allowed to be changed for existing parameters because they might be used in other tables. Renaming the used IDs could cause problems in database integrity.

4/19/2016 3:12:56 PM

HRS AASHTO

101

Complete Issue Information

In the next beta build you will see numerical and alphabetical IDs sorted properly, so you do not need to worry about adding zeros to the beginning of the IDs to make them three digit numbers.

FROM:mordoobadi DATE:08/09/1999 15:56:43
Fixed for versions 2.1 and 3.0.

FROM:mordoobadi DATE:08/12/1999 10:17:53

FROM:mordoobadi DATE:08/20/1999 13:37:49
The release build (2.1 beta 2) is verified and it works OK.

Issue ID: 1162
Subject: Configuration Browser

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/14/1999 5:58:39 PM
Modified By: administrator	6/19/2008 3:59:39 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 5/14/1999 1:01 PM
Trying to edit/add KDOT's terminology.

Example 1: In the Owner/Maintainer Name fields I am trying to put Kansas Dept. of Transportation for ID #1. I can put in KDOT or Kansas Dept. of Transpor (if I put anything more after the "r" it will not save.

Complete Issue Information

Example 2: In Functional Class, I am trying to put in Other Freeways & Expressways, If I leave the word OTHER out it will save.

It appears to have a string length parameter. But if this length is exceeded, nothing will be saved (all work in that window will be lost and you'll need to start over). HELP does not mention a limit to the length. No warnings as to field length on the Parameters input screen.

FROM:jduray DATE:06/08/1999 09:54:33

Mehrdad - Please check into this. We may need to limit the number of characters permitted during input. Check with Joe regarding the grid.

FROM:mordoobadi DATE:06/16/1999 14:20:14

SetMaxLength() function is called to limit text length in Grid Cells.
Fixed for both versions 2.1 and 3.0.

FROM: dteal DATE: 8/6/1999 3:05 PM

Are we going to be limited to 24 characters??? I tried to put in "Kansas Dept. of Transportation", I ended up cutting off the last 4 characters.

FROM:jduray DATE:08/09/1999 08:32:42

The length is defined by Pontis and probably NBI. These fields are being stored in the Pontis bridge table and are shared with Pontis. We can not change them. We can check to make sure that we have used them properly within our code.

Mehrdad - please verify that our lengths are correct in the pontis_bridge table. Check with the most recent version of Pontis database that we have.

FROM:mordoobadi DATE:08/09/1999 11:54:50

short_desc attribute in paramtrs table in version 3.4 pontis database is a char(24).

FROM:mordoobadi DATE:08/09/1999 12:01:17

FROM:jduray DATE:11/24/1999 09:25:41

We should restrict the number of characters the user can input.

FROM:mordoobadi DATE:11/24/1999 09:53:03

The number of characters is already limited to 24 in the grid.

FROM:jihnmat DATE:12/27/1999 08:10:46

Accepted by dteal via email.

Issue ID: 1208

Subject: Printing of structure rating results

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Shah, Shyam

6/12/1999 5:31:48 PM

Modified By: administrator

6/19/2008 3:59:36 PM

4/19/2016 3:12:57 PM

HRS AASHTO

103

Complete Issue Information

Priority: Urgent
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Suspended		Enhancement
	Discard		
Ihnat, Joseph	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1219.10162	Discard	Add Save function to BWS Report Window

Description

FROM: snshah DATE: 6/11/1999 3:25 PM

Why can't we print the table of the structure rating results from the bridge explorer?

FROM:mordoobadi DATE:06/15/1999 17:14:02

There is no print capability on this window. The window is a dialog box and we cannot use document-view printing capabilities.

Complete Issue Information

Issue ID: 1219
Subject: Add Save function to BWS Report Window

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: quinn, r	6/18/1999 3:11:09 PM
Modified By: administrator	6/19/2008 3:59:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:rdquinn DATE:06/18/1999 11:10:32
Add Save function to BWS Report Window. Save as RTF file.

FROM:jduray DATE:07/13/1999 08:50:11
This is delayed for 3.0 because it will take more effort than expected. Normal practice is to use CRichEditDoc with CRichEditView but because of the way we did the BWS we are using CDocument.

FROM:jduray DATE:7/5/01 12:51:33 PM
This incident was originally entered during 3.0 development.

FROM:jduray DATE:7/5/01 12:52:42 PM
If we do this we would convert the BWS report to xml. This probably isn't necessary once the report tool is avail.

4/19/2016 3:12:57 PM

HRS AASHTO

105

Complete Issue Information

FROM:hlee DATE:4/30/2008 2:17:17 PM
Discarded by TAG 12/07.

Issue ID: 1224
Subject: Rating Results Summary Report

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Schwagler, Tim	7/8/1999 3:13:24 PM
Modified By: administrator	6/19/2008 3:59:35 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	Suspended		
Duray, Jim	Suspended	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Tim Schwagler	North Dakota DOT	tschwagl@state.nd.us	701-328-4421

4/19/2016 3:12:57 PM

HRS AASHTO

106

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1225.10156	Resolved	Steel girder bridges with timber decks

Description

FROM: tim schwagler DATE: 6/21/1999 3:50 PM
can the bridge ID and the bridge name be added to this report and
this data is not saved by save icon on tool bar

Issue ID: 1225
Subject: Steel girder bridges with timber decks

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Schwagler, Tim	7/8/1999 3:14:15 PM
Modified By: administrator	6/19/2008 3:59:35 PM
Priority: High	
Category: Comment	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
puckett, jay	Assigned		
puckett, jay	Assigned	Medium	Comment

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1226.10155	Assigned	Misc. Comments

Description

FROM: tim schwagler DATE: 6/21/1999 3:54 PM

how can i rate steel girder bridges with timber decks? is there going to be a section added to the program?

FROM:jduray DATE:07/08/1999 11:14:07

You can use a girderline structure definition and define the dead load due to the deck to rate the girder. We have not completed the scope for timber yet so I can't answer regarding rating timber decks on steel girders.

Complete Issue Information

Issue ID: 1226
Subject: Misc. Comments

Folder: /Virtis/Support Center	
Primary Contact: puckett, jay	
Submitted By: Teal, Dean	6/22/1999 12:26:46 PM
Modified By: administrator	6/19/2008 3:59:35 PM
Priority: Medium	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ihnat, Joseph	Assigned		
Duray, Jim	Suspended		
	Information Needed		
	Suspended		Enhancement
		High	
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1232.10149	Suspended	Window Configuration

Description

4/19/2016 3:12:58 PM

HRS AASHTO

109

Complete Issue Information

FROM: dteal DATE: 6/22/1999 7:31 AM
For Ken Hurst, Kansas State Bridge Engineer
Library, Steel Shapes
Shapes should be grouped by units with the USC and the SI counterpart right under it, or separate USC or SI.
ie: USC = HP10x42 SI = HP250x62

LRFD Distribution Factors
Shouldn't the slab thickness "ts" be structural thickness?

Stages
Is it possible to have multiple structural slab thickness by construction stage?
Stage 1 = 0", 7" DL Only
Stage 2 = 7" composite with 1.5" SFO
Stage 3 = 8" composite with 0.5" deduct, add FWS

Intermediate Stiffeners
Need a full depth option with clips, weld similar to connection stiffeners

Weight/Mass Output
Can you get approximate weight/mass in BRASS output? Can you get it by adding up the reactions for self weight? This is needed for optimizing economical designs.

HL-93 Includes?
How can you tell is the HL-93 includes the HS20 + Lane or Tandem + Lane or 90% (2 HS20's + Lane) or (2 Tandem's +Lane)?

Issue ID: 1232
Subject: Window Configuration

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	6/22/1999 12:35:09 PM
Modified By: administrator	6/19/2008 3:59:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1235.10146	Suspended	Live Load Distribution – Deflection

Description

FROM: dteal DATE: 6/22/1999 7:40 AM

Windows should open up without having all the column's pushed to the left. At least expand them so the column headings can be read without manipulation.

FROM:jihnat DATE:07/08/1999 12:45:10

We generally do this. Do you know specifically which window(s) he is referring to?

FROM: dteal DATE: 7/21/1999 10:24 AM

For the most part all new windows require user manipulation. You have to grab each column seperatly and widen them to see the text. You can read the column headings, but text below the headings is usually partly hidden.

FROM: dteal DATE: 7/26/1999 12:55 AM

At the User Group meeting this past week I watched as each different window was opened. Jim went to the top of the column to widen something on every window he opened to see the text. This extra column width manipulation is what I'm referring to.

FROM:jduray DATE:08/12/1999 07:51:30

We will look into this, however, this is only necessary the first time a window is opened after Virtis is installed. When each window closes we save the info to the registry for future use. It may not be possible, or reasonable, to size the columns perfectly because the size of the text varies from row to row. Also, (i'm not sure about this one) the font may affect the size and to determine for each row may slow window updates.

Issue ID: 1235

Subject: Live Load Distribution – Deflection

Folder: /Virtis/Support Center

Primary Contact: Campbell, Jeff

Submitted By: Teal, Dean

6/22/1999 1:09:06 PM

4/19/2016 3:12:58 PM

HRS AASHTO

111

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:34 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
quinn, r	New	High	
	Assigned		
	Not Reproducible		Bug
quinn, r	Not Reproducible	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1238.10143	Not Reproducible	Member length incorrect for girder system structure definition

Description

FROM: dteal DATE: 6/22/1999 8:14 AM

Someplace, somewhere, we should tell the user where to find any AASHTO code governing deflection. It is not found in section 4 of the code where the rest of the information is regarding Dist. Factors. It is the last 1 sentence paragraph of the commentary in section 2 (C2.5.2.6.2). I could not find reference of a Dist. Factor for deflection in Puckett's book.

"HELP" also fails to give us any useful direction here!

FROM: dteal DATE: 1/12/2000 10:31 AM

See Incident #1849

FROM:jduray DATE:01/17/2000 14:24:55

Jeff is going to report to M&M that the spec is hard to follow.

FROM: dteal DATE: 2/3/2000 11:33 AM

This sounds like a long process.

In the interim, shouldn't we add some text to the "help" so we don't frustrate users. As in Incident

4/19/2016 3:12:58 PM

HRS AASHTO

112

Complete Issue Information

#1849, I had to get help from Jay to figure out how to do Deflection Dist. Factors. Users will not have that luxury.

FROM:jduray DATE:02/15/2000 16:57:40

Issue ID: 1238
Subject: Member length incorrect for girder system structure definition

Folder: /Virtis/Support Center	
Primary Contact: quinn, r	
Submitted By: Christian, George	6/23/1999 12:14:18 PM
Modified By: administrator	6/19/2008 3:59:34 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:rdquinn DATE:06/23/1999 08:02:47

The girder member reference line length became too long for girder system causing an additional cantilever span to be created. Changing the girder system support skew and then back to the original value should fix the problem. Cause of problem not known at this time.

Complete Issue Information

Issue ID: 1245
Subject: BARS conversion to VIRTIS

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Shah, Shyam	7/8/1999 3:24:44 PM
Modified By: administrator	6/19/2008 3:59:34 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
Duray, Jim	Resolved	High	Comment

Contacts

Name	Company	Email 1	Phone 1
Shyam Shah	Louisiana DOTD	sshah@dotdmail.dotd.state.la.us	225-379-1329
April Hurry	Design Engineering,	ahurry@dei-engr.com	504-836-2155

4/19/2016 3:12:59 PM

HRS AASHTO

114

Complete Issue Information

Inc.

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1249.10133	Resolved	Selection of Analysis Vehicles

Description

FROM: snshah DATE: 6/30/1999 10:03 AM

When converting BARS file to VIRTIS, particularly welded plate girders, we get rating results that are either substantially higher or lower than the original BARS LFM results. Could this be due errors in BARS or from the conversion process itself? Our standard wide-flange bridges seem to convert with rating results being very similiar to the BARS file. Have you had any problems of this sort and if so, what were the solutions?

FROM: jduray DATE: 07/08/1999 11:23:08

No other problems have been reported. I suggest you compare the Bridge Workspace Report to your plans to ensure the data is correct.

Issue ID: 1249
Subject: Selection of Analysis Vehicles

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Shah, Shyam	7/1/1999 3:11:51 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Comment	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
	Resolved		
Goodrich, Brian	Resolved	High	Comment

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1250.10132	Resolved	Input of Dead Loads

Description

FROM: snshah DATE: 6/30/1999 10:56 AM

When selecting analysis vehicles, VIRTIS should have the capability of making certain, frequently used vehicles as the default vehicles. This way, the user doesn't have to keep selecting the same vehicles over and over again. In our case we use the same two vehicles most of the time, so these two should be the default vehicles. But, the user should be able to change these defaults at any time. FROM: snshah DATE: 6/30/1999 11:02 AM

FROM: jduray DATE: 07/08/1999 11:26:05
Use an event template for this.

Complete Issue Information

Issue ID: 1250
Subject: Input of Dead Loads

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Shah, Shyam	7/1/1999 3:09:16 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
	Resolved		
Goodrich, Brian	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1251.10131	Resolved	Points of Interest

Description

FROM: snshah DATE: 6/30/1999 11:02 AM

Why does VIRTIS code all of the dead loads with the Uniform Distributed Command? Why not put the dead loads in the Dead Load command?

FROM: bgoodrich DATE: 8/2/1999 12:24 PM

Within Virtis, the user creates load groups that can contain uniform, distributed, and/or concentrated loads. The parameters on the DEAD-LOAD command cannot be used for the general case (i.e., when

4/19/2016 3:13:00 PM

HRS AASHTO

117

Complete Issue Information

uniform and distributed or concentrated loads are input). Therefore, the UNIFORM-DL1 command was utilized for all cases.

Issue ID: 1251
Subject: Points of Interest

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Shah, Shyam	7/1/1999 3:07:44 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: snshah DATE: 7/1/1999 8:06 AM

Whenever I enter a POI other than at a 1/10th point I get an error stating "Node point locations are

4/19/2016 3:13:00 PM

HRS AASHTO

118

Complete Issue Information

1/10th points, all ranges, and cross section change locations."

FROM: bgoodrich DATE: 8/17/1999 7:11 AM

Currently, BRASS-LFD requires that all POI be specified at the locations described above which are where node points are placed in the BRASS structural analysis model. This is only a temporary limitation of BRASS, and we will be enhancing BRASS to automatically insert node points at POI.

Issue ID: 1252	
Subject: ENGINE SETTINGS	
Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Schwagler, Tim	7/8/1999 3:27:41 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Information Needed		

4/19/2016 3:13:00 PM

HRS AASHTO

119

Complete Issue Information

Duray, Jim	Information Needed	High	Comment
------------	--------------------	------	---------

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1253.10129	Resolved	TRANSVERSE STIFFENER OVERRIDE

Description

FROM: TIM SCHWAGLER DATE: 7/1/1999 1:57 PM
 WHEN A WINDOW THAT HAS ENGINE SETTIGS ON IT THE CURRENT SETTINGS ARE NOT DISPLAYED. WHEN CHANGEING SETTINGS FOR THE ENGINE DO ALL OF THE WINDOWS NEED TO BE CHANGED?

FROM:jduray DATE:07/08/1999 11:27:33

I don't understand your question.

FROM: tschwagler DATE: 7/13/1999 1:19 PM Part 1: When in the 'Point of Interest' window and the 'Engine' tab is selected the 'Configure engine properties for analysis module:' input block is blue and does not display what is in effect, 'Brass ASD' 'Brass LFD' or 'Brass LRFD' . Part 2: There are at least 4 windows where the engine can be changed.'Point of Interest', 'Member Alternative Description', 'Girder System Structrue Definition' and 'Analysis Settings'. If I want to chane the engine settings do I need to go into each window and change the settings?

FROM:jduray DATE:09/21/1999 13:28:12

The 'Configure engine properties for analysis module:' combo is used to select the engine whose properties you would like to edit. It does not select an engine. The engine is selected on the Description tabs on the Member alt or Structure Def windows.

Issue ID: 1253
Subject: TRANSVERSE STIFFENER OVERRIDE

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Goodrich, Brian	
Submitted By: Schwagler, Tim	7/8/1999 3:30:37 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New Assigned	High	
Goodrich, Brian	Investigation Information Needed Resolved		
Goodrich, Brian	Resolved	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1254.10128	Resolved	INPUT OF SLAB DATA

Description

FROM: TIM SCHWAGLER DATE: 7/1/1999 2:04 PM
THE TRANSVERSE STIFFENER OVERRIDE IN THE POINT OF INTREST WINDOW DOES NOT CHANGE THE BRASS INPUT FILE.

FROM: bgoodrich DATE: 8/2/1999 12:33 PM
Does this issue pertain to BRASS-LFD? If so, BRASS-LFD does not currently allow the user to override the schedule data. There should be a warning produced in the progress window.

4/19/2016 3:13:00 PM

HRS AASHTO

121

Complete Issue Information

FROM: tschwagler DATE: 9/23/1999 8:09 AM

This issue is from a Virtis run using BRASS-LFD. When running Virtis there is no mention of the Transverse Stiffener override not working. This seems to be a translation problem between Virtis and BRASS. If Virtis gives the option to do something and it cannot do the function I think the option should be removed from Virtis or the Engine should be modified to do the option.

FROM: bgoodrich DATE: 10/7/1999 11:17 AM

The warning that is issued by the export is:

"The POI control parameter on the ANALYSIS command indicates to generate points of interest from the schedule data. BRASS currently does not allow the generated data to be overridden with the data entered on the point-of-interest commands."

This warning pertains to all point of interest overrides - stiffeners (transverse, bearing, longitudinal), bracing, lateral support, etc.

Virtis/Opis is designed to capture the complete bridge description (geometry, loads, etc.). I doubt any computational engine utilizes every piece of Virtis/Opis data, but an engine should utilize a good majority of it. I think that users must understand the limitations of the engine being utilized. This incident only occurs in BRASS-LFD, so this is a limitation of one rating engine. Hopefully, others will implement additional engines.

FYI: Some items that BRASS does not address are concentrated moment loads and temperature gradients. BRASS is also limited to a fixed number of load cases, loads, cross sections, schedule ranges, etc. These are discussed in the BRASS help files installed with Virtis/Opis.

Issue ID: 1254
Subject: INPUT OF SLAB DATA

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Schwagler, Tim	7/8/1999 3:01:47 PM
Modified By: administrator	6/19/2008 3:59:33 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
1255.10127	Suspended	Flange Sizes

Description

FROM: TIM SCHWAGLER DATE: 7/1/1999 2:18 PM

WHEN MODELING A CONTINUOUS BEAM AND THE SLAB IS DEFINED AS BEING CONTINUOUS FROM ONE END OF THE BEAM TO THE OTHER AND REBAR INFORMATION IS INPUT AT THE PIER. BRASS USES THE SLAB DATA TO CALCULATE THE SECTION PROPERTIES AT THE PIER. THE REBAR IS NOT USED.

FROM: bgoodrich DATE: 11/29/1999 2:41 PM

I will examine this issue.

FROM: bgoodrich DATE: 11/29/1999 2:50 PM

BRASS-LRFD always uses the slab in the section properties for structural analysis if it was entered. BRASS-LFD uses the slab or rebar depending on which one is exported.

Issue ID: 1255

Subject: Flange Sizes

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Shah, Shyam

7/2/1999 6:28:08 PM

Modified By: administrator

6/19/2008 3:59:33 PM

4/19/2016 3:13:01 PM

HRS AASHTO

123

Complete Issue Information

Priority: High
Category: Change Request

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
Duray, Jim	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1268.10116	Resolved	Importing / Exporting bridges

Description

FROM: snshah DATE: 7/2/1999 8:07

Top and bottom flange sizes should be able to be entered differently in the library.

Complete Issue Information

Issue ID: 1268
Subject: Importing / Exporting bridges

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	7/9/1999 4:00:41 PM
Modified By: administrator	6/19/2008 3:59:32 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: rmbest DATE: 7/9/1999 11:09 AM

It is important that a bridge and library import/ export facility be added so that bridge models can be copied from one database to another. We will want our consultants to share their models with us and we will want to be able to share our libraries with them.

FROM: jduray DATE: 07/20/1999 11:37:31

This work will be completed for version 3.0 later this year.

Complete Issue Information

Issue ID: 1269
Subject: Need to improve hardcopy

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	7/9/1999 4:03:48 PM
Modified By: administrator	6/19/2008 3:59:32 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Information Needed		
	Suspended		
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

4/19/2016 3:13:01 PM

HRS AASHTO

126

Complete Issue Information

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1270.10114	Closed	VIRTIS and OPIS conflict

Description

FROM: rmbest DATE: 7/9/1999 11:12 AM

There needs to be better control of output. The user should be able to select the items to be included in an output report. The 100page+ output file from BRASS is unmanageable

FROM: jduray DATE: 07/20/1999 11:36:35

Do the output options available in the analysis settings help?

FROM: rmbest DATE: 8/3/1999 2:23 PM

Yes, but I think what we need is a report writer or wizard. The user should be able to generate a formatted report with as much or as little information as necessary. The ability to set up Agency templates would be nice.

Issue ID: 1270
Subject: VIRTIS and OPIS conflict

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	7/9/1999 4:12:27 PM
Modified By: administrator	6/19/2008 3:59:32 PM
Priority: High	
Category: Education	

History

4/19/2016 3:13:02 PM

HRS AASHTO

127

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Duray, Jim	New	High	
	Suspended		
	Duplicate		
Duray, Jim	Duplicate	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1273.10111	Duplicate	Standard parapet can not be modeled

Description

FROM: rmbest DATE: 7/9/1999 11:19 AM

For a specific bridge(, VIRTIS and OPIS are in conflict over the moment capacity. VIRTIS claims the composite ductility requirement fails for this section, thus making the section braced, non-compact and the capacity is moment at first yield. OPIS claims the composite ductility requirement is OK, thus making the section compact and the capacity is between the plastic capacity and the yield capacity. The fact that OPIS and VIRTIS follow different codes is irrelevant since the requirements are the same in this case. Data file available on request.

FROM: rmbest DATE: 7/9/1999 1:10 PM

Sorry - this is no longer valid. The problem was resolved in Beta 4. Please remove.

Complete Issue Information

Issue ID: 1273
Subject: Standard parapet can not be modeled

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	7/9/1999 4:20:17 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Resolved		
	Accepted		
	Closed		Comment
Duray, Jim	Closed	Low	Comment

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1274.10110	Closed	Status of old incidents

Description

FROM: rmbest DATE: 7/9/1999 11:27 AM

The IDOT standard Parapet can not be modeled adequately by the current Input screen. Additional horizontal fields are required. Parapet description has been sent in previously.

FROM: rmbest DATE: 7/27/1999 11:29 AM

Complete Issue Information

I see that this has been suspended. Can you explain?

FROM:kkennelly DATE:03/29/2000 10:28:48
Duplicate of 1167

Issue ID: 1274
Subject: Status of old incidents

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	7/9/1999 4:23:59 PM
Modified By: administrator	6/19/2008 3:59:32 PM
Priority: Low	
Category: Comment	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 7/9/1999 11:25 AM

4/19/2016 3:13:02 PM

HRS AASHTO

130

Complete Issue Information

I have the following unresolved incidents left. Some of them are very old. Are they going to be addressed or am I to quit reviewing them for solutions?

- Resubmit – 142, 378, 951, 956
- ReOpen – 164, 570
- Open – 569
- Investigation – 698
- Development - 919 printing problems
- Assigned - 247, 338

FROM:jduray DATE:07/20/1999 11:30:35
 Bugs will be scheduled to be fixed based upon their seriousness. Serious ones may warrant an intermediate release. Others will be fixed during development and testing of future versions, i.e., many are being addressed during concrete development.

Enhancements will be added based on TF approval and funding.

FROM: dteal DATE: 8/6/1999 2:26 PM

See Incident #1326
 FROM: dteal DATE: 8/13/1999 1:42 PM
 These have not been resolved yet?

FROM:jduray DATE:09/01/1999 16:29:38
 All incidents listed above have been reviewed and their status changed to match what is listed above or corrected based upon their current status. There is not need to keep this incident open since all it does is list the status of other incidents.

Issue ID: 1275
Subject: Sectors break too close to a tenth point

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	7/9/1999 4:24:44 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	

Complete Issue Information

	Open		
	Duplicate		Comment
Martin, Ed	Assigned	High	
Duray, Jim	Information Needed		
Duray, Jim	Information Needed	High	Bug Unknown

Contacts

Name	Company	Email 1	Phone 1
Shyam Shah	Louisiana DOTD	sshah@dotdmail.dotd.state.la.us	225-379-1329
Ed Martin	Michael Baker Jr., Inc.	emartin@mbakercorp.com	(304) 769-2126

Documents

Name	Resource Identifier	Description
	013420xs.dat	
	#013420a.dat	

Tasks

Name	Current State	Summary
1321.10064	Information Needed	BRASS Import HINGE command

Description

FROM: rmbest DATE: 7/9/1999 11:31 AM

Section breaks too close (.099') to a tenth point are not permitted by BRASS. User will get an analysis error "Element too small". The user will have to change the location of section breaks that fall that close to a span tenth point. This means that the model in the database will not represent the plans perfectly. This is very undesirable.

FROM:kkennelly DATE:7/2/01 9:13:52 AM

Duplicate of 745

FROM:bgoodrich DATE:08/10/2001 18:45:40

This is a duplicate of 545 also.

Issue ID: 1321
Subject: BRASS Import HINGE command

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	7/26/1999 12:04:09 PM
Modified By: hlee	10/26/2012 1:21:03 PM
Priority: High	
Category: Unknown	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	New	High	
	Assigned		
	Not Reproducible		
Goodrich, Brian	Not Reproducible	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1323.10062	Not Reproducible	BRASS export problem with stiffeners.

Description

FROM:jbosch DATE:07/26/1999 07:59:19

BRASS we use the HINGE command. We enter the point which we are interested into the 3rd and 4th parameters. However, VIRTIS codes ours hinge points into the 1st and 2nd parameters. This causes very low ratings. Since we are trying to import many BRASS files into VIRTIS which contain special analysis points this is a big problem. Is there another way to enter special analysis points in VIRTIS.

Ed - It seems like we are not handling this correctly. The way he describes their BRASS file Hinge command they are specifying an additional analysis point, not a hinge. Do interpret that to be a hinge?

FROM: emartin DATE: 8/2/1999 3:31 PM

Please provide an input file. The sample files I have do not add hinges from parameter 3 or 4 data of the HINGE command.

4/19/2016 3:13:03 PM

HRS AASHTO

133

Complete Issue Information

Issue ID: 1323
Subject: BRASS export problem with stiffeners.

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	7/26/1999 12:14:45 PM
Modified By: administrator	6/19/2008 3:59:29 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:07/26/1999 08:13:38

Stiffener command bug in VIRTIS...

Single plate stiffeners are coded as double plate stiffeners in the BRASS data file when both types are used on the same span. Also, the distances are different in the BRASS data file than those that were entered into VIRTIS.

Finally, the schematic view of the girder is incorrect. Double plate stiffeners are not colored as noted

4/19/2016 3:13:03 PM

HRS AASHTO

134

Complete Issue Information

on the screen.

FROM: bgoodrich DATE: 8/18/1999 9:57 AM

I am unable to reproduce this incident. I need a specific example that causes this problem to effectively determine if there is indeed a problem. Note that the BRASS schedule commands use a stiffener spacing applied over a range, instead of the Virtis/Opis method of defining actual stiffener locations. If there are double-sided stiffeners at the cross frame locations with several single-sided stiffeners in between the cross frames, the double-sided stiffeners may just be merged into a range of single-sided stiffeners.

Issue ID: 1324
Subject: Point loads when importing into VIRTIS...

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Duray, Jim	7/26/1999 12:15:26 PM
Modified By: administrator	6/19/2008 3:59:29 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Martin, Ed	Assigned	High	
	Suspended	Medium	Enhancement
Martin, Ed	Suspended	Medium	Enhancement

4/19/2016 3:13:03 PM

HRS AASHTO

135

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1326.10059	Assigned	Incidents brought up at the User Group Mtg.

Description

FROM:jduray DATE:07/26/1999 08:15:03
Point loads when importing into VIRTIS...
Point loads do not import into VIRTIS from BRASS.

Issue ID: 1326
Subject: Incidents brought up at the User Group Mtg.

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	7/26/1999 4:41:19 PM
Modified By: administrator	6/19/2008 3:59:29 PM

4/19/2016 3:13:03 PM

HRS AASHTO

136

Complete Issue Information

Priority: Medium
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Urgent	
	Information Needed		
	Assigned		
	Closed		
Duray, Jim	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1327.10058	Closed	Access Privileges

Description

FROM: dteal DATE: 7/26/1999 11:45 AM

Three Items that were brought up at the User Group Mtg that have already been submitted or resubmitted.

#164 – (ReOpen) During a Design Review, the lower left corner where it usually states “Press F1 for Help” states “Rating in Progress”.

#378 – (Resubmit) Travelway is not dimensioned but the out to out width of the bridge is dimensioned twice.

#919 – (Development) Not able to view or print or view the second page of the schematic.

Complete Issue Information

Issue ID: 1327
Subject: Access Privileges

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	7/26/1999 5:08:15 PM
Modified By: administrator	6/19/2008 3:59:28 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 7/26/1999 12:11 PM

Using defaults settings (as sent):

Under "Bridge Description", a design engineer has read, write, create and delete privileges. The design engineer should be able to alter the Bridge Description data as stated in the privileges window. So I opened up training bridge #1 and alter the location. I selected OK. I opened up the same window to verify that it was changed, OK. I then selected SAVE. I got a system error message window that simply stated "Unable to Save Bridge Data". This window should of at least stated why – that user is not authorized or something. According to the privileges listing I should have been able to save this. If I did not have privileges to save, then the data fields should have been grayed out and not let me change them?

Then when trying to exit the bridge I am again asked if I would like to save the changes, as if it where going to let me NOW save them.

Is this normal?

4/19/2016 3:13:04 PM

HRS AASHTO

138

Complete Issue Information

FROM:jduray DATE:07/30/1999 08:20:01

I believe this is normal...did you figure out why you couldn't save? If you don't have privilege to create or write the BWS opens in read-only mode and nothing can be changed. I suspect this problem is not related to privileges.

FROM: dteal DATE: 8/6/1999 11:07 AM

I had a misunderstanding of PRIVILEGES, disregard that part.
The system error message (Unable to Save Bridge Data) was no help – it should have stated something to the effect (User is not authorized to save changes – Unable to Save Bridge Data).

FROM:jduray DATE:11/24/1999 09:13:32

Need to improve the error message.

Issue ID: 1328
Subject: Checkin/Checkout

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	7/26/1999 5:10:12 PM
Modified By: administrator	6/19/2008 3:59:28 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Urgent	
	Information Needed		
quinn, r	Assigned		
Ihnat, Joseph		High	
	On Hold		
	Closed		
Ihnat, Joseph	Closed	High	Bug

Contacts

4/19/2016 3:13:04 PM

HRS AASHTO

139

Complete Issue Information

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1332.10053	Not Reproducible	Bridge ID Field, Rename

Description

FROM: dteal DATE: 7/26/1999 12:14 PM

I have tried to do this without any success.

I highlighted a bridge to checkout. I pulled down the Bridge menu, checkin/checkout are not highlighted (unavailable).

Where have I gone wrong?

FROM: gbarnhill DATE: 7/29/1999 8:12 AM

I talked to Dean about this. He has not enabled the Checkin/Checkout feature. I suggested he wait for release 2.1.

FROM: jduray DATE: 07/30/1999 08:17:56

Dean - do you need to enable Checkin/Checkout? If so I can send you a utility to do so? We are considering making the utility available on the web page.

FROM: dteal DATE: 8/5/1999 3:47 PM

Is the only way to enable Checkin/Checkout by running a utility? If so, I guess we need it. Or should we wait for 2.1 to be released like Gale suggested? We will start training soon, when we get up and running we will need it enabled for sure.

FROM: jduray DATE: 08/12/1999 07:56:50

Rick - I would like for you to show me and Bill how to add this utility to the web page.

FROM: jduray DATE: 11/24/1999 10:14:36

Joe - we need to add the BridgeWareAdmin program to the downloads web page.

FROM: jihnat DATE: 12/02/1999 16:33:57

This is shipped on the CD-ROM.

FROM: dteal DATE: 3/17/2000 2:58 PM

FROM: jihnat DATE: 03/17/2000 16:04:56

Accepted by dteal.

Complete Issue Information

Issue ID: 1332
Subject: Bridge ID Field, Rename

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	7/27/1999 5:16:32 PM
Modified By: administrator	6/19/2008 3:59:28 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	Closed		
Duray, Jim	Closed	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1333.10052	Closed	Access Privileges, Delete

Description

FROM: dteal DATE: 7/27/1999 12:15 PM

Went to edit the Bridge ID - Current ID was "TEST" and wanted to replace it with "NewBridge" (without the " "). So I highlighted TEST and pressed delete. Started typing in NewBridge but could only go as far as 4 letters. In order to get the new 9 letter ID in I had to highlight 9 characters worth of space and press delete.

FROM:jihnmat DATE:07/30/1999 11:33:07

I'm unable to reproduce this. It sounds as if the original ID may have been "TEST" with spaces

4/19/2016 3:13:04 PM

HRS AASHTO

141

Complete Issue Information

trailing to the maximum length for this field. If the ID was only "TEST", it would not be possible to highlight 9 characters worth of space. How did the ID appear in the BWS tree? As "TEST" or as "TEST "?

FROM: dteal DATE: 8/6/1999 11:06 AM

(First Sentence) – There where no spaces trailing TEST, it occupied 4 spaces. When I changed the ID name to TEST, I put the cursor in the ID field and pressed end, then I backspaced to the beginning of the field and entered TEST.

(Second Sentence) – If the 4 letter word TEST is in the Bridge ID field, you can highlight more than the 4 characters (press left mouse button and drag across the field). This is the only way I can enter more characters than were previously there.

(Third Sentence) – It appeared as “TEST “

FROM: dteal DATE: 8/9/1999 8:53 AM

FROM: jduray DATE: 11/24/1999 10:05:09

I can not reproduce this. I followed the steps described above and was able to type "NewBridge" plus more.

Issue ID: 1333
Subject: Access Privileges, Delete

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	7/27/1999 5:31:19 PM
Modified By: administrator	6/19/2008 3:59:28 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Complete Issue Information

Description

FROM: dteal DATE: 7/27/1999 12:34 PM

Is there any combination of access privileges that would allow the User (designer or rater) to be able to copy bridge(s) to a folder without having delete privileges. Any way I have tried, delete & remove from folder are always (on or off) together.

I want the user to be able to create, copy and remove without being able to delete from the master list of bridges.

FROM: dteal DATE: 7/28/1999 12:59 PM

OK – I can separate the Delete & Remove from folder.

FROM: dteal DATE: 8/6/1999 11:11 AM

This incident should be listed as RESOLVED or CLOSED

Issue ID: 1341

Subject: Access Privileges - Bridge Folder

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

7/28/1999 7:58:29 PM

Modified By: administrator

6/19/2008 3:59:27 PM

Priority: High

Category: Bug

History

4/19/2016 3:13:05 PM

HRS AASHTO

143

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Duray, Jim	New	High	
	Resolved		
	Suspended		
	Assigned		
Ordoobadi, Mehrdad	Resolved		
Kennelly, Krisha	Open		
	Resolved		
	Closed		Enhancement
Kennelly, Krisha	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1342.10043	Closed	Personal Folders - Access Privileges

Description

FROM: dteal DATE: 7/28/1999 3:01 PM

I have the WRITE privilege set to NO. The copy & paste function appear to be available (not grayed out). It leads the user to believe that the two functions work.

FROM:jduray DATE:11/24/1999 09:00:53

With Bridge Folder write privilege set to NO I was not able to copy a bridge to a folder. That is correct behavior.

Bridge list controls copy and paste of bridges. With Bridge List create privilege set to NO I was not able to copy (correct behavior) but I the copy toolbar button was enabled (it shouldn't be).

FROM:jduray DATE:10/03/2000 09:11:52

The button should be enabled so the user can add a bridge to a folder.

Complete Issue Information

Issue ID: 1342
Subject: Personal Folders - Access Privileges

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	7/28/1999 8:00:08 PM
Modified By: administrator	6/19/2008 3:59:27 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
Kennelly, Krisha	Resolved		
	Accepted		Bug
	Closed		
Kennelly, Krisha	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1343.10042	Closed	Access Privileges – some functions appear to be available

Description

FROM: dteal DATE: 7/28/1999 3:03 PM

1. After you copy a Bridge from "All Bridges" I would like to rename it in my personal folder without renaming both of them. The SAVE AS function never seems to be available.

4/19/2016 3:13:05 PM

HRS AASHTO

145

Complete Issue Information

2. Would like to allow designers/raters to remove bridges from there personal folders and not be able to delete any folders belonging to somebody else. Or be able to remove bridges from folders that belong to somebody else.

FROM:jduray DATE:07/30/1999 08:08:19

Please refer to the help on this topic...When you copy a bridge you must rename it because the names must be unique. If you are simply adding a bridge to a folder but not copying it, they cannot have different names because they are the same bridge. Remember, bridges copied to folders are just references or short-cuts to the original bridge. Use Copy if you want another copy of the bridge.

FOLDERS AND BRIDGES ARE NOT PERSONAL at this time!

FROM: dteal DATE: 8/6/1999 11:09 AM

The USER should have personal folders that only the User and the Administrator or Manager can manipulate (delete).

FROM:kkennelly DATE:03/29/2000 10:03:13

FROM:jduray DATE:04/18/2000 08:49:21

This was approved by the TF 4/13/00.

FROM:jduray DATE:05/01/2000 10:01:57

Database changes for this enhancement:

Add two columns to abw_group:

private_ind char(1) Nullable

owner_id smallint Nullable foreign key to abw_person:person_id

FROM:mordoobadi DATE:05/01/2000 11:47:11

ERWin model updated.

FROM:mordoobadi DATE:05/01/2000 13:56:54

Database updated.

FROM:mordoobadi DATE:05/02/2000 13:40:46

Finished

FROM:jduray DATE:05/04/2000 13:57:22

GUI changes are complete.

Krishna - Please modify the Help. We can discus so you know what to add.

FROM:kkennelly DATE:09/05/2000 15:28:03

Help updated for Version 4.0

Issue ID: 1343

Subject: Access Privileges – some functions appear to be available

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	7/28/1999 8:01:13 PM
Modified By: administrator	6/19/2008 3:59:27 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Information Needed		
	Assigned		
	Not Reproducible		
Ihnat, Joseph	Not Reproducible	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1344.10041	Not Reproducible	Bridge Description (Cont'd)

Description

FROM: dteal DATE: 7/28/1999 3:04 PM

If the bridge description has no write privileges, and you select the button to create a new bridge, you can't put data in the description window, but the tree is still available under it. The new bridge button should not have been available to start with.

FROM:jduray DATE:11/24/1999 08:57:08

Need to disable the New Bridge button if no Bridge Desc. write privilege.

FROM:jduray DATE:10/03/2000 09:15:43

4/19/2016 3:13:06 PM

HRS AASHTO

147

Complete Issue Information

Change Help - summary of Access Privileges. Bridge Description Write privilege is also required to create a new bridge.

Bridge DDescription Write privilege should read:

Allows you to save the Bridge Workspace to the database. Also required to create a new bridge, checkout and check-in a bridge or structure definition and to add new parts to a bridge.

FROM:kkennelly DATE:10/17/2000 14:03:23

Help modified for 4.0

FROM: dteal DATE: 11/15/2000 1:30 PM

Issue ID: 1344
Subject: Bridge Description (Cont'd)

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	7/29/1999 3:39:17 PM
Modified By: administrator	6/19/2008 3:59:27 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 7/29/1999 10:43 AM

I selected NHS Indicator as -1 for Unknown or -2 for Not Applicable, Applied or OK, then saved. Reopen the Bridge Description (Cont'd) tab and the NHS indicator field is blank.

FROM:jduray DATE:07/30/1999 08:07:51

Joe - can we get this fixed for 2.1?

Complete Issue Information

FROM:jihnna DATE:07/30/1999 13:11:39

I'm unable to reproduce this. Had you made any changes in the Parameters table? Can you successfully save any of the other possible values for NHS Indicator (e.g. "On the NHS" or "Not on NHS")?

FROM:dteal DATE: 8/6/1999 11:05 AM

0 for "Not on NHS & 1 for On the NHS work fine (both positive numbers). Try use a negative number (-1 or -2) for Unknown and NA.
Negative values will not work.

FROM:jduray DATE:11/24/1999 10:02:42

I'm unable to reproduce this.

Issue ID: 1345
Subject: New Bridge Workspace

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	7/29/1999 3:40:04 PM
Modified By: administrator	6/19/2008 3:59:27 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
	Accepted		
	Closed		Comment
Duray, Jim	Closed	High	Comment

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1346.10039	Duplicate	Improvements Needed to the Access Privileges

Description

FROM: dteal DATE: 7/29/1999 10:44 AM

When creating a New Bridge Workspace, in the Description tab, Route #, Admin. Area & Functional Class defaults to a -1 instead of a blank field. Shouldn't they all be blank?

FROM: jduray DATE: 07/29/1999 15:05:41

These fields come from Pontis and Pontis requires a value.

Issue ID: 1346

Subject: Improvements Needed to the Access Privileges

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

7/29/1999 4:28:51 PM

Modified By: administrator

6/19/2008 3:59:27 PM

4/19/2016 3:13:06 PM

HRS AASHTO

150

Complete Issue Information

Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
Duray, Jim	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
Tim Schwagler	North Dakota DOT	tschwagl@state.nd.us	701-328-4421

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1352.10033	Resolved	RATING AT ALL POINTS OF INTREST

Description

FROM: dteal DATE: 7/29/1999 11:30 AM
Bear with me and follow the logic.

With Bridge Description Delete allowed – User can delete any bridge from the “All Bridges” to the Deleted Bridges folder. Where an administrator or manager can control there removal.

With Bridge Folders Delete allowed – User is allowed to remove any bridge from any folder (except All Bridges) plus remove any folder. User could remove an entire directory tree. Not a good idea!

With Bridge List Delete allowed – User is allowed to delete a bridge from “All Bridges” and not from any other folders. User is also allowed to empty or delete the contents of the Deleted Bridge Folder. Also not a good idea!

The big problem here is in the Bridge Folders Delete allowed. The user needs to maintain (clean up) his own folders. Included in that privilege is the ability to delete ANY or ALL folders. The user doesn't need global access to the folders. He should only be able to do maintenance on his own folders. Along with that should be a “delete” that is not global. Should only be able to delete something he created, not some existing bridge from the database.

FROM: gbarnhill DATE: 7/29/1999 1:26 PM

4/19/2016 3:13:06 PM

HRS AASHTO

151

Complete Issue Information

This somewhat goes along with the Nashville discussion of "Global folders" and "User folders". Perhaps we should think about being able to enable Checkin/Checkout at the folder level as well as per bridge.

FROM:jduray DATE:07/29/1999 15:03:20
The user doesn't own a folder. All folders are global.
We need to give ownership of folders to users.

FROM: dteal DATE: 8/5/1999 3:55 PM
Exactly, that's the problem. If you give a user access to folders (read/write/delete) so he can manage what's in his folder, than he can also do a delete on another users stuff. That's no good!!

FROM:jduray DATE:01/07/2000 16:56:05
Consider adding two columns to abw_group.
Add private_group_ind and person_id. Only use these if the group is a folder (of bridges). Folders could be private or public (using private_group_ind). If private then only the owner can see it and modify it. If public then all can see but only the owner can modify. Folders where both are NULL are public and cannot be modified (like All Bridges).

FROM:jduray DATE:01/12/2000 10:05:03

FROM:jduray DATE:5/22/02 9:05:09 AM
Duplicate of 1342.

Issue ID: 1352
Subject: RATING AT ALL POINTS OF INTREST

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Schwagler, Tim	7/30/1999 8:01:45 PM
Modified By: administrator	6/19/2008 3:59:27 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
1353.10032	Duplicate	Printing girder profiles

Description

FROM: tschwagler DATE: 7/30/1999 3:04 PM

CAN WE GET THE RATING RESULTS FOR ALL POINTS OF INTREST SPECIFIED?

FROM:jduray DATE:08/02/1999 12:49:12

Yes, you need to specify a Point of Interest where you would like rating results or you can specify for the Member Alternative on the Engine tab for BRASS LFD for POI Control the following: "Generate pointsof interestat all tenth points...".

Issue ID: 1353

Subject: Printing girder profiles

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Schwagler, Tim

8/2/1999 2:23:10 PM

Modified By: administrator

6/19/2008 3:59:27 PM

Priority: High

4/19/2016 3:13:07 PM

HRS AASHTO

153

Complete Issue Information

Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Assigned	High	
	Resolved		
Kennelly, Krisha	Resolved	High	Comment

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1360.10025	Resolved	Structure Framing Plan Details - diaphragm spacing

Description

FROM: tschwagler DATE: 8/2/1999 9:24 AM

When printing the girder profile from the (Schematics: Profile View) window the only print you can get is from the left end of the profile. If you are zoomed in on the right end of the profile and try to print you get a zoomed in print but of the left end of the profile.

FROM:kkennelly DATE:03/31/2000 08:44:58
duplicate of 919

Complete Issue Information

Issue ID: 1360 Subject: Structure Framing Plan Details - diaphragm spacing

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Vire, Dennis	8/9/1999 12:16:30 PM
Modified By: administrator	6/19/2008 3:59:26 PM
Priority: High	
Category: Comment	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:08/09/1999 07:54:40
The following was copied from an e-mail fro dvire:

As I was entering a bridge into VIRTIS, I came upon a small problem.

The bridge is a steel multibeam, skewed, simple span.

While entering the diaphragm spacing under "Structure Framing Plan Details", I am confronted by a message stating "End Distance is 62.5000 ft. Beam Length is 63.0000 ft. Do you want to change the spacing? Yes No."

If I choose "No", VIRTIS will not allow me to apply the diaphragm spacings as input. It once again displays the message stated above. If I choose "Yes", VIRTIS modifies the diaphragm spacing, which does not accurately model the structure.

4/19/2016 3:13:07 PM

HRS AASHTO

155

Complete Issue Information

Evidently the "No" option does not point to the appropriate line in the code to allow a bypass of this check.

FROM:kkennelly

I think it's working ok but it's just annoying.

If he hits Apply, Validate() will tell him the distance is 62.5' twice in a row. Once for the left girder and once for the right girder of the bay. If he answers No to these and then hits OK to close the window, Validate() tells him twice again, once for the left girder and once for the right girder. If he answers No to change the spacing these 2 times, the window will close and save the distance of 62.5' like it should.

I think I would have to save some kind of flag to not show the warning again after it is displayed on Apply and the user hits No.

Or I could add to the message which girder (left or right) the message applies to. That would make the appearance of two messages seem more warranted and not look like a code error.

FROM:jduray DATE:08/09/1999 08:16:23

FROM:jduray DATE:08/17/1999 10:42:28
I like option 2 above.

FROM:kkennelly DATE:08/18/1999 10:32:29
Fixed with Option 2, message now states to which girder the message applies.

Issue ID: 1364
Subject: Height of Rows

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 8/9/1999 3:18:00 PM
Modified By: administrator 6/19/2008 3:59:26 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		

Complete Issue Information

Duray, Jim	Suspended	High	Enhancement
Ordoobadi, Mehrdad	Assigned	High	Enhancement
	Resolved		
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1366.10019	Resolved	Folder Properties - incorrect units displayed

Description

FROM: VVinayagamoorthy DATE: 8/9/1999 8:20 AM

I am wondering whether we could have the options to save user preferred' height of rows (Just like the user has the preference in saving his/her column width.)

FROM: jduray DATE: 08/09/1999 14:35:25

It is possible to do this.

Issue ID: 1366
Subject: Folder Properties - incorrect units displayed

Folder: /Virtis/Support Center
Primary Contact: Ordoobadi, Mehrdad
Submitted By: Duray, Jim
8/9/1999 6:22:14 PM

4/19/2016 3:13:08 PM

HRS AASHTO

157

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:26 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Kennelly, Krisha	Assigned		
	Resolved		Enhancement
	Closed		
Kennelly, Krisha	Closed	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
susan hida	Caltrans	susan_hida@dot.ca.gov	916-227-8738

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1372.10013	Closed	diaphragm wizard--please list out all diaphragms

Description

FROM:jduray DATE:08/09/1999 14:18:59

The Folder Properties dialog should display Mi/Km post consistent with the tollbar units.

I created a folder for a route based on mile posts. The query was successfully executed and the folder was created. When I viewed the Folder Properties the dialog text was "mi Post..." but the values were km.

FROM:mordoobadi DATE:08/09/1999 14:23:02

Fixed for both 2.1 and 3.0.

FROM:mordoobadi DATE:08/20/1999 13:35:26

The release build (2.1 beta 2) is verified and it works OK.

4/19/2016 3:13:08 PM

HRS AASHTO

158

Complete Issue Information

Issue ID: 1372
Subject: diaphragm wizard--please list out all diaphragms

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Generated, shida	8/10/1999 6:12:50 PM
Modified By: administrator	6/19/2008 3:59:25 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

I would find it very helpful if all diaphragms were listed out when the wizard is used. Two reasons:
1) this list could be used next to that for stiffeners so that stiffeners and diaphragms are correctly located wrt each other

2) one could go back and edit cases where spacing 'S' isn't equal

FROM: shida DATE: 8/10/1999 11:15 AM

FROM: jduray DATE: 08/11/1999 16:16:44

Krisha - let's discuss this.

FROM: kkennelly DATE: 5/17/01 1:06:45 PM

A button was added to the Stiffener Ranges window to let you place stiffeners at the diaphragms.

4/19/2016 3:13:08 PM

HRS AASHTO

159

Complete Issue Information

Issue ID: 1374

Subject: Member Alternative Description: Description

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

8/10/1999 6:17:31 PM

Modified By: administrator

6/19/2008 3:59:25 PM

Priority: High

Category: Help

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
Duray, Jim			
Kennelly, Krisha	Resolved		
	Accepted		
	Closed		

4/19/2016 3:13:08 PM

HRS AASHTO

160

Complete Issue Information

Kennelly, Krisha	Closed	High	Help
------------------	--------	------	------

Contacts

Name	Company	Email 1	Phone 1
susan hida	Caltrans	susan_hida@dot.ca.gov	916-227-8738

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1375.10010	Suspended	diaphragm wizard--possible to highlight entire bay and delete at once, rather than line-by-line?

Description

FROM: dteal DATE: 8/10/1999 1:21 PM

I have a question about Additional Self Wt % that is not spelled out in help. % of what? (Help states, percentage of the member) Is this percentage of the GIRDER alone or percentage of the GIRDER + CONCRETE?

FROM: rmbest DATE: 8/10/1999 2:34 PM

We always assumed that it was percentage of steel girder alone, and think that is what it should be. The percentage should be for additional steel weight, such as diaphragms, plates, etc. In incident # 1272, I noted that it does not appear the weight of additional steel, added in the form of a percent, is included in DL1. At least we weren't seeing an increase in the moments.

FROM: dteal DATE: 8/10/1999 3:01 PM

Right above that there is Additional wt in Force per unit length.
 ?Is this acting on one girder (effective width)?
 ?Is this acting on the total width fo the deck?
 I think Help should be a little clearer here.

FROM: jduray DATE: 08/11/1999 16:14:18

Brian - how did you implement this in the export. I can add to further explanation to the help.

FROM: bgoodrich DATE: 8/12/1999 8:27 AM

The Additional Self Wt % and force/length is intended to adjust the bare girder self-weight. Check the girder self-weight load case for the contribution to these increases, not dead load group 1. Note that this load is applied on the member alternative, which is a single girder, so the load adjustment should be entered for one girder only.

FROM: jduray DATE: 11/24/1999 11:30:21

Krishna - add to Help

FROM: kennelly DATE: 12/01/1999 09:25:31

4/19/2016 3:13:08 PM

HRS AASHTO

161

Complete Issue Information

Added to 3.0's help.

FROM:jihnat DATE:12/27/1999 08:13:34

Accepted by dteal via email.

Issue ID: 1375
Subject: diaphragm wizard--possible to highlight entire bay and delete at once, rather than line-by-line?

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, shida	8/10/1999 6:19:17 PM
Modified By: administrator	6/19/2008 3:59:25 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

diaphragm wizard--possible to highlight entire bay and delete at once, rather than line-by-line?

FROM: shida DATE: 8/10/1999 11:22 AM

Complete Issue Information

Issue ID: 1390
Subject: Deck Profile – Questions

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/11/1999 4:11:49 PM
Modified By: administrator	6/19/2008 3:59:24 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Open		
	On Hold		
	Resolved		
	Closed		Bug
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

4/19/2016 3:13:09 PM

HRS AASHTO

163

Complete Issue Information

Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
-----------	-----------------------------------	----------------	---------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1397.9988	Duplicate	Column titles

Description

FROM: dteal DATE: 8/11/1999 11:16 AM

Deck Concrete – will Opis calculate the Modular Ratio, n for the user or do we have to calculate one and enter it?

Reinforcement – Will Opis calculate a stiffness for the deck using AASHTO min. requirements or do we have enter some re-steel.

If Opis does these for me, how would the user know? Is there some place to look to find out what items Opis calculates if left blank (or can be over ridden by the user)? If yes, where? Any new user would automatically assume that if the field is blank with out any other explanation that he would have to enter something. This defeats the purpose of many of the software's features.

FROM: jduray DATE: 08/11/1999 15:58:19

The ending export (the log file created during a Brass analysis) should tell you these things.

FROM: dteal DATE: 8/11/1999 3:40 PM

I think you missed the point. When a user is entering data, nothing has been run yet. Also, checking the log file can certainly be a problem for a user that is not up to speed with BRASS commands.

FROM: dteal DATE: 3/17/2000 3:30 PM

See 1507

FROM: jduray DATE: 03/23/2000 08:56:26

Refer to the Engine-Related Help for the Deck Profile/Deck Concrete window.

FROM: dteal DATE: 3/24/2000 8:29 AM

Issue ID: 1397
Subject: Column titles

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: fulton, keith	8/12/1999 2:22:15 PM

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:24 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	Not Reproducible		
Duray, Jim	Not Reproducible	High	Bug

Contacts

Name	Company	Email 1	Phone 1
keith fulton	Wyoming DOT	kfulto@state.wy.us	(307)777-3950

Documents

Name	Resource Identifier	Description
	jql.bbd	

Tasks

Name	Current State	Summary
1399.9986	Not Reproducible	View schematic

Description

FROM: kfulton DATE: 8/12/1999 8:25 AM

When defining new materials in the library module the columns read 'modulus of' and are missing elasticity.

Also several screens dont have a unit of measure on them. They include girder profile, span length and uniform loads in the wizard.

FROM:jihnmat DATE:08/13/1999 14:09:40

Duplicate of 1387. (Fixed.)

Complete Issue Information

Issue ID: 1399
Subject: View schematic

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: fulton, keith	8/12/1999 2:32:22 PM
Modified By: administrator	6/19/2008 3:59:24 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: kfulton DATE: 8/12/1999 8:32 AM

This may be a Windows 95 problem. When i try to view the girder profile or framing plan schematics, I can only get small length structure to view properly. So far, for any structures over three spans, I can only see the first span and part of the second. I can not get the third span to show up. The schematic I can see is not correct. If I try to change the magnification, all I get is a blank screen.

FROM:jduray DATE:11/24/1999 08:53:32

Could not reproduce this on NT.

Complete Issue Information

Issue ID: 1400
Subject: Adding Stiffeners

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: fulton, keith	8/12/1999 2:35:00 PM
Modified By: administrator	6/19/2008 3:59:24 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Not Reproducible		
Ihnat, Joseph	Not Reproducible	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
keith fulton	Wyoming DOT	kfulto@state.wy.us	(307)777-3950

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1401.9984	Resolved	Long. stiffeners

Description

FROM: kfulton DATE: 8/12/1999 8:38 AM

When adding a large number of stiffeners, the cursor always goes back to the top stiffener when the newor duplicate button is pushed. So every time you have to grab the slide bar and take it to the bottm so you can add the next stiffener.

When I finished inputting a long list of transverse stiffeners, I got a message that the length I input does not match the length of the beam, which it should not for a transverse stiffener.

FROM:jihnmat DATE:10/04/1999 15:17:12

I'm unable to reproduce this. Are you still seeing this problem in Version 2.1? I'm assuming you mean the Stiffener Ranges window since you mentioned the New and Duplicate buttons. Is this correct?

Issue ID: 1401

Subject: Long. stiffeners

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: fulton, keith

8/12/1999 2:39:38 PM

Modified By: administrator

6/19/2008 3:59:23 PM

Priority: High

Category: N/A

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
fulton, keith	Information Needed		
Ordoobadi, Mehrdad	Resolved		
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
keith fulton	Wyoming DOT	kfulto@state.wy.us	(307)777-3950

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1403.9982	Resolved	Printing

Description

FROM: kfulton DATE: 8/12/1999 8:43 AM

When adding longitudinal stiffeners, the new and duplicate buttons will not take the end distance from the previous stiffener and use it for the new start distance.

FROM:kkennelly DATE:08/17/1999 10:07:35

This is the behavior that we want.

We only fill in the start distance for a new row for items that have to be continuous along the length of the member (things like flanges, webs, etc.). Long stiffeners do not have to be continuous along the length of the member so we don't fill in the next start distance for the user.

Complete Issue Information

Issue ID: 1403
Subject: Printing

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: fulton, keith	8/12/1999 3:03:01 PM
Modified By: administrator	6/19/2008 3:59:23 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Goodrich, Brian	Assigned		
	Resolved		
Goodrich, Brian	Resolved	Low	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1408.9977	Resolved	Warning message

Description

FROM: kfulton DATE: 8/12/1999 9:06 AM

I cannot get the program to print the analysis properties or system error screens. When i hit the print button, I get the prompt screen to select the printer, properties, etc. but then nothing ever gets sent to the printer.

FROM:mordoobadi DATE:08/13/1999 12:55:46

Are you running windows 95? Please assign this incident back to me with your answer.

4/19/2016 3:13:10 PM

HRS AASHTO

170

Complete Issue Information

FROM:mordoobadi DATE:08/13/1999 13:07:46

Also see incident 216.

FROM: kfulton DATE: 8/13/1999 1:05 PM

I am using 95

FROM: kfulton DATE: 8/31/1999 1:43 PM

Using the latest version on a NT machine, I can get the printing to work.

Issue ID: 1408
Subject: Warning message

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: fulton, keith	8/12/1999 3:51:06 PM
Modified By: administrator	6/19/2008 3:59:23 PM
Priority: Low	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: kfulton DATE: 8/12/1999 9:53 AM

When the POI control is set to generate POI's at all tenth points a warning message is produced when rating that states that no points of interest are defined.

4/19/2016 3:13:11 PM

HRS AASHTO

171

Complete Issue Information

FROM: bgoodrich DATE: 8/17/1999 7:09 AM

The warning is no longer output when the condition described above is detected.

Issue ID: 1409
Subject: Members Window – Member 1, Member2, Etc.

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krisha
Submitted By: Teal, Dean 8/12/1999 4:11:19 PM
Modified By: administrator 6/19/2008 3:59:23 PM
Priority: High
Category: Help

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		

Complete Issue Information

Kennelly, Krisha	Resolved			
Duray, Jim	New	High		
	Assigned			
	On Hold			
	Suspended			Enhancement
Duray, Jim	Suspended	High		Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	BID 26.bbd	

Tasks

Name	Current State	Summary
1411.9974	Suspended	Profile schematic does not show steel girder profile beyond the CL brg.

Description

FROM: dteal DATE: 8/12/1999 11:15 AM

The Help for this window has one topic that doesn't belong.

"Deck concrete crack control parameter (z)"

This is not called for in this window. It does appear correctly in the Structure Typical Section and it's associated help screen.

FROM: kkennelly DATE: 11/30/1999 09:38:12

The Help for this item states "This is available for a girder line only." The z parameter only shows up in this window if it is a girderline member since girderlines don't have a Structure Typical Section window.

FROM: jihnat DATE: 12/27/1999 08:10:14

Accepted by dteal via email.

Issue ID: 1411
Subject: Profile schematic does not show steel girder profile beyond the CL brg.

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/12/1999 4:13:01 PM
Modified By: administrator	6/19/2008 3:59:23 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Martin, Ed	Assigned		
Ordoobadi, Mehrdad	Resolved		
	Accepted		
	Closed		
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1412.9973	Closed	BWS Report

Description

FROM: dteal DATE: 8/12/1999 11:17 AM

In the member window I have values for the End Bearing Locations as Lt = 350 mm & Rt = 200 mm. According to the help file, this X distance (girder overhang) is from the centerline of bearing to the end of the girder. My left span was 35 m centerline to centerline of bearing. The left span + girder overhang is then 35.350 m. The view shows the 2 pair of stiffeners correctly with there offsets, but the girder stops at the centerline of bearing and does not extend out the actual end of the girder. Should it show in the view this extension?

FROM:jduray DATE:1/5/01 12:02:41 PM

4/19/2016 3:13:11 PM

HRS AASHTO

174

Complete Issue Information

It seems appropriate to show the complete steel profile.

FROM:dteal DATE:Tuesday, April 02, 2002 3:21:45 PM
Look at the left end of girder line #2 for an example

Issue ID: 1412
Subject: BWS Report

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	8/12/1999 5:13:17 PM
Modified By: administrator	6/19/2008 3:59:23 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/12/1999 12:17 PM
After an analysis I checked the BWS Report and found and in the Deck Profile area that being the entire Material name was printed (17 characters), it shifted all the columns over so the data doesn't line up with the proper column headers.

FROM:jduray DATE:12/03/1999 11:23:36
Fix for Beta 3.

Complete Issue Information

FROM:mordoobadi DATE:01/26/2000 15:54:01

This happens when a text or number is bigger than expected. One solution is using tables instead of tab separated text.

FROM:mordoobadi DATE:02/15/2000 14:18:28

I wasn't able to find anything on how to do tables in a RichTextEdit control.

FROM:mordoobadi DATE:03/27/2000 11:26:08

Fixed.

FROM:mordoobadi DATE:04/19/2000 10:32:10

Accepted by Dean Teal.

Issue ID: 1415
Subject: Rating results

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: fulton, keith	8/12/1999 7:28:09 PM
Modified By: administrator	6/19/2008 3:59:22 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
	Resolved		
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

4/19/2016 3:13:12 PM

HRS AASHTO

176

Complete Issue Information

Name	Company	Email 1	Phone 1
keith fulton	Wyoming DOT	kfulto@state.wy.us	(307)777-3950
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1416.9969	Closed	Results Graph - Design Ratio < 1 but spec checks pass

Description

FROM: kfulton DATE: 8/12/1999 1:16 PM

I created a bridge that had three structures. One structure was a simple span, one was a two span, and the third was a three span. I rated the bridge from the bridge explorer and found the following. See attached files.

1) The bridge rating results gave the single controlling factor for the entire bridge. It would be nice to see which structure and location were this occurred.

2)When I view the structure rating results, I get the same rating factor for all structures, which happens to be the controlling factor for the bridge. Also the ratings are repeated three times for each structure. This screen should show the controlling factor for each structure and the location.

3)When i view the member rating results for each structure i again get the same rating factor (the controlling factor for the bridge) for each member and each one is repeated three times. For s1 g1 the first three results are for the controlling vehicle (hs20 truck, lane values are not shown) and the last six are from s2 g2 and s3 g3. Also the results screen has three sets of inv and opg columns with nothing to distinguish then from each other.

4) An enhancement I would like to see is that the results show the length and tenth point that controls the rating.

FROM:jduray DATE:08/13/1999 07:46:39

1) You can drill down to structure and member.

2) We will investigate this. (Mehrdad)

3) Same a 2.

4) This is an enhancement.

FROM:mordoobadi DATE:08/13/1999 11:43:29

Database view fixed. Fixed for both versions 2.1 and 3.0.

4/19/2016 3:13:12 PM

HRS AASHTO

177

Complete Issue Information

FROM:mordoobadi DATE:08/20/1999 13:35:04
The release build (2.1 beta 2) is verified and it works OK.

Issue ID: 1416
Subject: Results Graph - Design Ratio < 1 but spec checks pass

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Teal, Dean 8/12/1999 8:43:27 PM
Modified By: administrator 6/19/2008 3:59:22 PM
Priority: High
Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
	Resolved		
	Resubmit		
	Information Needed		Bug - BRASS
Duray, Jim	Closed	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:13:12 PM

HRS AASHTO

178

Complete Issue Information

FROM: dteal DATE: 8/12/1999 3:48 PM
Is it possible to pass all spec checks and still have a point on the Design Ratio graph less than 1?

FROM:jduray DATE:08/13/1999 07:45:39
This is scheduled for 3.0.

FROM: dteal DATE: 8/13/1999 7:40 AM
I'll take that as a yes.

FROM:jduray DATE:03/24/2000 13:35:39
This was done some time ago. Do you have an example that illustrates this?

FROM: dteal DATE: 4/7/2000 9:02 AM
With release version 3.0.0 I can not get a rating factor at all. See #2540 & #2541.

FROM:jduray DATE:04/07/2000 14:10:41
It works fine for me. Does it work for a LRFD analysis of TrainingBridge1? If it does then you must have something wrong with your data. A likely cause of this is not having POI specified.

FROM: dteal DATE: 4/7/2000 3:31 PM
TrainingBridge1 also works for me. When I select Rating Factor for the P/S structure from incident #2603 I don't get anything. I have POI's defined at the ends of all spans and at all mid spans.

FROM: dteal DATE: 11/16/2000 1:20 PM

FROM:jduray DATE:12/18/2000 10:39:33

FROM:jduray DATE:5/21/02 8:54:46 AM
I think this should be considered a bug not an enhancement. Is this still a problem?

FROM:dteal DATE:Monday, January 27, 2003 1:36:14 PM
No - I can't reproduce any of the problems I encountered earlier. Please close this incident.

Issue ID: 1424
Subject: what is "design ratio"

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krishna
Submitted By: Generated, shida 8/13/1999 6:44:16 PM
Modified By: administrator 6/19/2008 3:59:22 PM
Priority: High
Category: Help

History

4/19/2016 3:13:12 PM

HRS AASHTO

179

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Duray, Jim	New	High	
	Q/A		
Duray, Jim	Q/A	High	N/A

Contacts

Name	Company	Email 1	Phone 1
susan hida	Caltrans	susan_hida@dot.ca.gov	916-227-8738

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1425.9960	Q/A	Could LRFD dist. factors default to 1.0

Description

Could "design ratio" be defined somewhere? I looked in the "help" but couldn't find anything. Or is that a hover-thing you're doing later. In any event, that's terminology we're not used to using. (in tree for viewing analysis results)

FROM: shida DATE: 8/13/1999 11:45 AM

FROM:jduray DATE:08/16/1999 08:16:21

Brian - we need to define what this is supposed to represent. Can you give me the BRASS definition of this so I put it in the help somewhere?

FROM: bgoodrich DATE: 8/16/1999 9:48 AM

From the BRASS-GIRDER(LRFD) technical manual:

Design ratios are computed for stages in which live loads are not applied. A design ratio is computed using:

Design Ratio = A / B

where:

A = Total load resistance of the structure

B = Total load effect

The total load represents the combined factored action and the total load resistance represents a factored resistance.

FROM:kkennelly DATE:12/01/1999 09:43:27

Added to 3.0's help.

Issue ID: 1425

Complete Issue Information

Subject: Could LRFD dist. factors default to 1.0	
Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, shida	8/13/1999 6:48:01 PM
Modified By: administrator	6/19/2008 3:59:22 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Goodrich, Brian	Assigned		
	Resolved		
Goodrich, Brian	Resolved	Medium	Education

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1426.9959	Resolved	BID 8, input error or software?

Description

I tried to do a design run on several matrix bridges in your dataset, and they wouldn't run because the LRFD load distribution factor table hadn't been filled in. Could there be a default of 1.0? Those are needed results, anyhow, for LRFD substructure design.
FROM: shida DATE: 8/13/1999 11:50 AM

FROM:jduray DATE:08/16/1999 08:14:02
Bridges that are in the LFD folder are not complete for LRFD. Likewise for those only in the LRFD folder. Those that are in both work for both.

4/19/2016 3:13:13 PM

HRS AASHTO

181

Complete Issue Information

Issue ID: 1426
Subject: BID 8, input error or software?

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Generated, shida 8/13/1999 6:58:29 PM
Modified By: administrator 6/19/2008 3:59:22 PM
Priority: Medium
Category: Education

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

I ran BID 8 for design, and opened the graphical results. For moments, HL93 falls under Strength II (design ratio).
HL93 should never fall under Strength II unless you're in California where we're creating Strength II-LVR and Strength II-sub,

4/19/2016 3:13:13 PM

HRS AASHTO

182

Complete Issue Information

both of which have one lane of HL93 and one lane of permit. Is this a user error, or programming???
FROM: shida DATE: 8/13/1999 11:54 AM

FROM: bgoodrich DATE: 8/16/1999 9:55 AM
BRASS-GIRDER(LRFD) performs computations for Strength I-IV (no wind loads though). The user may turn off the output for limit states they would like to ignore by modifying the engine data output options on the Analysis Settings window (Engine tab).

Issue ID: 1428
Subject: results graph--scale

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Generated, shida 8/13/1999 8:33:50 PM
Modified By: administrator 6/19/2008 3:59:21 PM
Priority: Urgent
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ordoobadi, Mehrdad	Assigned		
Goodrich, Brian		Urgent	

4/19/2016 3:13:13 PM

HRS AASHTO

183

Complete Issue Information

	Resolved		
Goodrich, Brian	Resolved	Urgent	Bug
Duray, Jim	New	High	
	Q/A		
Duray, Jim	Q/A	High	N/A

Contacts

Name	Company	Email 1	Phone 1
susan hida	Caltrans	susan_hida@dot.ca.gov	916-227-8738

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1430.9955	Q/A	save analysis settings with each bridge?

Description

I ran BID #16, and the y-axis for moment was labeled without exponential notation i.e. 25000000000.00 rather than 2.5×10^{12} . Is this still in the works? Also, the graph was off of the top i.e. inappropriate scale was chosen.

FROM: shida DATE: 8/13/1999 1:36 PM

FROM:jduray DATE:08/17/1999 13:22:16

The values coming from BRASS appear to be incorrect. The output file prints *****.
Brian - please investigate this.

FROM:jduray DATE:08/17/1999 15:43:05

The problem seems to be a difference in the way the FORTRAN compiler optimizes the code for the release build vs the unoptimized debug build. The release build is generating erroneous results for this member.

FROM: bgoodrich DATE: 10/7/1999 11:42 AM

The GUI bug is due to incorrect results from the release build of BRASS. The debug version of BRASS will be distributed to address this issue in the short term. This issue will be investigated when BRASS funds are available and assigned to this task.

Issue ID: 1430
Subject: save analysis settings with each bridge?

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: Generated, shida	8/13/1999 8:50:34 PM
Modified By: administrator	6/19/2008 3:59:21 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Q/A		
Duray, Jim	Q/A	High	N/A

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1435.9950	Q/A	Library – Standard/Agency - Add capability to rename items in the standard folders

Description

If I run a bridge, close it, go on to another, and come back to the first, I still have to reset "design" and vehicle selection.

Is there a way to set "design" (as opposed to rating) so that it doesn't have to be set each time I do a run?

Designers rarely rate, and raters rarely design.

Also, could the vehicle selection be saved so that each time I run a bridge, I don't have to reopen the analysis settings window?

FROM: shida DATE: 8/13/1999 1:49 PM

FROM: jduray DATE: 08/16/1999 08:09:35

Read about templates in the Help.

Complete Issue Information

Issue ID: 1435
Subject: Library – Standard/Agency - Add capability to rename items in the standard folders

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/16/1999 3:02:32 PM
Modified By: administrator	6/19/2008 3:59:21 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/16/1999 10:07 AM

Can any editing be done to the standard library? Like edit a name or description.

There may be several names used in the standard library that an agency would have the same description for. If they could just rename the Item, there would be no need to add an Agency item to the data base.

Also, an agency may only want users (in-house or consultants) to have access to only the materials used by this agency. If we cannot edit the standard library items, then can we restrict access to Agency only materials?

4/19/2016 3:13:14 PM

HRS AASHTO

186

Complete Issue Information

FROM:jduray DATE:08/17/1999 08:31:35

I don't think we can allow the names to be changed in the standard folders. That would allow a user to rename a HS20 to HS25 or Joe's coal truck and that would not be correct. YOU can restrict access to agency library but not specifically to materials.

FROM: dteal DATE: 10/11/1999 10:59 AM

The user would not have privileges to change the names. That is left at the administrator or manager level.

Being we can't currently change a name, then how do you restrict the user to just the agency library without access to the standard library?

Issue ID: 1436
Subject: Bridge Explorer -Sorting folders

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/16/1999 6:27:30 PM
Modified By: administrator	6/19/2008 3:59:21 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
	Discard		Enhancement
	Resolved		
Duray, Jim	Resolved	High	Enhancement

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1445.9940	Suspended	Option to saving before running - add to preferences

Description

FROM: dteal DATE: 8/16/1999 1:28 PM

It appears that there is no auto-sort or manual sorting capabilities of the folders in the tree. All new folders are added to the bottom of the parent folder it's creating in.

FROM: dteal DATE: 8/17/1999 9:15 AM

What's the answer, is there any way to sort?????

FROM:jduray DATE:09/22/1999 14:31:57

There is no way to sort folders.

FROM: dteal DATE: 3/17/2000 3:37 PM

FROM:hlee DATE:4/30/2008 2:17:55 PM

FROM:dteal DATE:Tuesday, June 17, 2008 11:41:00 AM

Issue ID: 1445
Subject: Option to saving before running - add to preferences

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	8/23/1999 2:27:00 PM
Modified By: administrator	6/19/2008 3:59:20 PM
Priority: High	

Complete Issue Information

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	Resolved	Urgent	
	Closed		Bug
Duray, Jim	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1449.9936	Closed	Access Privileges – Error Message

Description

FROM: rmbest DATE: 8/23/1999 9:29 AM

After entering data for a bridge, I ran the analysis and soon ran out of virtual memory. Since I didn't save the information to the database before running, the entered data was lost. It would be nice if the program asks to save the data to the database before running. Perhaps a switch can be put in the preferences to turn this option on or off.

Complete Issue Information

Issue ID: 1449
Subject: Access Privileges – Error Message

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/24/1999 6:08:50 PM
Modified By: administrator	6/19/2008 3:59:20 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/24/1999 1:13 PM

Version 2.0

While experimenting with access privileges.

I had Bridge Description – Create – set to N in one group and to Y in another group.

Opened up TrainingBridge1 and selected Member Alternative, selected Rolled Beam and then selected Cancel. I got the following error message:

The attempt to delete this object has failed!

(Reasons Unknown)

Please shut down Virtis and contact Virtis Technical Support.

This error message is inappropriate. It doesn't tell the user he doesn't have the needed access privilege.

4/19/2016 3:13:14 PM

HRS AASHTO

190

Complete Issue Information

FROM: dteal DATE: 8/25/1999 11:55 AM

More exact information on this error message.

When Bridge Description – Delete is set to “N”

Double click on lets say Appurtenances – Generic, now don't enter any information, just click Cancel.

Being you don't have any permissions to Delete, then you get this error message, the coding thinks you are deleting, not just canceling out of a window you entered by mistake.

FROM:jduray DATE:08/26/1999 08:39:09

The domain should check for a negative object id (or similar check) and allow the delete if it is.

Check into possibly passing CDeObject (m_pData or m_pCurrentData) in the call to CDoCmdTarget::CanDelete. In the function we can check GetDataStatus to determine if it is new or newmodified.

FROM:jduray DATE:08/26/1999 08:58:41

FROM:jduray DATE:03/14/2000 10:23:27

Created a new CanDelete function that takes a short that should be the value returned from GetDataStatus(). Modified the following domain objects:

from abobrdg:

DoBridgeAlt.cpp
DoConcreteRailing.cpp
DoGirderLineStructDef.cpp
DoGirderSystemStructDef.cpp
DoLfdFactor.cpp
DoLfdLoadingSet.cpp
DoLrfdFactor.cpp
DoLrfdLimitStateSet.cpp
DoLrfdLoadFactorSet.cpp
DoLrfdLoadingSet.cpp
DoMatlConcrete.cpp
DoMatlPsStrand.cpp
DoMatlSteelReinforcement.cpp
DoMatlStructuralSteel.cpp
DoPsShapeStrandGrid.cpp
DoSteelRailing.cpp
DoSuperStruct.cpp
DoSuperStructAlt.cpp

and from abognrl:

DoCmdTarget.h
DoCmdTarget.cpp

The code has been changed so that a user without BRIDGE_DESC_PRIV delete privilege can delete items he created. However, at this time the GUI prohibits him from deleting them. The net result is that if he creates an new item and then cancels the new item is deleted.

FROM:jduray DATE:03/14/2000 16:29:52

Many more files had to be changed in abostld, abobrdg and abocncb.

4/19/2016 3:13:14 PM

HRS AASHTO

191

Complete Issue Information

FROM: dteal DATE: 3/20/2000 1:16 PM

Issue ID: 1450
Subject: Access Privilege – Wrong Message

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/24/1999 6:09:57 PM
Modified By: administrator	6/19/2008 3:59:20 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Information Needed		
	On Hold		
	Assigned		
	Resolved		
	Closed		Bug
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1450.9935	Closed	Access Privilege – Wrong Message

Description

FROM: dteal DATE: 8/24/1999 1:14 PM

4/19/2016 3:13:15 PM

HRS AASHTO

192

Complete Issue Information

Version 2.0

The following error message was received while trying to SAVE a Workspace when the access privilege for create was set to "N" in one group and to Y in another group.

Unable to save Bridge data!
Assignment of data to recordset variables failed.
Trying to set NAME to NULL in table ABW_SPNG_MBR_DEF, but the field is not allowed to be NULL.
Operation cannot be completed without WRITE access for Bridge Description privilege.

The last sentence states I have no WRITE privilege. My WRITE privilege was set to "Y" but the CREATE was set to "N" in one group and "Y" in another group. I think we are getting the wrong error message here.

FROM: dteal DATE: 8/24/1999 3:33 PM

FROM:jduray DATE:08/26/1999 08:37:32
If you can recreate this please save an export file prior to saving to the database. Send me the export file.

FROM: dteal DATE: 8/30/1999 3:15 PM
What is an export file?
I can't recreate it either.

FROM:jduray DATE:09/02/1999 10:16:50
File/Export from the BWS.

FROM: dteal DATE: 3/20/2000 11:14 AM
What info are you needing from me?

FROM:jduray DATE:03/23/2000 08:58:54
I think there are two problems here - The error message "Trying to set NAME to NULL in table ABW_SPNG_MBR_DEF, but the field is not allowed to be NULL." indicates that you have a member alt without a name. You can display the BWS Report and you should see a member alt without a name listed in the report. Validation may also tell you this.

The other error - "Operation cannot be completed without WRITE access for Bridge Description privilege."
" - needs investigation.

FROM:jduray DATE:03/27/2000 10:55:08
I was not able to reproduce this.

Issue ID: 1463
Subject: Tandem train enhancement

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krisha
Submitted By: Goodrich, Brian 8/25/1999 9:36:49 PM

4/19/2016 3:13:15 PM

HRS AASHTO

193

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:19 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
Kennelly, Krisha	Resolved		
	Accepted		
	Closed		
Kennelly, Krisha	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1465.9920	Closed	Help – Getting Started

Description

FROM: bgoodrich DATE: 8/25/1999 3:33 PM

A new HL-93 loading was added to BRASS-GIRDER(LRFD) called the Tandem Train. A new type (TYP_VEHICLELD_VLD____) needs to be added to the domain and the associated results objects need to be updated with this new load. This load is located in the AASHTO LRFD Specification Commentary, and it IS important in generating the critical negative moment over interior piers. Should we always generate this new load when the HL-93 vehicle is specified, or will we need to add some way to indicate to generate it?

Jim instructed me to add this as an enhancement.

FROM:jduray DATE:10/11/1999 10:09:38

We should add an attribute to the Tandem tab for the vehicle or handle it on the Analysis Settings

4/19/2016 3:13:15 PM

HRS AASHTO

194

Complete Issue Information

window similar to the Fatigue vehicle.

FROM: bgoodrich DATE: 11/1/1999 12:13 PM

I think we should handle this issue on the Analysis Settings window. This way the user does not have to create a record in the vehicle library for each group.

FROM: jihnat DATE: 5/30/2003 11:32:50 AM

Mehrdad, please add the TYP_VEHICLELD_VLDTANDEMTRAIN, then assign this back to me.

FROM: jihnat DATE: 5/30/2003 4:23:50 PM

I've already changed SysTypeDefines.h

FROM: mordoobadi DATE: 6/6/2003 1:58:22 PM

Sybase Databases (5.0.1 and 5.1.0) updated . The migration scripts for Service Pack 1 updated.

FROM: jihnat DATE: 6/10/2003 4:14:32 PM

The Help needs to be updated.

FROM: kkennelly DATE: 6/11/2003 8:33:05 AM

Help updated.

The "tandem train" checkbox that was added to the Advanced Vehicle Properties window is only enabled for the HL-93 vehicle. It should be enabled for any vehicle that has tandem data. If PennDot were to ever use Opis, they use an agency PHL-93 vehicle that would require access to this checkbox.

FROM: jihnat DATE: 6/12/2003 3:21:20 PM

Done for 5.0 SP1

FROM: gbarnhill DATE: Thursday, June 19, 2003 5:23:15 PM

The HELP still reads like this:

This window allows you to specify whether a single lane is loaded and enter a scale factor and impact factor for each

It appears we have replaced the SINGLE LANE LOADED option with the new TANDEM TRAIN.

FROM: kkennelly DATE: 6/23/2003 9:28:24 AM

Help fixed.

FROM: gbarnhill DATE: Thursday, July 10, 2003 1:48:13 PM

OK in 5.0.1 Beta 7 July

Issue ID: 1465

Subject: Help – Getting Started

Folder: /Virtis/Support Center

4/19/2016 3:13:15 PM

HRS AASHTO

195

Complete Issue Information

Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	8/26/1999 2:16:52 PM
Modified By: administrator	6/19/2008 3:59:19 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
		Medium	Enhancement
Duray, Jim	Suspended	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1466.9919	Suspended	Data Source

Description

FROM: dteal DATE: 8/26/1999 9:21 AM

Items #3, #4 & #5 in the Help - Getting Started only pertains to Sybase users and will mislead Oracle users. Our (KDOT) setup has the data source in the System DNS tab and not where this help screen indicates. Nor is it called virtis2 or virtis2s.

FROM:jduray DATE:11/24/1999 08:34:05

Krisha - see me when you are going to fix this if you have questions.

FROM:jduray DATE:12/01/1999 11:03:25

Change 4 to the following:

4) Find the data source in the list of data sources. (Setup adds virtis2 and Virtis2s to the list for access to Sybase SQL Anywhere. Virtis2 is for production, and Virtis2s is for teaching.) Select the data source, and click the OK button. (for Sybase SQL Anywhere - if virtis2 or Virtis2s is not in the list, then

4/19/2016 3:13:15 PM

HRS AASHTO

196

Complete Issue Information

something went wrong with the installation) (For Oracle - your Oracle database administrator should create an ODBC data source on each client PC. That data source should then be available for selection.)

FROM:kkennelly DATE:12/01/1999 11:26:25
done

FROM:jihnmat DATE:12/27/1999 08:14:25
Accepted by dteal via email.

Issue ID: 1466
Subject: Data Source

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	8/26/1999 2:17:57 PM
Modified By: administrator	6/19/2008 3:59:19 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/26/1999 9:22 AM
Engineers tend to be inquisitive and may experiment with software settings. When it comes to selecting a Data Source, maybe there should be some permissions here. They need to protect from themselves!

FROM:jduray DATE:08/26/1999 17:04:55
Thsi may not be possible but we can investigate.

Complete Issue Information

Issue ID: 1477

Subject: Materials Library- Sorting

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

8/31/1999 4:44:17 PM

Modified By: administrator

6/19/2008 3:59:18 PM

Priority: High

Category: Comment

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
	Accepted		
	Closed		Comment
Duray, Jim	Closed	High	Comment

4/19/2016 3:13:16 PM

HRS AASHTO

198

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1483.9902	Discard	Adding a Bridge to a Folder - difficulty getting a copy cursor - perhaps right mouse menu is needed

Description

FROM: dteal DATE: 8/31/1999 11:49 AM

I add some agency steels, they sorted in the following order:

M270 Grade 100 F2

M270 Grade 36 F2

M270 Grade 50 F2

M270 Grade 50W F2

M270 Grade 70 F2

The sorting order put 100 before 36 instead of after 70.

May be related to incidents 1161 and 1367.

FROM: jduray DATE: 09/01/1999 09:19:34

This is an ASCII (text) sort and 1 comes before 7 so the sort is correct.

FROM: dteal DATE: 10/11/1999 10:55 AM

The number wasn't 1 & 7 it was 100 & 70. I understand what mean about the 1 & 7, but the user doesn't sort that way.

Issue ID: 1483

Subject: Adding a Bridge to a Folder - difficulty getting a copy cursor - perhaps right mouse menu is needed

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

9/1/1999 3:49:17 PM

Modified By: administrator

6/19/2008 3:59:18 PM

Priority: High

4/19/2016 3:13:16 PM

HRS AASHTO

199

Complete Issue Information

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krisha	Assigned		
	Resolved		
	Accepted		
	Closed		Bug
Kennelly, Krisha	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1487.9898	Closed	Apply Stiffeners at Diaphragms

Description

FROM: dteal DATE: 9/1/1999 10:54 AM

When I try to add a Bridge to a folder by drag and drop, I have to make several attempts to accomplish this. The first few attempts will result in the highlighting (down) the bridge list when I drag the cursor over to the folders pane.

Also see #956

FROM:jduray DATE:09/01/1999 14:37:15

It seems that implementing the right click menu is needed so you don't have to be so precise in double clicking, and cursor positioning for the copy cursor.

FROM: dteal DATE: 3/17/2000 3:39 PM

Is 956 going to be suspended also?

FROM:jduray DATE:03/23/2000 09:03:35

You can select the bridge and select Edit/Copy. Then select the folder you wish to copy to and select Edit/Paste.

4/19/2016 3:13:16 PM

HRS AASHTO

200

Complete Issue Information

Yes, 956 is also suspended - until TF approves this enhancement. Most enhancements need Task Force approval. Sometimes we can take care of minor ones (i.e. ones that don't take long to implement and require minimal testing) while we are working on something else in the same area of the system or code.

FROM:hlee DATE:4/30/2008 2:18:02 PM
Discarded by TAG 12/07.

Issue ID: 1487
Subject: Apply Stiffeners at Diaphragms

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krishna	
Submitted By: Teal, Dean	9/2/1999 7:10:41 PM
Modified By: administrator	6/19/2008 3:59:18 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/2/1999 2:16 PM
 When you first open the Stiffener Ranges Window there will already be stiffeners populated by the wizard (if you selected stiffened). Being I want them at diaphragms, I will have to delete all of them. Then I select Apply at Diaphragms. If you select OK here, you will get the error announcing 2 stiffeners at the same location. What I found is that you have to select Apply after you delete the existing, then you can use the wizard.
 Is this normal?

FROM:kkennelly DATE:09/27/1999 08:28:43

Complete Issue Information

FROM:kkennelly DATE:10/06/1999 12:47:52
Fixed. Fix being put on web support site.

FROM:kkennelly DATE:10/06/1999 12:48:10

FROM: dteal DATE: 12/8/2000 8:54 AM

FROM:kkennelly DATE:12/08/2000 13:04:31
Changed to Accepted based on A in track field.

Issue ID: 1488
Subject: Checkin/Checkout

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	9/7/1999 2:36:12 PM
Modified By: administrator	6/19/2008 3:59:18 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Assigned		
		High	
	Closed		
Duray, Jim	Closed	High	Bug

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Tim Schwagler	North Dakota DOT	tschwagl@state.nd.us	701-328-4421

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1506.9879	Duplicate	cover plates not shown on profile

Description

FROM: dteal DATE: 9/7/1999 9:39 AM

If user attempts to checkin a bridge that was checked out by another user you will get 2 messages.

1) Selected bridge was checked out by -----
and after selecting OK

2) System Error - unable to checkin bridge

Is this second message really needed?

FROM: jduray DATE: 09/08/1999 13:45:27

Probably not!

FROM: dteal DATE: 3/17/2000 3:42 PM

Issue ID: 1506
Subject: cover plates not shown on profile

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Schwagler, Tim	9/21/1999 1:05:34 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	

4/19/2016 3:13:17 PM

HRS AASHTO

203

Complete Issue Information

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Assigned		
	On Hold		
	Resolved		
	Closed		
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1507.9878	Closed	Required/Optional Data

Description

FROM: tschwagler DATE: 9/21/1999 8:06 AM THE VERSION I AM USING IS 2.1 NOT 2.0 BUT 2.1 IS NOT AN OPTION ON THE PULLDOWN. WHEN I INPUT COVER PLATES ON A ROLLED BEAM THE COVER PLATES ARE NOT SHOWN ON IN THE SCHEMATIC PROFILE WINDOW.

FROM:kkennelly DATE:7/2/01 9:30:45 AM

Cover plates are displayed in the schematic but they are not labeled. Labeling is a duplicate of 858

Complete Issue Information

Issue ID: 1507
Subject: Required/Optional Data

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	9/21/1999 1:15:49 PM
Modified By: administrator	6/19/2008 3:59:16 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/21/1999 8:20 AM
One question that keeps surfacing as new users begin looking at the software.
How do I know what is required and what is optional (user over ride)?

- Ex:
- LRDF Distribution factors in a girder system
 - Effective slab width in a girder system
 - Shear connector definitions (when using composite thru out)

FROM: dteal DATE: 10/4/1999 3:30 PM
Brian G. answered the Eff. Slab Width question, (no it's calculated)
What about Deck Crack Control Parameters ? Is there a default?

Sustained Modular Ratio Factor? (3n)
Modular Ratio? (8n)

Complete Issue Information

New users always ask the same questions, Whats optional and whats not!

FROM: dteal DATE: 3/17/2000 3:43 PM

See 1390

FROM: jduray DATE: 03/23/2000 09:34:18

We have added the Engine-Related Help.

FROM: dteal DATE: 3/24/2000 8:23 AM

Issue ID: 1510
Subject: Library - Appurtenances - parapet - Calculated Properties in Error?

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Thompson, Todd	9/22/1999 1:57:52 PM
Modified By: administrator	6/19/2008 3:59:16 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ordoobadi, Mehrdad	Assigned	Urgent	
	Investigation		
	Resolved		
	Closed		
Ordoobadi, Mehrdad	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1515.9871	Resolved	Privileges/Bridge Description saving

Description

FROM: tthompson DATE: 9/22/1999 8:56 AM

In entering our "standard/agency" parapets, one of our designers noticed that the computed net centroid appears to be in error. This error appears to be fairly small but does put doubt in the designers mind if there are other errors not so noticeable.

The dimensions entered were from left to right across the top

7 in, 2 in, 7 in

and from top to bottom

0 in, 19 in, 10 in, 3 in

There was no additional load placed and the parapet unit weight used was .150 kcf. The computed properties from Virtis place the centroid at 5.456 inches and total weight at .339 kips/ft. I've computed (and our designers also) the centroid to be at 5.528 inches.

I'm not sure if this is really worth pursuing, but if a simple area/centroid can't be calculated accurately, the designers will doubt other calcs....

FROM:jduray DATE:09/27/1999 12:25:03

Let's fix this for 3.0.

FROM:mordoobadi DATE:09/27/1999 14:03:25

The problem was inside the function that computes centroid locations of a trapezoid in the domain object.

Fixed for 3.0.

FROM: tthompson DATE: 1/5/2000 1:01 PM

Checked with 3.0 Beta Build 2 and appears to have been correct.

It compute the centroid at 5.529 (vs. hand calcs of 5.528).

Issue ID: 1515
Subject: Privileges/Bridge Description saving

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	9/27/1999 5:31:07 PM
Modified By: administrator	6/19/2008 3:59:16 PM
Priority: High	
Category: Comment	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Assigned		
Duray, Jim	Assigned	Low	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1520.9866	Assigned	Error Message – Access Privileges

Description

FROM:jduray DATE:09/27/1999 13:28:52

Ken H. got an error when trying to save a BWS. Dean wrote back:

The only problem was that error message Ken got really didn't do him any good. He thought there was an error when he really didn't have the proper privileges.

We need to add a better error message when a user does not have privilege to do something.

Complete Issue Information

Issue ID: 1520
Subject: Error Message – Access Privileges

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	9/30/1999 6:51:59 PM
Modified By: administrator	6/19/2008 3:59:16 PM
Priority: Low	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/30/1999 1:56 PM

If the user doesn't have create privileges in the Bridge Description and tries to save data you will get an error message as follows:

Unable to save Bridge data!
Assignment of data to
recordset variables failed.
Trying to set NAME to NULL in
table ABW_MATL_CONC, but the
field is not allowed to be
NULL.

This message says nothing about your Privileges. User led to believe that an error has accrued and doesn't know why

4/19/2016 3:13:18 PM

HRS AASHTO

209

Complete Issue Information

Issue ID: 1521
Subject: Schematics – Framing Plan Dimensioning

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Teal, Dean 9/30/1999 6:52:48 PM
Modified By: administrator 6/19/2008 3:59:16 PM
Priority: Low
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Assigned		
	On Hold		
Duray, Jim	On Hold	Low	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
1522.9864	Closed	Deck Profile – Effective Width

Description

FROM: dteal DATE: 9/30/1999 1:57 PM

The leaders for length of span are extended to the center of the bridge. This is ok for a skewed structure but on a non-skewed bridge. The leader doesn't have a break, it continues over the object lines.

Issue ID: 1522

Subject: Deck Profile – Effective Width

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean 9/30/1999 6:53:40 PM

Modified By: administrator 6/19/2008 4:38:35 PM

Priority: Low

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Goodrich, Brian	Q/A		

4/19/2016 3:13:18 PM

HRS AASHTO

211

Complete Issue Information

Information Needed				
Duray, Jim	Assigned			
Duray, Jim	New		Low	
Goodrich, Brian	Assigned		High	
Duray, Jim				
Goodrich, Brian				
	Resolved			
	Accepted			
	Closed			
Goodrich, Brian	Closed		High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1523.9863	Closed	Analysis Settings-Engine-Properties-Output

Description

FROM: dteal DATE: 9/30/1999 1:58 PM

Does the effective width field have to be filled in or is calculated internally? If it's calculated internally then where can I view the values it used?

FROM: bgoodrich DATE: 10/4/1999 9:46 AM

BRASS does not compute the effective width of the deck internally, so it is a required input (for BRASS). We have considered computing the effective width within BRASS, but there is one problem. BRASS also requires the user input the amount of rebar within the effective width. Do you feel the BRASS export from Virtis/Opis or the BRASS computational engine should be enhanced to perform this computation?

FROM: dteal DATE: 10/4/1999 3:29 PM

The Eff. Width is different from interior to exterior girders and from span to span. How sensitive is it? I don't think we need to add it, but we need to make the user aware that it's not calculated by the engine and we have to enter the data.

I gave an Opis demo at the K-State Bridge Workshop. This question was asked there. Why do you have to enter it when all the information you need has already been entered.

Every time I work with a new user the same questions pop up.

4/19/2016 3:13:18 PM

HRS AASHTO

212

Complete Issue Information

FROM: bgoodrich DATE: 10/7/1999 8:30 AM

Jim - Could something be added to the GUI to compute the effective width when enough information is known and then populate the field on the appropriate window?

FROM: kkennelly DATE: 1/4/2002 3:15:02 PM

Duplicate of 1878 which has been resolved for Version 4.2.

FROM: kkennelly DATE: 1/4/2002 3:37:49 PM

Issue ID: 1523
Subject: Analysis Settings-Engine-Properties-Output

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	9/30/1999 6:54:26 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/30/1999 1:59 PM

I set the Action Output Level in the Properties to "Do not print actions", selected OK and Apply. And then when I return to Action Output Level it is returned to Print actions at 1/10th points

FROM: bgoodrich DATE: 10/4/1999 10:22 AM

The bug only occurred for the LRFD engine properties. The bug has been corrected in Version 3.0, but what should we do for Version 2.1? No matter what the user selects as the Action Output Level, the value stored in the properties string will be the ID for the "Print actions at 1/10th points" option.

4/19/2016 3:13:18 PM

HRS AASHTO

213

Complete Issue Information

Jim - Could we make a change in the 2.1 code and send out a new Abxbrass.dll? Line 670 just needs to be deleted in BrassLRFDAnalEvtCtrl.cpp. It's in the CBrassLRFDAnalEvtCtrl::MakePropertyString function: (m_iOutputLevel = 1;).

FROM:jduray DATE:10/22/1999 13:07:38
Let's fix it for 3.0 since it is not serious.

FROM:jduray DATE:11/24/1999 08:49:22
Has this been fixed for 3.0? If so, please set status to Resolved.

FROM:bgoodrich DATE: 11/29/1999 9:59 AM
Yes, it is fixed for 3.0.

FROM:jihnmat DATE:12/27/1999 08:14:49
Accepted by dteal via email.

FROM:bgoodrich DATE: 12/27/1999 1:13 PM

Issue ID: 1524
Subject: Auto Backup

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	9/30/1999 6:57:22 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Closed		
Duray, Jim	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1525.9861	Closed	Girder Profile - Shape: New shape window always comes up in US units

Description

FROM: dteal DATE: 9/30/1999 2:00 PM

I wasn't hearing any hard disk activity for the autobackup set at every 15 minutes. So I set my autobackup at every 1 minute. I changed a description, waited 2 minutes, exited with out saving and re-opened that structure. Nothing got saved. Should it have been?

FROM: dteal DATE: 9/30/1999 4:04 PM

Nevermind, I figured it out!

Issue ID: 1525

Subject: Girder Profile - Shape: New shape window always comes up in US units

Folder: /Virtis/Support Center

Primary Contact: lhnat, Joseph

Submitted By: Teal, Dean

9/30/1999 7:07:55 PM

Modified By: administrator

6/19/2008 3:59:15 PM

Priority: High

4/19/2016 3:13:19 PM

HRS AASHTO

215

Complete Issue Information

Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Open		
	Not Reproducible		
Ihnat, Joseph	Not Reproducible	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1526.9860	Not Reproducible	Deck Profile – Deck Concrete

Description

FROM: dteal DATE: 9/30/1999 2:10 PM

When I clicked the shape button to input a W section, it always comes up with the library in US units regardless of your default units for the overall structure or the systems default.

FROM:dteal DATE:Tuesday, April 02, 2002 8:35:51 AM

Either I can't reproduce the what I was talking about 2 1/2 years ago or it's been addressed. Mark this closed.

Complete Issue Information

Issue ID: 1526
Subject: Deck Profile – Deck Concrete

Folder: /Virtis/Support Center	
Primary Contact: Ilnat, Joseph	
Submitted By: Teal, Dean	9/30/1999 8:17:51 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/30/1999 3:22 PM

The Duplicate button doesn't duplicate, it starts a new row just like the New button does.

FROM:jihnat DATE:10/06/1999 14:22:49

I'm so far unable to reproduce this. The Duplicate button copies everything except the Length.

FROM: dteal DATE: 10/7/1999 8:16 AM

This incident was first reported to me by an Engineering Consultant firm (George Butler Associates). I tried it and confirmed that what he did was correct and the error was valid. But, right now I can't reproduce it either. I will try it under different conditions when I get a chance.

Complete Issue Information

Issue ID: 1529
Subject: Wizard Stiffeners - Too Many

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	10/4/1999 7:24:22 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: Medium	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Kennelly, Krisha	Assigned		
	On Hold		
	Resolved		
	Closed		Bug
Kennelly, Krisha	Closed	Medium	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Complete Issue Information

Documents

Name	Resource Identifier	Description
	Requested.bbd	

Tasks

Name	Current State	Summary
1532.9854	Closed	Girder Profile – Question

Description

FROM: dteal DATE: 10/4/1999 2:28 PM

When using the Wizard and selecting stiffened.

The wizard will create a Wizard Stiffener, one for each girder bay. If a 5 girder structure only has 2 different stiffeners, the other 3 that appear in the workspace are useless and should be deleted. But in order to delete them the user has to go to the Member Alt – Stiffener Ranges for Member 3, 4 and 5 and delete them there first.

It seems to me that we should have the wizard only create one wizard stiffener and populate all the stiffener ranges with it.

FROM: jduray DATE: 10/06/1999 13:01:31

Krishna - are we fixing this for 3.0?

FROM: kkennelly DATE: 10/14/1999 10:13:29

Yes

FROM: kkennelly DATE: 12/03/1999 16:08:32

fixed

FROM: dteal DATE: 11/15/2000 1:49 PM

Issue ID: 1532
Subject: Girder Profile – Question

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	10/4/1999 8:50:30 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: Medium	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:13:20 PM

HRS AASHTO

219

Complete Issue Information

Duray, Jim	New	Medium	
Goodrich, Brian	Q/A		
Duray, Jim	New	High	
	Resolved		
	Accepted		
	Closed		Education
Duray, Jim	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1533.9853	Closed	Save Analysis Results

Description

FROM: dteal DATE: 10/4/1999 3:55 PM

When entering a parabolic haunched section where the web plate thickness changes someplace in the haunch. Does the second section geometry start with a line with a zero slope or does it continue it's slope from the first section??

FROM: jduray DATE: 10/06/1999 12:59:04

My understanding is that BRASS has been modified to handle the continuous slope.

FROM: jduray DATE: 10/06/1999 13:00:16

Brian - can you verify?

FROM: bgoodrich DATE: 10/7/1999 8:35 AM

Jim is correct. Also, the web depths at the end of the first range and start of the next range must be the same or the ranges will all start with a zero slope at one end. The depth is not always a nice round number, so enter at least four digits to the right of the decimal. BRASS uses a fine tolerance to detect the continuous slope.

FROM: dteal DATE: 10/20/1999 2:41 PM

I found that you have to be more accurate than 0.000002 mm or the web will be considered "not continuous". User ends up doing a bunch of decimal chasing.

FROM: jihnat DATE: 12/27/1999 07:50:50

4/19/2016 3:13:20 PM

HRS AASHTO

220

Complete Issue Information

Resubmitted by dteal via email.

FROM: bgoodrich DATE: 12/27/1999 1:19 PM

BRASS uses an SI units tolerance of 0.1 mm for detecting discontinuous parabolic web profiles. I also increased the number of digits right of the decimal (from 1 to 3) when exporting all start distances and ranges from Opis. There should not be any round-off of error from these distances. The web depths are also exported with 3 digits past the decimal.

Dean - Please attach a BBD file that produces the problem, so I can check the latest export module.

FROM: dteal DATE: 1/3/2000 11:50 AM

I can't reproduce it!?!

FROM: dteal DATE: 1/3/2000 1:31 PM

I had attached the .bbd file to Incident #1581.

FROM: dteal DATE: 1/4/2000 8:37 AM

I was able to reproduce it today, as per my email to Brian G. Attached is the .bbd file and a below is copy of the error message. Input Errors (1103) - Cross-section area less than or equal to zero

----- End of Contents of BRASS Error File -----

The cross section area is zero for span 2 and span point 11. Check data file for possible error.

Location : Data File

Type : Input Error

Error No.: 1103

Data File: C:\Program Files\AASHTO BridgeWare\VirtoisOpis21\Parabolic_Example\Unit_#3_-_P#5_to_A#2\G2=Girder_K\Girder_K.dat

Fatal Error Encountered - Unexpected Termination

File: C:\Program Files\AASHTO BridgeWare\VirtoisOpis21\Parabolic_Example\Unit_#3_-_P#5_to_A#2\G2=Girder_K\Girder_K.ERR

----- Contents of BRASS Error File -----

FROM: bgoodrich DATE: 1/4/2000 1:26 PM

Mehrdad is converting two BBD files that will be used to find any problems.

FROM: bgoodrich DATE: 1/18/2000 8:02 PM

A few of the web ranges were entered to 6 digits past the decimal, however, one of the start distances did not equal the end distance of the previous range by a small distance. After changing the length of a couple of the ranges, so the end distance equaled the start distance of the next range, the bridge could be analyzed.

The analysis was not completed due to a bug in the BRASS computational code. The problem only occurs for the 104 point. I have found the BRASS problem and the issue will be addressed for beta build 4.

FROM: bgoodrich DATE: Tuesday, April 09, 2002 4:55:41 PM

Track field marked with "A", so status set to Accepted.

FROM: bgoodrich DATE: Tuesday, April 09, 2002 5:11:36 PM

Closed.

4/19/2016 3:13:20 PM

HRS AASHTO

221

Complete Issue Information

Issue ID: 1533
Subject: Save Analysis Results

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	10/5/1999 6:46:40 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Suspended		
	Resolved		
	Closed		
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1534.9852	Closed	Struct. Definition Wizard does not assign default LFD Analysis Modules

Description

FROM: dteal DATE: 10/5/1999 1:51 PM

I analyzed a 2span 5 girderline structure with 1 & 5 Linked and 2 linked to 3 and 4. I ran the structure from the Structure Definition level (all girderlines). I then saved the analysis results (3.5 minutes). I then verified that I could view the analysis results for girder 1 & 2. I exited Opis, and then logged in again. I went back to the structure I had run and saved. There where no analysis results. Should

4/19/2016 3:13:20 PM

HRS AASHTO

222

Complete Issue Information

there have been? If not, there isn't much good in saving if they can't be called up later.

FROM:jduray DATE:10/14/1999 16:58:07

You need to select the member alt in the BWS and us Bridge/Analysis Events to select an event to view.

FROM:jihnata DATE:12/27/1999 08:09:47

Accepted by dteal via email.

Issue ID: 1534
Subject: Struct. Definition Wizard does not assign default LFD Analysis Modules

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	10/5/1999 6:53:44 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 10/5/1999 1:58 PM

If I create a Struct. Definition without using the wizard, then in the Analysis Tab, Analysis Module Fields

4/19/2016 3:13:21 PM

HRS AASHTO

223

Complete Issue Information

(3) have been populated and are carried to the Member Alt. Description Tab. Now if you use the wizard, the only Analysis Module field that is populated is the LRFD and LFD for the Default Rating Method. To do a rating the user will have to go to the Member Alt. Window and select BRASS LFD as the analysis module.

I think that all the analysis modules should have a default in them to start with, like when not using the wizard.

FROM:jduray DATE:10/14/1999 16:52:14

The original intent of the wizard was for design (LRFD - Opis) and that is why it behaves the way you describe. The other analysis modules should be straight forward to add.

FROM:jduray DATE:7/19/2003 10:53:23 AM

Same as 3215

Done for Version 5.0, Service Pack 1

FROM:dteal DATE:Tuesday, March 28, 2006 9:40:56 AM

Accepted in 5.4 beta 7

Issue ID: 1535
Subject: Girder Profile – Material

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	10/6/1999 8:16:16 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	

Complete Issue Information

Ihnat, Joseph	Assigned			
			Urgent	
Duray, Jim	New		High	
	Closed			
Duray, Jim	Closed		High	N/A

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1536.9850	Closed	Library – Vehicles

Description

FROM: dteal DATE: 10/6/1999 3:21 PM

Both the Top & bottom flange tabs.

I entered one line of input with a material selected. I duplicated that line 6 times. I then finished modifying flange widths, thickness' and ranges, leaving the material alone (being a duplicated the first line I didn't have to change the material). I applied and went on to do the bottom flange. I OK'd the window and went on. When my model wouldn't run I discovered that the material in the flanges were only present for the first line. No material defined for the lines I duplicated. I then selected each material pulldown list and re-selected my material. I applied, OK'd and saved, (several times) and each time I go back and check to see if the material stayed I find the fields blank. I tried the same (duplicating) in the deck profile – reinforcing and it works just fine.

To fix it I tried to delete all rows in the top & bottom flange. I re-entered the data, and OK'd it.

Re-entered the top & bottom flange window and found the material fields to be blank. The only way I could make it work was to go to the Default Materials window and change the default material to the material the flanges were made of.

FROM: jduray DATE: 11/24/1999 10:01:58

Joe - I couldn't reproduce this. See what you can do.

FROM: jihnat DATE: 11/24/1999 11:57:48

I haven't been able to reproduce this either.

Issue ID: 1536
Subject: Library – Vehicles

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	10/6/1999 8:17:09 PM
Modified By: administrator	6/19/2008 3:59:15 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Information Needed		
	Suspended		Enhancement
		High	
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1538.9848	Discard	Schematic-Profile-Stiffener Spacing

Description

FROM: dteal DATE: 10/6/1999 3:22 PM

I can not delete any of the agency vehicles. I get the following error message.

Error deleting record from database record set.

State:S1000,Native:604,Origin:[Oracle][ODBC Oracle Driver][Oracle OCI]

ORA-00604: error occurred at recursive SQL level 2 ORA-01000: maximum open cursors exceeded.

4/19/2016 3:13:21 PM

HRS AASHTO

226

Complete Issue Information

I am logged in as the administrator with all the privileges turned on. I entered some junk in the agency materials, saved it, and then went back and deleted it. Agency Vehicles seemed to be the only place this happens.

FROM: dteal DATE: 10/7/1999 11:55 AM

I had our Oracle support people increase the number of open cursors that the database can have. After testing - It appears to work OK now. So it was a database problem our our end.

Issue ID: 1538
Subject: Schematic-Profile-Stiffener Spacing

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	10/11/1999 12:35:52 PM
Modified By: administrator	6/19/2008 3:59:14 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 10/11/1999 7:40 AM

For all the structures I have created, there is no dimension between the very left most stiffener and Abutment #2. Should there be?

FROM:jduray DATE:10/15/1999 12:24:36

Do you mean the rightmost stiffener and abut 2? If not, I don't understand why you want this

4/19/2016 3:13:21 PM

HRS AASHTO

227

Complete Issue Information

dimension.

FROM: dteal DATE: 10/18/1999 12:06 PM

Yes, I meant my other left. My wife forgot to put an "R" on hand that morning!

It seems incomplete with the last dimension missing. I am used to adding up a string of dimensions to back check the totals. It's not a required item, it just appeared incomplete.

FROM: dteal DATE: 12/8/1999 8:22 AM

Does this mean it's still suspended?

FROM:hlee DATE:4/30/2008 2:18:08 PM

Discarded by TAG 12/07.

Issue ID: 1550
Subject: Deleting Structures from Virtis/Opis

Folder: /Virtis/Support Center	
Primary Contact: Lee, Herman	
Submitted By: Thompson, Todd	10/19/1999 3:45:45 PM
Modified By: hlee	6/20/2008 1:36:57 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		
	Resolved		Enhancement
	System Test		

4/19/2016 3:13:21 PM

HRS AASHTO

228

Complete Issue Information

Lee, Herman	Resubmit		
	System Test		
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
Ordoobadi, Mehrdad			
	Resolved		
	Accepted		
	Assigned		
	Information Needed		
	Closed		Bug
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1555.9831	Closed	View Analysis Chart

Description

FROM: tthompson DATE: 10/19/1999 10:49 AM

I'm not sure if this is a bug or if this should be an enhancement request. I've observed that when one deletes a structure from virtis/opis, that it doesn't delete the structure folder and subsequent folders and output files from that structure from the harddrive.

If it's a bug we should fix it.
If it's not a bug, please submit this as an enhancement request.
Thanks

FROM:jduray DATE:10/19/1999 17:04:21
This is not a bug. We think the directories are named such that Explorer can be used to clean up. This would be a good enhancement though.

FROM: tthompson DATE: 10/26/1999 11:39 AM

4/19/2016 3:13:22 PM

HRS AASHTO

229

Complete Issue Information

is true that Explorer can be used, but if the user isn't alerted to the fact that he must additionally delete these directories, there is no easy way to track which directories are valid or invalid. PLEASE add this as a needed enhancement. Hopefully it can be incorporated with the concrete release. The cleaner and better this can be, the better buy in we can have for its use.

FROM:hlee DATE:6/18/2001 3:20:39 PM

The revision includes deleting bridge, super structure def., member, and member alt. from Virtis/Opis.

FROM:bgoodrich DATE:10/15/2001 10:30:55

When deleting the files and folders associated with an item, the UI should warn the user if all the applicable directories could not be deleted. For example, if a user saves a file to a directory associated with the bridge, all the directories cannot be deleted.

FROM:jduray DATE:10/23/01 8:10:20 AM

FROM:hlee DATE:10/30/2001 2:44:36 PM

A warning message will be displayed with the location of the first folder that has problem.
Done.

Issue ID: 1555
Subject: View Analysis Chart

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	10/19/1999 8:42:12 PM
Modified By: administrator	6/19/2008 3:59:13 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Complete Issue Information

Description

FROM: dteal DATE: 10/19/1999 3:47 PM

Scenario – 2 span (27.450 m & 27.060 m), used a girder system, schedule based. After running an analysis I looked Critical Moments, Strength I, Max (I found it happens to all). In the tabular information I found on the second line, Span 2, -24.71 for the location and 2.74 for the distance. The third line is Span 1, distance and location are 2.75. It is giving me the first 10th point in span 1, once from support 1 and once from support 2. I deleted all my Points of Interest and had requested output at 10th points. No change.

Now it has some funky things happening. I unchecked the requested max moment, when the screen refreshed, this -24.71 remained in the tabular output. When I recheck the one max moment it put another point for -24.71. Now the value for the first -24.71 is blank and the new one now has the value. And so on. They keep adding up until you leave the Analysis charts window and open it again.

FROM: dteal DATE: 10/21/1999 9:16 AM

Please also see Incident #1272

I received a phone call from Ill. DOT today. They where glad to see that somebody else had found the same problem.

FROM:mordoobadi DATE:10/22/1999 14:48:18

This is fixed in version 2.1 update (abgrslt to be downloaded from our web site)

Fixed in version 3.0 (the way values of y placed in the grid improved)

FROM: dteal DATE: 10/27/1999 8:42 AM

I down loaded TN0003, the documentation for the technical note states that it contains the file ABGSTL3.DLL and not the one you referenced (AGBRSLT.DLL).

FROM: dteal DATE: 10/27/1999 9:29 AM

I have found no change after down loading and executing TN0003 & TN0004. Is there some other patch you are refering to?

FROM:mordoobadi DATE:10/27/1999 10:38:14

Where did you see a reference to TN0003 for this problem? You should download TN0006.

FROM: dteal DATE: 10/27/1999 1:42 PM

Reference to TN0003 is available under the "Down Loads" tab.

I down loaded TN0006 and installed. It fixed some of the problems but not all. When I select Design Ratio, I get a point that doesn't belong. In the left hand column the span number is indicated. In the middle of the Span #1's there is a span #2 with a negative location and a positive distance. The distance into span #1 is correct but it is located to the left of the beginning of span #2.

FROM:mordoobadi DATE:03/13/2000 10:51:23

Please Test this in the new build and see if you can reproduce it.

FROM:dteal DATE:Tuesday, April 02, 2002 8:47:53 AM

No - I can't reproduce it anymore. Mark it closed.

Issue ID: 1618

Subject: Parapet Dead Load

4/19/2016 3:13:23 PM

HRS AASHTO

231

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Best, Richard	10/26/1999 2:44:40 PM
Modified By: administrator	6/19/2008 3:59:09 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
	Resolved		
Ordoobadi, Mehrdad	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1635.9753	Resolved	Make member inactive for analysis

Description

FROM: rmbest DATE: 10/26/1999 9:34 AM

There seems to something wrong in the rating computations for dead load in Girder System models .

1. When parapet is defined in Appurtenances and is specified as a Stage 2 load in the Structure Typical Section then the dead load force contribution from this parapet isn't included in the in the Dead Load Actions results in the tabular report (Stage 2, SDL).

2. If the parapet is toggled to Stage 1 load instead, then the results in the tabular report for Stage 1 Superimposed Uniform Dead Load actually decreases instead of becoming larger as expected. There is something wrong here. It appears that Superimposed Uniform Dead Load was created by the program and it would be helpful if this were better defined. (see incident 1505)

3. If I make parapet a separate load case and specify it as Stage 2 then I don't see the Parapet as a Dead Load Case in the tabular report.

4/19/2016 3:13:23 PM

HRS AASHTO

232

Complete Issue Information

FROM: bgoodrich DATE: 10/29/1999 12:07 PM

BRASS-LFD requires that the parapet loads be entered as a line load over all spans and assigned a stage. BRASS distributes the dead load to the girder of interest by moment distribution and then internally adds the contribution to the superimposed dead load case for the specified stage. Depending on the girder you are examining, the contribution of the parapet could be nearly zero or even sometimes be negative due to the moment distribution method. A warning message is printed during the BRASS export process. We are currently enhancing BRASS-LFD to perform the other distribution methods (tributary width, uniformly distributed, etc.), but this will not be available until Virtis 3.0 is release. If this discussion does not address your concerns, please attach your bridge export file (*.BBD).

FROM: rmbest DATE: 11/2/1999 11:26 AM

That explains the problem - Thanks

FROM: bgoodrich DATE: 11/12/1999 10:49 AM

Resolved.

Issue ID: 1635
Subject: Make member inactive for analysis

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Best, Richard	10/27/1999 2:44:29 PM
Modified By: administrator	6/19/2008 3:59:08 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: rmbest DATE: 10/27/1999 9:39 AM

I would like to ignore the fascia girder in the rating of a bridge that is defined as Girder System but keep the fascia girder member definition for completeness. I thought that I could make it inactive for rating

4/19/2016 3:13:23 PM

HRS AASHTO

233

Complete Issue Information

by unchecking the "Existing" box in the member description of the fascia girder. However when I do this I get a system error in the analysis advising me to mark one of the member alternatives as existing. Gale suggested that this might be an easy fix for 3.0.

FROM: rmbest DATE: 10/27/1999 2:27 PM

FROM:mordoobadi DATE:11/05/1999 14:07:03
Behavior enhanced.

Issue ID: 1671
Subject: Library Data – Materials – Reinforcing Steel

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	11/2/1999 2:17:31 PM
Modified By: administrator	6/19/2008 3:59:06 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Urgent	
Ordoobadi, Mehrdad	Assigned		

4/19/2016 3:13:23 PM

HRS AASHTO

234

Complete Issue Information

	Information Needed			
	Open			
Duray, Jim	New		High	
	Open			
	Resolved			
Duray, Jim	Resolved		High	Unknown

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1684.9704	Resolved	Error opening BWS

Description

FROM: dteal DATE: 11/2/1999 9:23 AM

Modulus of Elasticity (Es) & Ultimate Strength (Fu) have been switched in the table

FROM: jduray DATE: 11/02/1999 16:59:28

We will need a script on our web page to correct this ASAP.

FROM: mordoobadi DATE: 11/03/1999 16:45:56

The values for standard library reinforcing steel materials seem OK. Would you please tell me exactly what seems to be wrong.

FROM: dteal DATE: 11/4/1999 9:16 AM

The column headers for Es and Fu are reversed. The values are correct. The values seem to copy from the library correct. I believe that just column headers are reversed.

FROM: mordoobadi DATE: 11/04/1999 16:28:53

Are you talking about the copy from library window? I think you are. Ok I got it.

FROM: mordoobadi DATE: 11/05/1999 13:42:53

Fixed for 3.0.

FROM: mordoobadi DATE: 11/05/1999 13:55:34

Jim, please advise what we should do for version 2.1.

FROM: jduray DATE: 01/10/2000 09:54:48

Nothing. every one will get 3.0 with the fix and it is not critical.

4/19/2016 3:13:23 PM

HRS AASHTO

235

Complete Issue Information

Issue ID: 1684
Subject: Error opening BWS

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	11/8/1999 4:28:59 PM
Modified By: administrator	6/19/2008 3:59:05 PM
Priority: High	
Category: Unknown	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1685.9703	Suspended	BWS Tree collapses when checking out structure definition - save status of tree to file

Description

FROM:jduray DATE:11/08/1999 11:27:34

E-mail from Jim Tran of Indiana DOT

Hi Jim,

I try to pull up a trainingbridge1 and I get this dialogue box "System Error"

4/19/2016 3:13:23 PM

HRS AASHTO

236

Complete Issue Information

Unable to retrieve bridge object!
07:47:20 AM - Line 226 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Incomplete retrieval of data.
07:47:20 AM - Line 560 in source file
D:\Virtis\domain\abobrdg\DoSuperStructDefList.cpp.

Incomplete retrieval of data.
07:47:20 AM - Line 622 in source file
D:\Virtis\domain\abobrdg\DoSpngMbrDefList.cpp.

Data management object unavailable.
07:47:20 AM - Line 562 in source file
D:\Virtis\domain\abostld\DoSteelAssemblyRangeSet.cpp.

Error opening database record set.
07:47:20 AM - Line 393 in source file D:\Virtis\data
management\abmstld\DmStlEyeBar.cpp.
State:S0002,Native:942,Origin:[Oracle][ODBC Oracle Driver][Oracle OCI]
ORA-00942: table or view does not exist.

Please let me know whenever you get a chance. Thanks.

FROM:jduray DATE:11/08/1999 11:29:18
I sent him e-mail asking him to check for the existence of abw_stl_eye_bar table and public synonym.

FROM:jduray DATE:11/24/1999 08:40:25
Mehrddad sent him e-mail to fix the problem.

Issue ID: 1685
Subject: BWS Tree collapses when checking out structure definition - save status of tree to file

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Ordoobadi, Mehrdad	11/8/1999 6:42:58 PM
Modified By: administrator	6/19/2008 3:59:05 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

4/19/2016 3:13:24 PM

HRS AASHTO

237

Complete Issue Information

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1741.9647	On Hold	ErWin PDF file

Description

FROM:mordoobadi DATE:11/08/1999 13:38:32

In BWS if you select an expanded structure definition tree item and check it out, the tree collapses.

FROM:jduray DATE:11/10/1999 16:42:56

We need to save the status of the tree before we rebuild the tree during the checkout process and then restore it after. This is an enhancement.

Issue ID: 1741

Subject: ErWin PDF file

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	11/22/1999 3:38:40 PM
Modified By: administrator	6/19/2008 3:59:01 PM
Priority: Medium	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krishna	Assigned	Urgent	
Duray, Jim			
	Suspended		
			Enhancement
Duray, Jim	Suspended	Urgent	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1748.9640	Suspended	Stress Limit - allowable slab compression

Description

FROM:jduray DATE:11/22/1999 10:37:37

Email from Dennis Winkie

Hi, sorry to bother you again, I was wondering if you had a list somewhere or knew of an easy way to obtain a listing of all the orphaned tables in Virtis 2.1. I couldn't find anything on the CD that contained this information. The ERD has a few lines that go into tables but the table that the line originates

4/19/2016 3:13:24 PM

HRS AASHTO

239

Complete Issue Information

from is not shown, for example, in a few spaces the line starts in blank space and then goes two or three inches (on a print out that we made) into the table, so I don't know which tables are joined by that line. It's not a printing error as I was able to locate those lines in the .pdf file for the ERD.

Thanks,

Dennis Winkie
DBA
Information Systems
MODOT

FROM:mordoobadi DATE:11/22/1999 13:50:42

Erwin diagrams sometimes don't show the relationship links correctly. I think that's the case here. For example the link between abw_bridge and abw_bridge_alt does not start from abw_bridge in the diagrams. If you try to move abw_bridge or abw_bridge_alt table or move the link, the link would appear.

Issue ID: 1748
Subject: Stress Limit - allowable slab compression

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	11/22/1999 9:03:33 PM
Modified By: administrator	6/19/2008 3:59:01 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:13:24 PM

HRS AASHTO

240

Complete Issue Information

FROM:kkennelly DATE:11/22/1999 16:00:15

I don't think we should have allowable slab compression on this window since the other items in this window correspond to the girder concrete material selected in this window. We could have a stress limit for an 8 ksi girder and a 4 ksi slab. Then say the user changes the deck concrete to a 3.5 ksi concrete in the deck profile or structure typical section window. The allowable slab compression in our stress limit no longer applies but we don't have any way to validate for that.

FROM:jduray DATE:11/22/1999 16:30:27

Good idea. Suggest where to put it.

FROM:kkennelly DATE:01/10/2000 14:48:38

I can't think of anywhere else to put this. Maybe the stress limit also has to have a deck slab material associated with it.

Issue ID: 1758
Subject: Transverse Stiffener Schedule

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	11/23/1999 8:25:29 PM
Modified By: administrator	6/19/2008 3:59:00 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:13:24 PM

HRS AASHTO

241

Complete Issue Information

Duray, Jim	New	High	
	Assigned	Urgent	
Duray, Jim	New	Urgent	
	Assigned		
Kennelly, Krisha			
Ordoobadi, Mehrdad	Open		
Goodrich, Brian	Assigned		
Duray, Jim	Suspended		
			Education
			Change Request
			Enhancement
Duray, Jim	Suspended	Urgent	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1760.9628	Suspended	Shrinkage/Time window - time for AASHTO equation - add engine coef. entered by user

Description

FROM: dteal DATE: 11/23/1999 2:32 PM

I am verifying HDR's LRFD Single Span Skewed Bridge. It is the same as your "Trainingbridge1" except I am using SI. I am using all dimensions from the example in the Design Handbook.

I got the following error:

** ERROR: The range is NOT located on Span No. 1. Review the input for the (# 8) STIF-TRAN-SCHEDULE command that was entered.

4/19/2016 3:13:24 PM

HRS AASHTO

242

Complete Issue Information

An error occurred while interpreting the schedule for Transverse Stiffeners . See the output file for detailed error message(s) that explain how to correct the problem.

I was getting an error that that said "An end distance (46229.30) of the Trans. Stiffeners for Span No.1 exceeded the start distance (46229.20) of the next range. Overlapping is not allowed."

The actual distances Opis refers to should be 46229.250. I think there is a rounding problem going on here.

FROM: dteal DATE: 11/23/1999 2:34 PM
I attached the BRASS input file

FROM: bgoodrich DATE: 12/14/1999 3:47 PM
This issue will have to be addressed in more places than just the transverse stiffener schedule. Other schedule commands will have to be modified, so two digits past the decimal are exported to the BRASS commands when SI units are specified. This is only a issue for BRASS-LRFD because BRASS-LFD does not export data in SI units.

Jim - Are two digits past the decimal sufficient or should we just go with three?

FROM: dteal DATE: 1/18/2000 2:05 PM
My boss just asked me for an update on the HDR Engineering examples. What is our status on this one? If I create this in Version 3 Beta Build X (Sybase), I will have to re-enter it when we get a 3.0 release version (Oracle).

FROM: dteal DATE: 3/7/2000 9:31 AM
Where do we sit on this one??

FROM:jduray DATE:03/09/2000 15:58:44
Yes you will have to re-enter it since we are only migrating from 2.1 to 3.0, not 3.0 beta to 3.0 release.

Brian - do the recent changes to the comparison functions fix this problem?

FROM: bgoodrich DATE: 3/10/2000 10:02 AM
This is a different issue, so the comparison function changes do not fix this problem. When these and other range commands are generated in SI units, three digits right of the decimal are now exported instead of one. This issue has been resolved in the export.

FROM: dteal DATE: 4/6/2000 8:25 AM
With Brians last comment - is this incident to be marked Resolved? If so, should it be verified with Release Version 3.0.0?

FROM: dteal DATE: 4/13/2000 11:19 AM

Issue ID: 1760
Subject: Shrinkage/Time window - time for AASHTO equation - add engine coef. entered by user

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Kennelly, Krisha 11/24/1999 3:23:18 PM

Complete Issue Information

Modified By: administrator	6/19/2008 3:59:00 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Goodrich, Brian	Assigned	High	
Duray, Jim			
Goodrich, Brian			
	Resolved		
	Accepted		
	Closed		
Goodrich, Brian	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1762.9626	Closed	Deck Profile – Deck Concrete – Modular Ratio

Description

FROM:kkennelly DATE:11/24/1999 10:19:45

The time additional under beam and deck on the shrinkage tab is a value in AASHTO LRFD eq. 54.2.3.3-1 and 2 dependent on moist or steam cured. (35 if moist cured, 55 if steam cured). they should be removed from virtis since we know the type of curing.

FROM:kkennelly DATE:11/24/1999 10:29:25

Also, there is a checkbox to consider deck differential shrinkage loads on this tab. Should this be part of the analysis event?

Complete Issue Information

FROM:jduray DATE:12/17/1999 15:47:53

Default the time additional (if null) when the curing method is selected. Also, default to moist cured.

I think we should set these default values in the domain when the member alt is created. Krishna - do you agree?

I don't think it should be in the analysis event.

FROM:jduray DATE:12/22/1999 10:26:10

Let's move these two values to engine data.

Krishna - remove from window

Mehrdad - remove from db and domain

Brian - add to engine data and fix export

FROM:kkennelly DATE:01/06/2000 16:41:04

Additional time removed from window for Beta build 3.

FROM:mordoobadi DATE:01/12/2000 15:13:49

Remove deck_additional_time from abw_super_struct_spng_mbr_alt.

Remove additional_time from abw_ps_precast_beam_def.

ERwin model updated.

FROM:mordoobadi DATE:01/12/2000 16:21:28

Database updated.

FROM:mordoobadi DATE:01/12/2000 16:52:55

Data dictionary updated.

FROM:mordoobadi DATE:01/14/2000 14:54:10

Domain updated.

FROM: bgoodrich DATE: 1/18/2000 9:15 AM

BRASS allows overrides for the additional times plus a handfull of other factors, which are entered on the PSLOAD-SHRINK-STRAIN command. Either all or none of this command's parameters should be added to the engine properties.

I spoke with Jim on 1/17/2000 and he instructed me not to add the additional times to the engine properties. We may come back in a later release and add them.

The times have been removed from the export, so the BRASS defaults are now used based on the concrete curing method.

Issue ID: 1762 Subject: Deck Profile – Deck Concrete – Modular Ratio

Folder: /Virtis/Support Center Primary Contact: Goodrich, Brian
--

Complete Issue Information

Submitted By: Teal, Dean	11/24/1999 5:30:55 PM
Modified By: administrator	6/19/2008 3:59:00 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Suspended		Enhancement
Ihnat, Joseph	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1800.9589	Suspended	Just default stress limit range

Description

FROM: dteal DATE: 11/24/1999 11:37 AM

When you leave the Modular Ratio field blank, Virtis/Opis will calculate the ratio "n" using Es/Ec. When it does the math BRASS uses a number to 3 decimals (I was using "TrainingBridge1" in US units). AASHTO 5.7.1 states the in SI it should be rounded to the nearest tenth and US Customary it should be rounded to the nearest integer and in either case shall not be less than 6.

FROM: dteal DATE: 11/24/1999 11:38 AM

Version should have been listed as 2.1 with patches.

FROM: bgoodrich DATE: 12/2/1999 9:53 AM

I modified the export to compare the computed modular ratio to 6.0 and take the larger. The specification states the the rounding assumption "may" be used. From my understanding, the rounding is just to make hand computations easier, but since we have a more exact number, it should probably be used. Jim - do you agree?

4/19/2016 3:13:25 PM

HRS AASHTO

246

Complete Issue Information

FROM:jduray DATE:12/02/1999 13:42:39
I agree.

FROM: bgoodrich DATE: 12/2/1999 2:20 PM
Fixed in version 3.0 beta 1.

FROM:jihnat DATE:12/27/1999 08:15:08
Accepted by dteal via email.

FROM: bgoodrich DATE: 12/27/1999 1:36 PM

Issue ID: 1800
Subject: Just default stress limit range

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: puckett, jay 11/30/1999 4:48:02 AM
Modified By: administrator 6/19/2008 3:58:58 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: jpuckett DATE: 11/29/1999 9:43 PM
A3b2

30. Stress limit range – default to span lengths

FROM:jihnat DATE:02/22/2000 15:15:39

4/19/2016 3:13:25 PM

HRS AASHTO

247

Complete Issue Information

This could be a future enhancement. We currently don't do this type of defaulting anywhere else in the GUI.

FROM:jduray DATE:6/29/01 3:17:08 PM
Perhaps this should be done in the domain?

Issue ID: 1807
Subject: BRASS output

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	11/30/1999 4:55:26 AM
Modified By: administrator	6/19/2008 3:58:57 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	On Hold		
	Resolved		Enhancement

Complete Issue Information

Duray, Jim	Resolved	High	Enhancement
------------	----------	------	-------------

Contacts

Name	Company	Email 1	Phone 1
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1809.9580	Suspended	strand positioning

Description

FROM: jpuckett DATE: 11/29/1999 9:50 PM

40. View all BRASS output files available. Need button modification. Need BRASS tool bar. Each engine has their tool bar (summer release). In the meantime, expand the BRASS output menu to have a submenu for all BRASS output files available. (or expand specification checker to include all intermediate output, e.g., distribution computations, loss computations, etc.

Our experience with users indicated that they would really like to see the other files but they may not know that they exist. This will help.

FROM:kkennelly DATE:7/2/01 9:59:54 AM

I think this was addressed in 4.0 by View Latest Analysis Output window now has a tree showing all output files for all engines.

FROM:hlee DATE:7/10/2006 10:01:35 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

Issue ID: 1809
Subject: strand positioning

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	11/30/1999 4:56:56 AM

Complete Issue Information

Modified By: hlee	6/10/2009 1:46:37 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
Kennelly, Krisha	Resolved		Enhancement
	System Test		
	Accepted		
	Closed		
Kennelly, Krisha	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1810.9579	Closed	gray harps

Description

FROM: jpuckett DATE: 11/29/1999 9:52 PM

A3b2

42. Strand layout – permit manipulations of one-half of section only, automatically do the same on the other side. Unlikely that strand selection will be non symmetric (within a cross section)

FROM: jduray DATE: 12/01/1999 16:52:25

Good suggestion but significant effort.

4/19/2016 3:13:26 PM

HRS AASHTO

250

Complete Issue Information

FROM: Herman Lee DATE: 6/10/2009 9:42:43 AM Eastern Daylight Time
Discarded by Beta TAG 6/9/09.

Issue ID: 1810
Subject: gray harps

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krishna	
Submitted By: puckett, jay	11/30/1999 4:57:55 AM
Modified By: administrator	6/19/2008 3:58:57 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: jpuckett DATE: 11/29/1999 9:53 PM

A3b2

44. Tool – gray harp distance, if debonded.

FROM:kkennelly DATE:03/30/2000 08:58:16

Do you mean in the PS Design Tool window, disable the harp distance if user picks debonded?

FROM:jduray DATE:6/29/01 3:21:39 PM

Remove the Harp distance column from the grid if Debonded is selected.

4/19/2016 3:13:26 PM

HRS AASHTO

251

Complete Issue Information

FROM:kkennelly DATE:9/12/01 8:57:11 AM

I can't remove the column because different rows could be different strand types. For example, row 1 could be harped with a distance entered and then row 2 could be straight and then the distance col would disappear.

FROM:kkennelly DATE:9/12/01 10:00:06 AM

Harp distance cell disabled if Straight/Debonded strand config selected. Fixed for version 4.1

FROM:jihnmat DATE:10/16/2001 1:00:04 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:30:43

Accepted

Issue ID: 1812
Subject: order of grid

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: puckett, jay	11/30/1999 5:00:06 AM
Modified By: administrator	6/19/2008 3:58:57 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Ihnat, Joseph	Assigned	High	
Kennelly, Krisha			Bug
Ihnat, Joseph	System Test		

Complete Issue Information

	Closed		
Ihnat, Joseph	Closed	High	Bug
Duray, Jim	New	High	
	Duplicate		
	Closed		Bug
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1828.9561	Closed	Lib – Material – Prestressing Strand – Transfer Length

Description

FROM: jpuckett DATE: 11/29/1999 9:55 PM

A3b2

46. Cross section – R/C bar count before bar size. Need to be consistent. See deck profile (minor issue)

FROM:jihnata DATE:9/19/2001 11:23:14 AM

I made this change for Cross Section - Slab and RC Cross Section - Reinforcement.
Krisha, do you want to reorder these items in the Help?

FROM:kkennelly DATE:9/20/01 2:44:16 PM

Help updated for Beta Build 1

FROM:dteal DATE:11/01/2001 16:31:37

Accepted

Issue ID: 1828
Subject: Lib – Material – Prestressing Strand – Transfer Length

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/1/1999 6:22:29 PM
Modified By: administrator	6/19/2008 3:58:56 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Kennelly, Krisha	Assigned		
	Resolved		
	Accepted		
	Closed		
Kennelly, Krisha	Closed	Medium	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1829.9560	Closed	Wizard – Units

Description

FROM: DTeal DATE: 12/1/1999 12:22 PM

Version 3.0 Build 1

Transfer Length varies between LFD (50 strand dia) & LRFD (60 strand dia). Being strand diameter is required input, transfer length can be calculated as needed.

FROM:jihnat DATE:12/27/1999 08:02:51

Accepted by dteal via email.

4/19/2016 3:13:27 PM

HRS AASHTO

254

Complete Issue Information

Issue ID: 1829
Subject: Wizard – Units

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	12/1/1999 6:23:37 PM
Modified By: administrator	6/19/2008 3:58:56 PM
Priority: Medium	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: DTeal DATE: 12/1/1999 12:23 PM
Version 3.0 Build 1

When Us is the default, and you try to enter an SI structure, I can not find a way to change the units to SI for input. I have changed the local units to SI when entering the bridge description. That works OK, the length changes to meters. As soon as I open the wizard, all units are US. No toggle available.

FROM: dteal DATE: 12/2/1999 9:43 AM

4/19/2016 3:13:27 PM

HRS AASHTO

255

Complete Issue Information

Never Mind!

I found that if I toggle the Units in the Bridge Description Window I have full control over the Units.

FROM:kkennelly DATE:12/06/1999 07:58:33

I'm marking this incident as resolved based on your last comments. If you are still having a problem, mark the incident as resubmit.

FROM:jihnat DATE:12/27/1999 08:15:30

Accepted by dteal via email.

Issue ID: 1830
Subject: Dr. Watson – Struc Definition Wizard – Deck Template

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	12/1/1999 6:24:53 PM
Modified By: administrator	6/19/2008 3:58:56 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krishna	Assigned	Urgent	
Ordoobadi, Mehrdad	Resolved		
	Accepted		

4/19/2016 3:13:27 PM

HRS AASHTO

256

Complete Issue Information

	Closed		
Ordoobadi, Mehrdad	Closed	Urgent	Bug
Duray, Jim	New	High	
Campbell, Jeff	Assigned		
Duray, Jim	Suspended		Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1831.9558	Discard	Structure Definition Wizard – Structure Definition – Material Type

Description

FROM: DTeal DATE: 12/1/1999 12:24 PM

Version 3.0 Build 1

I haven't had one of these for a long time. I got it three times in a row at the same place.

"Exception Access Violation (0xc0000005), Address 0x006c2a04"

Using the Wizard, Welded Plate, 4 span, 5 girder lines, entering data for rail location in the Deck Template window. When I select the back of the rail for the first one I get the Dr. Watson.

If I skip over selecting front/back and leave the default, I can create and finish the structure definition.

FROM: jduray DATE: 12/2/1999 9:03 AM

We should check if this is also a problem in 2.1.

FROM:kkennelly DATE:12/02/1999 11:02:31

Don't think its a problem with 2.1. Asserting in OnCBNSelChange() . I think it's looking at the wrong grid on this tab.

FROM: dteal DATE: 12/2/1999 10:35 AM

I found the same problem while doing a Prestressed Structure also.

4/19/2016 3:13:27 PM

HRS AASHTO

257

Complete Issue Information

FROM:mordoobadi DATE:12/03/1999 09:59:45
Fixed.

FROM:jihnmat DATE:12/27/1999 08:00:31
Accepted by dteal via email.

Issue ID: 1831
Subject: Structure Definition Wizard – Structure Definition – Material Type

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/1/1999 6:26:08 PM
Modified By: administrator	6/19/2008 3:58:56 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: DTeal DATE: 12/1/1999 12:26 PM
Version 3.0 build 1

Only Steel and Prestressed Concrete are available. What about reinforced concrete slab? If you select lets say Prestressed I on a girder line, on the next window (Beam Data) we are to enter a Beam Shape. And you can't go past this window until a Beam Shape is selected. So you have to enter just anything to get past and finish. And then go to Member Alternative to define a reinforced concrete slab.

FROM: jduray DATE: 12/2/1999 9:01 AM
We did not plan to handle slab here. Should we?

FROM: dteal DATE: 12/20/1999 11:28 AM
And to make things worse, a Member Alt was created that is not applicable. You have to go back to the

4/19/2016 3:13:28 PM

HRS AASHTO

258

Complete Issue Information

Member window and make the newly created rectangular section the current and existing, then go back to the member alt's and delete the item that was not needed.

FROM:jduray DATE:02/09/2000 14:48:27

FROM:jduray DATE:6/29/01 4:20:14 PM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:18:51 PM
Discarded by TAG 12/07.

Issue ID: 1838
Subject: Cross Sections – Rectangular Section – Modular Ratio

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	12/1/1999 9:05:21 PM
Modified By: administrator	6/19/2008 3:58:55 PM
Priority: Low	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Ordoobadi, Mehrdad	Assigned		
	Accepted		
	Closed		
Ordoobadi, Mehrdad	Closed	Low	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688
----------------	------------------	-------------------------------------	--------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1839.9551	Closed	Cross Sections – Rectangular Section – Help

Description

FROM: dteal DATE: 12/1/1999 3:05 PM
Version 3.0 Build 1

Shouldn't this be calculated based on the Concrete Material Modulus and the Reinforcing Steel Modulus? In SI rounded to 1 decimal and in US to the nearest integer.

FROM: bgoodrich DATE: 12/2/1999 10:03 AM
This is similar to Incident 1762.

FROM: dteal DATE: 3/17/2000 3:49 PM

FROM:mordoobadi DATE:03/20/2000 08:55:27
Accepted By Dean Teal.

Issue ID: 1839
Subject: Cross Sections – Rectangular Section – Help

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	12/1/1999 9:06:04 PM
Modified By: administrator	6/19/2008 3:58:55 PM
Priority: Low	
Category: Bug	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Duplicate		
	Closed		Bug
Duray, Jim	Closed	Low	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1840.9550	Closed	Member Window

Description

FROM: dteal DATE: 12/1/1999 3:06 PM
Version 3.0 Build 1
Topic does not exist.

FROM:kkennelly DATE:12/06/1999 16:28:32
done

FROM:jihnat DATE:12/27/1999 07:59:43
Accepted by dteal via email.

Complete Issue Information

Issue ID: 1840
Subject: Member Window

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/1/1999 9:06:52 PM
Modified By: administrator	6/19/2008 3:58:55 PM
Priority: Low	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	On Hold		
	System Test		Enhancement
	Accepted		
Duray, Jim	Accepted	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
keith fulton	Wyoming DOT	kfulto@state.wy.us	(307)777-3950

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1845.9545	Accepted	Copying within the BWS

Description

FROM: dteal DATE: 12/1/1999 3:06 PM

Version 3.0 Build 1

The member window by default is too large. OK, Apply, and Cancel are all ½ off the bottom of the screen. Window resizing doesn't help.

FROM:jihnat DATE:12/27/1999 07:59:24

Accepted by dteal via email.

4/19/2016 3:13:28 PM

HRS AASHTO

262

Complete Issue Information

Issue ID: 1845
Subject: Copying within the BWS

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: fulton, keith	12/1/1999 9:16:21 PM
Modified By: administrator	6/19/2008 3:58:55 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: kfulton DATE: 12/1/1999 3:35 PM

When copying stiffeners, cross sections, etc. the new item copied has the same name as the original.

4/19/2016 3:13:29 PM

HRS AASHTO

263

Complete Issue Information

It would be nice to have a new name or some designation that it is a copy.

FROM:jduray DATE:6/29/01 4:22:26 PM
This incident was originally entered during 3.0 beta testing.

Done for 4.1

FROM:jihnata DATE:10/16/2001 1:00:27 PM
Accepted via email by Brian Goodrich.

Issue ID: 1850
Subject: Live Load Distribution (LRFD) – Slab Bridge

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/2/1999 2:02:59 PM
Modified By: administrator	6/19/2008 3:58:54 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	

Complete Issue Information

	Assigned		
	Suspended		
Duray, Jim	New	High	
puckett, jay	Assigned		
Kennelly, Krisha			
Duray, Jim			
Kennelly, Krisha	Suspended		Enhancement
	Discard		
Kennelly, Krisha	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Daniel Jones	Alabama DOT	jonesdan@dot.state.al.us	334-242-6752

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1851.9539	Discard	Live Load Distribution (LRFD) – Slab Bridge – Duplicate Input

Description

FROM: dteal DATE: 12/2/1999 8:03 AM

Calculations for the dist. Factors should be done by a calculate button. At this point we already know span lengths, number of lanes and section width. Needed input at this point would be the "physical edge to edge distance of the bridge" and skew angle.

In US units we always divide by "1 FOOT" for simplicity. But in SI this is not the case. If a user were to change a section width and not change the Dist. Factors errors in output would result.

FROM: dteal DATE: 12/2/1999 8:21 AM

Attached is a simple spread sheet I worked up last night for calculating Dist. Factors. It's basic, but it works.

FROM: dteal DATE: 1/20/2000 11:57 AM

Being RATING doesn't have LRFD code to follow yet, they are still using LFD Dist. Factors for Slab Structures. They don't know yet how important this "will be" to them.

Complete Issue Information

FROM: dteal DATE: 3/15/2000 2:00 PM

FROM: jduray DATE: 6/29/01 4:26:29 PM

This incident was originally entered during 3.0 beta testing.

Issue ID: 1851
Subject: Live Load Distribution (LRFD) – Slab Bridge – Duplicate Input

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krisha
Submitted By: Teal, Dean 12/2/1999 2:03:56 PM
Modified By: administrator 6/19/2008 3:58:54 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 12/2/1999 8:04 AM

V & M Dist. Factors are always equal. User is forced to duplicate his input, hopefully without errors. Depending on the outcome of Incident 1849, Deflection may be included in this.

FROM: jduray DATE: 12/2/1999 9:42 AM

I don't think they are always the same. If they are ALWAYS the same why do we have them seperate?

Jay - can you help?

FROM: kkennelly DATE: 02/11/2000 13:39:36

I think he means they are always the same just for a slab bridge. I think it would be more confusing to the user if he could only enter deflection and shear df and not the moment df for slab bridges. If you could see all of the df's at the same time like on the Std tab it would be clearer cause then you could

4/19/2016 3:13:29 PM

HRS AASHTO

266

Complete Issue Information

see the moment disabled and see it get populated with what you entered for shear. Just for slab bridges we could not let them pick from the Action type list box and just ask for the df and just store that as the df for all of the action types in the db(this would all be hidden from the user). But then the user could never change just one of the action types.

Jim, what do you want me to do with this?

FROM:jduray DATE:02/15/2000 17:13:44
Good idea...do it!

FROM:jduray DATE:02/25/2000 13:10:14
Suspend this incident for TF approval.

FROM:jduray DATE:6/29/01 4:28:14 PM
This incident was originally entered during 3.0 beta testing.

FROM:rfulton DATE:Tuesday, December 11, 2007 3:17:53 PM
Change: DF calculator/wizard for all bridge types for LRFD/LRFR Distribution Factors

FROM:hlee DATE:4/30/2008 2:19:02 PM
Discarded by TAG 12/07.

Issue ID: 1858
Subject: RC Slab – Cross Section – Crack Control (Z) - BARS import

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Teal, Dean	12/2/1999 3:30:55 PM
Modified By: administrator	6/19/2008 3:58:54 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Campbell, Jeff	Assigned		
Goodrich, Brian			
Duray, Jim			
Ordoobadi, Mehrdad			
Goodrich, Brian			
Ordoobadi, Mehrdad		Urgent	

Complete Issue Information

Ihnat, Joseph			
Goodrich, Brian			
Duray, Jim	New	High	
	Assigned		
	Suspended		
	Assigned		
	Suspended		
	Assigned		
	Suspended		
			Enhancement
	Assigned		
	Resolved		
	Accepted		
	Resolved		
	Closed		
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1866.9526	Closed	Strand Layout – Harped

Description

FROM: dteal DATE: 12/2/1999 9:31 AM
 BRASS assumes Z = 170 kip/in (30 000 N/mm)
 Agencies will need a little over ride control here. Our agency uses Z = 130 in the Negative moment area and Z = 170 in the Positive moment area.
 This is from AASHTO 8.16.8.4 (LFD), I don't have a Spec. book here so I don't know if LRFD follows in this area.

FROM: dteal DATE: 12/3/1999 8:12 AM

Complete Issue Information

BRASS only assumes 170 kip/in only if Z is not set in the member window. But, it only allows for "one" Z value for both top and bottom. I guess this would have to be addressed on the same Member window.

FROM: dteal DATE: 1/24/2000 2:05 PM

I think we need some discussion here. Our Bureau uses the following for all slab designs. (RC, Steel Girder & PS Girder).

Z = 130 kip/in for areas of Neg. Moment Steel

Z = 170 kip/in for areas of Pos. Moment Steel

The Structure Typ. Section only allows for one choice to be used on both top and bottom.

FROM: dteal DATE: 2/3/2000 11:37 AM

See Attached sketch.

FROM: dteal DATE: 6/28/2000 7:40 AM

BRASS output itemizes 2 z values. One for top and one for bottom. It is Opis that is lacking an input field for each.

FROM: jduray DATE: 10/03/2000 09:04:25

Brian - please discuss with Jay and suggest solution.

FROM: bgoodrich DATE: 10/3/2000 1:00 PM

Please refer to Incident 1499 as it pertains to this discussion.

FROM: bgoodrich DATE: 10/25/2000 4:47 PM

Jim - I discussed this issue with and and we think the crack control parameter (Z) for the bottom of the girder should be added to the member alternative window. We should not put it on the same window as the deck Z (Structure Typical Section window for GS and Member window for GL) because at those levels the type of member alternative is not known. The Z for the bottom of a girder is only applicable to R/C and P/S structures. BRASS allows only one Z for the DECK when part of a steel or P/S structure. BRASS allows a top and bottom Z for concrete slabs. Please let me know what you decide.

FROM: jduray DATE: 10/26/2000 16:26:29

Yes - we should add z to the member alt for r/c and p/s member alts.

FROM: dteal DATE: 11/16/2000 12:51 PM

On 10/3/00 Brian referred to Incident # 1499. I can't find this incident???

FROM: jduray DATE: 11/27/2000 08:34:04

We need to add z for the bottom of a concrete member to the member alt window.

FROM: mordoobadi DATE: 11/29/2000 15:07:24

bot_crack_control_param_z attribute added to abw_conc_beam_def.

Db, Dm, De, and Domain updated,

Joe, Please use the new attribute in the member alternative window.

FROM: jihnat DATE: 12/01/2000 12:39:23

GUI updated for Beta Build 2.

Brian - I think Ed gets this after you, then Krisha needs to update the Help.

4/19/2016 3:13:30 PM

HRS AASHTO

269

Complete Issue Information

FROM: bgoodrich DATE: 12/5/2000 8:08 AM

The BRASS-GIRDER(LRFD) export has been modified to generate the CONC-MATERIALS command with the crack control parameter (Z) for the bottom of R/C and P/S beams.

Note that BRASS-GIRDER does not support input of any Z, so no BRASS-GIRDER import modifications are required.

Ed – When you are finished, assign to Krishna to update the Help.

FROM:kkennelly DATE:12/14/2000 16:09:30

I've added this to the VirtisOpis help for Version 4.0 Release.

FROM:dteal DATE:01/25/2001 16:22:43

Deck crack Control Parameter on the Member GUI screen doesn't state if it's for the top or bottom of the deck. The Help doesn't help either.

The Member Alternative Description has added the crack control parameter for the bottom of the slab , OK.

Both of these values should be on the same GUI screen!

FROM:jduray DATE:6/12/01 10:39:10 AM

I don't think they should be on the same window. The z on the member windows is for the deck. The member windows can't display for the bottom because it doesn't know what kind of member alt will be assigned. Only concrete member alts have z for the bottom. The member can have steel and concrete member alts assigned.

FROM:jduray DATE:8/2/01 11:44:51 AM

All but the BARS import was complete for version 4.0.

FROM:dteal DATE:Monday, April 01, 2002 3:07:17 PM

Jim – For RC bridge it is all deck, monolithic, there are no girders.

FROM:jduray DATE:5/21/02 10:37:20 AM

The z for the bottom of the rc member has been added to the member alt and was included in the 4.0 release. The BARS import has not been updated. Change the status to Suspended until the TF authorizes modifications to the BARS import.

FROM:dteal DATE:Tuesday, June 17, 2008 11:38:26 AM

Being I assume that we are not going to update BARS import - Accepted based on that assumption

Issue ID: 1866 Subject: Strand Layout – Harped

Folder: /Virtis/Support Center Primary Contact: Duray, Jim

Complete Issue Information

Submitted By: Teal, Dean	12/2/1999 7:57:21 PM
Modified By: administrator	6/19/2008 3:58:53 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Assigned	Urgent	
	Resolved		
Ihnat, Joseph	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1877.9515	Resolved	Deck Profile Edit (This was originally Incident 1280)

Description

FROM: dteal DATE: 12/2/1999 1:57 PM

When defining the left end of the beam, on the strands that will be harped up to the top. You can not do them as a group. You have to select them one at a time.

FROM: dteal DATE: 2/10/2000 1:35 PM

You have to select them from the top down. I don't think you are instructed to do that anywhere in the help (I may have missed it). Could be very confusing to the user if the lowest harped strands are selected first. User will be led to believe that they have done something wrong.

FROM: jduray DATE: 6/29/01 4:35:24 PM

This incident was originally entered during 3.0 beta testing.

FROM: jduray DATE: 7/19/2003 9:33:05 AM

Scheduled for 5.1.

FROM: jduray DATE: 8/25/2003 3:44:41 PM

For 5.1 the user can select a group of strands to harp. The right side of the Strand Layout window was modified to iterate the sorted list of selected strand positions starting with the maximum strand position number and calling ModifyHarped(...) to toggle the harping.

4/19/2016 3:13:30 PM

HRS AASHTO

271

Complete Issue Information

FROM:dteal DATE:Wednesday, September 10, 2003 9:23:49 AM

FROM:hlee DATE:6/10/2004 3:06:17 PM
Changed status from Accepted to Resolved.

FROM:dteal DATE:Tuesday, October 26, 2004 10:53:46 AM

Issue ID: 1877
Subject: Deck Profile Edit (This was originally Incident 1280)

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Schwagler, Tim	7/13/1999 6:53:20 PM
Modified By: administrator	6/19/2008 3:58:53 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tschwagler DATE: 7/13/1999 1:46 PM

When modeling a continuous girder the deck profile can not be input as runnig from begin bridge to end bridge or brass will not use the rebar at the piers to calculate the section properties. When the deck profile length is changed the following start distances are changed. For example in the deck in span 1 runs form 0 to 80', the spans are 100', the deck in span 2 runs from 20' to 100'. If the length of deck in span 1 is changed to 75' the start distance in span 2 is changed to span 1 75'.

4/19/2016 3:13:30 PM

HRS AASHTO

272

Complete Issue Information

FROM:jduray DATE:07/20/1999 10:27:57

Krishna - please investigate and let me know if he is referring to a GUI problem or a BRASS export problem.

FROM:kkennelly DATE:08/04/1999 15:41:27

GUI issue. We calculate the next start distance for the user when they change the length of the previous row. I guess we shouldn't do that in this window since the user is more likely to have a discontinuous deck for continuous beams? (unlike a flange that has to be continuous across the length of the beam, the deck doesn't have to be.)

I seem to have found a bigger problem. In Concrete Deck Profile and Web Profile, say you have 2 rows of data saved in the db. When you change the length value in the first row, it changes the start distance of the following row. Hit Ok. When you reopen the window, the first row has the new length that you put in (that put an M in the Update column). But the second row doesn't have the new start distance that was displayed before, (modified flag didn't get set when the cell was updated).

FROM:jduray DATE:11/24/1999 09:14:20

We need to fix these two problems.

- 1) We should not compute the start distance (Joe - let's review this before we make changes).
- 2) Fix the modified flag problem.

FROM:jihnata DATE:12/03/1999 08:11:47

This was originally entered as Incident 1280.

- 1) For Deck Concrete, recalculation of start distances when an end distance is changed has been disabled.
- 2) All occurrences of the "modified flag" problem have been fixed. All changes have been made for Beta Build 2.

Issue ID: 1885
Subject: Strand Layout - Debonded and Harped strands in same beam

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/3/1999 6:44:37 PM
Modified By: administrator	6/19/2008 3:58:52 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		Enhancement

4/19/2016 3:13:31 PM

HRS AASHTO

273

Complete Issue Information

	Development		
Duray, Jim	New	Medium	
Ordoobadi, Mehrdad	Assigned	Urgent	
	Information Needed		
	Closed		Bug
Ordoobadi, Mehrdad	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Paul Jensen	Montana DOT	pjensen@mt.gov	406-444-9245

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1912.9482	Closed	Access problem V3.0.0 Build 1

Description

FROM: dteal DATE: 12/3/1999 12:45 PM

With a short PS beam, several strands are harped at beam center point (1/2 span). Being the beam is short the 1/2 span harp point is used to keep hold down forces within allowable. Also, being the beam is short, several strands had to be debonded to lower the end block stresses.

How can a strand layout be entered that contain both harped and debonded?

FROM:jduray DATE:12/04/1999 11:48:02

We do not handle that at this time. We asked the User Group about this (during GUI design) and they indicated this is not done and should not be handled.

FROM:jduray DATE:6/29/01 4:39:26 PM

This incident was originally entered during 3.0 beta testing.

FROM:jduray DATE:5/10/02 12:51:30 PM

This enhancement is in development and will be released in the next release.

FROM:jduray DATE:7/19/2003 8:09:15 AM

Scheduled for release in 5.1 (Sept 2003).

FROM:dteal DATE:Tuesday, October 26, 2004 10:53:02 AM

Issue ID: 1912

Complete Issue Information

Subject: Access problem V3.0.0 Build 1	
Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Jensen, Paul	12/6/1999 7:06:15 PM
Modified By: administrator	6/19/2008 3:58:50 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Suspended		
		High	Enhancement
Lee, Herman	Assigned		
	Resolved		
Lee, Herman	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1927.9468	Resolved	PS Shapes - need templates to describe additional P/S shapes

Description

FROM: pjensen DATE: 12/6/1999 12:06 PM

I just loaded the beta 3.0.0 build 1 on to my system and installed the tables into a new user named "VIRTIS30". I went into the ABW_PERSON table and change the username "VIRTIS" to "VIRTIS30". The software says that "VIRTIS30" dose not have privilages to change data in the database. I looked at the configuration table and "VIRTIS30" belongs to the "ADMIN" group. I own the tables, and therefor have full access to all of the tables. Is there something else that I need to do?

4/19/2016 3:13:31 PM

HRS AASHTO

275

Complete Issue Information

FROM:mordoobadi DATE:12/07/1999 11:20:01

Did you get this error when you executed an SQL statement?no

Do you still have version 2.1 database on your oracle database?no

Did you remove old virtis database (2.1) public synonyms?n/a

Did you create public synonyms for virtis30?no

FROM: pjensen DATE: 12/7/1999 4:26 PM

FROM: pjensen DATE: 12/9/1999 12:42 PM

Responses to the questions were given on 12/7. Please advise if additional information is needed. I would like and resolve this setup issue and look at the product.

Issue ID: 1927
Subject: PS Shapes - need templates to describe additional P/S shapes

Folder: /Virtis/Support Center	
Primary Contact: Lee, Herman	
Submitted By: vinayagamoorthy, vinacs	12/8/1999 8:44:17 PM
Modified By: administrator	6/19/2008 3:58:49 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: VVinayagamoorthy DATE: 12/8/1999 12:41 PM

In this release, I-shaped and Box-beam shaped sections are included. However, there are many shapes (Inverted T of Texas DOT, Bulb Tee of Florida DOT, Standard Double Tee) available. Are we planning to add these shapes in the near future?

4/19/2016 3:13:31 PM

HRS AASHTO

276

Complete Issue Information

FROM:jduray DATE:01/04/2000 15:29:03
These can be added as enhancement requests. There are no specific plans at this time.

FROM:jduray DATE:7/6/01 10:45:17 AM
This incident was originally entered during 3.0 beta testing.

FROM:jduray DATE:5/21/02 10:49:29 AM
Additional P/S shape templates are being developed for 5.0.

FROM:hlee DATE:12/10/2002 11:07:44 AM
Additional P/S shape templates listed below have been implemented in 5.0 Release.

- 1. I shape with deck
- 2. I shape with radius fillet
- 3. Tee shape with up to 3 webs (with or without deck)
- 4. U shape
- 5. Inverted Tee can be entered as I Shape without top flange

Issue ID: 1933
Subject: Change P/S Strands label to PS Steels within Materials Library

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 12/8/1999 9:53:14 PM
Modified By: administrator 6/19/2008 3:58:49 PM
Priority: Low
Category: Change Request

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Kennelly, Krisha	Assigned		
Duray, Jim			

4/19/2016 3:13:31 PM

HRS AASHTO

277

Complete Issue Information

	Information Needed		
	Suspended		Enhancement
Duray, Jim	New	High	
	Suspended		
			Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1935.9460	Suspended	Rebar Sizes - add to library including square bars

Description

FROM: VVinayagamoorthy DATE: 12/8/1999 1:50 PM

Prestressing can be achieved using strands or bars. Although we are not planning to include ps bars in this version, we may, at a later date, include PS bars within the Library. Because of this, I prefer use the term "Prestressing Steels" instead of "Prestressing strands"

FROM:kkennelly DATE:12/14/1999 13:25:10

I think we may have to have a separate material for Prestressing Steel bars. Strands can be two types, low-relaxation and stress-relieved. Bars can be either plain or deformed. If you want to describe both strands and bars in the same window, we'll have to add another attribute specifying if it's a bar or strand cause they also different jacking stress ratios.

FROM:jduray DATE:01/04/2000 14:10:43

Can we proceed with Prestressing Strands and when we support bars add Prestressing Bars? Is the list of properties the same or would bars have more or fewer properties to describe?

FROM: VVinayagamoorthy DATE: 3/21/2000 6:12 AM

I guess that is OK!

FROM:jduray DATE:6/29/01 4:42:11 PM

This incident was originally entered during 3.0 beta testing.

Issue ID: 1935

Complete Issue Information

Subject: Rebar Sizes - add to library including square bars	
Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	12/8/1999 10:03:05 PM
Modified By: administrator	6/19/2008 3:58:49 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Suspended		
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
1939.9456	Discard	Compute "Interior Diaphragm" - Diaphragm Weight

Description

FROM: VVinayagamoorthy DATE: 12/8/1999 1:58 PM

Don't we need to have a library that lists all the possible rebar sizes? In 1930s, they used "square bars" in RC bridges. Now, we have metric rebar sizes. Although we could convert these bars to "circular bars", having these bars in a library will help to improve the efficiency of the program.

Complete Issue Information

Issue ID: 1939
Subject: Compute "Interior Diaphragm" - Diaphragm Weight

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, jmckool	12/9/1999 7:54:12 PM
Modified By: administrator	6/19/2008 3:58:49 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jmckool DATE:12/09/1999 14:54:58

It would be helpful if Virtis would calculate a default diaphragm weight using the diaphragm thickness, the area of void in the box beam, and 0.150 KCF concrete unit weight. The user would have to be able to override this Virtis-calculated weight. Also, if the length extends to 2 or more spans, we will have to be careful because the beams sizes might vary from span to span and therefore each span would have

4/19/2016 3:13:32 PM

HRS AASHTO

280

Complete Issue Information

a different diaphragm weight. In that case maybe we should just not provide a default diaphragm weight or make the heavier one the default.

FROM:jduray DATE:6/29/01 4:47:19 PM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:19:11 PM
Discarded by TAG 12/07.

Issue ID: 1967
Subject: Stress Limits – Final Allowable Tension & Compression

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	12/14/1999 3:28:46 PM
Modified By: administrator	6/19/2008 3:58:48 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Urgent	
	Assigned		
	Suspended		

Complete Issue Information

		High	Enhancement
Duray, Jim	Discard New Suspended	High	
			Enhancement
Duray, Jim	Discard Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Terrence Tiberio	Michael Baker Jr., Inc.	ttiberio@mbakercorp.com	412-269-6353

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2052.11304	Discard	BRIDGE WORKSPACE.- save status when closing

Description

FROM: dteal DATE: 12/14/1999 9:25 AM

We need to have 4 more fields added to cover Final Allowable Tension & Compression for Rating. So, we need Stress Limits for DESIGN, OPERATING and INVENTORY for final compression and the same for tension. I know AASHTO hasn't released a LRFD Rating Manual but our bureau has 3 values for each in LFD also (1 for design and 2 for rating). We certainly can't expect the user to go back and change this value to switch between the design review and rating or visit this GUI twice to do a Rating (Inv. & Operating).

FROM: jduray DATE: 01/04/2000 13:45:10
E-mail sent to Jeff/Jay 12/16/99.

FROM: dteal DATE: 3/20/2000 10:44 AM
Also see #2074

I guess I don't understand the status of this incident. I would like to be copied on Jay and/or Jeff's response.

FROM: jduray DATE: 03/22/2000 17:05:00
This is an enhancement that is postponed until a later release.

FROM: jduray DATE: 6/29/01 4:49:36 PM
This incident was originally entered during 3.0 beta testing.

4/19/2016 3:13:33 PM

HRS AASHTO

282

Complete Issue Information

FROM:hlee DATE:4/30/2008 2:19:19 PM
Discarded by TAG 12/07.

Issue ID: 2052
Subject: BRIDGE WORKSPACE.- save status when closing

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, ttiberio	12/22/1999 4:41:47 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: ttiberio DATE: 12/22/1999 11:34 AM

I recently was working with a Clip Art Program that had a mega structure of tree branching and an explore type environment similar to VIRTIS BRIDGE WORKSPACE. The very nice feature of this program was that it remembered where you were in the tree and when you came back into the program, it would open up the tree and go to the the last point you were at. Although not in WINDOWS Explore, I think this is a feature that VIRTIS should seriously consider, especially since the tree branching structure can become a little taxing to remember and have to constantly re-open every time you come back into the program. I talked with Mary Rosick about the feasibility of this being done and she indicated that this is able to be programmed without too much trouble.

FROM:jduray DATE:12/22/1999 13:13:04

We have considered this and have done a little investigation into how we can do it in a multi-user environment where someone may have changed the data in the database since you last viewed the BWS. It is not so simple when the multi-user aspects are considered. We could probably implement

4/19/2016 3:13:33 PM

HRS AASHTO

283

Complete Issue Information

something is phases. For example:

Phase 1 - save the name of each BWS tree item and its expanded/collapsed tree status. Also save the name of the item that is at the top of the visible tree (probably would have to save several names because names may not be unique but its likely that a name sequence would be unique). The next time the user opens that particular BWS we could iterate the list of items and set the status as it was saved. If we encounter one that no longer exists in the current tree (because someone deleted or renamed it) we could skip that particular item and any of its siblings.

Phase 2 - also save a list of open windows and their size/position/z-order.

FROM: ttiberio DATE: 1/21/2000 11:57 AM

FROM:hlee DATE:4/30/2008 2:19:27 PM
Discarded by TAG 12/07.

Issue ID: 2067
Subject: Install Scripts for 3.0b2

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Jensen, Paul	12/23/1999 5:43:04 PM
Modified By: administrator	6/19/2008 4:02:45 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Resolved		
Duray, Jim	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
Paul Jensen	Montana DOT	pjensen@mt.gov	406-444-9245

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:13:33 PM

HRS AASHTO

284

Complete Issue Information

Tasks

Name	Current State	Summary
2069.11288	Discard	Diaphragm wizard - Adjusting Spacing

Description

FROM: pjensen DATE: 12/23/1999 10:32 AM

I think that one of the constraint scripts is in correct. It is the relationship between PONTIS_BRIDGE and ABW_BRIDGE (R_1620) I think the script should have CASCADE ON DELETE added. The problem comes from when you delete a bridge from PONTIS_BRIDGE, the bridge needs to be removed from the complete tree (current tree implies PONTIS_BRIDGE -> ABW_BRIDGE). I change my copy of the script to reflect this change.

Is this assumption correct? Please let me know.

FROM: jduray DATE: 01/04/2000 17:28:48

No. the only way to delete a bridge is in the Bridge Explorer. There are several tables where relationships are such that the cascade doesn't work.

Issue ID: 2069
Subject: Diaphragm wizard - Adjusting Spacing

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	12/23/1999 6:14:57 PM
Modified By: administrator	6/19/2008 4:02:44 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:13:34 PM

HRS AASHTO

285

Complete Issue Information

Duray, Jim	New	High	
Duray, Jim	New	High	
Kennelly, Krishna	Assigned		
Duray, Jim	Q/A		
	Suspended		Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2073.11284	Discard	Diaphragm weight when we use Wizard

Description

FROM: VVinayagamoorthy DATE: 12/23/1999 10:06 AM

When I was entering diaphragms using wizard, I was using the 2nd type shown in the 2nd row. I entered the distance and number of equal spacing. Up to the point, everything went OK. However, when I click on the "APPLY" button, program in essence states that the end distance does not match the length of girder and whether I like to adjust the spacing. If I click "NO", everything went on OK. However, if I click "YES", it adjusts the spacing of the bay that is selected in the "Framing Plan Detail" GUI. It is expected because "APPLY" button is applicable for the bay that is selected in the GUI. However, since I use the wizard to create the diaphragms, I would like to see that diaphragm spacings in all of the bays be adjusted.

FROM:kkennelly DATE:01/10/2000 16:16:46

Jim, the message that he is getting about the end distance not matching the length of the girder is displayed thru the validate function in this window. Validate() is only checking what is visible in the window. I'd have to ask the user twice if they wanted to change the spacing, once for this bay displayed and once for all of the bays. (I'm not even sure that any other girder bays in the domain will have the same diaphragm end distance.) I don't think we should change something in the domain without the user seeing what the original values are on the screen.

FROM:jduray DATE:01/17/2000 14:41:49

I don't understand the problem. Is he working in the wizard or has he used the wizard to generate

4/19/2016 3:13:34 PM

HRS AASHTO

286

Complete Issue Information

diaphragms and is then changing them?

FROM:kkennelly DATE:01/17/2000 15:23:19

I think he used the wizard to generate the diaphragms and based on what he input he got a diaphragm at the end distance of say 99.9' and the girder length is 100'. When he hits Apply in the Framing Plan Details window, the window validation for the girder bay shown will tell him that the end distance is 99.9' and the girder length is 100'. Window validation will ask him if he wants to change the spacing so that the end distance matches the girder length. I think Vinacs wants the spacing in the other bays not displayed in the grid changed like he just changed the spacing for the girder bay currently displayed.

FROM:hlee DATE:4/30/2008 2:19:35 PM
Discarded by TAG 12/07.

Issue ID: 2073
Subject: Diaphragm weight when we use Wizard

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 12/23/1999 8:25:14 PM
Modified By: administrator 6/19/2008 4:02:44 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:VVinayagamoorthy DATE: 12/23/1999 12:21 PM

I noticed that the user has to enter diaphragm weights after the wizard generated all the diaphragms. I understand that the weight depends on the area and length of the diaphragms. Can we allow the diaphragm to obtain the weight per length from user and then estimate the weight?

4/19/2016 3:13:34 PM

HRS AASHTO

287

Complete Issue Information

FROM:jduray DATE:01/04/2000 15:49:18

This seems like a reasonable input for the wizard. We would not store the weight in the database. Just prompt for it and use it to generate the diaphragm weight.

FROM:kkennelly DATE:01/11/2000 08:00:37

Do you want the user to be able to input a different weight per length for the end diaphragm and an interior diaphragm?

I'll have to change the code to generate the diaphragm ranges a little bit because it currently works like this:

say I have a 100' span and I want 3 equal spaces of diaphragms. following ranges generated:

Start Dist	Spacing	Num Spaces	Length	End Dist
0	0'	1	0	0
33.33	0	1	0	33.33
33.33	33.33	2	66.67	100.00

the last end diaphragm is part of range that also includes an interior diaphragm.

FROM:jduray DATE:01/12/2000 11:40:49

No - we don't have time to do this now.

FROM:jduray DATE:6/29/01 5:06:02 PM

This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:19:43 PM

Discarded by TAG 12/07.

Issue ID: 2107
Subject: MEMBER-LOADS - Need Discription

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, ttiberio	12/28/1999 8:09:37 PM
Modified By: administrator	6/19/2008 4:02:42 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Suspended		Enhancement

Complete Issue Information

	Discard		
Duray, Jim	Discard	High	Enhancement
Duray, Jim	New	High	
	Resolved		
Duray, Jim	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2120.11237	Resolved	How can consultant submit their work using Virtis? Can we intall Virtis on consultant machine.

Description

FROM: ttiberio DATE: 12/28/1999 3:08 PM

It would be extremely handy to allow user to give a discription of various MEMBER LOADS in addition to merely having the LOAD CASE DISCRIPTION (e.g. S.I.P. Forms).

FROM: ttiberio DATE: 1/21/2000 11:54 AM

FROM: jduray DATE: 7/2/01 11:31:56 AM

This incident was originally entered during 3.0 beta testing.

FROM: hlee DATE: 4/30/2008 2:19:50 PM

Discarded by TAG 12/07.

Issue ID: 2120
Subject: How can consultant submit their work using Virtis? Can we intall Virtis on consultant machine.

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, mrmirza	1/4/2000 1:42:40 PM

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:41 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Closed		
Duray, Jim	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2121.11236	Closed	Testing-I am new at this support center- anyone received this message please respond.

Description

FROM:jduray DATE:01/05/2000 08:43:33

I responded to your e-mail as follows:

When 3.0 is delivered you will be able to exchange bridge data with others using the import/export feature. This is only partially implemented in version 2.1.

Consultants must license Virtis if they want to use it. They can do so by contacting AASHTO. The cost is \$1500 per license (per workstation). Several states have purchased licenses for their consultants and other states are requiring their consultants to license it themselves.

Complete Issue Information

Issue ID: 2121
Subject: Testing-I am new at this support center- anyone received this message please respond.

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Generated, mrmirza 1/4/2000 1:49:15 PM
Modified By: administrator 6/19/2008 4:02:41 PM
Priority: High
Category: Education

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: JTRAN DATE: 1/4/2000 8:52 AM

FROM:jduray DATE:01/04/2000 09:59:04

Incident was recieved and status was changed to Closed. Be careful to report the correct version above when reporting incidents.

Complete Issue Information

Issue ID: 2129
Subject: Limit State Summary Report

Folder: /Virtis/Support Center
Primary Contact: Ordoobadi, Mehrdad
Submitted By: Teal, Dean 1/4/2000 10:01:17 PM
Modified By: administrator 6/19/2008 4:02:41 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Goodrich, Brian	Assigned		
	Information Needed		
	Assigned		
Ordoobadi, Mehrdad	Open		
	Resolved		

Complete Issue Information

	Resubmit			
	Information Needed			
Duray, Jim	New	High		
	Suspended			Enhancement
	Discard			
Duray, Jim	Discard	High		Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2137.11220	Discard	An enhancement, but a good one

Description

FROM: dteal DATE: 1/4/2000 4:00 PM

In the Limit State Summary Report, Under Strength I, II and III, under the negative flexure, all there is is zeros. But in the BRASS "View Output Report" the values are present. It seems like they didn't get included in the report.

FROM: bgoodrich DATE: 1/5/2000 11:25 AM

Dean - I'm not sure what type of girder material you are using, but the Limit State Summary Report is only populated for steel structures. Please attach the BBD file that produces this problem. Indicate the vehicle you ran and if you are looking at the design truck, tandem, train, etc. in the results. Include the stage of construction, point of interest, and any other information you can think of.

FROM: DTeal DATE: 1/7/2000 11:56 AM

LFRD Design Review for a welded plate girder, Version 2.1 (production version)

Look at the "Limit State Summary Report", Stage 2 & 3. Look under the Neg. column for Flex Control "f". The Flexure Stress (f) is zero. I don't think it should be, especially for stage 3 over the pier. Trucks used where the LFRD HL-93 and the LFRD Fatigue. The zero's where found for Axle, Tandem and Train. I believe BRASS contains data for these fields.

FROM: DTeal DATE: 1/7/2000 11:58 AM

This Incident uses the same bridge as incident #2127

Complete Issue Information

FROM: DTeal DATE: 1/7/2000 12:00 PM
Please note, this is Version 2.1

FROM:jduray DATE:01/12/2000 14:59:55

FROM: bgoodrich DATE: 1/17/2000 4:26 PM
Use TrainingBridge3 to duplicate this incident. Also, see related Incident 2127.

The BRASS data is passed into the results object fine. I analyzed the bridge in debug mode and the data and null bitmask values were correct and passed using the AddRow function.

There seems to be a problem with how this report is displayed when using the GUI. It is still occurring with version 3.0 beta (build 3). Please call me if you wish to discuss this issue.

FROM:mordoobadi DATE:02/08/2000 14:42:57
There was a problem with the units.
Fixed.

FROM: dteal DATE: 3/19/2000 1:00 PM
See 2127

FROM:mordoobadi DATE:03/20/2000 09:06:51
Resubmitted by Dean Teal.

FROM:mordoobadi DATE:03/20/2000 16:09:42
I don't understand. You didn't put anything in either 2127 or 2129. I don't know what the problem is.

FROM: dteal DATE: 3/21/2000 6:56 AM
If we look back to the Jan 4th and Jan 7th comments I made we will find they haven't been resolved yet.

FROM:mordoobadi DATE:03/21/2000 09:12:59
You are right, It seems not to be fixed yet.

FROM:mordoobadi DATE:03/21/2000 10:14:59
I send Dean a dll that fixes the problem.
FROM: dteal DATE: 11/15/2000 1:56 PM

FROM:mordoobadi DATE:11/15/2000 16:13:51
Accepted by Dean.

Issue ID: 2137
Subject: An enhancement, but a good one

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	1/5/2000 8:58:37 PM
Modified By: administrator	6/19/2008 4:02:40 PM

Complete Issue Information

Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
Ihnat, Joseph	Assigned	Urgent	
	Resolved		
	Closed		
Ihnat, Joseph	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2159.11200	Closed	Member – Span Fields and Scroll Bar

Description

FROM: VVinayagamoorthy DATE: 1/5/2000 12:52 PM

When we 'right' click on members, it gives us several options, including 'review'. This option allows to check our input. I would like to have this option included to all GUIs that have multiple Tabs. This will allow a user to quickly check/verify his/her input without checking each Tabs (and sometimes within each Tab, user need to chage the load cases as well). ThOne could argue that user could go to member and get a review. This is OK, however, user need to scroll down to information corresponding to the particulr GUI. For example, if this option is available at member loads section, load case input only will be shown in the review. This will allow him to check his input as he enter the data.

FROM:jduray DATE:01/05/2000 17:23:36

This is a good suggestion.

FROM:jduray DATE:7/2/01 11:35:06 AM

This incident was originally entered during 3.0 beta testing.

FROM:jduray DATE:7/2/01 12:32:47 PM

4/19/2016 3:13:35 PM

HRS AASHTO

295

Complete Issue Information

Perhaps the Report Tool engine can be used for this. We could provide the report definition that consists of the data displayed by the current window.

FROM:hlee DATE:4/30/2008 2:19:58 PM
Discarded by TAG 12/07.

Issue ID: 2159
Subject: Member – Span Fields and Scroll Bar

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	1/10/2000 1:47:28 PM
Modified By: administrator	6/19/2008 4:02:39 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: DTeal DATE: 1/7/2000 11:55 AM
Version 2.1 (Production Version)

Under the members list like say "Member 1". Near the center bottom of the window there is box containing span length and span numbers. I am using a 4 span structure, but only 3 spans are visible. The scroll bars, either up /down or right/left do not work. So I am not able to verify my 4th span.

FROM:jihnat DATE:01/10/2000 08:49:43
Fixed in Version 3.0.0 (Beta Build 3).
Duplicate of 1902, 1907.

FROM:jihnat DATE:03/20/2000 07:55:07
Accepted by dteal.

Complete Issue Information

Issue ID: 2178
Subject: Beta 3 - Point of Interest description

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, jmckool	1/11/2000 9:00:28 PM
Modified By: administrator	6/19/2008 4:02:38 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Low	
	Suspended		
		High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

4/19/2016 3:13:36 PM

HRS AASHTO

297

Complete Issue Information

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2183.11176	Suspended	Add a table to store parameters

Description

FROM:jmckool DATE:01/11/2000 15:58:56

I think it would be helpful to be able to put a description with each user-entered point of interest. This would identify why that point was picked. For example, you could put Harp Point or Critical Section for Shear.

FROM:jduray DATE:7/2/01 1:30:38 PM

This incident was originally entered during 3.0 beta testing.

Issue ID: 2183
Subject: Add a table to store parameters

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Ordoobadi, Mehrdad	1/12/2000 3:37:21 PM
Modified By: administrator	6/19/2008 4:02:38 PM
Priority: High	
Category: Enhancement	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Suspended		
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Terrence Tiberio	Michael Baker Jr., Inc.	ttiberio@mbakercorp.com	412-269-6353

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2190.11169	Suspended	SHEAR REINFORCEMENT RANGES

Description

FROM:mordoobadi DATE:01/12/2000 10:17:51
Add a table abw_lib_parameters

parameter_id	SMALLINT	(PK)
name	VARCHAR(32)	(AK)
sys_units_type	INTEGER	(FK)
unit_id	SMALLINT	(FK)
data_type	INTEGER	(FK)
float_value	DOUBLE	
integer_value	INTEGER	
char_value	VARCHAR(255)	
description	VARCHAR(255)	

odl file will have the following function declarations (List object)

```
boolean First();  
boolean MoveNext();  
IDeString* GetName();  
IDeString* GetDescription();  
short GetUnitId();  
long GetSystemOfUnits();  
IDispatch* GetParameter();
```

We would need a system class CSysParameters in abslib that is static to store the contents of this

Complete Issue Information

table in the memory.

FROM:mordoobadi DATE:01/12/2000 10:43:25

See incident 2074 and 1783. These parameters should eventually be moved to the new table.

FROM:mordoobadi DATE:12/11/2007 4:07:33 PM

I think this table was intended to store different values (coefficients) that are needed by the Virtis/Opis (like the ones in 2074) and may have different values based on the system of units that we are using. I guess I suggested this to have these kinds of data to be stored in a generic table like I suggested instead of adding new columns to the abw_lib_default table.

FROM:mordoobadi DATE:12/11/2007 4:09:06 PM

FROM:jduray DATE:12/11/2007 4:14:32 PM

Similar toPontis COPTIONS.

Issue ID: 2190
Subject: SHEAR REINFORCEMENT RANGES

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, ttiberio	1/13/2000 6:50:54 PM
Modified By: administrator	6/19/2008 4:02:38 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: ttiberio DATE: 1/13/2000 1:46 PM

4/19/2016 3:13:37 PM

HRS AASHTO

300

Complete Issue Information

9 times out of 10 these ranges are going to be symmetrical about the beam mid C.L. Why not give the user the Symetrical Option similar to what we do with P/S STRAND LAYOUT?

FROM:jduray DATE:7/3/01 2:35:26 PM
This incident was originally entered during 2.1 beta testing.

FROM:jduray DATE:7/3/01 2:48:56 PM
Add an indicator to the db - domain for symmetry, add domain function to generate the symmetry stirrups with and without applying to the dm/db. In other words, provide the option to generate the other side of the beam for purposes of export to the analysis program or for viewing the generated stirrups in the GUI. Also provide the option to generate the other side for storage in the db.

Need to also consider changes to validation, export, schematics, BWS Report, possibly the Report Tool, Help, an new window for viewing the generate stirrups.

Issue ID: 2208
Subject: BEAM SHAPES-STEEL SHAPES

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, ttiberio	1/18/2000 7:49:40 PM
Modified By: administrator	6/19/2008 4:02:37 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	

Complete Issue Information

	Suspended			
				Change Request
Duray, Jim	New		High	
Kennelly, Krisha	Assigned			
Duray, Jim				
		Information Needed		
Kennelly, Krisha	Resubmit			
		Assigned		Enhancement
Generated, task force				
	Suspended			
Generated, task force	Suspended		High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Incident 2240 slab compression.doc	

Tasks

Name	Current State	Summary
2240.11119	Suspended	Structure Definition – Prestressing Strand – Final Allow. Slab Compression

Description

FROM: ttiberio DATE: 1/18/2000 2:43 PM

First, I'm wondering why we list angles, tees, etc. under the designation "BEAM SHAPES". If this tab is a "catch all" tab, maybe you should just call it "SHAPES". Same remark concerning the tab "STEEL BEAM SHAPES." In fact, on the BWS report it just uses the term "STEEL SHAPES". Also if you are going to include single angles under this then why not double angles, tubes, pipes.

FROM: ttiberio DATE: 1/21/2000 11:41 AM

I realize now that we really are not reviewing STEEL since it has already been accepted by the client. Perhaps for the future development, however, you might want to input a comment that when we get to Trusses, etc. we may want to make this TAB more general and not limit it to the term "beam".

FROM:jduray DATE:02/15/2000 16:19:27

Complete Issue Information

FROM:hlee DATE:7/10/2006 8:46:40 AM
Changed Project to Support Center.

Issue ID: 2240
Subject: Structure Definition – Prestressing Strand – Final Allow. Slab Compression

Folder: /Virtis/Support Center	
Primary Contact: Generated, task force	
Submitted By: Teal, Dean	1/24/2000 9:31:54 PM
Modified By: administrator	6/19/2008 4:02:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 1/24/2000 3:31 PM

May be related to Incident #1916

This should be populated with the AASHTO default. In order to do that, Deck Concrete material must have been selected prior. Deck concrete isn't defined until the next GUI in the wizard.

In the LRFD BRASS manual, pg 9-7.1, Item #7, it refers to AASHTO 5.9.4.2.1, I think it should be 5.9.4.1.1.

FROM: bgoodrich DATE: 1/24/2000 3:29 PM

Because the P/S losses are removed in the non-composite stage and the deck comes into play in the composite stage, I think the reference to AASHTO 5.9.4.2.1 (Stresses at Service Limit State AFTER Losses) is correct.

FROM: dteal DATE: 1/27/2000 3:04 PM

Your correct about the code reference in the BRASS manual.

4/19/2016 3:13:37 PM

HRS AASHTO

303

Complete Issue Information

Are we going to populate the Final Allow. Slab Compression field? If we are using AASHTO 5.9.4.2.1 table 5.9.4.2.1-1, the full calculation should be $0.60\phi w f' c$ (ksi) where ϕw is a reduction factor for boxes.

FROM:jduray DATE:01/31/2000 09:03:36
Krisha - please advise.

FROM:kkennelly DATE:01/31/2000 09:25:26
See incident 1748. The only thing I think we can do is put a deck concrete material on the stress limit window. Then we have to make sure the deck concrete used on the deck profile is the same as the deck concrete associated with the stress limit being used. Or maybe we should take the allow. slab compression off the Stress Limit window and put it on the deck profile window? But that's not such a good idea cause it would just be on ps member alts and it doesn't really match the other type of data we have on that window.

FROM: dteal DATE: 2/4/2000 9:04 AM
Incident #1748 is not available to me on the "All Incident List". Could you provide a copy for me?
Thanks

FROM:jduray DATE:02/07/2000 10:02:06
Dean - you should now have access to 1748.

FROM:jduray DATE:02/25/2000 13:16:01

FROM: dteal DATE: 3/6/2000 1:11 PM
Marked as "Information Needed". What's the question?

FROM: dteal DATE: 3/17/2000 10:48 AM
Be sure to look at # 1748 also.
I think we still need some attention here.
The wizard enters a value of zero if the user skips over it.
If the user enters a value here, and then on the Deck Profile window decides to use a different strength concrete, he will never remember to go back to the PS Stress limit window to change the value for the Final Allowable Slab compression.
A lot of the time this program is being looked at mostly from the Rating aspect where the concrete strength value doesn't change. But from the design side, we may change the concrete strength during the iterative design process.

FROM:jduray DATE:03/22/2000 17:20:31
Krisha - let's discuss this.

FROM: dteal DATE: 5/17/2000 9:05 AM
Have we made any progress here??

FROM:jduray DATE:3/2/01 11:53:11 AM
No progress.

FROM:kkennelly DATE:5/17/01 1:56:04 PM
Refer to attached document for possible resolution.

Issue ID: 2265

4/19/2016 3:13:37 PM

HRS AASHTO

304

Complete Issue Information

Subject: Replace Compute Button with Compute Automatically Check Box	
Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	2/7/2000 7:46:34 PM
Modified By: administrator	6/19/2008 4:02:33 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Resolved		
	Suspended		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2276.11085	Discard	Improvement of Structure Wizard is proposed

Description

FROM: VVinayagamoorthy DATE: 2/7/2000 11:45 AM
I strongly recommend that we replace the COMPUTE button with a CHECK BOX. I am proposing this after having a lot of struggle in using template type of input. Instead of allowing user to press COMPUTE button, we allow the user place a check mark, if he wants the program to evaluate the some of the values. This change, in my opinion, will give much more flexibility to the program. We have COMPUTE buttons resides within Properties of PS I beam, Lane Position Tab of Structure

4/19/2016 3:13:37 PM

HRS AASHTO

305

Complete Issue Information

Typical Section, and Standard Tab of Live Load Distribution Factors. At this point, user has to enter all the required variables and then click COMPUTE button. This is OK if we are entering these values for the first time. Having a user enter all the data correctly during his first attempt is slim. A typical user enters the data and then corrects them as he rechecks these data. Errors typically crop up during the check and user changes whenever he finds them. If he change any of the variables, he has to click on COMPUTE button to change values that are dependent on the changed values. (Note when he enters for the first time, most of the related values are reported null and flags the user; as a result he will either enter a value or click the COMPUTE button). Since most of the cells are filled with numbers, user may overlook/forget to click on the COMPUTE button. This may result in error that may or may not be detectable depending on the overall effect of the changed variable.

We could argue that user should check his data thoroughly before completing his input. Again, we need to modify our program such that it is user friendly and produce less problems to the user in the long run. Consider a case we have CHECK BOX instead of COMPUTE button. During the first go around, user enters the variables and check the box appropriately. (If the user decides to let the program determines the values, he will check the box, and otherwise he will not NOT check the box). Later if we finds an error any of the variables, as he change the variable, program will automatically update the values that are dependent on the variable if the user had checked the box.

One example is here. Consider a bridge that was built in 1940s. They have used substandard rails those days. Assume that bridge was already in the Virtis Database. Now, in 2000, we updated the bridge rails and needs to rerate the bridge. When we update the bridge rail, that will effect the Lane Position of Structure. Present Virtis expects that the user will visit Lane Position Tab and click COMPUTE button to update the results. On the other hand, if implement the proposed change, user need NOT visit Lane Position Tab. Please note that this is very simple example.

FROM: VVinayagamorthy DATE: 2/8/2000 7:52 AM
version used is 3.3 Beta

FROM: jduray DATE: 02/08/2000 11:53:26

The Task Force has reviewed the Compute buttons on several occasions and seem to be in favor of them instead of the checkbox as you suggest. I will mark this as an enhancement and for discussion with the TF.

FROM: VVinayagamorthy DATE: 2/10/2000 7:57 AM

Having COMPUTE button has some advantages as well. User could easily determines the AASHTO based results and then he could modify the values as he wishes. COMPUTE check box provide some more flexibility to COPY an PASTE style data entry. Because of these two reasons, CAN we support both on the windows?

FROM: jduray DATE: 7/3/01 3:07:44 PM

This incident was originally entered during 2.1 beta testing.

FROM: hlee DATE: 4/30/2008 2:20:15 PM

Discarded by TAG 12/07.

Issue ID: 2276

Subject: Improvement of Structure Wizard is proposed

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

4/19/2016 3:13:38 PM

HRS AASHTO

306

Complete Issue Information

Submitted By: vinayagamoorthy, vinacs	2/9/2000 4:54:05 PM
Modified By: administrator	6/19/2008 4:02:33 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
	Suspended		Enhancement
	Discard		
Ordoobadi, Mehrdad	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2277.11084	Discard	Improvement of Structure Wizard is proposed # 1

Description

FROM: VVinayagamoorthy DATE: 2/9/2000 8:51 AM

Structure Definition Wizard for Girder System

At present, this wizard has very limited use for a Girder System Option. Please note that Two important items—skew and Girder Spacing—need to be improved to give us a better wizard. We have cases where skew at supports varies. Furthermore, we have girder spacing are entered using two different options—perpendicular to girders or along the support. This wizard does not support these cases.

1. Please consider adding one more GUI for Girder system case, where user could enter different skew values at each support locations and allow the user to select girder spacing for each bay depending on the type of entry he chooses.

What I tried to do next was to see how easy for a user to use the wizard and create an rectangular pattern first and then modify the skew and spacing as shown in the plan. This lead to a frustrating

Complete Issue Information

experience. I will try to list all the problems that I came across during this process as separate incidences.

FROM:jduray DATE:02/09/2000 14:52:31

The wizard is intended to be quick and easy for standard brigdes. The capability you are asking for would complicate the wizard. You can use the wizard and then go the the framing plan details window and change the skew and spacing.

FROM: VVinayagamoorthy DATE: 2/9/2000 1:16 PM

That is what I thought at first. I tried your proposed method earlier and had so much trouble in adjusting the mismatched girder lengths and etc. As a result, I have reported 13 incidents. I could find many more problems if I check all possible options. That is why I proposed this enhancement.

FROM:jduray DATE:02/15/2000 16:03:55

We will have to investigate this as a future enhancement.

FROM:jduray DATE:7/3/01 3:11:56 PM

This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:20:25 PM

Discarded by TAG 12/07.

Issue ID: 2277
Subject: Improvement of Structure Wizard is proposed # 1

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: vinayagamoorthy, vinacs	2/9/2000 5:00:07 PM
Modified By: administrator	6/19/2008 4:02:33 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

4/19/2016 3:13:38 PM

HRS AASHTO

308

Complete Issue Information

Name	Current State	Summary
------	---------------	---------

Description

FROM: VVinayagamoorthy DATE: 2/9/2000 8:58 AM

First I created a 2 span, 4 girder bridge (overhang is 3 feet in both side) with 60 and 90 feet long spans with skew of 0 degrees girder spacing of 8 feet perpendicular to girders.

1. When I created this, Even if I forget to select an appropriate Material, program let me to continue to next page. In my opinion, program should prompt an error and direct the user to select a material or warn him about his action and its consequences. User has to visit every GUI and select an appropriate material for that particular item. It is very time consuming and could lead to error

FROM:jduray DATE:02/09/2000 15:35:15

This seems reasonable. Let's discuss.

FROM:kkennelly DATE:03/30/2000 08:16:03

I think we decided back in the beginning that we would only warn the user if they left out things that were fundamental to the definition (like span numbers or lengths).

FROM:jduray DATE:7/3/01 3:34:13 PM

This incident was originally entered during 3.0 beta testing.

This seems appropriate within the wizard since so much is generated by the wizard.

FROM:hlee DATE:4/30/2008 2:20:31 PM

Discarded by TAG 12/07.

Issue ID: 2280

Subject: Improvement of Structure Wizard is proposed #4

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 2/9/2000 5:06:32 PM

Modified By: administrator 6/19/2008 4:02:32 PM

Priority: High

Category: Enhancement

4/19/2016 3:13:38 PM

HRS AASHTO

309

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ordoobadi, Mehrdad	Assigned		
	Suspended		Enhancement
	Discard		
Ordoobadi, Mehrdad	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2281.11080	Discard	Improvement of Structure Wizard is proposed #5

Description

FROM: VVinayagamoorthy DATE: 2/9/2000 9:04 AM

4. Can we set the Wizard to fill the LFD related information when it creates all the GUIs? In order to do rating using LFD method, I need to visit almost all GUIs, since the wizard does not automatically fill the data that are specific to LFD method. For example, if the material property of girder is given, then program can, in my opinion, fill AASHTO based values for LFD method as well.

FROM:jduray DATE:02/09/2000 15:09:57
the wizard is for Opis and LRFD.

FROM:jduray DATE:7/3/01 3:58:58 PM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:20:38 PM
Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 2281
Subject: Improvement of Structure Wizard is proposed #5

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: vinayagamoorthy, vinacs	2/9/2000 5:08:07 PM
Modified By: administrator	6/19/2008 4:02:32 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Ihnat, Joseph	Assigned		
	Suspended		Enhancement
	Discard		
Ihnat, Joseph	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2285.11076	Discard	Improvement of Structure Wizard is proposed #9

Description

FROM: VVinayagamoorthy DATE: 2/9/2000 9:06 AM

5. Can we allow the wizard to get information on PS properties? This will help us to reduce the number of visits to each GUIs. Similarly, Can we allow the wizard to obtain any basic information on shear reinforcement, such as spacing, type of steel, and number of legs?

4/19/2016 3:13:39 PM

HRS AASHTO

311

Complete Issue Information

FROM:jduray DATE:02/09/2000 15:09:03
Let's discuss this.

FROM:kkennelly DATE:02/10/2000 08:51:04
Wizard lets you pick PS strand material and then automatically assigns AASHTO loss method and sets the jacking stress ratio based on the strand type. If you're going to put all of the PS property input on the wizard screen, what's the point of using the wizard? Just visit the gui.
Design tool will generate shear reinforcement (at least a good enough starting point). Note, we didn't put any steel plate girder stiffener input on the wizard to limit the amount of data the user entered in the wizard.

FROM:jduray DATE:7/3/01 4:05:18 PM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:20:44 PM
Discarded by TAG 12/07.

Issue ID: 2285
Subject: Improvement of Structure Wizard is proposed #9

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: vinayagamoorthy, vinacs	2/9/2000 5:14:31 PM
Modified By: administrator	6/19/2008 4:02:32 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:13:39 PM

HRS AASHTO

312

Complete Issue Information

FROM: VVinayagamoorthy DATE: 2/9/2000 9:10 AM

9. When I changed my skew angels, the member lengths changed automatically. That is good. However, several GUIs within member alternatives had reported mismatch in length. Those GUIs are 1. Live Load Distribution (Deflection, Moment, and Shear) Tabs; 2. Stress Limit Range of Beam Details GUI; 3. Deck Concrete of Deck Profile; and Haunch Profile; Unless, I revisit the GUI and click on APPLY or OK button, user will not aware the problem. Reports or Comments during SAVE commands do not warn the user about the mismatch in the span length. WE need better ERROR checker. Or we need to have schematic diagram that shows the mismatch.

FROM:jduray DATE:02/15/2000 15:32:43

Validation does identify some of the data that need to be changed but it could do more. This is an enhancement that the TF will have to prioritize.

FROM:jduray DATE:7/3/01 4:06:43 PM

This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:20:51 PM

Discarded by TAG 12/07.

Issue ID: 2287
Subject: Improvement of Structure Wizard is proposed 11

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 2/9/2000 5:30:38 PM
Modified By: administrator 6/19/2008 4:02:32 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:13:39 PM

HRS AASHTO

313

Complete Issue Information

Duray, Jim	New	High	
	Information Needed		
Duray, Jim	New	High	
	Suspended		
			Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2328.11034	Suspended	Stress Limits; Copy-Paste-Modify Option

Description

FROM: VVinayagamoorthy DATE: 2/9/2000 9:29 AM

11. Is there way where we can let the program to name them using the structure name given by the user? At present, program names every thing starting with WIZARD. How about it start with the name given by the user. For example, user name the structure as APPROACH then program names the variables as APPROACH- Prestress Properties(WZ), APPROACH Prestress Limits(WZ), APPROACH -Member 1(WZ), APPROACH-Member 1 Alternative(WZ), and etc. (WZ) is to indicate that is created using Wizard.

FROM:jduray DATE:02/09/2000 15:04:34

Why? The items are created under the structure def so they cannot be confused with items from other structure defs.

FROM: VVinayagamoorthy DATE: 2/9/2000 1:09 PM

When you use the Wizard to create another structure (bridge can have several structures), wizard starts with the same "WIZARD". This could lead to some confusion. I can think of other possibilities as well.

FROM:kkennelly DATE:02/10/2000 08:39:21

We'll have to limit the size of the structure def name we let the user use. If the user names the struct def something long like "Approach Spans Eastbound" and then we tack on Prestress Properties(WZ) the names are going to get too long.

FROM: VVinayagamoorthy DATE: 2/10/2000 12:26 PM

4/19/2016 3:13:39 PM

HRS AASHTO

314

Complete Issue Information

You have a point. How about requesting the user to enter a 6 character long special ID within the Wizard panels and then add that instead of WIZARD? You are able create all names with 6 character long WIZARD and therefore it will fit the allotted space. Whenever user does not enter any ID, use WIZARD as default name.

FROM:jduray DATE:02/15/2000 16:01:33
We will have to investigate this as a future enhancement.

FROM:jduray DATE:7/3/01 4:08:35 PM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:20:57 PM
Discarded by TAG 12/07.

Issue ID: 2328
Subject: Stress Limits; Copy-Paste-Modify Option

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 2/15/2000 8:30:21 PM
Modified By: administrator 6/19/2008 4:02:30 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:VVinayagamoorthy DATE: 2/15/2000 12:25 PM
At present, we are allowed to copy-paste and modify to enter new set of stress limits. A GOOD FEATURE. However, it needs a minor improvement.
Final Allowable slab compression is supposed to be entered by the user. When a user enters a stress

4/19/2016 3:13:39 PM

HRS AASHTO

315

Complete Issue Information

limit, allowable slab compression cell is blank and as a result, user will be forced to enter the correct value. However, when a user copy and paste an already entered stress limit, this may not happen. Please note that the final allowable slab compression cell is already filled when you copy and paste. This could lead to problem. Is there any thing that we can do to bring the user's attention to that cell? Please note that since the deck material for the whole bridge will be the same and therefore, there may be a remote possibility to have different allowable compression stress. Because of this reason, this can be considered as an enhancement for later release.

FROM:jduray DATE:7/3/01 4:16:31 PM
This incident was originally entered during 3.0 beta testing.

Issue ID: 2342
Subject: Improve print and zoom capability of the schematics

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Generated, jmckool	2/17/2000 6:46:51 PM
Modified By: administrator	6/19/2008 4:02:29 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
	Assigned		
	Suspended		

4/19/2016 3:13:40 PM

HRS AASHTO

316

Complete Issue Information

		Low	Enhancement
		High	
Duray, Jim	New	Medium	
	Suspended		
		High	Enhancement
	Resolved		
	Resubmit		
Ihnat, Joseph	Resolved		
Ihnat, Joseph	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2344.11018	Resolved	Point of Interest order

Description

FROM:jmckool DATE:02/17/2000 13:43:39

I viewed the typical section schematic for a 10-beam (P/S box) system. It showed up fine on-screen, but when I printed it, it came out portrait and cut off the right half of the bridge. The deck is 76'-10" wide. Is it possible to scale the image to fit on one sheet, or (better yet) print in landscape which would allow a larger scale?

FROM:jduray DATE:7/6/01 10:20:34 AM

This incident was originally entered during 3.0 beta testing.

Improvement of the printing and zoom capability of the schematics is scheduled for the 4.1 or 4.2 release.

Issue ID: 2344
Subject: Point of Interest order

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph

4/19/2016 3:13:40 PM

HRS AASHTO

317

Complete Issue Information

Submitted By: Generated, jmckool	2/17/2000 6:51:35 PM
Modified By: administrator	6/19/2008 4:02:29 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	Enhancement
	Assigned		
	Suspended		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2347.11015	Discard	Disable Checkin/Checkout when not applicable

Description

FROM:jmckool DATE:02/17/2000 13:49:11

I suggest having Virtis automatically put the points of interest in order from left to right along the span. That way if you add a POI later, it will be placed in its correct position. I think this makes it easier to check that you have all the required POI's inputted.

FROM:jduray DATE:7/3/01 4:18:49 PM

This incident was originally entered during 3.0 beta testing.

FROM:jihnat DATE:12/1/2005 10:51:59 AM

The domain needs to return POIs in sorted order (see Floorbeam list).
The BWS needs to insert new POI into correct spot on tree.
Remember to test for all POI types.

4/19/2016 3:13:40 PM

HRS AASHTO

318

Complete Issue Information

FROM:jihnat DATE:12/28/2005 12:28:50 PM
Done for version 5.4.0 (Beta Build 4).
CDoSteelAnalysisPointList
CDoPsConcreteAnalysisPointList
CDoReinfConcreteAnalysisPointList
CDoTimberAnalysisPointList
CDoBmDefSteelAnalysisPointList

FROM:xli DATE:3/22/2006 4:25:13 PM
I'm not able to add point of interest to floor beams in BID 18.

FROM:xli DATE:3/22/2006 4:34:20 PM
When I add new POI, it automatically put them in order, but if I edit an existing POI, it doesn't.

FROM:jihnat DATE:3/23/2006 10:10:52 AM
Fixed in 5.4.0 Beta 7.

FROM:xli DATE:3/24/2006 9:46:25 AM
Tested with 5.4.0 Beta 7, resolved.

Issue ID: 2347
Subject: Disable Checkin/Checkout when not applicable

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Barnhill, Gale	2/17/2000 9:19:16 PM
Modified By: administrator	6/19/2008 4:02:29 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Complete Issue Information

Description

FROM: gbarnhill DATE: 2/17/2000 3:11 PM

Now that the per/bridge checkout is working, can we gray out CHECKOUT in the BRIDGE menu if the user is not authorized to CHECKOUT the selected bridge ??

If a user selects a bridge that is checked out by another user and then clicks BRIDGE, CHECKIN is available. If clicked, an information message tells them who and when the bridge was checked out and then an error message that they can't check in the bridge. Can we gray out CHECKIN if another users checked out bridge is selected ??

FROM:jduray DATE:02/18/2000 16:49:17

I'll check on this. I think it is reasonable to do.

FROM:jduray DATE:04/05/2000 09:25:53

This would also have to be done in the BWS.

FROM:jduray DATE:04/05/2000 10:07:57

This is not a trivial task and has implications relative to the disconnect feature that NY has requested (but is not yet fully implemented).

FROM:jduray DATE:7/3/01 4:19:50 PM

This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:21:04 PM

Discarded by TAG 12/07.

Issue ID: 2355

Subject: Analysis Results Tables - indicate if impact is included or not

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Generated, bbeeraman 2/18/2000 4:58:11 PM

Modified By: administrator 6/19/2008 4:02:29 PM

Priority: Medium

Category: Enhancement

History

4/19/2016 3:13:41 PM

HRS AASHTO

320

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	New	High	
Duray, Jim	New	High	
	Suspended		Enhancement
	Resolved		
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2393.10977	Resolved	allowable stress in deck

Description

FROM: bbeerman DATE: 2/18/2000 11:48 AM

1>

[Analysis Results] Report Type "Dead Load Actions"
In the "prestress loads" & "initial prestress loads". The moment values appear to be the same. Is this correct?

2>

[Analysis Results] Report Type "Live Load Actions"
There is nothing in the window to indicate if Impact and LL Distribution is /is not included.

3>

[Analysis Results] Report Type "LRFD Critical Loads"
The vehicles loads are not shown in the tables for moment/shear/reac./def.
Also, values in the "Moment Max." column - does that include live loads or dead loads only? There are no values for "Min. Moment"

FROM: jduray DATE: 02/18/2000 16:38:47

Mehrdad:

Check #1.

For number 2 - can we indicate these?

4/19/2016 3:13:41 PM

HRS AASHTO

321

Complete Issue Information

For number 3 - should the vehicles be shown?

Maybe ask Brian for help on these.

FROM: bbeerman DATE: 2/24/2000 11:51 AM

FROM:mordoobadi DATE:02/29/2000 15:59:50

Brian would you please respond to this incident.

FROM: bgoodrich DATE: 3/1/2000 11:24 AM

Mehrdad - Please review my comments below. Then, set the status to "Information Needed" because we need more information for Items 1 and 3.

I ran PCI 9.9.6 and examined each item described above.

Item 1:

The "Prestress Loads" and "Initial Prestress Loads" actions are different. The only way they would be the same is if Lump Sum losses of zero were used. We need to import the BBD file from your bridge if you still get the same results for both.

Item 2:

The BRASS results shown in the "Live Load Actions" report contain both impact and live load distribution. I think a message to this effect could be added below the engine version. In the long-term, functions should be added to the DualInterface.f90 file, so the engine can set flags indicating if the live load actions include impact and LL distribution. Then, the results GUI could create a display string based on the flags.

Item 3:

I am not sure what "The vehicles loads are not shown in the tables for moment/shear/reac./def." means. Are you referring to one of the following?

A. The vehicle load types (i.e., axle, tandem, etc.) are not shown.

B. The "Moment Max Vehicle", "Moment Min Vehicle", etc. columns are not filled for some stages. Note that this occurs for dead load only stages, where there is no vehicle applied yet.

C. The factored live load actions corresponding with the critical action are not shown. Note that these are not available in BRASS, so they cannot be shown in the results GUI.

The BRASS "Min. Moment" results are passed to the results object correctly, so I think there may be a problem in the GUI.

The actions in the "LRFD Critical Loads" include dead load only for non-live load stages. For live load stages, the actions include both dead and live load.

FROM: bbeerman DATE: 3/27/2000 7:35 AM

Item 3: "C"

Resubmit - Item 2, did not see any changes made in the pre-release version

FROM: jduray DATE: 03/27/2000 13:56:10

Enhancement - add a function (maybe two functions) to the results object for the engine to call to indicate if live load actions include impact and LL distribution.

FROM: jduray DATE: 7/3/01 4:26:32 PM

4/19/2016 3:13:41 PM

HRS AASHTO

322

Complete Issue Information

This incident was originally entered during 3.0 beta testing.

Issue ID: 2393
Subject: allowable stress in deck

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	2/27/2000 5:06:46 AM
Modified By: administrator	6/19/2008 4:02:27 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: jpuckett DATE: 2/26/2000 10:05 PM
Final allowable stress in the deck should default to 0.6 f'c.

FROM: jduray DATE: 7/3/01 4:31:12 PM
This incident was originally entered during 3.0 beta testing.

Complete Issue Information

Issue ID: 2398
Subject: deck template

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: puckett, jay	2/27/2000 5:13:18 AM
Modified By: administrator	6/19/2008 4:02:27 PM
Priority: Medium	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	New	Medium	
Kennelly, Krisha	Assigned		
	Resolved		Enhancement
Kennelly, Krisha	Resolved	Medium	Enhancement

Contacts

Name	Company	Email 1	Phone 1
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

4/19/2016 3:13:41 PM

HRS AASHTO

324

Complete Issue Information

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2399.10971	Discard	Deck template defaults

Description

FROM: jpuckett DATE: 2/26/2000 10:12 PM

The dead load case for barriers should default to DC2, is available and possible.

FROM:kkennelly DATE:03/10/2000 13:17:00

I'm hesitant to do this since user can change the name of the load cases and the stages to which they are applied.

FROM:kkennelly DATE:12/08/2000 11:11:44

Done for Version 4.0 Release

FROM:hlee DATE:7/10/2006 8:47:05 AM

Changed Project to Support Center.

Issue ID: 2399
Subject: Deck template defaults

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: puckett, jay	2/27/2000 5:16:37 AM
Modified By: administrator	6/19/2008 4:02:27 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:13:41 PM

HRS AASHTO

325

Complete Issue Information

Duray, Jim	New	High	
	Suspended		
Duray, Jim	New	High	
	Suspended		
Ihnat, Joseph	Assigned		
	Suspended		Enhancement
Ihnat, Joseph	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
jay puckett	BridgeTech, Inc.	puckett_bt@compuserve.com	307-766-2223

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2406.10964	Suspended	Time of analysis

Description

FROM: jpuckett DATE: 2/26/2000 10:13 PM

The distances in the deck template can default most of the time. For example, the common edge barrier case could completely default once the case is picked, i.e., the one in the upper left corner.

FROM: jduray DATE: 7/5/01 9:03:48 AM

This incident was originally entered during 3.0 beta testing.

FROM: hlee DATE: 4/30/2008 2:21:26 PM

Discarded by TAG 12/07.

Issue ID: 2406
Subject: Time of analysis

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: puckett, jay	2/27/2000 5:29:21 AM
Modified By: administrator	6/19/2008 4:02:26 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Martin, Ed	Not Reproducible	Urgent	
	Accepted		Bug
Martin, Ed	Accepted	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2435.10940	Accepted	BARS import error messages

Description

FROM: jpuckett DATE: 2/26/2000 10:28 PM
Suggest default of time of analysis to service life.

FROM:jduray DATE:7/5/01 9:09:46 AM
This incident was originally entered during 3.0 beta testing.

Complete Issue Information

Issue ID: 2435
Subject: BARS import error messages

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Thompson, Todd	9/21/1999 6:31:25 PM
Modified By: administrator	6/19/2008 4:02:25 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 9/21/1999 1:33 PM

I attempted to import a BARS structure with a user that did not have permission to create a structure. I was politely given an error messages stating so. After I clicked on ok, I received two additional error messages. The first was a MS Visual C++ Runtime library error and the other was a barsimport.exe - application error. I believe that this error messages reflect a problem.

4/19/2016 3:13:42 PM

HRS AASHTO

328

Complete Issue Information

As soon as I can find a way to attach a word document with the error messages, I will do so. Seems that you can't do that from a New Incident.

FROM: tthompson DATE: 9/21/1999 1:37 PM

I was only able to attach/upload a file after pulling the incident up and editing it. Can this be fixed to attach a file while entering a new incident?

FROM: jduray DATE: 01/10/2000 10:49:27

We did not write Visual Intercept and cannot change it.

FROM: emartin DATE: 1/11/2000 10:30 AM

Not able to create the error with the current version of the import.

Issue ID: 2447
Subject: "Spec check detail for determination of stresses"

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Generated, jmckool 12/8/1999 4:42:38 PM
Modified By: administrator 6/19/2008 4:02:25 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Assigned	High	
Goodrich, Brian			
Duray, Jim	Suspended		Enhancement

4/19/2016 3:13:42 PM

HRS AASHTO

329

Complete Issue Information

	Discard		
Duray, Jim	Discard	High	Enhancement
Martin, Ed	Information Needed	High	
	Resolved		
Martin, Ed	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2453.10924	Resolved	Haunch thickness with BARS to VIRTIS conversion

Description

FROM:jmckool DATE:12/08/1999 11:35:25

This window under Stage 1 for SERVICE-I has a section where it lists the DL+P/S moments. The DL portion of the moment listed here only includes the beam selfweight, not the slab. This is misleading since the slab is also a Stage 1 DL. Also, there is an axial force listed which is due to the prestress, but it does not tell you what P/S force it is, either P/S with only initial losses or after all losses. By comparing to PCI Design Example 9.9.4, I have determined it is the P/S force after only the initial losses. Therefore, I think the intent is to calculate the beam stresses at prestress transfer, but this is not clear anywhere. Also, as I stated in Incident #1915, the stress calculated here is compared to Final allowable DL stress in one of those rating factor windows so I'm not positive of the intent but something appears to be wrong. Could more description be added to these spec checks?

FROM: bgoodrich DATE: 12/14/1999 8:14 AM

I can add some wording to indicate if this is an initial stress check or not, but it will not be ready for beta build 2. Again, the BRASS output was used to illustrate these comps and indicate that they were for the initial stress checks with a single heading above the spec checks. Should something be added to the results object to indicate that certain spec checks are for initial stresses? The initial stress checks are performed after the final stress checks, so I think a single function could be called when BRASS starts the initial stress checks. The function could then set a flag in the spec checks table.

Jim - How should we proceed?

4/19/2016 3:13:42 PM

HRS AASHTO

330

Complete Issue Information

FROM:jduray DATE:03/02/2000 08:12:45
Is this a duplicate?

Brian - Can you add a description to the memo field?

FROM: bgoodrich DATE: 3/2/2000 12:35 PM
The spec check detail is written from a general tool, which does not know if initial or final P/S forces are being applied. Therefore, I cannot add anything to the memo field, without passing more parameters into the tool. There are a few other spec check details that are so general that they may not make much sense when reviewed by themselves. We probably need to review several of the spec check details as shown by Opis and determine which ones need more information.

FROM:jduray DATE:7/5/01 9:11:23 AM
This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:21:36 PM
Discarded by TAG 12/07.

Issue ID: 2453
Subject: Haunch thickness with BARS to VIRTIS conversion

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Shah, Shyam	7/1/1999 3:13:09 PM
Modified By: administrator	6/19/2008 4:02:24 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Complete Issue Information

Description

FROM: snshah DATE: 6/30/1999 10:39 AM

The haunch thickness is not converted correctly when converting from BARS to VIRTIS.

FROM: emartin DATE: 12/13/1999 3:20 PM

Please provide a BARS input file that produces the incorrect haunch thickness.

FROM: emartin DATE: 2/29/2000 3:10 PM

Input data file provide by Kurt Brauner (LaDot).

FROM: emartin DATE: 2/29/2000 3:12 PM

The input file specifies a fillet thickness of 4.5 inches and an effective slab thickness of 7.5 inches. The given distance from the centroid of the effective slab to the top of the steel is 7.25 inches. BARS Import uses these two dimensions to compute the haunch thickness: $7.25 - (7.5 / 2) = 3.5$ inches
BARS Import uses the fillet dimensions to compute the Dead Load from the haunch.

Issue ID: 2473
Subject: Hovering over data does not work in grids

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	3/2/2000 9:30:02 PM
Modified By: administrator	6/19/2008 4:02:23 PM
Priority: High	
Category: Enhancement	

History

4/19/2016 3:13:43 PM

HRS AASHTO

332

Complete Issue Information

Primary Contact	Status	Priority	Category
Duray, Jim	Discard	High	Enhancement
Duray, Jim	Suspended	High	Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2474.10903	Discard	Analysis results after data of a girder changed

Description

FROM: VVinayagamoorthy DATE: 3/2/2000 1:28 PM

Please check!

FROM: VVinayagamoorthy DATE: 3/2/2000 2:03 PM

I noticed that we do not have this hovering over data within Table is not implemented anywhere in Virtis. Considering the Incidenet 2472, I am wondering whether we canimplement it this feature for data of Tables too!

FROM:jduray DATE:7/5/01 9:14:45 AM

This incident was originally entered during 3.0 beta testing.

FROM:hlee DATE:4/30/2008 2:21:59 PM

Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 2474
Subject: Analysis results after data of a girder changed

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	3/2/2000 10:10:53 PM
Modified By: administrator	6/19/2008 4:02:23 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Accepted	High	Enhancement
Kennelly, Krisha	Accepted	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2481.10896	Accepted	Generated Girder Alternatives using Wizard

Description

FROM: VVinayagamoorthy DATE: 3/2/2000 2:07 PM

I created a member and analyzed it. Later I changed the some data of the girder. Can we automatically remove the analysis results from memory, since they are no longer valid.

I noticed this type of behavior in other softwares!

FROM:hlee DATE:4/30/2008 2:22:07 PM

Discarded by TAG 12/07.

4/19/2016 3:13:43 PM

HRS AASHTO

334

Complete Issue Information

Issue ID: 2481
Subject: Generated Girder Alternatives using Wizard

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krishna	
Submitted By: vinayagamoorthy, vinacs	3/3/2000 10:08:45 PM
Modified By: administrator	6/19/2008 4:02:23 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

#####

Complete Issue Information

FROM:jihnat DATE:10/16/2001 1:00:51 PM
Accepted via email by Brian Goodrich.

FROM:hlee DATE:7/10/2006 8:47:27 AM
Changed Project to Support Center.

Issue ID: 2483
Subject: Default Rating Method for PS girders - BRASS enhancement

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: vinayagamoorthy, vinacs 3/6/2000 4:34:31 PM
Modified By: administrator 6/19/2008 4:02:23 PM
Priority: Urgent
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Open	Urgent	Enhancement

Complete Issue Information

	Resolved		
Duray, Jim	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2489.10888	Suspended	non numeric entries are allowed within Live Load Distribution factors

Description

FROM: VVinayagamoorthy DATE: 3/6/2000 8:27 AM

I was able to select ASD as default rating method for PS girders. Do we have a ASD rating method for PS girders?

Although I have selected ASD as my default rating method, BRASS rated this girder using LFD method. Please check this. If ASD rating method is available for PS girders, do not change the GUI. If the BRASS does not have the capability to handle ASD method for PS, then warn the user about his selection.

FROM: VVinayagamoorthy DATE: 3/6/2000 9:14 AM

As we know that Rating can be done at different levels. I tried to rate from the bridge explorer level. First I rated a PS girder using LFD method and then rated the girder using ASD method. Please note that Within the girder, I did not provide any ASD factors.

Question 1: How does the program assign ASD factors? I assume that it uses AASHTO standard specification, however, I want to confirm it.

Question 2: When I rated Member alterantives using LFD and ASD, program rated the girder using LFD method only. However when I rated at Bridge explorer level, program was able to rate using both methods. Is this a bug?

FROM: jduray DATE: 3/8/2000 11:20 AM

FROM: bgoodrich DATE: 3/10/2000 3:04 PM

Jim - Vinacs is correct that there is no ASD rating method for P/S girders. If the LFD rating method was selected, BRASS performed an ultimate strength analysis. If the ASD rating method was selected,

4/19/2016 3:13:44 PM

HRS AASHTO

337

Complete Issue Information

BRASS performed a service load analysis. Basically, BRASS requires two runs to perform the total analysis. I am not sure how we address this in the export.

FROM: bgoodrich DATE: 3/10/2000 3:04 PM

Regarding question 1: BRASS uses service load factors from the spec or rating manual.

Regarding question 2: I could not duplicate the bug. When I selected the ASD rating, BRASS performed a service load analysis and when I selected the LFD rating, BRASS performed an ultimate strength analysis.

Jim - Vinacs is correct that there is no ASD rating method for P/S girders. If the LFD rating method was selected, BRASS performed an ultimate strength analysis. If the ASD rating method was selected, BRASS performed a service load analysis. Basically, BRASS requires two runs to perform the total analysis. Maybe the BRASS analysis control should call the BRASS export function twice for prestress, however, I am unsure how this would affect the results. Only one set of results can be shown at a time. Could the two results be combined to show the critical inventory and operating ratings.

FROM: jduray DATE: 03/20/2000 16:08:05

I looked at the AASHTO Manual for Condition Evaluation of Bridges and it looks to me as though there is an ASD rating 6.6.2.5 and a LFD rating 6.6.3.3. It seems that ASD rating requires a check of the ultimate moment in addition to the in-service allowable stresses and LFD rating requires a check for serviceability in addition to strength requirements.

It seems to me that the engine should be able to provide this such that when the user requests ASD he gets what the spec requires. Similar to LFD.

FROM: bgoodrich DATE: 3/20/2000 3:58 PM

Jim - The 1994 AASHTO Manual for Condition Evaluation of Bridges states the information you listed above, however, the 1995 and 1996 Interims changed the two articles you listed. Now, Article 6.6.2.5 simply refers to Article 6.6.3.3. I guess this could be interpreted as both ASD and LFD rating exist.

The BRASS-LFD engine performs the strength analysis in one run and the service analysis in a separate run. If these analyses were run from Virtis, only the results from the later analysis would be available in Virtis. There is not currently an easy way within BRASS to combine the results from the two analyses. One possibility using Virtis would be to create a single data file containing two data sets (for a strength run and a service run). The data sets would be identical, except for the DESIGN, INVENTORY, and OPERATING commands. Then, BRASS could write two sets of rating factors to the results object. The results object would then have to choose the critical inventory or operating factor from the two sets of results. I think I could get this working in a few hours. I would have to make sure BRASS didn't write two sets of dead load, live load, and critical load actions. Then, I could put a loop around the code that creates the DESIGN, etc. commands and stack the data sets in one file.

FROM: jduray DATE: 03/23/2000 10:06:16

FROM: jduray DATE: 03/24/2000 08:31:07

Discussion with Jeff - It should be the engine's responsibility to do a rating in accordance with the spec. BRASS should be fixed to do a proper LFD rating which should include the proper serviceability checks.

FROM: jduray DATE: 7/5/01 9:26:05 AM

This is being addressed by BRASS for the next release (4.1).

4/19/2016 3:13:44 PM

HRS AASHTO

338

Complete Issue Information

FROM:jduray DATE:7/5/01 9:28:07 AM

FROM:jduray DATE:5/14/02 4:37:15 PM
Was this completed for 4.1?

FROM:bgoodrich DATE:Friday, May 17, 2002 11:05:12 AM
Yes. Note that the maintenance manual no longer lists a prestress ASD rating. Therefore, BRASS only performs prestress LFD ratings.

FROM:hlee DATE:7/10/2006 8:48:01 AM
Changed Project to Support Center.

Issue ID: 2489
Subject: non numeric entries are allowed within Live Load Distribution factors

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 3/7/2000 3:17:18 PM
Modified By: administrator 6/19/2008 4:38:35 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: VVinayagamoorthy DATE: 3/7/2000 7:14 AM
Within Standard and LRFD load distribution data entry GUIs, non numeric enteries are allowed.

Please make sure all the GUIs are checked for this error. It takes a lot of time to check every GUI
FROM: VVinayagamoorthy DATE: 3/7/2000 9:22 AM

Complete Issue Information

Framing Plan Tables does not check for non numeric entry either.

FROM:kkennelly DATE:03/29/2000 11:17:14
duplicate of 473

Issue ID: 2498
Subject: Element Too Small error message

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: vinayagamoorthy, vinacs	3/7/2000 10:20:11 PM
Modified By: administrator	6/19/2008 4:02:22 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Duplicate	High	Enhancement
Goodrich, Brian	Duplicate	High	Enhancement

Contacts

4/19/2016 3:13:44 PM

HRS AASHTO

340

Complete Issue Information

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2503.10874	Discard	Rebar library

Description

FROM: VVinayagamorthy DATE: 3/7/2000 2:16 PM

I tried to rate an fixious 2 span PS girder bridge. BRASS gives element too small message. This happens when I placed the deck rebar details. Please check. BRASS should be able to create elements such that this error never shows up.

FROM: jduray DATE: 3/8/2000 11:08 AM

FROM:bgoodrich DATE:08/10/2001 18:38:00
Duplicate of Incident 545.

FROM:hlee DATE:7/10/2006 8:48:26 AM
Changed Project to Support Center.

Issue ID: 2503
Subject: Rebar library

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Duray, Jim
3/8/2000 4:32:31 PM

4/19/2016 3:13:45 PM

HRS AASHTO

341

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:22 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Duplicate	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2529.10848	Duplicate	Bridge Rating Results window: Prerelease

Description

FROM: jduray DATE: 3/8/2000 11:30 AM
 Several users expressed a need for access to the rebar library.

FROM: jduray DATE: 3/8/2000 11:31 AM
 Ability to add square bars is the most likely use of this feature.

FROM:hlee DATE:4/30/2008 2:22:14 PM
 Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 2529
Subject: Bridge Rating Results window: Prerelease

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: vinayagamoorthy, vinacs	3/17/2000 3:55:50 PM
Modified By: administrator	6/19/2008 4:02:21 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: VVinayagamoorthy DATE: 3/17/2000 8:51 AM

I noticed that the window reset to default size as soon as I close it. Can we make it to retain the size that was given when it is closed?

If it is not possible for this release, please do this enhancement for the next release.

FROM:mordoobadi DATE:8/2/01 4:38:52 PM

Related to 3255.

4/19/2016 3:13:45 PM

HRS AASHTO

343

Complete Issue Information

Issue ID: 2531
Subject: Drag and Drop: Enhancement

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 3/17/2000 5:35:25 PM
Modified By: administrator 6/19/2008 4:02:21 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:13:45 PM

HRS AASHTO

344

Complete Issue Information

Tasks

Name	Current State	Summary
2532.10845	Discard	BRASS and Virtis use different dll's

Description

FROM: VVinayagamoorthy DATE: 3/17/2000 10:24 AM

Program allows to drag and drop a folder. I use this option instead of using copy and paste option. It make the modeling easier. However, when I have a long bridge tree I am not able to use this option.

This is because that I am not able to see both copy and paste folders within displayed window. Futhermore, Virtis does not scroll down the tree automatically. (I noticed that Windows explorer does scroll down automatically)

Can we improve Virtis such that it scrolls down automatically? This needs not to be addressed in this release. (An enhancement request.)

FROM: jduray DATE: 7/5/01 9:30:59 AM

This incident was originally entered during 3.0 beta testing.

Issue ID: 2532
Subject: BRASS and Virtis use different dll's

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	3/17/2000 5:37:43 PM
Modified By: administrator	6/19/2008 4:02:20 PM
Priority: High	
Category: Enhancement	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Closed	High	Enhancement
Kennelly, Krisha	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2539.10838	Closed	RC Slab Training Example

Description

FROM:jduray DATE:03/17/2000 13:36:00

BRASS and Virtis/Opis install into different directories and therefore use different dll's that could produce different results for the same problem. We need to coordinate installation to install to a common location and record it in the registry.

FROM:hlee DATE:4/30/2008 2:22:22 PM

Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 2539
Subject: RC Slab Training Example

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	3/19/2000 6:06:01 PM
Modified By: administrator	6/19/2008 4:02:20 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Enhancement
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2562.10815	Resolved	Two diaphragms at a location

Description

#####

FROM:dteal DATE:10/09/2001 16:00:28
 ????? Unable to verify - The description is missing ?????

FROM:kkennelly DATE:10/10/01 9:36:06 AM
 Our list of enhancement estimates has this item described as "Add rc training example". I think this was a request for a 2 span rc slab example with multiple cross sections. This was added as example RC4 so I think it is resolved.

4/19/2016 3:13:46 PM

HRS AASHTO

347

Complete Issue Information

FROM:kkennelly DATE:10/18/2001 3:18:52 PM
Accepted and closed based on A in track field.

FROM:hlee DATE:7/10/2006 8:48:41 AM
Changed Project to Support Center.

Issue ID: 2562
Subject: Two diaphragms at a location

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: vinayagamoorthy, vinacs 3/21/2000 2:13:37 PM
Modified By: administrator 6/19/2008 4:02:19 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: VVinayagamoorthy DATE: 3/21/2000 7:05 AM
I was able to place two diaphragms at a location. Similar to 2070. Somehow, I am able to break the code. Here are the steps

4/19/2016 3:13:46 PM

HRS AASHTO

348

Complete Issue Information

1. Create non skewed 5 girder 2span system
2. Click on Diaphragm Tab
3. Use Wizard to create diaphragms (say 2 equal space per span)
4. Click COPY TO button to copy diaphragms from bay 1 to 2
5. At programs prompt say NO as an answer
6. It creates two diaphragms at the same location and allows us to save

Priority Low; Enhancement

FROM:jduray DATE:7/5/01 9:34:16 AM

This incident was originally entered during 3.0 beta testing.

FROM:kkennelly DATE:8/25/2003 10:12:29 AM

Framing Plan window now validates for 2 diaphragms at a location. (Not sure what version this added to, Definitely was before 5.0)

Issue ID: 2569

Subject: Linking engine error to GUI windows

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: puckett, jay

3/22/2000 11:46:02 AM

Modified By: hlee

9/7/2012 1:47:26 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

4/19/2016 3:13:46 PM

HRS AASHTO

349

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
vinacs vinayagamoorthy	Caltrans	Murugesu_Vinayagamoorthy@dot.ca.gov	916-227-8657

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2575.10802	Resolved	Enhancement to remove analysis results

Description

FROM:jduray DATE:03/22/2000 07:44:21

E-mail from Jay...

Jim: How can we link the Window/resource ID to an error message? My suggestion is that we (the engine folks) have an output window that lists possible errors. Here the user can double click on an error and bring up a Window that outlines possible error(s). The user selects an option and Virtis/Opis goes to the appropriate Window. If only one possibility exists then the double click places the user in the most likely place. Very similar to the compiler IDE. Seems like we need to a resource ID table in the Domain. The engine provides a one-to-many relationship. One engine error to several possible Virtis/Opis bridge definitions problems.

FROM:jduray DATE:7/5/01 9:35:24 AM

This incident was originally entered during 4.0 development.

FROM: Herman Lee DATE: 9/7/2012 9:43:28 AM Eastern Daylight Time

See also Incident 3847.

Issue ID: 2575

Subject: Enhancement to remove analysis results

Folder: /Virtis/Support Center

4/19/2016 3:13:46 PM

HRS AASHTO

350

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: vinayagamoorthy, vinacs	3/22/2000 11:58:29 PM
Modified By: administrator	6/19/2008 4:02:19 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	Urgent	Bug
	Closed		
Goodrich, Brian	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Parabolic.zip	

Tasks

Name	Current State	Summary
2579.10798	Closed	Girder Profile – Parabolic Haunch Input

Description

FROM: VVinayagamoorthy DATE: 3/22/2000 4:38 PM

I am requesting an enhancement to allow the users to delete analysis results that are stored in the database.

To allow a Permit vehicle to cross over several bridges, an agency may analyze those structures at Bridge Explorer level. As soon as the analysis is done, summary of the results will be shown within rating result table. In order to show the results, program stores the analysis results within database. Problems starts here.

Whenever we analyze structures for various permit trucks, Virtis will accumulate all the results and consume a lot of space. Because of this, agency may want to remove the results of permit trucks from database. Furthermore, Once the analysis is done and permit is issued/rejected, agencies may wish to delete the results pertains to the special permit truck.

4/19/2016 3:13:46 PM

HRS AASHTO

351

Complete Issue Information

At present, user has to open the member alternatives of each analyzed bridge and remove analysis events from the database. If we have two members for every bridges that is analyzed, there will be a lot of time necessary to delete them. Furthermore, analysis event does not show the vehicles that are used to analyze and therefore, user has to go by the exact date and time to locate the proper event to erase.

Because of this potential problems, I suggest that we improve the way to remove the analysis results that are stored in the data base. For example, program should be able to remove all the analysis pertains to a particular vehicle. Several other options could be considered.

FROM: VVinayagamoorthy DATE: 3/22/2000 4:56 PM

Issue ID: 2579
Subject: Girder Profile – Parabolic Haunch Input

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	10/20/1999 7:48:44 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 10/20/1999 2:54 PM

Please also reference Incident #1532.

When entering a parabolic haunched section where the web plate thickness changes someplace in the haunch. The accuracy has been carried out to 6 decimal places in millimeters. The girder validated OK but I get the following error message from BRASS.

4/19/2016 3:13:47 PM

HRS AASHTO

352

Complete Issue Information

Input Errors (1103) - Cross-section area less than or equal to zero

----- End of Contents of BRASS Error File -----

The cross section area is zero for span 2 and span point 11. Check data file for possible error.

Location : Data File

Type : Input Error

Error No.: 1103

Data File: C:\Program Files\AASHTO BridgeWare\VirtisOpis21\105-292_WWCH_Sk00_Cur00
\Unit_#3_-_P#5_to_A#2\G2=Girder_K\Girder_K.dat Fatal Error
Encountered - Unexpected Termination

File: C:\Program Files\AASHTO BridgeWare\VirtisOpis21\105-292_WWCH_Sk00_Cur00\Unit_#
3_-_P#5_to_A#2\G2=Girder_K\Girder_K.ERR
----- Contents of BRASS Error File -----

Because of the problems I had getting it to validate, my guess would in rounding of significant digits.

FROM: dteal DATE: 10/20/1999 3:50 PM

I found that if I removed the change in plate thickness that fell within the parabolic haunch geometry, BRASS would run to completion.

When I looked at the schmatic drawing of the girder, it was represented correctly for both.

FROM: bgoodrich DATE: 10/26/1999 8:54 AM

Dean - Would you please attach the Virtis Export file (*.BBD) as well as the exported BRASS file (Girder_K.DAT). This way I can import the *.BBD file and I'll have your exact bridge to help me figure out how to best address this issue. I may just need to increase the number if digits past the decimal. Thanks.

FROM: dteal DATE: 10/27/1999 9:09 AM

Brian, there is no file *.BBD created. I attached the other file requested.

FROM: dteal DATE: 10/27/1999 3:09 PM

I think I exported correctly and created the *.bbd file.

FROM: bgoodrich DATE: 11/12/1999 4:42 PM

In the attached girder_K.dat file, I noticed some commands with duplicate ranges. The domain functions convert the schedule based girder profile to cross sections and the export just generates the BRASS cross sections and ranges. I am not sure where these extra ranges come from (see commands below).

```
SPAN-GENERAL-LENGTH 2, 70100.0
SPAN-GENERAL-SEGMENT 2, 3150.0, L, 617.53, 3150.0
SPAN-GENERAL-SEGMENT 2, 3150.0, P-, 16100.00, 2418.0
SPAN-GENERAL-SEGMENT 2, 2418.0, P-, 16100.00, 2418.0    <= extra range (equal web depths)
SPAN-GENERAL-SEGMENT 2, 2418.0, P-, 35050.00, 2100.0
SPAN-GENERAL-SEGMENT 2, 2100.0, P-, 56800.00, 2519.0
SPAN-GENERAL-SEGMENT 2, 2519.0, P-, 56800.00, 2519.0    <= extra range (equal web depths)
SPAN-GENERAL-SEGMENT 2, 2519.0, P-, 69482.47, 3150.0
SPAN-GENERAL-SEGMENT 2, 3150.0, L, 70100.00, 3150.0
```

4/19/2016 3:13:47 PM

HRS AASHTO

353

Complete Issue Information

My version 2.0 does not allow importing of BBD files and I did not see any patches to make it able to import. I could not get version 2.1 to import the attached BBD file, so I used the BRASS data file to determine the girder profile. I have tried to duplicate the problem with version 2.1 and 3.0 and have been unsuccessful. The BRASS error is given because it detected an element with a length of zero.

Krishna - Could you try to import the BBD file? If you can, please try exporting it to see if you get the same error as Dean.

FROM:kkennelly DATE:12/09/1999 08:47:19

I was able to import the bbd file and reproduce the problem. The input for the problem is as follows so you can reproduce it. The problem is with all of the digits after the decimal places.

Girder Profile - Web

Begin Depth	Vary	End Depth	Thick	Support #	Start Dist	Length
2100	none	2100	18	1	0	16.390
2100	parab	2348.47487	18	1	16.39	16.750
2348.47487	parab	3150	20	1	33.14	17.682474
3150	none	3150	20	1	50.822	1.235053
3150	parab	2418.03234	20	2	0.618	15.482474
2418.03234	parab	2100	18	1	16.100001	18.95
2100	parab	2518.95885	20	2	35.050	21.75
2518.95885	parab	3150	20	2	56.800	12.682474
3150	none	3150	20	2	69.482	1.235053
3150	parab	2277.32327	20	3	0.618	20.282474
2277.32327	parab	2100	18	3	20.900	14.150
2100	none	2100	18	3	35.050	71.244998

Girder Profile Top Flange

Begin Width	End Width	Thick	Support	Start Dist	Length
380	380	25	1	0.000	33.140
450	450	38	1	33.140	34.400
380	380	25	2	16.100	40.700

4/19/2016 3:13:47 PM

HRS AASHTO

354

Complete Issue Information

450	450	38	2	56.800	34.200
380	380	25	3	20.900	14.150
450	450	38	2	35.050	30.250
380	380	25	4	11.950	40.995

The domain generates a cross section change pt at 67540 (from left end, 16100 in Span 2) for the top flange plate change. It then generates a cross section change pt at 67540.001 for the web plate change. The domain checks for duplicate change pts but we use a standard tolerance of 0.0000001 when comparing if 2 numbers are the same. 67540.0 is not the same as 67540.001 when using that std tolerance.

So the duplicate ranges you see aren't really duplicates

SPAN-GENERAL-SEGMENT 2, 3150.0, P-, 16100.00, 2418.0
SPAN-GENERAL-SEGMENT 2, 2418.0, P-, 16100.00, 2418.0 <= extra range (equal web depths)

is actually

SPAN-GENERAL-SEGMENT 2, 3150.0, P-, 16100.00, 2418.0323637283
SPAN-GENERAL-SEGMENT 2, 2418.0323637283, P-, 16100.001, 2418.0323301629

I can't tell why BRASS is giving the internal error about the cross section having zero area because as far as I can tell, the following cross sections are generated by the domain

Brass Cross Sect #

5	top flg 450x38	web 20x2418.0323637283	bot flg 450x38
6	380x25	web 20x2418.0323637283	bot flg 450x38
7	380x25	web 20x2418.0323301629	bot flg 450x38
8	380x25	web 18x2418.0323301629	bot flg 450x38

that matches the BRASS data file produced.

I'll check with Jim when he gets back about using a different tolerance when checking if the change pts are at the same location. Even though the points are really at the same location and the user shouldn't have to worry about the extra cross sections, I think all of the data has been defined for BRASS to run.

FROM: bgoodrich DATE: 12/15/1999 10:36 AM

Krishna - Was the 16100.001 mm distance physically entered? The 0.001 is an extremely small fraction of a millimeter, so was there an input problem. Also, did you talk to Jim about the tolerance?

FROM: kkennelly DATE: 02/07/2000 10:18:42

Talked it over with Jim. The 16100.001 was physically entered by the user. User entered top flange

Complete Issue Information

and web profiles that are 0.001 mm apart. The domain recognizes this and generates 2 sections as it should. Either the export or brass needs to handle this. BRASS needs to handle the precision that the user enters.

FROM: bgoodrich DATE: 2/8/2000 11:40 AM

I modified the export so it does not generate a web or cross section range that is within 1/32 inch of the previous one. Note that the export sorts the ranges in consecutive order. I tested this modification with the exact distances listed above and BRASS runs successfully.

FROM: dteal DATE: 3/23/2000 2:15 PM

Below is the BRASS error info I got when attempting to verify this problem. I attached the .bbd file and the wizard alternative.dat files. I only have info entered under member 2.

Section Analysis and Specification Check Errors (3225) - Depth of web in compression cannot be zero

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTO BridgeWare\VirtisOpis30
\Parabolic_Example\Parabolic_Haunch_Example\Member_2\Wizard_Alternative.ERR

Fatal Error Encountered - Unexpected Termination

Data File: C:\Program Files\AASHTO BridgeWare\VirtisOpis30
\Parabolic_Example\Parabolic_Haunch_Example\Member_2\Wizard_Alternative.dat

Error No.: 3225
Type : Section Analysis or Spec. Check Error
Location : NonCompactComprFlangeSlend

The depth of web in compression (Dc) cannot be zero. This causes a divide-by-zero error in a compression flange slenderness check.

----- End of Contents of BRASS Error File -----

FROM: dteal DATE: 3/23/2000 2:17 PM

FROM: bgoodrich DATE: 3/23/2000 5:04 PM

I ran the data file (Wizard_Alternative.dat) with BRASS and received no error. I also imported the bridge (Parabolic Example.bbd) with Opis and analyzed the Wizard Alternative member alt of Member 2, however, I did not receive an error here either. I do not think this is a debug/release version issue because I ran the data file just with BRASS and no problems occurred.

Jim - Could you please have someone try to duplicate this incident.

FROM: jihnat DATE: 03/24/2000 14:24:48

***** THIS WAS PREVIOUSLY INCIDENT 1581 *****

FROM: kkennelly DATE: 03/24/2000 14:51:23

Duplicated in Acceptance build from last week and in debug with Girder(LRFD).dll dated 3/23/00 3:01pm

4/19/2016 3:13:47 PM

HRS AASHTO

356

Complete Issue Information

FROM:kkennelly DATE:03/27/2000 09:23:19

Stage 3 Pt 103 (15432 mm) BRASS calculates xbar as being in the bottom flange so the Depth of the web in compression is 0. BRASS quits because when it tries to check AASHTO 6.10.4.1.4 Noncompact Section Compression Flange Slenderness with $D_c = 0$ it will divide by zero.

FROM: bgoodrich DATE: 3/27/2000 5:23 PM

Krishna sent me the data file and some intermediate output files. I found that I could reproduce this incident from Virtis by specifying the US units HL-93 vehicle when analyzing the SI units member alternative. For this bridge at the 103 point, the superimposed stresses due to the minimum actions do cause the depth of web in compression to be zero. Furthermore, the elastic N.A. computed using the stresses and similar triangles falls in the bottom flange. Therefore, the outer fibers of the flange are in compression and inner fibers are in tension. BRASS checks the outer fiber to determine if a flange is in compression, which is why BRASS attempted the compression flange slenderness equation. I am currently working on correcting this issue in BRASS.

FROM: bgoodrich DATE: 4/3/2000 2:28 PM

I have addressed this issue and will be sending a new DLL soon.

FROM: dteal DATE: 4/13/2000 12:55 PM

FROM: dteal DATE: 4/18/2000 1:03 PM

I checked this with an interior girder and all was fine. When I check it with an exterior girder, G1, (from same structure) I get an "Unable to compute depth of web in compression" error. I get the error in "unit #3-P#5 to A#2, Member G1", Member G2 was OK. Attached is a copy of the error message and a copy the .bbd file.

FROM: bgoodrich DATE: 4/28/2000 10:37 AM

We will have to release a new BRASS-GIRDER(LRFD) DLL to address these issues. I will contact Jay and get the ball rolling.

FROM: bgoodrich DATE: 5/19/2000 9:13 AM

WYDOT or I will try to send a new DLL to Baker by the end of next week.

FROM: dteal DATE: 6/27/2000 11:34 AM

What release or patch will reflect the changes?

FROM:jduray DATE:12/18/2000 10:37:38

FROM: bgoodrich DATE: 12/18/2000 2:47 PM

Most issues in this incident (except the depth of web in compression bug) were corrected as indicated in the comment made above on 4/18/2000.

The depth of web in compression issue was addressed for the Version 1.03.01 release of BRASS-GIRDER(LRFD), which was released around the end of May with Service Pack 3 for Opis 3.0. This correction was documented in the BRASS-GIRDER(LRFD) Release Notes for Version 1.03.01 as well as the "Service Pack 3 Readme.pdf" file. The tolerance and zero length issues should have been corrected in this release as well.

FROM:dteal DATE:01/27/2001 09:53:21

4/19/2016 3:13:47 PM

HRS AASHTO

357

Complete Issue Information

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:49:30 AM
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:59:32 AM
Closed.

Issue ID: 2583
Subject: No dead load factors type found

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Kennelly, Krisha	3/28/2000 7:22:55 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	62912.txt	
	62912.bbd	

Tasks

Name	Current State	Summary
2583.10794	Resolved	No dead load factors type found

Description

FROM:kkennelly DATE:03/28/2000 15:20:33

4/19/2016 3:13:47 PM

HRS AASHTO

358

Complete Issue Information

Submitted by James Pierce, MN

FROM:kkennelly DATE:03/29/2000 08:06:44
Internal brass lrfd error. I sent the .bbd and .dat files to Brian yesterday.

FROM: bgoodrich DATE: 3/30/2000 1:32 PM
I have located the problem and am working on a solution. The steel girders in this bridge are extremely deep and are entered in SI units. When the structural analysis is performed, the values from some intermediate computations are too large to store in a REAL*4 variable. These variables will have to be changed to REAL*8 to store these large intermediate values. I suspect this problem has not occurred because a bridge with this deep of girders has not been run. I will add this bridge to our test suite.

FROM: bgoodrich DATE: 5/19/2000 10:31 AM
The problem has been addressed in BRASS. I or WYDOT will try to send Baker a new BRASS DLL by the end of next week.

Issue ID: 2586
Subject: BRASS LFD only handles 12 PS box beams in a bridge cross section

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	3/30/2000 6:42:27 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2588.10789	Resolved	Release 3.0 Bridge Description Write Privilege problem

Description

FROM:jduray DATE:03/30/2000 14:38:57

I don't know if this is a bug or enhancement request. Brian needs to determine if the export is giving an incorrect warning. Need to check if BRASS LFD handles more than 12 girders. If it does the export warning message needs to be changed. The engine-help should indicate these kinds of limitations.

FROM:bgoodrich DATE: 3/30/2000 1:23 PM

BRASS-GIRDER has arrays set up to handle 12 girders in a deck cross section. I will forward a request to WYDOT for increasing the number of girders to 30, which is the BRASS-GIRDER(LRFD) limit.

FROM:bgoodrich DATE:01/17/2001 09:02:41

An engineer at MASS Highway (Binh T. Ha, P.E., (617) 973-7561, binh.ha@state.ma.us) requested an increase also.

FROM:bgoodrich DATE:07/07/2001 13:33:42

We are currently working to increase the number of transverse girders in BRASS to 50.

FROM:bgoodrich DATE:07/25/2001 11:36:03

The number of transverse girders that BRASS allows has been increased to 50 for the version 4.1 release. The export has also been modified to allow this new maximum.

Issue ID: 2588
Subject: Release 3.0 Bridge Description Write Privilege problem

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Kennelly, Krisha	3/31/2000 12:18:30 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: Urgent	

Complete Issue Information

Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
	Discard		
Duray, Jim	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1

Documents

Name	Resource Identifier	Description

Tasks

Name	Current State	Summary
2589.10788	Discard	Virtis BWS needs data entry wizard - July 1999 User Group Mtg

Description

FROM:kkennelly DATE:03/31/2000 08:16:26

I have the Bridge Description Write privilege turned off for Design Engineer, logged into VirtisOpis as OpidUser. When I double click on Box Beams under Prestress Beam Shapes or do File New on Box Beams, Virtis crashes. Same problem if I do same thing under Appurtenances.

FROM:jduray DATE:04/05/2000 09:59:50

Change GUI to not allow a new item to be created if user doesn't have Write privilege. This may be a temporary fix until the Create and Write privileges can be re-evaluated. With this change the two privileges become redundant and perhaps we should remove the Create privilege.

Joe - Disable New if no Write privilege

Krishna - Revise Help Write privilege description.

FROM:jihnath DATE:04/05/2000 10:38:55

GUI has been fixed.

FROM:kkennelly DATE:04/06/2000 11:05:14

help has been fixed.

Complete Issue Information

Issue ID: 2589
Subject: Virtis BWS needs data entry wizard - July 1999 User Group Mtg

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Kennelly, Krisha 3/31/2000 2:11:29 PM
Modified By: administrator 6/19/2008 4:02:18 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kkennelly DATE:03/31/2000 10:08:30
The VIRTIS Bridge Workspace needs a data entry wizard or other such tool. The purpose of this feature would be to indicate the minimum amount of data needed for bridge analysis and to guide the user while the data is being input.

FROM:hlee DATE:4/30/2008 2:22:31 PM
Discarded by TAG 12/07.

Complete Issue Information

Issue ID: 2590
Subject: Report Writer tool to generate custom reports - July 1999 User GroupMtg

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	3/31/2000 2:13:12 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Enhancement
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

4/19/2016 3:13:48 PM

HRS AASHTO

363

Complete Issue Information

2590.10787	Closed	Report Writer tool to generate custom reports - July 1999 User GroupMtg
------------	--------	---

Description

FROM:kkennelly DATE:03/31/2000 10:11:40

Both VIRTIS and OPIS need a "Report Writer" tool or program that would improve the ability of the user to generate custom reports based upon the data in the VIRTIS/OPIS database.

FROM:jduray DATE:04/18/2000 08:52:11

This was approved by the TF 4/13/00.

Issue ID: 2591

Subject: Permit entries to minimize analysis - July 1999 User Group Mtg

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha 3/31/2000 2:18:14 PM

Modified By: administrator 6/19/2008 4:02:18 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Enhancement

4/19/2016 3:13:49 PM

HRS AASHTO

364

Complete Issue Information

Duray, Jim	Resolved	High	Enhancement
------------	----------	------	-------------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2592.10785	Resolved	Database Security - July 1999 User Group Mtg

Description

FROM:kkennelly DATE:03/31/2000 10:13:28

VIRTIS needs to allow the input of minimum and maximum impact factors. It should also allow, during permit vehicle analysis, the ability to generate rating factors based upon (A) unrestricted travel, (B) reduced impact travel and (C) reduced impact and centerline-of-roadway travel. This would allow quantification of needed restrictions, on a per bridge basis, for the permit request without requiring multiple runs of the bridge analysis program.

FROM:jduray DATE:7/5/01 9:37:22 AM

This incident was suggested at the 1999 User Group Meeting..

FROM:jduray DATE:7/31/2003 11:34:44 AM

This is the Permit Restrictions enhancement included in 5.0.1.

Issue ID: 2592
Subject: Database Security - July 1999 User Group Mtg

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	3/31/2000 2:20:08 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: High	
Category: New Feature	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resubmit	High	Bug - GUI 2
	On Hold		
	Suspended		Enhancement
	Resolved		
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
	S001_00166.dat	
	gale inc 2594.bbd	

Tasks

Name	Current State	Summary
2594.10783	Resolved	3.0.0 Release - Graphic in STRAND LAYOUT window not correctly placed

Description

FROM:kkennelly DATE:03/31/2000 10:18:31

Provide guidance and documentation to enable better management of the database security features. Paul Jensen, of the Montana Dept. of Transportation, has already submitted an enhancement request to highlight this issue.

FROM:jduray DATE:04/03/2000 13:43:05

This was done for 3.0.

4/19/2016 3:13:49 PM

HRS AASHTO

366

Complete Issue Information

Issue ID: 2594
Subject: 3.0.0 Release - Graphic in STRAND LAYOUT window not correctly placed

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Barnhill, Gale	3/31/2000 6:29:34 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: gbarnhill DATE: 3/31/2000 1:20 PM

3.0.0 Release

This is a re-submittal of Incident 2338 which was marked duplicate to some other incidents (but I don't know which ones).

The STRAND LAYOUT graphic for any prestressed shape comes up partly off the screen to the top with no vertical scroll bar. If I reduce the window (not minimized) and then maximize it, the graphic

4/19/2016 3:13:49 PM

HRS AASHTO

367

Complete Issue Information

appears complete in the window.

This appears to be related to the width dimension. If I set any width dimension in the BEAM SHAPES dimensioning window greater than or equal to 76.4 inches, then the graphic shows up too high. If all width dimensions are 76.3 or less, then the graphic appears complete. A horizontal scroll bar comes up when the graphic opens for widths greater than 76.3.

A height dimension of greater than 57 produces a graphic off the top of the window, but also produces a vertical scroll bar.

FROM:jduray DATE:04/04/2000 09:15:01

Is it doing this for ps i and boxes? I'm not able to reproduce this.

FROM:jduray DATE:04/04/2000 09:22:48

For PS I I've tried the following:

80 inch top flange and 48 inch depth. I have varied the size of the window that opens to display the shape but it always opens correctly (with scroll bars if appropriate).

Trying boxes next.

FROM:jduray DATE:04/04/2000 09:27:13

Tried a width of 80 inch and depth of 42 in. Varied the window size and works fine.

FROM: gbarnhill DATE: 4/5/2000 1:16 PM

I've attached a bbd file for a Nebraska Twin Tee bridge. We model it as a single stem tee. Import puts it into the "I" shape category.

When I open the STRAND LAYOUT WINDOW, the shape is shifted off the top of the screen. If I reduce the schematic window and then maximize it, the shape is correctly placed (with a horizontal scroll bar).

I'm on a 17 inch monitor with 1024 x 768 resolution.

I can make it occur for box shapes also.

FROM:jduray DATE:04/17/2000 17:04:15

Gale is opening the window maximized.

FROM:jduray DATE:04/19/2000 16:06:37

If the shape is deeper than the window can display the vertical scroll bar should appear but it doesn't if the window is maximized.

FROM:jduray DATE:05/30/2000 10:22:25

Resolved for version 4.0.

FROM:gbarnhill DATE:02/12/2001 15:12:29

4.0.1 - I still get the original results with Virtis in "full window" mode. If Virtis is in "reduced window" mode, then the STRAND LAYOUT window opens with a vertical scroll bar.

I've attached a BARS data file. It's a tee that models as an "I" with an 84 inch top flange.

FROM:jduray DATE:4/12/2005 10:49:05 AM

Window should open fit to view.

4/19/2016 3:13:49 PM

HRS AASHTO

368

Complete Issue Information

Issue ID: 2595
Subject: 3.0 release - export from 3.0 delivered db will not import into migrated 2.1 db

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Barnhill, Gale	3/31/2000 8:44:33 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2596.10781	Closed	3.0 release - BARS Import crashes if trying to import struc def into existing wrksp, but not checked out

Description

FROM: gbarnhill DATE: 3/31/2000 3:39 PM

Since my migrated 2.1 db does not contain the PCI structures, I exported one from the 3.0 delivered db as a BBD file and then tried to import it into my migrated 2.1 db. I had checkin/checkout turned on in the migrated db, so I turned it on in the delivered db. The import failed with the following messages:

File format not compatible with this version of system.

03:36:32 PM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp.

Unable to create document!

03:36:47 PM - Line 2369 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

4/19/2016 3:13:49 PM

HRS AASHTO

369

Complete Issue Information

Unable to open Bridge Workspace!

03:36:47 PM - Line 2368 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

I also tried going the other way, migrated 2.1 to delivered 3.0. I get the same errors.

I've attached the bbd files.

frommigrated21to30 is the structure from my migrated db.

from30 is from the 3.0 delivered db.

FROM:mordoobadi DATE:04/20/2000 09:50:45

Problem was with the build number in the delivered sample database.

We issued a patch that changes the build number in the database.

FROM: gbarnhill DATE: 4/21/2000 12:36 PM

OK with Service Pack 1

Issue ID: 2596
Subject: 3.0 release - BARS Import crashes if trying to import struc def into existing wrksp, but not checked out

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Barnhill, Gale	4/3/2000 10:08:11 PM
Modified By: administrator	6/19/2008 4:02:18 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: gbarnhill DATE: 4/3/2000 5:01 PM

4/19/2016 3:13:50 PM

HRS AASHTO

370

Complete Issue Information

I loaded pontis_bridge and abw_bridge with some NBI data using SQL load table. When I tried to import structure definitions from BARS data, Import crashed. I had not given any authority to check the bridges out and therefore not checked them out. Import crashed gracefully. I got a run-time error and then an application error. Can we get Import to issue an error rather than crashing ??

FROM:jduray DATE:04/04/2000 13:16:17
Version 2.0 bug.

FROM:jduray DATE:04/05/2000 16:29:04
Distribute BarsImport.dll and abognrl.dll.

FROM:jduray DATE:04/06/2000 15:55:17
Revised CDoCmdTarget::CanAdd() to check for CanWrite. Also improved the error messages that are returned so user will have a better idea of how to correct the problem. A few other error messages were fixed in CanDelete() and CanModify().

FROM: gbarnhill DATE: 4/21/2000 12:37 PM
OK in Service Pack 1

FROM:jihnat DATE:04/21/2000 16:22:12
Accepted by gbarnhill.

Issue ID: 2598
Subject: Error Loading BRASS DLL

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/6/2000 4:57:29 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2599.10778	Suspended	View Latest Analysis Output

Description

FROM: dteal DATE: 4/6/2000 11:53 AM

Our Oracle people haven't yet got us up and running so I installed the new version 3.0.0 to run locally on SYBASE. I loaded this on one other persons PC (266 mz) besides mine (550 mz). The other persons pc gets an error "Error Loading BRASS DLL" and states the Analysis Failed. I exported the file and ran it on mine, it sent the data file along to BRASS but stopped when BRASS encountered 3 input error. I reinstalled the software and still get the same error "Error Loading BRASS DLL". I tried to run one of the example problems, they get the same error on that pc also. Any ideas where I should look?

FROM: dteal DATE: 4/6/2000 2:12 PM

We solved it at this end. Being this machine only had 64 meg or ram the virtual memory was set too low. We increased it and it works fine now.

FROM: jduray DATE: 04/07/2000 08:43:32

Yes, that is what I was going to suggest you check.

Issue ID: 2599
Subject: View Latest Analysis Output

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/6/2000 7:38:42 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	Urgent	Bug - BRASS
	Closed		
Goodrich, Brian	Closed	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Deans.bbd	

Tasks

Name	Current State	Summary
2600.10777	Closed	Max & Min Reinforcement for Ductility

Description

FROM: dteal DATE: 4/6/2000 2:34 PM

Just after selecting "View Latest Analysis Output", in the upper left corner, a portion of the Bridge Workspace is visible behind the report that is being displayed until the total report is read in. The default Microsoft busy "hour glass" is flashing during this time, very annoying.

Complete Issue Information

Issue ID: 2600
Subject: Max & Min Reinforcement for Ductility

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	4/6/2000 8:54:45 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: Urgent	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/6/2000 3:51 PM

In a PS structure I have a failure to satisfy AASHTO code Spec check for 5.7.3.3.1 & 5.7.3.3.2 for Ductility. So at the same point of interest (105.8) in the Negative Flexure Sense Opis reported a failure as being over reinforced and under reinforced and the same point. How can this be? All the failures are in ductility.

FROM: dteal DATE: 4/10/2000 11:02 AM

4/19/2016 3:13:51 PM

HRS AASHTO

374

Complete Issue Information

It appears that the problem was due to not having defined the deck reinforcement over the pier. This may have resolved this incident.

FROM: dteal DATE: 4/11/2000 7:54 AM
Still nothing appears in the rating factor graph.

FROM: jduray DATE: 04/11/2000 09:07:04
I don't understand Dean's last two comments. They don't seem to be relative to this incident. They are repeated in incident 2603.

FROM: bgoodrich DATE: 4/18/2000 4:17 PM
If negative bending occurs at a point where there is no steel to carry the tension, then there will be problems satisfying the min/max reinforcement checks. I think that by adding the deck steel, the problem does not occur any longer.

Dean - Please see Jim's comments above.
FROM: dteal DATE: 4/20/2000 8:34 AM

FROM: bgoodrich DATE: Wednesday, April 10, 2002 11:50:03 AM
Track field marked with "A", so status set to Accepted.

FROM: bgoodrich DATE: Wednesday, April 10, 2002 11:59:58 AM
Closed.

Issue ID: 2601
Subject: Can't import bbd

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Best, Richard	4/7/2000 1:56:37 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2602.10775	Suspended	Cleanup of engine data files

Description

FROM: rmbest DATE: 4/7/2000 8:52 AM

This may relate to item 2595. We are unable to import any bbd files that were created in another 3.0 database. We are getting the same error message "File format not compatible with this version of system". However, we are able to export and import back into the same database.

FROM:jduray DATE:04/07/2000 14:08:35

Krishna - please test this and let me know what you find.

FROM:kkennelly DATE:04/10/2000 11:23:23

I am unable to import between the virtis03-sample.db and virtis03.db delivered with Virtis. I am able to import between virtis03-sample.db and a copy of virtis03-sample.db

FROM:kkennelly DATE:04/10/2000 15:55:24

DbBuildNumber of Virtis03.db is 3002 and DbBuildNumber of Virtis03-sample.db is 3001. If I make the db build numbers of the 2 databases the same I am able to import between the 2 db's.

Issue ID: 2602

Subject: Cleanup of engine data files

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

4/7/2000 2:15:36 PM

Modified By: administrator

6/19/2008 4:02:17 PM

4/19/2016 3:13:51 PM

HRS AASHTO

376

Complete Issue Information

Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Assigned	Urgent	Change Request
	Resolved		Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2604.10773	Assigned	Installation - creates user DSN, should create system DSN

Description

FROM:jduray DATE:04/07/2000 10:06:47
E-mail form MoDOT:

One thing that we have noticed when running Virtis is that it goes out and stores some data files on our hard drives. These files are data files that are used by the analysis engine for Virtis which is Brass. We were trying to figure out if there is a way to have these files stored somewhere besides our hard drives. The problem that we are going to have is that these files are large. They range in size from 250 Mbytes to 2.0 Mbytes. There will basically be a file stored for each bridge. (For example if you analyze A4974, then a directory for A4974 is created on your hard drive with various files in it.) Sooner or later, we will run out of space on our hard drives (this would especially be true if we wanted to analyze a large group of bridges). We want the program to be installed on our hard drives so that we are taking advantage of the speed of our machines when compared to having the program out on the network. What we would like to be able to try was to have these files written out on a network drive somewhere while keeping the actual executable files on our hard drives. Another option that we might have would be to have these files automatically deleted whenever Virtis is started. I was wondering if you could look into this matter and determine if there is some way that we can get around this. Me and Rich looked to see if there was an INI file somewhere which would allow you to redirect these files, but we could not find one.

My response back to them:

4/19/2016 3:13:52 PM

HRS AASHTO

377

Complete Issue Information

The issue of files created by the analysis engine, their size, location, etc. is on our list of enhancements that, with AASHTO approval, we will be addressing in the version 4 release in September. We may be able to do something sooner on a smaller scale.

At this time you have to maintain the files using Explorer. It sounds like you understand the directory structure so you know where to find the files and how to delete them. There is no provision for writing the files on a server and this may not be feasible given that multiple users can work on the same bridge at the same time. For example suppose person A checks a bridge out and is modifying the bridge description while person B is doing a permit analysis of that same bridge. Person A rates the bridge and the files are written to the server. Before person A opens the output file for review person B does a rating of a different vehicle and possibly with different structural properties. Person A then opens the output file (not knowing that person B has also done an analysis) and is now looking at the wrong analysis results. Furthermore, writing the large output files to a server may be slow (as you mention). I think it is best that we provide tools for managing the files we create but continue to write them to the local PC drive (although maybe we should send them to a user-defined location and add a userid to the directory structure). Perhaps an option to delete files when a bridge workspace is closed.

---end of my response

The following needs to be scoped to improve the way we manage output:

- 1) a utility for viewing and maintaining the analysis events stored in the database - at the Bridge Explorer level. (80) hours)
- 2) a utility for viewing and maintaining the engine output files on the disk - at the Bridge Explorer level. (80 hours)
- 3) add the option to not write batch rating results to the database but still review them the way we do now (from the Bridge Explorer). -----done for 4.1
- 4) provide 1-3 above but from the Bridge Workspace (160 hours)

FROM:jduray DATE:5/21/02 9:21:20 AM

FROM:jduray DATE:5/22/02 11:37:02 AM

Issue ID: 2604
Subject: Installation - creates user DSN, should create system DSN

Folder: /Virtis/Support Center	
Primary Contact: lhnat, Joseph	
Submitted By: Duray, Jim	4/10/2000 6:27:57 PM
Modified By: hlee	2/6/2011 1:18:33 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2605.10772	Closed	Typical section schematic for splayed girders problem

Description

FROM:jduray DATE:04/10/2000 14:21:30

Rob McIntosh from Colorado DOT called with a problem that is occurring because he is installing Virtis/Opis on user's PC's under his login. When the user runs Virtis/Opis he does not have access to the DSN's that the installation created.

We should change the installation to install the DSN's as system. Check how this impacts 98 installation.

Future enhancement is to prompt the user during the installation for user or system. Default to system.

Rob's phone number is 303.757.9589.

FROM: Joseph Ihnat DATE: 2/2/2011 9:21:56 AM Eastern Standard Time
Implemented in version 6.1 to always configure System DSNs.

Issue ID: 2605

Subject: Typical section schematic for splayed girders problem

Complete Issue Information

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Duray, Jim 4/11/2000 1:42:17 PM
Modified By: administrator 6/19/2008 4:02:17 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Paul Jensen	Montana DOT	pjensen@mt.gov	406-444-9245

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2606.10771	Closed	Import of data

Description

FROM:jduray DATE:04/11/2000 09:38:09

The schematic does not properly display the girders if they are splayed. The code checks to see if they are but doesn't position them correctly in the cross section.

Revised the schematic to not draw the girders if they are splayed.

Complete Issue Information

Issue ID: 2606
Subject: Import of data

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Jensen, Paul	4/11/2000 2:44:52 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: pjensen DATE: 4/11/2000 8:40 AM

I can not import at .bbd file. I created the file from the SQLANYWARE database and tried to import into the Oracle database. The error that I am getting is

"File format not compatible with this version of system."

In debug the message is:

"File format not compatible with this version of system."

08:37:39 AM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp."

4/19/2016 3:13:52 PM

HRS AASHTO

381

Complete Issue Information

The process worked in beta release (Keith and I swaped several structures during testing).

thanks-

FROM: jduray DATE: 04/11/2000 15:40:40

Were you using the sample database? We are preparing a patch for the version 3.0 that fixes this problem (if you were using the sample database). The sample database does not have the correct build number in the abw_sys_database table. You can change it manually if you want. The correct build number is 3002.

The patch will be available on our web site within a week.

FROM: pjensen DATE: 4/12/2000 2:50 PM

That fixed the problem.

Issue ID: 2607
Subject: Access Privileges – Active Window Size

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	4/11/2000 3:53:24 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: Low	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Suspended	Low	Enhancement
Ordoobadi, Mehrdad	Suspended	Low	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

4/19/2016 3:13:53 PM

HRS AASHTO

382

Complete Issue Information

Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
-----------	-----------------------------------	----------------	---------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2608.10769	Closed	Access Privileges – Marked for Delete

Description

FROM: dteal DATE: 4/11/2000 10:48 AM

We have an excess of real estate in the Access Privileges window. There is no reason we should have to scroll up/down for any information here. When assigning privileges it is annoying to scroll rt/lt and up/dwn.

FROM:mordoobadi DATE:6/18/01 4:47:18 PM

The window should be derived from CABWLibraryFormView to inherit Resizing features.

Issue ID: 2608
Subject: Access Privileges – Marked for Delete

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/11/2000 7:05:46 PM
Modified By: administrator	6/19/2008 4:02:17 PM

4/19/2016 3:13:53 PM

HRS AASHTO

383

Complete Issue Information

Priority: High
Category: Education

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Accepted	High	Bug
	Closed		
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2609.10768	Closed	System Defaults – Units

Description

FROM: dteal DATE: 4/11/2000 2:02 PM

What does "Marked for Delete" mean? Does it mean moved to the Deleted Bridge folder?

FROM:jduray DATE:04/11/2000 15:43:59

Yes

Complete Issue Information

Issue ID: 2609
Subject: System Defaults – Units

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	4/11/2000 7:06:45 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/11/2000 2:03 PM

It was brought up and I thought solved some time ago.

My system default is SI units. When I make a new PC installation, the upper right corner of the bridge workspace reads US Customary. Shouldn't this be SI according to the defaults set???

FROM:mordoobadi DATE:06/05/2000 14:39:35

We display two system of units in Virtis. One for Bridge Workspace (when BWS is active) another for Bridge Desktop (when desktop is active).

1 - Default system of units for a new bridge is stored in the Virtis/Opis database and should be the same for everyone who uses the same database, and can be changed by going to 'Configuration Browser' / 'System Defaults' / 'Bridge Workspace' Tab.

2 - System of Units for Bridge Workspace is stored in the Windows registry database and can be different for different users. This can simply be changed by selecting a different system of units in

4/19/2016 3:13:53 PM

HRS AASHTO

385

Complete Issue Information

System of Units drop down list on the toolbar when Bridge Explorer window is active.

You can also specify the system of units that you'd like to view the information in at the following levels of bridge structure:

- Bridge
- Structure Definition
- Member Alternative

Conclusion:

If Bridge Explorer "System of Units" is SI on your PC. Others can have different System of Units displayed in Bridge Explorer and/or Bridge Workspace.

When you create a new bridge from your PC and some other PC that is connected to a common database, the system of units will be set to the system of units specified in the system defaults window (Config. Browser). So the toolbar's system of units for new bridges should be the same on the two PCs.

Please let me know if you are still having problems with the system of units.

FROM:dteal DATE:10/18/2001 10:57:04

Please close this incident

FROM:mordoobadi DATE:10/18/2001 1:04:39 PM

Accepted by Dean.

Issue ID: 2610

Subject: Bridge Workspace – Directory Tree

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

4/11/2000 7:07:37 PM

Modified By: administrator

6/19/2008 4:02:17 PM

Priority: Medium

Category: Third Party

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Resolved	Medium	Education Third Party
	Closed		
Ihnat, Joseph	Closed	Medium	Third Party

Contacts

4/19/2016 3:13:53 PM

HRS AASHTO

386

Complete Issue Information

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2611.10766	Closed	Access Privileges – Folder Deleting

Description

FROM: dteal DATE: 4/11/2000 2:04 PM

I have been switching back and forth between logging in as the system administrator and myself as a designer to check access privileges. The "+" sign in front of a folder keeps disappearing and looks like some dithered gray lines. Not all the time.

FROM:jihnat DATE:6/14/2005 1:55:45 PM

I don't think this is a Virtis issue. I see this occasionally even in Windows (XP) Explorer.

FROM:jihnat DATE:12/8/2005 7:17:33 AM

Track field Accepted.

Issue ID: 2611

Subject: Access Privileges – Folder Deleting

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

4/11/2000 7:08:34 PM

Modified By: administrator

6/19/2008 4:02:17 PM

Priority: High

4/19/2016 3:13:54 PM

HRS AASHTO

387

Complete Issue Information

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	Error Message.zip	
	Dean BID58.LST	
	Dean BID32.LST	
	Dean BID32 detail.txt	
	reference line relationships.sql	
	delete.zip	

Tasks

Name	Current State	Summary
2612.10765	Closed	Deleting a bridge created in 2.1

Description

FROM: dteal DATE: 4/11/2000 2:05 PM

The problem with deleting folders is still a problem. We have more than 53 users connected to Virtis/Opis. Each person has been assigned a folder to store the shortcut to there work. If somebody was to have the cursor on the very first folder (root directory), all sub folders would be deleted. Is there a work around for this???

FROM: jduray DATE: 04/11/2000 15:46:14

No - we need to implement ownership of folders.

Complete Issue Information

Issue ID: 2612
Subject: Deleting a bridge created in 2.1

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	4/12/2000 7:19:24 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/12/2000 2:16 PM

I am not able to delete structures that where created in version 2.1. At the Administrator level, I am able to delete structures from the deleted bridges folder only if they are created in version 3.0 or copies of structures that where created from version 2.1. I have one structure that was created in 2.1 that at the administrator level can not even be marked for delete. The administrator has all delete privileges checked. I have double checked that the bridge isn't checked out at the time.

FROM: jduray DATE: 04/17/2000 09:30:35

I migrated a 2.1 database and then deleted several bridges. The delete worked as it should (marked the bridge as deleted so it appeared in the Deleted Bridges folder, then I removed all deleted bridges). What error do you get when you do this?

FROM: dteal DATE: 4/18/2000 9:25 AM

Attached is a copy of the error messages I get. The file "delete error" was an error trying to mark a bridge for delete that was created in 2.1. The file "marked delete error" was an error trying to delete a

4/19/2016 3:13:54 PM

HRS AASHTO

389

Complete Issue Information

bridge from the deleted bridges folder that had been created in version 2.1

FROM: dteal DATE: 4/20/2000 7:51 AM

I just ran into a bridge just created in version 3.0 that I can mark for delete but I can't delete it from the deleted bridges folder.

FROM:jduray DATE:04/28/2000 08:03:23

FROM:jduray DATE:04/28/2000 08:06:58

Based on the error messages Oracle is not configured properly. Have your DBA increase the size of the rollback segments.

FROM:jduray DATE:04/28/2000 08:08:49

FROM: dteal DATE: 5/11/2000 8:24 AM

Jim - Did you find out what your Rollback segments are set to?

FROM:jduray DATE:05/11/2000 10:59:48

We have 7 rollback segments. Each with initial_extent=51200 bytes, next_extent=256000 bytes, min_extent=2, and max_extent=121. The number of rollback segments doesn't matter since a transaction only can use one segment. Within Virtis we do not in any way control rollback segments or assign transactions to particular segments. Your dba will have to increase the size of ALL rollback segments since Oracle manages the assignment of a transaction to a rollback segment.

FROM: dteal DATE: 5/16/2000 11:02 AM

Here is a summary of what our db folks have done. I am still not able to delete one of our bridges.

1. He suggested we increase the size of the rollback segments:

I have increased the size of the rollback segments on DT06FT01. They are set to Initial: 104k, Next: 256k, min_extent=3, and max_extent=121. The old value for next extent was 104k, so this is a significant increase in segment size. Hopefully, this will resolve the problem with the segment size. It should be available now for your use.

2. Open_cursors are set above 150:

>>> Carol Baldry 04/28/00 08:52AM >>>

I checked the Open_cursors and we are OK there. I remember we bumped that up last year and it is currently at 10,000.

3. Result:

You were able to delete one structure you could not delete before. The rollback used 22 meg of space, which was more than was available before I changed the rollback segment size, but now you have up to 40 meg of rollback segment available. You attempted to delete another structure, which failed. This second structure used no rollback segment at all, so the problem with this must lie in a different area. Since the error messages came from within Virtis, and not from the database, you should consult with Virtis concerning this. I have no way to interpret their error messages. If there are any special requirements for the system, Virtis should have a list.

what can we try next???

FROM:jduray DATE:05/30/2000 10:25:30

What error message do you get when you try to delete? It sounds like there is a different problem than

4/19/2016 3:13:54 PM

HRS AASHTO

390

Complete Issue Information

before.

FROM: dteal DATE: 6/1/2000 12:54 PM

I am attaching the message I get.

FROM: dteal DATE: 6/15/2000 3:26 PM

This particular bridge that I can not delete started out as a corrupt bridge in my datat base. I had to export it and import it back in to open the bridge. The file that is left is the one that was corrupt. But I still need to delete it.

FROM:jduray DATE:08/22/2000 15:24:18

BID 32 was some how corrupted, exported and imported. The imported version is ok. The original cannot be updated or deleted.

BID 58 is a copy of a bridge that is ok. BID 58 cannot be deleted.

FROM:jduray DATE:08/22/2000 15:26:44

Dean BID32 Detail.txt is a query on abw_struct_def_ref_line table for bridge 32. Most of the values in the report were input into a test table (test_digits) and all were successfully deleted using a test program TestDigits.

FROM:jduray DATE:08/22/2000 15:39:54

E-mail from Dean:

Below is the message I got after trying to delete BID #32

Unable to delete bridge!

02:33:25 PM - Line 2715 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Delete process failed while deleting CDmStructDefRefLine (SaveOrder object 107).

02:33:25 PM - Line 360 in source file D:\Virtis\dev\data management\abmbche\DmBridgeCache.cpp.

Unable to delete Reference Line Id=7 for Bridge Id=32, StructDef Id=1

02:33:25 PM - Line 1132 in source file D:\Virtis\dev\data management\abmbrdg\DmStructDefRefLine.cpp.

Error deleting record from database record set.

02:33:25 PM - Line 1128 in source file D:\Virtis\dev\data management\abmbrdg\DmStructDefRefLine.cpp.

No rows were affected by the update or delete operation.

Below is the message I got after trying to delete BID #58

Unable to delete bridge!

02:35:32 PM - Line 2715 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Delete process failed while deleting CDmStructDefRefLine (SaveOrder object 107).

02:35:32 PM - Line 360 in source file D:\Virtis\dev\data management\abmbche\DmBridgeCache.cpp.

4/19/2016 3:13:54 PM

HRS AASHTO

391

Complete Issue Information

Unable to delete Reference Line Id=5 for Bridge Id=58, StructDef Id=2
02:35:32 PM - Line 1132 in source file D:\Virtis\dev\data
management\abmbrdg\DmStructDefRefLine.cpp.

Error deleting record from database record set.
02:35:32 PM - Line 1128 in source file D:\Virtis\dev\data
management\abmbrdg\DmStructDefRefLine.cpp.

No rows were affected by the update or delete operation.

FROM:jduray DATE:10/09/2000 09:25:44
Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2613
Subject: Printing Tabular Output

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	4/12/2000 7:36:11 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	dean.zip	

Tasks

Name	Current State	Summary
2613.10764	Closed	Printing Tabular Output

Complete Issue Information

Description

FROM: dteal DATE: 4/12/2000 2:33 PM

I thought this was addressed along time ago??

When I look at the screen everything is OK. When I print it:

- 1) The line under "Dead Load Actions Report" has text printed over itself.
- 2) In the column headings, for Moment, the "t" at the end of moment is wrapped to the next line (it wasn't on the screen) which makes the units "kn" down one more line which is typing over the first line of values.

I attached a .bmp file so you can see the actual problem.

FROM: jduray DATE: 04/17/2000 12:06:15

#2 above is caused by not setting the column width wide enough to fit the heading.

Mehrdad - Fix #1 above.

FROM: dteal DATE: 4/18/2000 8:55 AM

#2 above had the column width wide enough for viewing on the screen!

FROM: mordoobadi DATE: 04/19/2000 10:37:31

There is nothing we can do about how tables are printed. Printing is done by Objective Grid functions.

FROM: mordoobadi DATE: 04/20/2000 10:02:50

We can use smaller fonts to resolve #1.

FROM: mordoobadi DATE: 04/20/2000 13:49:40

Text trimmed and ellipses put at the end.

FROM: dteal DATE: 11/15/2000 2:12 PM

FROM: mordoobadi DATE: 11/15/2000 16:14:49

Accepted by Dean.

Issue ID: 2614
Subject: Print to a file

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/12/2000 7:47:02 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Education
Duray, Jim	Closed	High	Education

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	Type K6.zip	

Tasks

Name	Current State	Summary
2615.10762	Closed	PS Shapes Library – Wide Top flange

Description

FROM: dteal DATE: 4/12/2000 2:44 PM

I tried to print some tabular output to a file, which went OK, it created a file, BUT, I can't read the file with any of the text editors I have. What gives. This was only one page of output?

I attached the .prn file.

FROM: jduray DATE: 04/17/2000 12:07:42

The file that is created is a binary file with printer codes. I checked some other applications and they do the same thing.

FROM: dteal DATE: 4/18/2000 8:54 AM

Issue ID: 2615

Subject: PS Shapes Library – Wide Top flange

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

4/19/2016 3:13:55 PM

HRS AASHTO

394

Complete Issue Information

Submitted By: Teal, Dean	4/13/2000 2:50:46 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Education
Duray, Jim	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2616.10761	Closed	Memory Problems?

Description

FROM: dteal DATE: 4/13/2000 9:47 AM

Found this problem with wide top flange US units only, NOT with narrow top flanges or in SI units.

1) When you check the Nominal Weight per foot, in the attached example, the compute button comes up with 798.024 lb/ft. Hand calc's $(767\text{in}^2 \times 150\text{#/ft}^3 \times 1/144 = 798.958\text{ 3/ft})$ This difference in value will not make a difference in the design, but it's not correct. The correct #/ft where calculated for narrow flange beams.

2) The volume to surface ratio is shown as 2.963 when it should be 3.01.

FROM:mordoobadi DATE:10/01/2001 11:29:21 AM

In the calculations concrete density is assumed to be 2400 kg/m³ which is slightly different from 150 lb/ft³.

FROM:mordoobadi DATE:10/10/2001 11:38:43 AM

Accepted by Dean Teal.

FROM:mordoobadi DATE:10/31/2001 2:59:40 PM

4/19/2016 3:13:55 PM

HRS AASHTO

395

Complete Issue Information

Issue ID: 2616
Subject: Memory Problems?

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/13/2000 3:55:54 PM
Modified By: administrator	6/19/2008 4:02:17 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/13/2000 10:53 AM

One of our workstations is a 266MZ machine with 64 meg RAM with virtual memory set at 200. When analyzing a PS member we are consistently getting the same message form Opis. "Something about not being able to load the direct stiffness method matrix." This appears only after the third analysis, (every time), and each run after that until the machine is rebooted. Our computer administrator says it sounds like Virtis/Opis is not releasing memory after each run. He doesn't think it's a PC problem. If this is the case, we need to change the statement for Virtis/Opis minimum requirements??

FROM:jduray DATE:04/17/2000 09:47:01

Each time you analyze Opis generates multiple megabytes (I think somethink like 20 - 30 mb of output

4/19/2016 3:13:55 PM

HRS AASHTO

396

Complete Issue Information

depending on # of spans, # of POI and which output is turned on). Unless you close the BWS or use the Bridge/Analysis Events for the Member Alt to remove them from memory they remain in memory.
FROM: dteal DATE: 4/18/2000 8:52 AM

Issue ID: 2617
Subject: Exiting Window

Folder: /Virtis/Support Center	
Primary Contact: Lee, Herman	
Submitted By: Teal, Dean	4/13/2000 4:46:03 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Lee, Herman	Resolved	High	Enhancement
	Closed		
Lee, Herman	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of	teal@ksdot.org	(785)291-3001

4/19/2016 3:13:56 PM

HRS AASHTO

397

Complete Issue Information

Transportation

Documents

Name	Resource Identifier	Description
	PS Girder.zip	

Tasks

Name	Current State	Summary
2618.10759	Closed	PS Girder – Large Axial Load

Description

FROM: dteal DATE: 4/13/2000 11:43 AM

Something has got to be done about this before I jump out a window.

When you have lets say the Schematics: Profile View window open and you want to exit that window. So you click the "X" in the upper right. But you got the very top "X" by mistake and now you are exiting Virtis/Opis. Very frustrating. There should be a pop up window to ask if you really want to exit Virtis/Opis and close the program or cancel.

Now after analyzing a structure and mistakenly exiting, I have to go back and analyze it again before I can view the results. I bet I'm not the first one this has happened to.

FROM: dteal DATE: 4/13/2000 11:43 AM

FROM:dteal DATE:Tuesday, April 02, 2002 10:09:19 AM

Very frustrating - I did this twice in the last 10 minutes!!

FROM:hlee DATE:6/10/2003 3:37:36 PM

In 5.0.1.

FROM:dteal DATE:Thursday, July 03, 2003 9:56:33 AM

Issue ID: 2618
Subject: PS Girder – Large Axial Load

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	4/13/2000 8:27:05 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Urgent	
Category: Bug	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	PS Properties.zip	

Tasks

Name	Current State	Summary
2619.10758	Closed	Library – PS Shape – Moment of Inertia

Description

FROM: dteal DATE: 4/13/2000 3:24 PM

Attached is a PS girder structure. Also attached is some info on Axial loads at the Analysis Point 200 for both the interior and exterior girder. Member 1, exterior, has a much larger axial load of 1633 kn compared to the interior which was only 491 kn. This seems out of line!

FROM: dteal DATE: 4/18/2000 7:36 AM

I found the error - User input error! Member supports were different between the exterior and interior. Now that they have been changed - all is well. Please close this incident.

FROM: bgoodrich DATE: 4/18/2000 4:14 PM

I found the same support problem today also, where all four the supports were restrained in horizontal and vertical directions.

Complete Issue Information

Issue ID: 2619
Subject: Library – PS Shape – Moment of Inertia

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	4/13/2000 8:54:22 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	Urgent	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	list_flangeweb_haunch.bmp	
	list_webflange_haunch.bmp	

Tasks

Name	Current State	Summary
2620.10757	Resolved	Haunch profile definition

Description

FROM: dteal DATE: 4/13/2000 3:51 PM
The Moment of Inertia displayed is 2245039382 mm⁴. If you don't have privileges to write (change things) in the libraries you can not ever see what the rest of the number is, which is 224503938211.59698 mm⁴. The same is true with St. Venant torsional constant. We either need to use scientific notation or make the field larger. There is plenty of real estate available. Attached is a view of what you would see without larger fields or without scientific notation.

FROM:jduray DATE:04/17/2000 10:23:04
Joe - please make the fields wider. You will probably have to make the window wider.

4/19/2016 3:13:56 PM

HRS AASHTO

400

Complete Issue Information

FROM:jduray DATE:05/30/2000 10:28:47
Let's get this into patch 3.

FROM:jihnat DATE:06/27/2000 09:45:03
Fixed for Version 3.0 Patch 4 and for Version 4.0
(Patch 3 was changed to Patch 4.)

FROM:jduray DATE:10/09/2000 09:22:14
Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2620
Subject: Haunch profile definition

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Duray, Jim	4/18/2000 12:40:22 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:04/18/2000 08:38:24
We need to be able to define the haunch thickness from the top of the web and the width relative to the

Complete Issue Information

width of the flange. We currently do not offer that combination.

This was approved by the TF 4/13/00.

FROM:kkennelly DATE:04/18/2000 10:44:30

I noticed code in UiHaunchVw.cpp checks if we have an ext or int member by looking at the first and last mbrs in list. Shouldn't use list, should use FindGirderBay().

FROM:kkennelly DATE:04/20/2000 10:13:57

GUI ready but need 2 types defined.

Need 2 types added to SysTypeDefines for type category HaunchDim. We currently have 2 types: TYP_HAUNCHDIM_FLNG and TYP_HAUNCHDIM_WEB. Also need type for:

- 1. Haunch thickness from top of web and haunch width from edge of flange
- 2. Haunch thickness from top of flange and haunch width from cl of web

FROM:jduray DATE:04/20/2000 15:09:38

Krishna - please fix UiHaunchVw.cpp .

FROM:jduray DATE:05/01/2000 09:12:05

Release this with Version 4.0.

FROM:mordoobadi DATE:05/05/2000 09:17:14

Fixed.

FROM:kkennelly DATE:05/05/2000 15:37:08

GUI fixed for 4.0. Change only applies to steel mbr alts. (Haunch profile window only gui window change, struc def wizard not changed.)

Brian, Please see if any of the export code needs changed. Attached bitmaps show the 2 additional ways haunches can be dimensioned.

FROM:bgoodrich DATE: 7/18/2000 4:51 PM

I modified the export to address the new haunch dimension references. I also tested the export for each of the four haunch dimension variations and the commands are generated with the correct values. This includes the haunch depth on the cross section commands and the haunch dead load on the dead load commands. I will send the updated export code to Jim.

Krishna - Does anyone else need to work on this?

Issue ID: 2621
Subject: Pontis Integration

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	4/18/2000 1:24:37 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Enhancement	

4/19/2016 3:13:57 PM

HRS AASHTO

402

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2623.10754	Resolved	Steel Builtup Cross Section Cover Plates Disappear

Description

FROM:jduray DATE:04/18/2000 08:55:00

Change the cross-referencing of the Pontis bridge table and abw_bridge by adding a cross-reference table and associated tables so Pontis, Virtis and Opis can share the same database tables.

FROM:jduray DATE:04/18/2000 09:24:59

This was approved by the TF 4/13/00.

FROM:jduray DATE:5/21/02 10:35:14 AM

The scope of this incident was expanded to include the scope of the Oct 2001 BridgeWAre Integration Proposal that was approved by the TF in Nov. 2001. The work is scheduled for a June 2002 release.

FROM:jduray DATE:Sunday, July 13, 2003 8:51:33 AM

Complete Issue Information

Issue ID: 2623
Subject: Steel Builtup Cross Section Cover Plates Disappear

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Kennelly, Krisha	4/18/2000 8:49:12 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kkennelly DATE:04/18/2000 16:46:56

In 3.0 release. Cross section cover plate tabs - if you pick bolted attachment type, enter plate sizes in grid and hit Apply but don't have any data entered for the bolt hole size and number, the plates in the grid are deleted. (Bolt hole data optional for BRASS)

FROM:jihnat DATE:04/20/2000 08:52:58

Fixed for Version 4.0

FROM:jihnat DATE:04/20/2000 08:55:18

Fix will also be in Patch #2 for Version 3.0

Complete Issue Information

Issue ID: 2624
Subject: Saving Error

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/19/2000 2:03:39 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	Save error.zip	

Tasks

4/19/2016 3:13:58 PM

HRS AASHTO

405

Complete Issue Information

Name	Current State	Summary
2624.10753	Closed	Saving Error
2625.10752	Resolved	Fatigue rating fails for certain tenth point POI'S

Description

FROM: dteal DATE: 4/19/2000 9:00 AM

I have a structure that has a problem saving. It was created in version 3.0. I can save all work except "Diaphragms". After I enter the data for the diaphragms (input attached) and try save, validation has no errors, I get the attached error message. I have went to other areas and entered data, saving went just fine. The only problem seems to be when saving the diaphragms. Could an input error be the problem??

FROM: dteal DATE: 4/19/2000 9:01 AM

Structure type is Steel welded plate

FROM:jduray DATE:04/19/2000 15:41:10

I imported the bbd file you provided.

FROM:jduray DATE:04/19/2000 16:00:49

I imported the attached bbd file and save it to the database. I then entered the diaphragm locations listed in the attached bitmap for girder bay 2. I saved to the database after each row in the table was entered so I would know which row is causing the problem. Guess what?...they all saved. I would like for you to do the same and let me know how it works. I looks to me as though something was wrong with your data that exporting to a bbd and importing cleans up.

FROM: dteal DATE: 4/20/2000 8:52 AM

Yes, that worked fine.

Please close this incident.

Issue ID: 2625
Subject: Fatigue rating fails for certain tenth point POI'S

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Kennelly, Krisha	4/19/2000 5:17:05 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug - BRASS

4/19/2016 3:13:58 PM

HRS AASHTO

406

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2626.10751	Resolved	Structure Loads DL Distribution

Description

FROM:kkennelly DATE:04/19/2000 13:06:51

Attached bbd is file from Aaron Stover for Baker Arizona DOT bridge rating project.

Release 2.1. Member G1. If Member Alt Engine tab has Generate POI's at tenth points, Point 207 will have a 0 rating for fatigue. BRASS LFD output file also attached. For some reason, Load Level 4 fatigue at this point is 0.00 but NA everywhere else. If you change the Member Alt Engine tab to Generate user defined POI's only, Point 207 will rate ok.

Migrated bridge to Release 3.0, kept Generate POI's at tenth point and rated ok.

FROM:jduray DATE:04/19/2000 14:44:33

Although this problem does not occur in 3.0 I am concerned that it is coincidence that it doesn't occur since it seems to be erratic in 2.1. Has code been changed in BRASS that may have fixed this problem?

FROM: bgoodrich DATE: 4/25/2000 8:44 AM

I have asked Dan Glandt to determine if this issue is truly resolved. I am awaiting his findings.

FROM: bgoodrich DATE: 5/1/2000 12:12 PM

Entered for Dan Glandt:

There was a change to subroutine St_LFD so that fatigue rating was done for both top and bottom of the section and stored accordingly. In areas of stress reversal, the older version could get a 0.0 rating. So has been fixed.

FROM:kkennelly DATE:05/02/2000 13:32:04

Attached is 01359_export.bbd which is another one of the Baker Arizona bridges that is having this problem in 3.0. Bridge entered and ran in 3.0. Member G6, analysis point 45 (410.00)

FROM:kkennelly DATE:05/02/2000 13:38:39

FROM: bgoodrich DATE: 5/5/2000 10:30 AM

I will take a look.

4/19/2016 3:13:58 PM

HRS AASHTO

407

Complete Issue Information

FROM: bgoodrich DATE: 5/19/2000 9:17 AM

Dan has fixed this BRASS bug. I or WYDOT will try to send a new BRASS DLL to Baker by the end of next week.

Issue ID: 2626
Subject: Structure Loads DL Distribution

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	4/19/2000 5:50:44 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: New Feature	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	New Feature

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kkennelly DATE:04/19/2000 13:41:03

Reported by Aaron Stover for Baker Arizona DOT bridge rating project. Selecting a DL distribution type on Structure Loads window doesn't work in 2.1. BRASS did not support some of the distribution methods offered in Virtis. BRASS has been enhanced for 3.0 to support the methods offered by Virtis or to inform the user if the selected method is not supported.

Complete Issue Information

Issue ID: 2627

Subject: Intermediate Stiffeners near interior supports are ignored by BRASS-Girder

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krisha 4/19/2000 5:59:40 PM

Modified By: administrator 6/19/2008 4:02:16 PM

Priority: High

Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Not Reproducible	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	00944.bbd	

4/19/2016 3:13:58 PM

HRS AASHTO

409

Complete Issue Information

Tasks

Name	Current State	Summary
2628.10749	Closed	PS Stirrups

Description

FROM:kkennelly DATE:04/19/2000 13:57:45
Reported by Aaron Stover, Baker Arizona DOT bridge rating project. bbd file attached.

FROM:jduray DATE:04/19/2000 14:27:33
Aaron found that if the space between the last intermediate stiffener and an interior support (pier) is larger than the space before the last stiffener BRASS ignores the stiffener. Adjusting the location of the stiffener such that the space is smaller than the previous space enables BRASS to use the stiffener (however, it is in the wrong location).

Brian - please check on this and report to Wyoming if you confirm that it is BRASS and not the export (or Virtis) causing the error.

FROM:jduray DATE:04/20/2000 08:58:43

FROM:kkennelly DATE:04/20/2000 13:11:23
I reattached the version 3.0 bbd file for this incident and also sent it to Brian via e-mail.

FROM: bgoodrich DATE: 4/20/2000 4:35 PM
I tried several stiffener spacing variations around the interior piers and I cannot duplicate the stiffener problems using version 3.0. Both the exported file and the BRASS results look correct, so I believe this issue was corrected somewhere between 2.1 and 3.0. I could have fixed it in the export, but I don't recall anything specifically. Dan Glandt worked on some schedule based issues in BRASS for the 3.0 release, so it may have fixed then.

Jim - Can this user migrate to 3.0 to verify this?

FROM:jduray DATE:05/08/2000 12:32:40
We are still having the problem.

FROM: bgoodrich DATE: 8/29/2000 3:46 PM
I tried again to reproduce the problem. I cannot find anything wrong with the export or BRASS.

Jim - Could you get more information from Aaron Stover, i.e., the bad BRASS output where the stiffener is neglected?

FROM:bgoodrich DATE:09/04/2001 14:09:10
I have never received any more information on this incident.

Issue ID: 2628 Subject: PS Stirrups
--

Folder: /Virtis/Support Center

Complete Issue Information

Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	4/19/2000 7:24:36 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Help	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	High	Change Request

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2629.10748	Resolved	P/S Library shapes dated 1900

Description

FROM: dteal DATE: 4/19/2000 2:21 PM

The stirrups imported into BRASS do not represent the stirrups input into Opis. The attached file "wizard_alternative.dat" = Stirrups/Groups & Schedules exported to BRASS. The attached file "shear ranges.bmp" = Stirrup ranges as input into Opis. Below is the way I think the BRASS file should have read using this Opis input:

Stirrup-Group 1,0.62,90
Stirrup-Group 2,0.40,90

Stirrup-Schedule 1,1,3,0,3
Stirrup-Schedule 1,1,3,3,30
Stirrup-Schedule 1,1,6,33,6
Stirrup-Schedule 1,2,10,69,10
Stirrup-Schedule 1,2,10,79,160
Stirrup-Schedule 1,2,9,239,9
Stirrup-Schedule 1,2,9,248,117
Stirrup-Schedule 1,2,9,365,9
Stirrup-Schedule 1,2,18,374,468
Stirrup-Schedule 1,2,9,842,9
Stirrup-Schedule 1,2,9,851,117

4/19/2016 3:13:59 PM

HRS AASHTO

411

Complete Issue Information

Stirrup-Schedule 1,2,9,968,9
Stirrup-Schedule 1,2,10,977,160
Stirrup-Schedule 1,2,10,1137,10
Stirrup-Schedule 1,1,3,1147,30
Stirrup-Schedule 1,1,6,1177,6
Stirrup-Schedule 1,1,3,1183,3
Stirrup-Schedule 1,1,3,1186,3

FROM: bgoodrich DATE: 4/20/2000 9:26 AM

When stirrups are entered into Virtis/Opis, the ranges may start or end within the beam overhangs (in your case within the 8"), however for BRASS, the stirrup ranges may only be defined within the span length (in your case within 100'). Therefore, only the stirrups located within the 100' are exported. The BRASS export is working correctly.

Jim - Should we add something to the BRASSLFDENGINE.HLP and BRASSLRFDENGINE.HLP files? If so, please send me the latest documents, so I can modify them.

FROM: jduray DATE: 05/30/2000 10:29:54
Krisha - please add this explanation to the help.

FROM: kkennelly DATE: 07/27/2000 13:18:26
Fixed for Version 4.0
FROM: dteal DATE: 11/15/2000 2:14 PM

FROM: kkennelly DATE: 12/21/2000 09:16:35
Accepted based on A in track field.

Issue ID: 2629
Subject: P/S Library shapes dated 1900

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Duray, Jim	4/19/2000 7:29:53 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Change Request	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2630.10747	Duplicate	Low Bearing Stiffener Rating

Description

FROM:jduray DATE:04/19/2000 15:28:49
P/S library shapes are dated 1900.

Krishna - please check on what the proper date should be.

FROM:kkennelly DATE:12/04/2000 10:39:56
Discussed PCI standards with Jim 12/1/00. Use the dates as specified in the PCI standard drawing names:

AASHTO Type I-VI: Std 101-94 is 1994
AASHTO Boxes: Std 107-94 is 1994
AASHTO Slab: Std 108-94 is 1994
AASHTO PCI Bulb Tees: Std 115-87 is 1987

Note: not writing a script for this change until users ask for it.

FROM:kkennelly DATE:12/04/2000 11:15:40
Beams I-28x66 to I-28x96 were taken from PennDot Std Dwgs BD-652, 1994 edition. So they were given 1994 year in the db.
Changes made to virtis04-sample.db for Version 4.0 Beta Build 2.

Issue ID: 2630

Subject: Low Bearing Stiffener Rating

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krishna

4/19/2000 7:51:10 PM

4/19/2016 3:13:59 PM

HRS AASHTO

413

Complete Issue Information

Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2632.10745	Resolved	Cover plates and composite at pier

Description

FROM:kkennelly DATE:04/19/2000 15:50:06

From Aaron Stover, Baker Arizona DOT bridge rating project. Low bearing stiffener rating because BRASS does not consider bearing stiffeners contributing to both spans.

FROM:jduray DATE:04/19/2000 16:25:47

Brian - please determine if this is a BRASS error or a problem in the export (or Virtis).

FROM:kkennelly DATE:04/20/2000 08:44:07

Duplicate of 2547 which is marked as resolved.

Complete Issue Information

Issue ID: 2632
Subject: Cover plates and composite at pier

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	4/19/2000 8:31:36 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:04/19/2000 16:25:38
Reported by Aaron Stover for Baker Arizona DOT bridge rating project.

BRASS does not handle cover plates and slab reinforcement in the negative moment region. It ignores the slab reinforcement.

FROM:jduray DATE:04/19/2000 16:30:13
Please confirm. If true please report to Wyoming as a bug in BRASS. If not true then let's discuss.

FROM: bgoodrich DATE: 4/20/2000 9:09 AM
This issue was addressed for the 3.0 release. To correct the issue for 2.1 you have to adjust the sections over the pier, which I do not recommend because you are not capturing the true bridge data.

4/19/2016 3:14:00 PM

HRS AASHTO

415

Complete Issue Information

If you decide to adjust the cross section over the pier, merge the cover plate into the top flange, specify the rebar, and remove the slab.

Issue ID: 2633
Subject: Member Alt Desc. Wdw – Reinforced Conc. Slab

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	4/20/2000 4:34:46 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Medium	
Category: Cosmetic	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	On Hold	Medium	Cosmetic

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
2634.10743	Closed	Live Load Dist. Factor – Standard

Description

FROM: dteal DATE: 4/20/2000 11:31 AM
The field for the shear computation method is just a little too small. The “e” on “Procedure” is half hidden.

FROM:jduray DATE:04/21/2000 08:48:57
Fix for Version 4.
If you select "Simplified Procedure" the same thing happens. The "e" is hidden.

FROM: dteal DATE: 11/15/2000 2:17 PM

FROM:jduray DATE:12/18/2000 10:29:26

FROM:jihnat DATE:12/18/2000 11:33:42
There's nothing in the Windows GUI Guidelines that requires a combobox to be as wide as the widest selection, only that all of the choices are discernible from one another. Also, in this case the choices are fully readable when the list is dropped down.

FROM:dteal DATE:01/09/2001 14:48:12
The "e" is still half hidden!

FROM:dteal DATE:01/09/2001 15:04:39
It's Tacky to leave it this way. The text that goes in the window is fixed, not variable. We should at least provide space enough for the text we know we will be using.

FROM:jduray DATE:3/2/01 11:44:56 AM
I agree this is something that we could do better, however, there are a lot of much more important issues to address and I don't think this requires attantion at this time. I changed the Priority to Medium so we don't lose track of it.

Issue ID: 2634
Subject: Live Load Dist. Factor – Standard

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	4/20/2000 6:29:54 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Bug	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	Urgent	Bug
Ordoobadi, Mehrdad	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2635.10742	Resolved	Sybase SQL Anywhere migration

Description

FROM: dteal DATE: 4/20/2000 1:27 PM

In BRASS, for a Reinforced concrete slab we would input the Wheel Fraction of 1/E (invert of E, not 1ft/E). Now in Opis the Standard Live Load Dist. Factor requested is not 1/E, is this correct. It is asking for "E" and calling this the Distribution Factor, correct?

FROM:kkennelly DATE:04/24/2000 08:40:16

BRASS LFD uses the Standard Live Load Dist. factor exactly as it is entered in Virtis. The export does not modify the df that the user enters in Virtis for the BRASS commands.

FROM: dteal DATE: 4/24/2000 8:57 AM

This may be misleading then. Opis is asking for "Wheel Distribution Factors" and assumes that the user will enter what BRASS is asking for which is "Wheel Fraction".

From AASHTO 3.24.3.2 we get distribution width "E" which we call the Distribution Factor.

From BRASS we want Wheel Fraction which is "1/E".

Do you see the confusion between DF and Wheel Fraction? Should it be mentioned in the help?

FROM:kkennelly DATE:04/25/2000 07:55:30

AASHTO 3.1 says E is the width of slab over which a wheel load is distributed. AASHTO 3.24.3.2 calls E the distribution width. When you say we call E the Distribution Factor do you mean your state calls it that or we are calling it that somewhere in Virtis? I think AASHTO is clear that E is the dist. width not the dist. factor.

A wheel line is distributed over slab width E. So the distribution factor for that wheel line is 1/E if you are designing a 1 ft width of the slab. If you entered a 2' wide section in the cross section window, you would want to enter 2(1/E) as the distribution factor.

FROM: dteal DATE: 4/25/2000 3:57 PM

4/19/2016 3:14:00 PM

HRS AASHTO

418

Complete Issue Information

FROM:kkennelly DATE:06/05/2000 09:53:28

Accepted based on A in track field

Issue ID: 2635
Subject: Sybase SQL Anywhere migration

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	4/21/2000 12:48:50 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:04/21/2000 08:46:31

The migration instructions do not ask the user to configure ODBC for Virtis to use the migrated db file. I think we should add a step describing how to either add a new data source or modify an existing one to use the migrated db file.

FROM:mordoobadi DATE:12/12/2001 11:22:24 AM

Fixed.

Complete Issue Information

Issue ID: 2636
Subject: Cannot display rating results from the Bridge Explorer

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	4/21/2000 2:44:06 PM
Modified By: administrator	6/19/2008 4:02:16 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2636.10741	Resolved	Cannot display rating results from the Bridge Explorer

4/19/2016 3:14:01 PM

HRS AASHTO

420

Complete Issue Information

Description

FROM:jduray DATE:04/21/2000 10:42:10
Brian Boucher from Bayside Engineering call with this problem.

FROM:jduray DATE:05/30/2000 10:31:33
Brian sent a CD with his db.

FROM:jduray DATE:4/12/01 11:33:24 AM
I think this is the problem with Sybase not completing the query.

FROM:mordoobadi DATE:6/18/01 10:23:11 AM
The problem was partially migrated database or a database that was migrated couple of times.
I fixed their database and sent it back to them.

Issue ID: 2637

Subject: Training Bridges Missing from 3.0

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean 4/24/2000 1:45:21 PM

Modified By: administrator 6/19/2008 4:02:16 PM

Priority: High

Category: Education

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Education

4/19/2016 3:14:01 PM

HRS AASHTO

421

Complete Issue Information

Duray, Jim	Closed	High	Education
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2638.10739	Closed	Analysis Settings Defaults

Description

FROM: dteal DATE: 4/24/2000 8:42 AM

Our installation of Version 3.0.0 doesn't include the new training bridge examples that should go along with it. It only includes the first 16 bridges that were included with version 2.1. What did we do wrong during the installation? How do we correct it?

FROM: jduray DATE: 04/26/2000 15:32:56

WE do not add them to the Oracle installation because we don't have any way to know what BID to give them. The BID is system generated for each bridge you add. The best way to get them into your Oracle db is to export (bbd file) them from the database we delivered and import them into your Oracle db.

Issue ID: 2638

Subject: Analysis Settings Defaults

Complete Issue Information

Folder: /Virtis/Support Center
Primary Contact: Ordoobadi, Mehrdad
Submitted By: Teal, Dean 4/24/2000 2:35:08 PM
Modified By: administrator 6/19/2008 4:02:16 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2639.10738	Closed	Validate in a RC Slab Bridge

Description

FROM: dteal DATE: 4/24/2000 9:31 AM

So other designers don't get stuck the way we did here, shouldn't all the Analysis Settings Output and Engine Output settings be turned on (checked) by default. Let the designers go in and turn off what they don't need. At least they would get everything to start with.

FROM:jduray DATE:04/25/2000 08:30:15

Make this change for 4.0.

FROM:mordoobadi DATE:11/01/2000 14:28:45

Fixed.

FROM: dteal DATE: 11/15/2000 11:59 AM

FROM:mordoobadi DATE:11/15/2000 13:34:17

Accepted by Dean Teal.

Complete Issue Information

Issue ID: 2639
Subject: Validate in a RC Slab Bridge

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	4/25/2000 9:01:47 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/25/2000 3:58 PM

I get a warning message for every section. "Slab effective thickness not defined for the cross section"
I don't believe that there is anyplace to enter "effective thickness" for a slab RC structure. Warning
messages like this are inappropriate and only confuse the user.

FROM:kkennelly DATE:05/08/2000 08:35:11

Validation fixed for 4.0 release.

4/19/2016 3:14:01 PM

HRS AASHTO

424

Complete Issue Information

Issue ID: 2640

Subject: Fail to Rate – Error Message Needed

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

4/26/2000 2:37:23 PM

Modified By: administrator

6/19/2008 4:02:15 PM

Priority: High

Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

4/19/2016 3:14:02 PM

HRS AASHTO

425

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2641.10736	Closed	Failure to see Rating Results

Description

FROM: dteal DATE: 4/26/2000 9:34 AM

When you have more than one Member and you go to do a rating but forgot to check the appropriate "existing & current" the rating window will only put an "X" in the boxes on tree for failure to complete task. There should be a message to direct the user in some way instead of just stopping.

FROM:jduray DATE:04/26/2000 15:37:02

Mehrdad - please add an appropriate message for version 4.

FROM:mordoobadi DATE:9/28/2001 1:01:45 PM

We previously had errors reported and stopped analysis if the program didn't find a current Member Alternative.

Then we changed it so that the Analysis continues and we put an X in the tree.

I think it is annoying if we show a System Error window every time we don't find the current member alternative.

I suggest that we show the error on the tree item label.

FROM:mordoobadi DATE:10/01/2001 1:49:37 PM

Jim agreed with my suggestion.

Fixed.

FROM:mordoobadi DATE:10/10/2001 11:39:31 AM

Accepted by Dean Teal.

FROM:mordoobadi DATE:10/31/2001 2:58:58 PM

Issue ID: 2641
Subject: Failure to see Rating Results

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	4/26/2000 2:38:40 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	

Complete Issue Information

Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	missing stiffeners.zip	

Tasks

Name	Current State	Summary
2642.10735	Closed	Missing Transverse and Bearing Stiffeners

Description

FROM: dteal DATE: 4/26/2000 9:35 AM

I was logged in as the administrator, did a rating, opened "view rating results" window – nothing there. I logged out and logged in not as the administrator but as a rater and checked this window – all the information was available in the view rating results window. I logged out and logged back in as the administrator, – all the information was available in the view rating results window. This very same thing happened yesterday also. Yesterday I thought I did something wrong. I have either done it wrong 2 days in a row or something is amiss.

FROM:jduray DATE:04/26/2000 15:38:11

When you don't get any results back does it seem to take longer than if you get results?

FROM: dteal DATE: 4/27/2000 7:07 AM

No

FROM:jduray DATE:4/1/02 4:02:51 PM

Is this still an issue or did the changes we made to the Bridge Explorer for 4.1 resolve this?

FROM:dteal DATE:Friday, May 10, 2002 9:05:07 AM

I can not reproduce this in 4.1 - I must be cured!

4/19/2016 3:14:02 PM

HRS AASHTO

427

Complete Issue Information

Issue ID: 2642
Subject: Missing Transverse and Bearing Stiffeners

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/26/2000 3:45:49 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 4/26/2000 10:42 AM

I have attached a .bbd file of a steel girder bridge. The stiffeners have been entered. After the structure is analyzed I found that no stiffeners where passed on to BRASS. I have sent screen shots to show that stiffeners where entered (transverse Stiffeners Ranges & the Bridge BWS screen). I have also sent along screen shots to show that they where never entered into BRASS.

FROM: dteal DATE: 4/26/2000 12:54 PM

Never mind – I found the error.

Under Member Alt. – Engine – POI, I had "User defined points only (no Schedule data). It should have been Generate at user-defined points using schedule data or at tenth points.

Mark this incident closed.

Complete Issue Information

Issue ID: 2643

Subject: Rating results summary does not report controlling limit state.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

4/26/2000 7:48:02 PM

Modified By: administrator

6/19/2008 4:02:15 PM

Priority: Urgent

Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed - Inactive	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

4/19/2016 3:14:03 PM

HRS AASHTO

429

Complete Issue Information

Name	Current State	Summary
2643.10734	Closed - Inactive	Rating results summary does not report controlling limit state.
2647.10730	Resolved	Engine-related help not setup for VirtisOpis

Description

FROM:jduray DATE:04/26/2000 15:43:20
Version 2.1 did.

FROM: bgoodrich DATE: 4/28/2000 10:42 AM
I ran some steel, P/S, and R/C bridges from the Virtis sample database and a controlling limit state was reported for all.

Jim - Did you run one of the sample problems?

FROM:jduray DATE:05/05/2000 16:19:37
Ask Aaron for bbd files for this and send to Brian.

FROM:jduray DATE:6/25/01 3:36:08 PM
The rating results viewed from the Bridge Explorer do not show the controlling limit state, the BWS Tabular Report does.

Closed-Inactive

Issue ID: 2647
Subject: Engine-related help not setup for VirtisOpis

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Duray, Jim	4/27/2000 6:11:58 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:14:03 PM

HRS AASHTO

430

Complete Issue Information

Ihnat, Joseph	Resolved	High	Bug
Duray, Jim	Assigned	High	Bug - GUI 2
	Duplicate		
	Closed		
Duray, Jim	Closed	High	Bug - GUI 2

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2650.10727	Closed	Printing Schematics: Profile View - Can't get entire length of girder to print out

Description

FROM:jduray DATE:04/27/2000 14:08:23

We should set the BRASS LFD engine help as the default for VirtisOpis.

FROM:jihnata DATE:11/03/2000 14:35:06

Fixed for Version 4.0.0 Beta Build 1.

Issue ID: 2650

Subject: Printing Schematics: Profile View - Can't get entire length of girder to print out

4/19/2016 3:14:03 PM

HRS AASHTO

431

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	4/28/2000 2:47:21 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug - GUI 2	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2653.10724	Resolved	Copied GL Member has the same Member Alt as the original

Description

FROM: dteal DATE: 4/28/2000 9:44 AM

How do you print a Profile View of a structure. Fit View makes it unreadable small. When view is of a readable size and you use print preview, there is nothing on the second page. I think we should be able to print the entire length of the girder in a readable size.

I was looking a steel welded plate example. Is there a work around?

FROM:jihnat DATE:1/23/2002 2:55:32 PM

Duplicate of 919.

Complete Issue Information

Issue ID: 2653
Subject: Copied GL Member has the same Member Alt as the original

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Ihnat, Joseph	5/2/2000 2:14:52 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jhnat DATE:05/02/2000 10:08:10

Problem first reported by Dave Foremsky.

To reproduce this, create a Girder Line Struct Def, and a Steel Plate (Schedule based) Member Alternative.

When the Girder Line Member is copied to the same Struct Def, then a change is made to the Girder Profile of the copied Member Alt, the changes show up in the original Member Alternative.

4/19/2016 3:14:04 PM

HRS AASHTO

433

Complete Issue Information

Doesn't occur when the Struct Def is copied, or when the Member is copied to another Struct Def.
I was also able to reproduce this in Version 2.1 and Version 2.0.

FROM:jduray DATE:05/04/2000 13:59:41

The problem was that the copy of the member was using the original beam def. Joe fixed the GUI code to copy the beam def (like we do for the member alt).

Issue ID: 2654
Subject: Windows 2000

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/2/2000 2:50:02 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	Urgent	Enhancement
Duray, Jim	Closed	Urgent	Enhancement

Contacts

4/19/2016 3:14:04 PM

HRS AASHTO

434

Complete Issue Information

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2655.10722	Closed	Results Graph – Spec Checker – Filter

Description

FROM: dteal DATE: 5/2/2000 9:46 AM

Our state will be going to Windows 2000 within the next year. What will the status of Virtis/Opis be for compatibility?

FROM: jduray DATE: 05/04/2000 09:27:18

We will need direction from the TF on this but I think the next release should support it.

Issue ID: 2655

Subject: Results Graph – Spec Checker – Filter

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

5/3/2000 3:38:50 PM

4/19/2016 3:14:04 PM

HRS AASHTO

435

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:15 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	Urgent	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2656.10721	Suspended	Load Case Description – R/C

Description

FROM: dteal DATE: 5/3/2000 10:33 AM

For the Spec Checker I can suppress items such as N/A so it doesn't clutter up and confuse the output. But when you view the Results Graph there is no filter. So for example, the Spec Checker (with filtered items) has no failures on a particular design review but the Results Graph could be cluttered with RED failures and you don't know which ones apply.

I was mostly looking at a RC Haunched slab structure.

FROM: dteal DATE: 5/3/2000 10:40 AM

The biggest confusion is "Rating Factors" that don't apply and can't be filtered out.

FROM: dteal DATE: 5/4/2000 8:18 AM

I was looking at the wrong N/A. I confused the flexural sense N/A with "Not Applicable". Mark this item CLOSED.

Complete Issue Information

Issue ID: 2656
Subject: Load Case Description – R/C

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/3/2000 4:05:50 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 5/3/2000 11:01 AM

My options for Stages are:

Non-Composite Stage 1

Composite (long term) Stage 2

Composite (short term) Stage 3

What I see here is confusion. When entering data for a RC Haunched Slab structure, none of the above options for Stages apply. There are no composite regions in a slab bridge (no girders). There is no direction anywhere to go to the Member Alt Properties to select "All loads applied in Stage One". The help for the key word "Stages" doesn't address this at all.

When you select "All loads applied in Stage One" in the Member Alt Properties, does this over ride

4/19/2016 3:14:04 PM

HRS AASHTO

437

Complete Issue Information

anything you may have selected in the Load Case Description window??

FROM: jduray DATE: 05/08/2000 10:29:24

Brian - please answer the question about the override and then assign to me.

FROM: bgoodrich DATE: 5/8/2000 10:54 AM

The short answer is YES. No matter what a user enters into the Load Case Description window, BRASS only allows one stage for R/C, so the export applies the loads accordingly. Maybe the stages in the Load Case Description window could be filtered based on the Member Alternative Types check boxes on the Structure Definition window.

Also, for an R/C member alternative, the ASD/LFD engine properties show two options (in a drop-down box) for the Load Sequence:

- => Computed based on loadings and composite regions
- => 1 stage - R/C bridge with one construction stage

However, the LRFD engine properties show the Load Sequence as a set of radio buttons that are the same for every type of girder, i.e., Computed, Stage 1, Stage 2, and Stage 3. We may need to hide the radio buttons that are not applicable to R/C to prevent any further confusion. Note that the Computed option is required because that is the default set in the default string of the member alt engine properties, which remains constant for all girder types. The 1 stage option was required for the import of BRASS data file.

The export does issue a warning if the users applies a load to a stage which does not exist in BRASS for the structure type. When this occurs, the load will be applied to the last allowable stage, which is stage 1 for R/C.

Issue ID: 2657
Subject: SI Units Default – View Rating Results

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	5/3/2000 5:58:18 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Accepted	High	Bug
	Closed		
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

4/19/2016 3:14:05 PM

HRS AASHTO

438

Complete Issue Information

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
Brian Goodrich	BridgeTech, Inc.	Goodrich@BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Results Graph.zip	

Tasks

Name	Current State	Summary
2658.10719	Closed	Results Graph – Extra Point

Description

FROM: dteal DATE: 5/3/2000 12:54 PM

My system default is SI, but whenever I go to view the Rating Results (Member Rating Results) they are in US and I have to go to the top and click the radio button for SI.

FROM:mordoobadi DATE:8/2/01 4:41:50 PM

Fixed in 4.1

FROM:dteal DATE:10/09/2001 17:25:04

I see no changes in operation.

Set my system default to SI. Opened the provided bridge, Matrixbridge12, set the Bridge Description window and the Matrix No. 8 structure definition to SI. I rated the Matrix No. 8 structure definition. Going to the view analysis results for Rating Results Summary – All Inventory and Operating locations are still in feet when all the defaults are set to SI.

FROM:mordoobadi DATE:10/10/2001 11:40:26 AM

Dean the Windows operate based on the selected system of units on the toolbar not the system of units in bridge description or structure definition.

FROM:dteal DATE:10/16/2001 15:31:58

I discovered a new problem with 4.1 beta 1 while trying to verify this incident. I reported it as #3443. I will revisit this incident for verification when #3443 is resolved.

FROM:dteal DATE:10/16/2001 16:32:54

FROM:mordoobadi DATE:10/17/2001 10:22:57 AM

Accepted by Dean Teal.

4/19/2016 3:14:05 PM

HRS AASHTO

439

Complete Issue Information

Issue ID: 2658
Subject: Results Graph – Extra Point

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	5/3/2000 7:09:04 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug
	Accepted		
	Closed		
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	Results Graph.zip	

Tasks

Name	Current State	Summary
2659.10718	Closed	Results Graph – Missing Distances & Vertical Lines

Description

FROM: dteal DATE: 5/3/2000 2:05 PM

In reviewing the attached results graph – why is there two entries for span #1 location 13.50? One has values and one is blank.

FROM: dteal DATE: 11/16/2000 11:49 AM

4/19/2016 3:14:05 PM

HRS AASHTO

440

Complete Issue Information

see #2810

FROM:mordoobadi DATE:11/9/2001 10:44:26 AM

This seems to be caused by BRASS supplying duplicate points (very close) to Virtis. The Tolerance that we are using right now is 0.0000001. I changed it to 0.001. This resolves the problem. In the meantime Brian is going to investigate why we get two different set of data for some points.

FROM:bgoodrich DATE:12/05/2001 11:06:29

I have corrected the BRASS engine to compute the distance to points in a consistent manner. Previously, one area used single precision and another used double precision, which caused slightly different distances to be passed to the results object. When multiple reports are superimposed, the blanks appear because a result value is not present for some of the points because the value was stored a nearly identical point. Fixed for version 4.1 acceptance build.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:50:54 AM
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:00:57 PM
Closed.

Issue ID: 2659
Subject: Results Graph – Missing Distances & Vertical Lines

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	5/3/2000 7:24:56 PM
Modified By: administrator	6/19/2008 4:02:15 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

4/19/2016 3:14:05 PM

HRS AASHTO

441

Complete Issue Information

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 5/3/2000 2:21 PM

Notice that on "Results Graph 1.bmp" there are labels at 13.5, 14.5, 15.5 & 17 m on the Distance axis of the Graph when Moment-Rating Factor is selected. But notice that on "Results Graph 2.bmp" the labels and vertical lines are missing on the Distance axis when only "Non-Composite (Stage 1)" is selected.

FROM:mordoobadi DATE:11/8/2001 7:05:23 PM

See Incident 3483.

Fixed.

Issue ID: 2660

Subject: Bearing Stiffener Clips

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

5/4/2000 3:46:02 PM

Modified By: administrator

6/19/2008 4:02:15 PM

Priority: Urgent

Category: Bug

4/19/2016 3:14:05 PM

HRS AASHTO

442

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2662.10715	Resolved	P/S strand layout - cannot save changes to debonding locations for box beams

Description

FROM: dteal DATE: 5/4/2000 10:42 AM

There are two fallacies in the BRASS procedure for calculating the Bearing Resistance for the bearing stiffeners.

1. The bottom flange width should be used, not the top flange width. The bottom flange is where the reaction is applied to the bearing stiffener.
2. The effective bearing length on the flange is calculated incorrectly. The clip dimension should be the sum of the inside and outside clips at the bottom of the stiffeners. The program used the larger of the top or bottom clips. Also, when performing the left hand portion of the equation for beff, the clip dimension should be the inside clip only.

Equation Used:

$$\text{beff} = \left(\left(\frac{\text{flange width} - \text{tw}}{2} \right) - \text{clip} \right) \leq \text{bt-clip}$$

Equation Should Be:

$$\text{beff} = \left(\left(\frac{\text{bottom flange width} - \text{tw}}{2} \right) - \text{inside clip} \right) \leq \text{bt-total clip}$$

Two methods are available to overcome this problem:

1. In the Opis input for "Stiffener Definitions", code the same clips for top and bottom even though they are different.
2. Override this information in the "Points of Interest" input.

FROM: jduray DATE: 05/08/2000 10:23:24

Brian - is this problem in BRASS or the export?

FROM: bgoodrich DATE: 5/9/2000 5:27 AM

I have requested permission from WYDOT to modify the bearing resistance code within BRASS to always use the bottom flange width and not the minimum of the top and bottom flange widths. This is a minor code modification.

The other issue regarding the clip dimensions will have to be addressed in the export. BRASS only

4/19/2016 3:14:06 PM

HRS AASHTO

443

Complete Issue Information

allows one clip to be entered, i.e., the bottom inside clip. However, Opis allows the user to enter inside and outside clip dimensions for both the top and bottom of the stiffener. The export sums the inside and outside clip dimensions at the top and then repeats this for the bottom. Then to be conservative, the maximum of the top and bottom clips are exported. This portion of the export will need to be changed so only the bottom clips are considered.

Jim - Please let me know if I can make this change in the export.

FROM:kkennelly DATE:05/15/2000 11:16:14

Similar question about clips. I've attached one of the Arizona bridges Baker is rating (00664.bbd). Member G4 analysis point 110. Bearing stiffener entered in Virtis as 5.5" wide, no clips entered. Top and bottom flange widths are 12", web 0.3125" wide. If I don't have the detailed output checked for POI 110 engine data, BRASS output file lists clip as 0.0. If the detailed output is checked on the poi engine data window, analysis point 110 detailed output for the spec check 10.48.7 lists the bearingstiffener clip (bcl) as 0.125". Rating factor calculated using 0.125" clip.

FROM:kkennelly DATE:05/15/2000 11:29:46

FROM:jduray DATE:05/26/2000 13:56:48

Discussed with Brian 5/25. He will calculate an effective clip based on the clips and the flange width.

FROM:jduray DATE:05/26/2000 13:58:35

Fix for patch 3.

FROM:bgoodrich DATE: 5/26/2000 2:52 PM

BRASS export fixed so effective clip is generated.

Krishna - I found that if a zero clip dimension is detected by BRASS-LFD only, the clip is set to 1/8" to account for a minimum weld size. This is done internally, so the LFD help should be updated to reflect this.

FROM:kkennelly DATE:07/27/2000 13:19:22

Help fixed for Version 4.0

FROM:dteal DATE: 11/15/2000 2:24 PM

FROM:kkennelly DATE:12/21/2000 09:16:05

Accepted based on A in track field.

Issue ID: 2662
Subject: P/S strand layout - cannot save changes to debonding locations for box beams

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: McCaffrey, Brian 5/5/2000 3:34:44 PM
Modified By: administrator 6/19/2008 4:02:14 PM
Priority: High
Category: Bug

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	High	Help

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2663.10714	Resolved	VirtisOpis Manual - missing a step in adding a new user to Sybase

Description

FROM:jduray DATE:05/05/2000 11:34:00
This was reported by Brian McCaffrey.

FROM:jduray DATE:05/05/2000 16:39:25
I was not able to reproduce this on a 4.0 debug build. Next try a release build of 3.0.

FROM:jduray DATE:05/30/2000 10:32:21
This may have been related to incident 2701. After the crash was fixed we found that sometimes the data wasn't being saved to the domain because the modified flag was not being set correctly.
Fixed in patch 2.

Complete Issue Information

Issue ID: 2663
Subject: VirtisOpis Manual - missing a step in adding a new user to Sybase

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krisha
Submitted By: Duray, Jim 5/5/2000 7:35:15 PM
Modified By: administrator 6/19/2008 4:02:14 PM
Priority: High
Category: Help

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:05/05/2000 14:36:28
The instructions do not describe adding the new user to the VirtisUserGroup.

FROM:kkennelly DATE:05/08/2000 07:51:01
I think Step 11 of Adding Users to the Virtis/Opis Database help topic addresses this.

Complete Issue Information

Issue ID: 2664
Subject: Point of Interest Window - Fatigue Tab

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Thompson, Todd 5/5/2000 8:54:37 PM
Modified By: administrator 6/19/2008 4:02:14 PM
Priority: Urgent
Category: Education

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	Urgent	Education

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2664.10713	Resolved	Point of Interest Window - Fatigue Tab

4/19/2016 3:14:06 PM

HRS AASHTO

447

Complete Issue Information

Description

FROM: tthompson DATE: 5/5/2000 3:50 PM
The drop down data windows for the following fields are not wide enough to display the entire field, making it impossible to use:
Measured From, LRFD Fatigue Category, LFD Fatigue Category

Thanks

FROM: jduray DATE: 05/08/2000 10:01:15
Joe - can we get this fixed for patch 2?

FROM: jihnat DATE: 05/08/2000 10:30:29
Jim - the window is not "impossible to use". As we do throughout the GUI, the initial column width is set to the width of the column heading. On this particular window, the user needs to widen the column in order to differentiate the selections in the list.

FROM: tthompson DATE: 5/8/2000 11:54 AM
YES,
That will be a work around.
Thanks

Issue ID: 2666
Subject: 3.0 Release - Agency shape PS Beam Schematic not visible in Strand Layout window

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Barnhill, Gale 5/9/2000 6:28:49 PM
Modified By: administrator 6/19/2008 4:02:14 PM
Priority: High
Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Duray, Jim	Assigned	High	Bug - GUI 1 Bug - GUI 2

Complete Issue Information

Ihnat, Joseph	Resolved Duplicate	High	Bug
---------------	-----------------------	------	-----

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2667.10710	Duplicate	Results Graph – Symbol Legend

Description

FROM: gbarnhill DATE: 5/9/2000 1:23 PM

I created new agency PS beam shapes in the library. To get the properties to check with our hand calculations for our shapes, I left the fillet dimensions as zero (both for a wide top flange type and a narrow top flange type).

When I select the agency shapes in the BEAM DETAILS window and then open the STRAND LAYOUT window, the shape does not appear in the schematic view.

If I put a dimension other than zero (0.0001) in for the fillet dimensions, then the schematic appears.

FROM: jduray DATE: Saturday, November 08, 2003 8:13:17 AM

I checked this in version 5.1 and it has been resolved (not sure when).

FROM: gbarnhill DATE: Monday, January 12, 2004 11:25:49 AM

OK in v5.1.1 and 5.1.0

Issue ID: 2667 Subject: Results Graph – Symbol Legend
--

Folder: /Virtis/Support Center

4/19/2016 3:14:07 PM

HRS AASHTO

449

Complete Issue Information

Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	5/9/2000 7:54:39 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Duplicate	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Depth of Web in Compression.zip	

Tasks

Name	Current State	Summary
2668.10709	Duplicate	Compute Depth of web in Compression

Description

FROM: dteal DATE: 5/9/2000 2:51 PM

Has anything been or going to be done about the legend on the bottom of the screen. Even after you shrink the tabular output to just one line you still can't see all the legends. I have to guess at what a line is representing.

FROM: jduray DATE: 05/17/2000 09:11:21

Joe - please contact Stingray about this.

FROM: jihnat DATE: 05/24/2000 12:39:24

This is not a Stingray problem. As originally written, the chart only gives a fixed percentage (15%) of the window for displaying the legend.

Some possible workarounds: (1) Maximize the results window and adjust the splitter frame so that the chart portion is as large as possible. (2) Open Chart Properties and reduce the size of the Legend font.

Duplicate of 1134, 1030, 604.

Dean, about how many plots are on your chart?

4/19/2016 3:14:07 PM

HRS AASHTO

450

Complete Issue Information

FROM: dteal DATE: 6/8/2000 11:41 AM

For an example:

Analyze PCI TrainingBridge Example #4. In the results graph under Concrete Stress select "Allowable (DL + PS)". Here you will find that with a 19 " monitor with the window maximized the symbols and descriptions will fall off the bottom of the pane.

FROM: dteal DATE: 11/16/2000 9:26 AM

(Same problem as 1134 & 1030)

Issue ID: 2668
Subject: Compute Depth of web in Compression

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	5/10/2000 1:15:53 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: Urgent	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 5/10/2000 8:03 AM

This may be the same problem as incident #2579, as related to the exterior girder and not being able to compute the depth of web in compression.

Attached is the structure in question. Run "5Spans 5 – WWGC Uniform Depth Girder Unit – Member G1 – Wizard Alternative". You will get an error "Program is unable to compute depth of web in compression. The flange stresses are equal."

4/19/2016 3:14:07 PM

HRS AASHTO

451

Complete Issue Information

I do not get this error when analyzing an interior girder.
The "Wizard_Alternative.out " file says see "Wizard_Alternative.ERR" file for coding errors. I went there, no help.
If this is a coding error – can you help me out?

FROM: bgoodrich DATE: 5/15/2000 10:31 AM
This is the same bug that was reported on Incident #2579. It has been corrected in the BRASS engine, but we still have to issue a patch for the BRASS-GIRDER(LRFD) DLL.

Issue ID: 2669
Subject: 3.0 Release - error trying to transfer BBD file from one migrated DB to another migrated DB

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Barnhill, Gale	5/10/2000 9:16:48 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	01125_export.bbd	

Tasks

Name	Current State	Summary
2670.10707	Closed	Girder Profile Schematic

Description

FROM: gbarnhill DATE: 5/10/2000 4:12 PM

I tried to transfer a BBD from a migrated DB with 2200 structures to a migrated DB with 50 structures. When I do the import into the smaller DB, I get the following message:

Unable to save Bridge data!

04:12:59 PM - Line 745 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Error updating database record set.

04:12:58 PM - Line 437 in source file E:\virtis\Dev\data management\ABMSYS\DmEvent2.cpp.

State:23000,Native:-194,Origin:[Sybase][ODBC Driver]

Integrity constraint violation: no primary key value for foreign key 'C_1089' in table 'abw_event'

I am able to import the same BBD file into a delivered DB with less than 50 structures.

The large migrated DB was populated by loading the ABW_BRIDGE and PONTIS_BRIDGE tables with NBI data and then importing BARS data into those bridge workspaces as structure def's.

CHECK-IN/CHECK-OUT is turned on for all DB's.

I've attached the BBD file.

FROM: gbarnhill DATE: 5/11/2000 2:08 PM

I am able to import the BBD from my 2200 bridge DB into the delivered DB and then export from the delivered DB and import into the 50 bridge DB.

FROM: gbarnhill DATE: 5/11/2000 2:18 PM

I am able to import a BBD from the 2200 bridge DB into the 50 bridge DB if it is one of the first bridges in the 2200 bridge DB.

FROM: tthompson DATE: 5/17/2000 8:05 AM

I have also migrated the database from 2.1 to 3.0 (with patch 1). I wanted to bring over all the new example bridges, but I get an error message when I try to import them. I'm not sure if my problem is related or not:

File format not compatible with this version of system.

4/19/2016 3:14:07 PM

HRS AASHTO

453

Complete Issue Information

08:07:09 AM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp.

FROM:jduray DATE:05/17/2000 09:11:53

FROM:mordoobadi DATE:09/11/2000 15:14:51
DLLs abmbrdg and abmbche fix the problem.

FROM:jduray DATE:10/09/2000 09:21:39
Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2670
Subject: Girder Profile Schematic

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	5/12/2000 2:47:21 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: High	
Category: Unknown	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Not Reproducible	High	Unknown
	Closed		
Duray, Jim	Closed	High	Unknown

Contacts

Name	Company	Email 1	Phone 1

Documents

Name	Resource Identifier	Description

Tasks

Name	Current State	Summary

Description

FROM:kkennelly DATE:05/12/2000 10:45:21
Sometimes the entire girder profile doesn't show up in the schematic when you are zoomed in. Profile just ends somewhere in middle and right side of profile not displayed. Fit view to window and entire

Complete Issue Information

profile shows up. Export file attached.

FROM:kkennelly DATE:5/21/2007 1:01:40 PM
Not reproducible. Must have been fixed somewhere along the way.

Issue ID: 2671
Subject: BARS Import - Symmetry - Lateral Support

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Thompson, Todd	5/12/2000 3:39:47 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Martin, Ed	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Complete Issue Information

Ed Martin	Michael Baker Jr., Inc.	emartin@mbakercorp.com	(304) 769-2126
-----------	----------------------------	------------------------	----------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2673.10704	Accepted	GUI Member Alt Type not set when importing

Description

FROM: tthompson DATE: 5/12/2000 10:33 AM

I've been having some problems with bridges that are symmetrical in BARS, but they don't completely import in as symmetrical in VIRTIS.

In this example: the Bracing Ranges, Lateral Support did not import in with the symmetry. For this 3 span bridge, it only imported in lateral support for spans 1 and 2. Even though tab card 16 was coded with symmetry, it didn't get brought in. I've attached a bars data set to use.
FROM: tthompson DATE: 5/12/2000 10:36 AM

FROM: emartin DATE: 10/31/2000 8:13 AM

FROM: emartin DATE: 10/31/2000 11:54 AM

Fixed.

Issue ID: 2673

Subject: GUI Member Alt Type not set when importing

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

5/15/2000 1:30:38 PM

Modified By: administrator

6/19/2008 4:02:14 PM

4/19/2016 3:14:08 PM

HRS AASHTO

456

Complete Issue Information

Priority: Urgent
Category: Bug

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Accepted	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	012154.dat	
	sd_prob_1.bbd	

Tasks

Name	Current State	Summary
2674.10703	Accepted	Int Transverse Stiffeners not showing up

Description

FROM:kkennelly DATE:05/15/2000 09:24:03

I've imported some bridges from Aaron that don't have the GUI member alt type set on the structure definition window . Aaron originally entered one bridge 2.1, migrated to 3.0 and then emailed to me. When I imported into 3.0, it didn't have gui member alt type set. He entered another bridge in 3.0, definitely set the member alt type in 3.0, emailed it to me. When I imported into 3.0, gui member alt type was not set.

FROM:jduray DATE:10/09/2000 09:26:36

I could not reproduce this in a version 4 alpha debug build. Test the release build.

FROM:jduray DATE:12/20/2000 11:16:08

Reproducible in release build.

Problem is in setting the value in the little bucket. The correct value is in the export file and is read in correctly by the archive class. CDmBridgeArchive::operator>>(IDeLongCom* pIDeLongCom) function calls setValue on the little bucket and the value does not get set.

SetValue was in an ASSERT instead of VERIFY.

FROM:kkennelly DATE:12/22/2000 11:24:56

Complete Issue Information

Accepted in Version 4.0 Release

Issue ID: 2674
Subject: Int Transverse Stiffeners not showing up

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	5/15/2000 2:08:26 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: Urgent	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 5/15/2000 9:02 AM

I have a Comp Cont Steel Girder bridge that no matter what I do, I can't seem to get BRASS to recognize the Transverse Stiffeners.

My analysis is giving me 0.00 at Span Point 110 and the BRASS output states that there are no Transverse Stiffeners and makes the section unstiffened. Yet I have entered all the stiffeners for the girder. I also tried to override the stiffeners at this check point, but the BRASS output still says there are no stiffeners.

I'm not sure if I have a mistake or if there is a problem in the program.

I've attached an export of the bridge. The problem is with MEMBER G2. I was originally imported from BARS.

4/19/2016 3:14:09 PM

HRS AASHTO

458

Complete Issue Information

FROM: tthompson DATE: 5/15/2000 9:06 AM

FROM: kkennelly DATE: 05/18/2000 08:55:36

The export is generating a stif-trans-schedule command with 0" spacing and 0' length at 120'. I'm not sure if this is the problem but I noticed that the data you have for the transverse stiffener ranges has a transverse stiffener located directly at each of the piers. (A transverse stiffener is not located at the start distance of a range but is located at the end distance of a range in Virtis) You also have bearing stiffeners at each of the piers. I'm not sure if the BARS model you imported from had a trans stiff at the pier and the import worked correctly based on the incorrect BARS model or the import placed the trans stiff at the piers incorrectly but I don't think you would have both a trans stiffener and bearing stiffener at the same location.

If you change the trans stiff range with start dist = 105.83', 34" spacing to have 4 spaces instead of 5, you will end up with an end distance of 117.17' and BRASS will run correctly for point 110 with a trans stiff spacing of 2.83'. I'm not sure if a trans stiff at the same loc as a brg stiffener is causing the problem with the export because you don't get this error at the other piers with both trans stiff and brg stiff. After you make the previous spacing change, pt 110 will run ok but point 510 will now have the same problem with shear.

As for not being able to override the stiffeners at that point, the export issues the following warning in the .log file:

WARNING (High):

The POI control parameter on the ANALYSIS command indicates to generate points of interest from the schedule data. BRASS currently does not allow the generated data to be overridden with the data entered on the point-of-interest commands.

If you want to override something for one of the points, you have to enter all of the override info for all of the points of interest and pick option 0 - "No point of interest data will be generated" on the Mbr Alt Engine tab for POI Control. BRASS currently doesn't let you mix overriding some points and using the generation option for the other poi's. Picking any other option for POI control will ignore any override data entered on the POI windows (other than the POI Engine tab). The Engine related help is being revised to explain this more clearly.

Brian, Can you look into why the export generates a stif-trans-schedule command with 0" spacing and 0' length at 120' and why point 510 thinks it is unstiffened? (maybe related to incident 2627.)

FROM: bgoodrich DATE: 5/19/2000 4:06 PM

BRASS is generating a small range at the ends of some of the spans because a stiffener is positioned near a support. For span 1, the schedule range at 105.833333' has an ending distance of 119.9999997' within Virtis ($105.833333' + 5*(34/12)' = 119.9999997'$). Therefore, the export thinks there is a space of 0.0000003' at the end of the span. Similarly, for span 5, $89.830000 + 2*(37/12) = 95.99666667'$, which is not exactly equal to the 96' span length. Because the range is sometimes extremely small, a zero range is exported due to the number of digits right of the decimal point that are written to the data file. I modified the stiffener ranges export code to ignore a stiffener if it located essentially at a support.

In general, transverse stiffener should not be placed at the supports. If you remove the transverse stiffeners at the supports, BRASS runs fine.

Krishna - If the BARS import generated the stiffener schedules, it needs to be modified. Please assign to Ed if this is the case.

4/19/2016 3:14:09 PM

HRS AASHTO

459

Complete Issue Information

FROM:kkennelly DATE:05/22/2000 09:36:34

Todd,

Did the BARS import generate the transverse stiffeners at the piers based on the BARS data file having stiffeners there or did the import place trans. stiffeners at the piers when the BARS file did not contain trans. stiffeners at the piers?

FROM: tthompson DATE: 5/24/2000 10:11 AM

Sorry didn't get back right away, but have been out of the office.

The BARS import did not place the stiffeners at the Pier. I did that by accident. I didn't enter my stiffeners correctly. If I remove that last stiffener at the Pier, then it seems to work.

I added the BARS data set in case you want that.

FROM:kkennelly DATE:05/24/2000 12:33:00

BARS import seems to be ok as is. Brian has fixed export to ignore trans stiffeners at supports so this incident should be resolved. Waiting to get fix from Brian so we can test it, this fix will probably be in Patch 2.

FROM:jduray DATE:05/26/2000 13:50:17

FROM: tthompson DATE: 6/29/2000 11:04 AM

Appears to be ok in Service Pack 3

FROM:kkennelly DATE:07/11/2000 08:25:53

Accepted based on A in track field.

Issue ID: 2675
Subject: Error Message of cross section area less than or equal to zero

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	5/16/2000 2:41:51 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: Urgent	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688
----------------	------------------	-------------------------------------	--------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2676.10701	Closed	Viewing Member Loads w/out Checkout

Description

FROM: tthompson DATE: 5/16/2000 9:35 AM

I keep getting this error message:

Input Errors (1103) - Cross-section area less than or equal to zero

09:28:10 AM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborst\DoMemberResults.cpp.

The structure has a lot of fractions and I'm guessing that there is a problem with rounding causing the problem. I've been trying to enter the fractions out to (ex. 101.864583). But can't seem to solve this. I am guessing that this may require an enhancement, unless I just have a bust in my data.

I've attached the bbd and the error message.

FROM: kkennelly DATE: 05/17/2000 13:59:47

I've reviewed the Virtis input and the BRASS input file generated by the export and I cannot determine what is causing this error. The BRASS input generated by the export looks ok to me. This is an internal BRASS error when BRASS is trying to compute the beam properties for the non-composite section (that's what appears in the BRASS window that opens in Virtis when analyzing with BRASS) so I'm assigning this to Brian and I'll notify him by email.

FROM: bgoodrich DATE: 5/19/2000 4:19 PM

There is problem in the export when generating commands containing distances. Some of the span and load commands have either 81.3437 or 81.3438 generated as ranges. The primary problem is the last range on the SPAN-D command for span 1 is not identical to the span length on the corresponding SPAN-A command. Therefore, there is a gap at the end of 0.0001 feet when BRASS interprets the commands. The actual span length and cross section ranges entered into Virtis are 81.34375 feet and only four digits right of the decimal point are exported. If I just changed the distance to 81.3438 in the data file, BRASS runs fine, so I know this is where the problem is located.

I re-entered the span length and cross section ranges into Virtis but still get the same export problem. The debugger even reports the span length and the cross section distance as the same, both 81.343750000000. If I subtract 81.3 from these values in the debugger watch window, the results are 0.043750000000003 and 0.043749999999989, respectively. This may be why the export is generating the commands incorrectly. However, if I subtract 81.34 from these values in the debugger watch window, the results are 0.003749999999966 and 0.003749999999824, respectively. I'm not sure why this span length value does not stay greater than 0.00375.

4/19/2016 3:14:09 PM

HRS AASHTO

461

Complete Issue Information

Just as a test, I retrieved the span length from the domain in inches and then in feet. The span length entered in the GUI is 81.34375 feet. The retrieval results seem odd and are shown below.

dSpanLengthInches/12-81.3 = 0.043749999999989

dSpanLengthFeet-81.3 = 0.043750000000003

The cross section change points are generated using inches because both the LFD and LRFD export use the same functions. However, the span length for LFD is retrieved in feet, which is causing the problem, I think. This issue is probably not isolated to just the cross section ranges. Any ranges used to generate BRASS commands (schedules, loads, etc.) would have to be checked as well. One possible way to correct this problem would be to increase the number of digits past the decimal that are exported (from 4 to 5). However, we increased them from 2 or 3 to 4 for the Version 3.0 release to address a similar issue.

Jim - Any suggestions?

FROM:jduray DATE:05/26/2000 13:45:26
Precision

FROM:jduray DATE:6/25/01 3:59:39 PM
Krisha - is this still a problem?

FROM:kkennelly DATE:7/16/01 11:51:39 AM
I migrated this bbd file to 4.0.4 and it ran without any problem. Tolerances seem to have fixed this problem.

Issue ID: 2676
Subject: Viewing Member Loads w/out Checkout

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	5/16/2000 7:09:38 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

4/19/2016 3:14:10 PM

HRS AASHTO

462

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2677.10700	Closed	Dist. Factor for Deflection

Description

FROM: dteal DATE: 5/16/2000 2:05 PM

For Example – take PCITrainingBridge4 – Don't check it out, just try to view the 2 load cases in the Member Loads screen. You can view the FWS Load Case, but you can not find out what the value is for the Parapets Load Case unless you have authorization and check out the bridge. (Or make a copy of the bridge) Shouldn't the user be able to view this information without checkout privileges or making a copy of it?

FROM:jihnat DATE:05/24/2000 11:21:57

Fixed for Version 3.0 Patch 2 and Version 4.0

FROM: dteal DATE: 11/15/2000 2:26 PM

FROM:jihnat DATE:11/16/2000 08:13:57

Accepted by dteal ("A" in Track field).

Issue ID: 2677

Subject: Dist. Factor for Deflection

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

5/16/2000 7:11:06 PM

Modified By: administrator

6/19/2008 4:02:14 PM

4/19/2016 3:14:10 PM

HRS AASHTO

463

Complete Issue Information

Priority: Urgent
Category: Documentation

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2679.10698	Closed	Import of bbd from sample db to migrated db fails

Description

FROM: dteal DATE: 5/16/2000 2:07 PM

In "PCITrainingBridge4" the LRF Distribution Factor for deflection is given as 0.499 for single lane and 0.732 for Multi-Lane. Where did these numbers come from?? According to Article 2.5.2.6.2 (found in the last paragraph of the commentary) – Distribution Factors for Deflection are simply Number of (Lanes/Number of Girders) * Multiple Presence Factor.

So for this case:

Single Lane = 1/6 Girders * 1.20 Mult Presence Factor = 0.200

Multi-Lane = 4/6 Girders * 0.65 Mult Presence Factor = 0.433

I have found this error in several of the example problems that came with the installation.

We need to have these examples correct.

FROM:kkennelly DATE:05/16/2000 15:33:04

These examples came from the PCI Design Manual. The PCI Design Manual states that it is more conservative to use the moment distribution factor since it is larger than the deflection dist. factor. We tried to follow the data in the PCI examples so users could refer to the PCI Design Manual.

FROM: dteal DATE: 5/22/2000 8:36 AM

The PCI example fails to state that the Dist Factor for Deflection should have been multiplied by the multi presence factor of 1.20 for single lane and 0.65 for the 4 lanes. This would have closed the gap between the DF's for moment and deflection.

This PCI example is also in error in 9.4.15.2 where it states that L=121 feet to calculate the deflections. L = 120 feet would be correct!

4/19/2016 3:14:10 PM

HRS AASHTO

464

Complete Issue Information

FROM: dteal DATE: 5/22/2000 9:26 AM

PCI also has an error 9.14.15.2, equation #2. They used initial modulus instead of final modulus for the concrete.

FROM:kkennelly DATE:5/22/01 9:54:56 AM

The LRFD deflection distribution factors for the following bridges delivered with the Virtis db have been changed: PCITraining Bridge 2 and PCI Training Bridge 4. Change made to db for version 4.1.

Issue ID: 2679
Subject: Import of bbd from sample db to migrated db fails

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	5/17/2000 1:17:31 PM
Modified By: administrator	6/19/2008 4:02:14 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 5/17/2000 8:13 AM

I have migrated the database from 2.1 to 3.0 (with patch 1). I wanted to bring over all the new example bridges, but I get an error message when I try to import them. I'm not sure if my problem is related or not to Incident #2669:

File format not compatible with this version of system.

08:07:09 AM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp.

FROM: tthompson DATE: 5/25/2000 11:05 AM

Complete Issue Information

Please close this Incident.

I double checked and the patch1.sql had NOT been applied to the sample database.

Once I completed the patch1.sql on the sample database, I successfully transferred a sample bridge.

Issue ID: 2681

Subject: Structure Definition - PS – Wizard – Traffic Lanes

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

5/17/2000 6:00:55 PM

Modified By: administrator

6/19/2008 4:02:13 PM

Priority: High

Category: Bug

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Closed	High	Bug
Kennelly, Krisha	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

4/19/2016 3:14:10 PM

HRS AASHTO

466

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2682.10695	Closed	Bridge Explorer - View Rating Results opens without any rows

Description

FROM: dteal DATE: 5/17/2000 12:57 PM

The first wizard screen for a PS girder line structure has a field for "Number of Traffic Lanes". I assume that if I have a 51' wide deck I would put in 4 traffic lanes. But if I didn't use the wizard – my only choices would be single or multilane.

So shouldn't both input methods be consistent? The wizard, for girder line, shouldn't have Number of traffic lanes but should only have the choice between single and multilane.

FROM:kkennelly DATE:08/31/2000 09:49:33

Structure Def Wizard changed for GirderLine to show radio buttons for multi and single lanes to match Struct Def window. Fixed for Version 4.0

FROM:kkennelly DATE:12/21/2000 09:14:49

Accepted based on A in track field.

Issue ID: 2682
Subject: Bridge Explorer - View Rating Results opens without any rows

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Boucher, Brian	5/17/2000 6:00:41 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug - GUI 1	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2683.10694	Suspended	Enhancement Request - Folders/Filters/Lists

Description

FROM:jduray DATE:05/17/2000 13:59:33
Brian is sending his db on CD.

FROM: gbarnhill DATE: 5/19/2000 11:31 AM
See my second comments in incident 2693, they may be related

FROM:jduray DATE:4/23/02 8:25:10 AM
Does this still occur?

FROM:mordoobadi DATE:2/21/2006 3:07:07 PM
No response for 4-5 years. Incident closed.

Complete Issue Information

Issue ID: 2683
Subject: Enhancement Request - Folders/Filters/Lists

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	5/17/2000 7:38:46 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2684.10693	Closed	Enhancement Request - Folders - sorting

Description

FROM: tthompson DATE: 5/17/2000 2:23 PM

I was hoping to use the concept of folders/filters/lists to do overweight permits. But I have come across one significant shortcoming, For NBI Item 5, we only currently have available Item 5D - Route Number. I would request that we have the ability to also have access to Item 5B - Route Signing Prefix, Item 5C - Designated Level of Service and 5E Direction Suffix.

pontis_bridge.kind_hwy
pontis_bridge.level_srvc
pontis_bridge.dirsuffix

These are really need to differentiate between for example
US 14 US 14 E US 14 W US 14A US 14B US 14 F

4/19/2016 3:14:11 PM

HRS AASHTO

469

Complete Issue Information

the routenum is 00014 for all of these but you need the additional NBI Item 5 codes to know which highway 14 you are using. Until we get the ability to create folders/filters/lists based on these other values, I would say that we are severely limited.

Issue ID: 2684
Subject: Enhancement Request - Folders - sorting

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	5/17/2000 8:30:36 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 5/17/2000 3:25 PM

4/19/2016 3:14:11 PM

HRS AASHTO

470

Complete Issue Information

I would propose an enhancement to be able to sort sub-folders under another folder. I currently created a folder called State Bridges. Under this folder, I am attempting to create a folder for each state highway. Currently, it appears that these individual folders are sorted only in the creation order. It would be of tremendous value to be able to sort these by folder name.

FROM: jduray DATE: 05/30/2000 09:22:29

I changed the folder update so it always sorts. If we need the option to sort then there is more work to be done. Mark as resolved.

Include in Version 3.0 Patch 2.

FROM: tthompson DATE: 6/9/2000 11:14 AM

It currently sorts in alphabetical order.

This is much better than in the order of creation.

I will accept these results but I anticipate that there may be additional needs/abilities in the future.

Issue ID: 2685
Subject: Construction Stage 2 in PS – Spec Checker

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	5/17/2000 8:55:36 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	High	Bug

4/19/2016 3:14:11 PM

HRS AASHTO

471

Complete Issue Information

	Closed		
Goodrich, Brian	Closed	High	Bug
Ordoobadi, Mehrdad	Not Reproducible	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2686.10691	Not Reproducible	Printing BWS Report

Description

FROM:dteal DATE: 5/17/2000 3:52 PM
Using PCITrainingBridge4. Why are all the codes listed in the spec checker (that I checked) for Construction Stage 2 when the stage listing on the left is for Stage 3??

FROM:jduray DATE:1/5/01 12:18:33 PM
This seems to be coming from BRASS with the stage id = 3 but in the memo field the stage is 2.

FROM:bgoodrich DATE:01/11/2001 15:57:43
BRASS analyzed this P/S structure in two stages, with Stage 1 being non-composite and Stage 2 being short-term composite. The BRASS results have to be mapped back to the appropriate Virtis/Opis stages where Stage 1 is non-composite and Stage 3 is short-term composite. BRASS does consider a long-term composite stage for prestress like is done for steel.

FROM:dteal DATE:01/29/2001 15:55:31

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:51:35 AM
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:01:25 PM
Closed.

Issue ID: 2686
Subject: Printing BWS Report

Complete Issue Information

Folder:	/Virtis/Support Center		
Primary Contact:	Ordoobadi, Mehrdad		
Submitted By:	Best, Richard	5/17/2000 9:00:59 PM	
Modified By:	administrator	6/19/2008 4:02:13 PM	
Priority:	Urgent		
Category:	Bug		

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Accepted	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
	2 and 10 inch span lengths.bbd	

Tasks

Name	Current State	Summary
2687.10690	Accepted	3.0 Release - span lengths with .17 & .67 decimals will not analyze

Description

FROM: rmbest DATE: 5/17/2000 3:54 PM

The File/Print option from within the View BWS Report malfunctions. It prints countless blank sheets after the end of the normal report. The user can specify to print from page 1 to say page 20 to reduce the number of blank sheets but Print All needs to be fixed.

FROM:mordoobadi DATE:10/04/2000 10:20:47

I remember putting some comments in this incident. I haven't been able to reproduce this problem on our printer.

Complete Issue Information

Issue ID: 2687
Subject: 3.0 Release - span lengths with .17 & .67 decimals will not analyze

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Barnhill, Gale	5/17/2000 9:56:18 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: gbarnhill DATE: 5/17/2000 4:50 PM

I imported a BARS bridge with spans of 49'-2" 65'-10" 49'-2". I added bracing data and lateral support data. When I tried to analyze, I get this error:

Unable to convert cross section based steel beam to BRASS cross sections!
Error generating BRASS cross section commands!
Unable to get cross section dimensions!

4/19/2016 3:14:12 PM

HRS AASHTO

474

Complete Issue Information

Unable to move to specified STEEL cross section range using MoveDistance!
Error getting cross section from STEEL cross section ranges!

I changed the span lengths to 49 65 49, added the bracing and lateral support data and was able to analyze.

I've attached the bbd file for the 2 & 10 inch spans.

FROM:kkennelly DATE:05/19/2000 13:45:35

I know this is a flaky work around but if you go to the Cross Section Ranges window, just click inside the last row's start distance, hit ok, BRASS will run.

Problem with precision. Span lengths are entered 49.166667/65.666667/49.166667 which add up to 164.000001'. When export tries to get cross section at end of beam, it does so at distance in inches = 164.000001*12in/ft = 1968.000012". Last cross section range ends at 1968.0". When we try to MoveDistance we use the new tolerance but it's still too tight (1968.000012" <= 1968.0 + 0.00001" returns false and can't get section at end of beam).

Clicking on the last row's start dist resets the length to 35.000001' which makes the last cross section end at 164.000001'

FROM:jduray DATE:05/26/2000 13:42:52

Fix for patch 4.

Krishna - please verify this is fixed.

FROM:kkennelly DATE:10/09/2000 11:30:31

Works as planned in Version 4.0. If user specifies a tolerance on inches 0.0001 or greater, domain thinks 1968.000012 = 1968 and BRASS will run. I also added the specific distance at which the domain can't get a cross section and the current tolerance to the error message to help user pin down error.

Fixed for 4.0. We said this would be in Version 4.0 not a patch as indicated on 5/26.

FROM: gbarnhill DATE: 12/19/2000 9:06 AM

OK in 4.0 Beta 2, see related comments in Incident 3006

FROM:kkennelly DATE:12/19/2000 10:39:53

Accepted based on A in track field.

Issue ID: 2688
Subject: Error in User Privileges - Bridge Folders

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Thompson, Todd 5/18/2000 2:10:58 PM
Modified By: administrator 6/19/2008 4:02:13 PM
Priority: High

Complete Issue Information

Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2689.10688	Closed	Viewing results after analysis of struc def with linked members

Description

FROM: tthompson DATE: 7/18/2000 3:52 PM

I logged on as user "toddt" and checked out a structure definition (not the entire bridge, just the structure definition).

I then logged on as user "virtis" and checked out the BRIDGE. The user virtis then had complete control over the bridge and all lower levels of structures and members.

I then logged on as user "toddt" and had NO control over the structure definition that I had previously checked out.

Is this intended to work this way? Shouldn't one be able to check out a structure definition and then if somebody else tries to either check out the structure (or bridge), that they would not be able to? Seems to be a bug in how it works now.

FROM: jduray DATE: 07/19/2000 13:44:05

You should be able to do what you describe. I will investigate. Did it work correctly prior to SP 3?

FROM: gbarnhill DATE: 7/19/2000 4:48 PM

I reloaded Virtis without any Service Packs and was able to duplicate what Todd did. I authorized two designers to check out a bridge. Logged in as designer1, opened the BWS, highlighted the bridge description name and checked it out. I was able to change something and save the BWS. I could not change any items above the bridge description.

I logged out and then logged in as designer2. I highlighted the bridge and checked it out. I opened the BWS. The tree indicated that I had the bridge and the description both checked out. I was able to change something in the description and save the BWS.

I logged out and logged in as designer1. The Explorer indicated the bridge was checked out to

4/19/2016 3:14:12 PM

HRS AASHTO

476

Complete Issue Information

designer2. I opened the BWS and could not change anything.

I agree with Todd that there should be a security check to see if a description is checked out before a second person can check out the entire bridge.

FROM: tthompson DATE: 7/20/2000 7:02 AM

Jim, I never checked this prior to SP 3. But based on Gales experience described, appears to be a problem/bug. Please also review Incident 2688, it also has a problem with User privileges. It's been listed as open since May.

FROM: jduray DATE: 10/03/2000 17:04:41

I believe this is fixed in Version 3.0 Patch 4 (3.0.4). I just checked version 4.0 and it is fixed.

Issue ID: 2689
Subject: Viewing results after analysis of struc def with linked members

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Kennelly, Krisha	5/18/2000 3:08:29 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: kkennelly DATE: 05/18/2000 11:05:36

Reported by Aaron Stover in 3.0. Girder system with 4 girders, 2 interior girders linked. Analyze while sitting on the Struc Def in the BWS tree. Go to last mbr (exterior girder that was not linked) and sit on its mbr alt in the BWS tree. Results toolbar button not enabled and cannot view the results for this member.

Complete Issue Information

FROM:jduray DATE:06/02/2000 16:05:25

I was able to reproduce this. The two interior girders must be linked to reproduce. If they are not linked then it works ok.

After the analysis is complete the member alt tree item should have a dispatch for the event but it is NULL. The Analysis Progress dialog shows that all four members are analyzed.

FROM:jduray DATE:06/02/2000 16:19:49

Numerous leaks too.

FROM:mordoobadi DATE:06/05/2000 13:25:03

Fixed. No leaks after the fix.

FROM:jduray DATE:10/09/2000 09:24:54

Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2691
Subject: Span Details – n – PS Wizard

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	5/18/2000 4:47:18 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
-----------	--------------------------------	----------------	---------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2693.10684	Closed	3.0 Release - folder improvement - VIEW RATING RESULTS - follow-up to Incident 2683

Description

FROM: dteal DATE: 5/18/2000 11:43 AM

After using the wizard to begin a PS girderline structure I entered the Beam Details window (Span Details). I found the "n" value to be 5 even. This n value is the modulus of the PS strand divided by the modulus of the beam concrete, (28,500/4,888), this value should have been 5.830999 like it is displayed in PCITrainingBridge4 not 5.0

FROM:jihnat DATE:05/25/2000 09:50:59
Fixed for Version 3.0 Patch 2 and Version 4.0

FROM: dteal DATE: 11/15/2000 2:28 PM

FROM:jihnat DATE:11/16/2000 08:14:46
Accepted by dteal ("A" in Track field).

Issue ID: 2693
Subject: 3.0 Release - folder improvement - VIEW RATING RESULTS - follow-up to Incident 2683

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Barnhill, Gale	5/19/2000 4:26:18 PM

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	On Hold	High	Bug - GUI 2
Ihnat, Joseph	Resolved		
Ihnat, Joseph	Resolved	High	Bug - GUI 2

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
	00314.bbd	

Tasks

Name	Current State	Summary
2696.10681	Resolved	Structure Typical Section Schematic does not draw median correctly

Description

FROM: gbarnhill DATE: 5/19/2000 11:17 AM

In addition to Todd's comments about filtering bridges for overloads, we should be able to view the rating results for all bridges in a folder. We can analyze all the bridges in a folder by highlighting the folder in the tree. To view the rating results, we need to highlight all the bridges in the right-side table view. We should be able to view all the bridges by highlighting the folder name.

FROM: gbarnhill DATE: 5/19/2000 11:26 AM

I filed this & then noticed incident 2682. They may be related. I highlighted a folder name and clicked VIEW RATING RESULTS. If I had previously highlighted brides in the folder on the right-side table view, those bridge results showed up in the BRIDGE RATING RESULTS window. If I changed folders and then returned to the first folder and clicked VIEW RATING RESULTS, an empty BRIDGE RATING RESULTS window opens.

FROM:gbarnhill DATE:12/28/2000 12:31:51

The second comment in this incident appears to be corrected in 4.0 Release. With focus on a folder name, nothing happens when the RESULTS icon is clicked.

Complete Issue Information

This incident should be marked SUSPENDED until the first comment and Incident 2683 are addressed.

FROM:jduray DATE:5/22/02 11:45:28 AM
Resolved by 4.0.

Issue ID: 2696
Subject: Structure Typical Section Schematic does not draw median correctly

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Kennelly, Krishna	5/22/2000 1:06:39 PM
Modified By: administrator	6/19/2008 4:02:13 PM
Priority: High	
Category: Bug - GUI 2	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kkennelly DATE:05/22/2000 09:02:51
Reported by Aaron Stover. Non-symmetric median shape not drawn correctly in schematic based on Front Face Orientation being changed from left to right. Dimensions in schematic and computed travelways appear to be ok, median shape just not drawn correctly. bbd file attached.

FROM:jihnat DATE:8/9/2005 8:54:27 AM
Fixed for 5.4.0

Complete Issue Information

Issue ID: 2699

Subject: 3.0 Release - PS options for BARS not picked up in import - ?? BRASS equivelents

Folder: /Virtis/Support Center

Primary Contact: Martin, Ed

Submitted By: Barnhill, Gale

5/22/2000 8:03:44 PM

Modified By: administrator

6/19/2008 4:02:12 PM

Priority: High

Category: Bug

History

Primary Contact	Status	Priority	Category
Martin, Ed	Accepted	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:14:13 PM

HRS AASHTO

482

Complete Issue Information

Tasks

Name	Current State	Summary
2702.10675	Information Needed	BBD file importing in 3.0

Description

FROM: gbarnhill DATE: 5/22/2000 2:59 PM
 There are some customization items in BARS Cutom.std file for PS rating. Steve Mample in Idaho has changed a couple of the items. We do not check for this during Import. Need to check to see if there are equivelent items in BRASS that can be set by export.

```
.SE 600
.C
.C PSC AND CPS EVALUATION OF THREE CRITERIA [LFSW (11)]
.C The System includes an additional procedure for calculating the
.C lowest Operating rating moment capacity by considering an
.C elastic analysis of the section. This is explained in Manual
.C 1, Tables A-1 and A-2. The user can select whether the System
.C is to evaluate all three criteria (Ultimate Strength Analysis,
.C Elastic Analysis and Lowest Tendon Yield Analysis) or to
.C evaluate only two criteria (Ultimate Strength Analysis and
.C Lowest Tendon Yield Analysis). The selected choice will not be
.C alterable at processing time.
.C
.C The default answer is NO, which means NOT to evaluate using the
.C three criteria.
.C
.C If you answer with a YES, then B.A.R.S. will evaluate the
.C three criteria for determining moment capacity and will use
.C the smallest obtained value.
.C
.C
.C          xxx
.I          ANSWER: [ NO]
.C
.E
IN THIS SECTION HE CHANGED THE "NO" TO "YES"
```

```
.SE 1300
.C
.C |----|-----|-----|-----|
.C |Block|Default |      |          |
.C |Data |Value in|Customization| Description |
.C |Name |Standard|Options  |          |
.C | |Version |      |          |
.C |----|-----| X.XXXX |-----|
.I | BVAR|( 6.0 )| [ 6.0 ] | "B" variable constant in the |
```


Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: McCaffrey, Brian	5/24/2000 12:51:11 PM
Modified By: hlee	10/26/2012 1:20:53 PM
Priority: High	
Category: Unknown	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Duplicate	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian McCaffrey	AECOM/EarthTech	Brian.McCaffrey@aecom.com	

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2703.10674	Duplicate	Importing between Oracle and Sybase in 3.0.0 with .BBD file

Description

FROM: bmccaffrey DATE: 5/24/2000 8:43 AM

I cannot import a bbd file into Oracle from an export from Sybase. We're working with version 3.0 on both systems.

I get the following error:

File format not compatible with this version of system.

08:41:55 AM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp.

Unable to create document!

08:42:19 AM - Line 2369 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Unable to open Bridge Workspace!

08:42:19 AM - Line 2368 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

FROM:jduray DATE:05/24/2000 14:17:12

4/19/2016 3:14:14 PM

HRS AASHTO

485

Complete Issue Information

Are the two databases the same version? Did you install patch 1?

FROM: bmccaffrey DATE: 5/24/2000 2:27 PM

Yes - service unit one is installed on both versions - try the attached bbd file

FROM: bmccaffrey DATE: 5/24/2000 2:28 PM

FROM: jduray DATE: 05/24/2000 14:30:43

Use 3.bbd to test this.

FROM: jduray DATE: 10/09/2000 10:24:21

Brian - do you have this problem?

Issue ID: 2703
Subject: Importing between Oracle and Sybase in 3.0.0 with .BBD file

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: McCaffrey, Brian	5/24/2000 12:56:30 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: bmccaffrey DATE: 5/24/2000 8:52 AM

I get the following error when trying to import between Oracle and Sybase:

File format not compatible with this version of system.

08:41:55 AM - Line 897 in source file E:\virtis\Dev\data management\abmbche\DmBridgeCache.cpp.

4/19/2016 3:14:14 PM

HRS AASHTO

486

Complete Issue Information

Unable to create document!
08:42:19 AM - Line 2369 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Unable to open Bridge Workspace!
08:42:19 AM - Line 2368 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

FROM:jduray DATE:05/24/2000 14:15:09
Are the two databases the same version? Did you install patch 1?

FROM:jduray DATE:05/24/2000 14:18:50
This is the same as 2702.

Issue ID: 2704
Subject: Enhancement Request - How Do I create a folder based on multiple routes

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	5/24/2000 3:42:03 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285
---------------	------------------	---------------------------	--------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2706.10671	Closed	Steel Girder – Haunch DL

Description

FROM: tthompson DATE: 5/24/2000 10:34 AM

This is similiar but different than a previous enhancement request. I would like to use VIRTIS for doing overweight permits and I would like to be able to create a folder/list of all the structures that a permit vehicle may cross. Since 99% of all permits loads use more than 1 highway, I don't see a way to currently create a structure list based on multiple routes.

I would like to see a more robust way to create folders/lists so that one may use VIRTIS for overweight permitting. I would say that a dozen routes for a permit is not uncommon (at least in our state). An upper limit would probably 18 or 20 routes. Maybe there is already a way to do this but I don't see how yet.

FROM: jduray DATE: 05/24/2000 14:20:28

If a list folder is adequate you can do it by creating a filter folder for each route and then copying the bridges in each of the filter folders to the list folder. Then delete the filter folder. I suspect you really want a filter folder that has multiple route criteria. If that is what you want let me know and I will add it to the list of enhancements for the TF to review and schedule.

FROM: tthompson DATE: 5/24/2000 3:41 PM

I really think that we need a multiple route filter (along with highway direction(s), suffix, mile posts, etc (previous enhancement request)). I wanted some of these enhancements brought up prior to the User Group meeting so TF has time to review, estimate costs and times. This way users can make better decisions on where to make changes, enhancements etc.

Issue ID: 2706
Subject: Steel Girder – Haunch DL

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	5/24/2000 7:48:25 PM

4/19/2016 3:14:14 PM

HRS AASHTO

488

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:12 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	vi2707.bbd	

Tasks

Name	Current State	Summary
2707.10670	Closed	bbd import - can't save file

Description

FROM: dteal DATE: 5/24/2000 2:43 PM

I know that the DL contribution of the haunch concrete is calculated for us when using a girder system. I also know that this DL is very insignificant. I was led to believe that this DL would be included in the slab DL. But when I calculate the concrete DL I found that the haunch concrete was not included. The gap for the haunch has been accounted for in the section moment of inertia (in the BRASS output). But I think the gap contains only air like it does in BRASS. The help item "Dead Loads" states that this DL is automatically computed by the BRASS Engine. I think we have a problem here?

FROM: bgoodrich DATE: 6/9/2000 5:00 PM

There is a problem here. I have corrected the export so the haunch loads are generated. If the haunch loads are generated, they will always show up in the uniform load commands of the load groups. For a girder line, they may be combined with the slab loads and possibly others that are described with COMMENT commands. For a girder system, the slab loads are computed by BRASS internally, so the haunch loads will not be included with the slab. I will send new export code, so a patch can be released as soon as possible.

FROM: dteal DATE: 11/15/2000 2:29 PM

FROM:bgoodrich DATE:01/11/2001 15:45:11

Complete Issue Information

Issue ID: 2707
Subject: bbd import - can't save file

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	5/25/2000 3:52:52 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 5/25/2000 10:45 AM

I exported/created a bbd file from the server database.
I imported the bbd file to a local copy of the database. But when I try and save the results I get the following error message:

Unable to save Bridge data!
10:46:37 AM - Line 745 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Error updating database record set.
10:46:36 AM - Line 573 in source file E:\virtis\Dev\data management\abmbrdg\DmBridge.cpp.
State:23000,Native:-195,Origin:[Sybase][ODBC Driver]

4/19/2016 3:14:15 PM

HRS AASHTO

490

Complete Issue Information

Integrity constraint violation: column 'dirsuffix' in table 'pontis_bridge' cannot be NULL

Both databases have been migrated from Version 2.1.

I believe that patch one was applied to BOTH databases.

I don't even see from the GUI, that there is a place to edit/manipulate the dirsuffix.

I have previously reported failure in importing bbd from a 3.0 sample db to a 3.0 (migrated from 2.1 db).
Not sure if this is related or not.

FROM: tthompson DATE: 5/25/2000 11:06 AM

I double checked and the patch1.sql was applied to BOTH the local database and the server database.

FROM: jduray DATE: 05/26/2000 13:32:11

Please attach the bbd file. Name it vi2707.bbd

Fix for 3.0 patch 3.

FROM: tthompson DATE: 5/30/2000 7:36 AM

Done as requested.

FROM: tthompson DATE: 9/14/2000 4:55 PM

Any update on this request. I still can't get this to work.

I get this error when I try to import a bbd from a copy of our database.

Unable to save Bridge data!

04:57:25 PM - Line 745 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Error updating database record set.

04:57:19 PM - Line 437 in source file E:\virtis\Dev\data management\ABMSYS\DmEvent2.cpp.

State: 23000, Native: -194, Origin: [Sybase][ODBC Driver]

Integrity constraint violation: no primary key value for foreign key 'C_1089' in table 'abw_event'

FROM: jduray DATE: 09/15/2000 13:13:59

Fixed for Patch 4 and version 4.0

FROM: jduray DATE: 09/19/2000 10:26:44

FROM: kkennelly DATE: 09/28/2000 16:32:00

First part of this incident by Todd about dirsuffix in pontis_bridge table has been moved to incident 2869 and is not resolved in Patch 4 or Version 4 yet.

FROM: jduray DATE: 10/09/2000 09:20:32

Gale confirmed this is fixed for Version 3.0 SP4.

FROM: tthompson DATE: 10/11/2000 1:31 PM

I agree that the one part has been fixed and that the part not fixed was assigned to incident 2869.

Marked A to accept

Issue ID: 2708

Subject: Rating Event

4/19/2016 3:14:15 PM

HRS AASHTO

491

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/25/2000 4:41:28 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Discard	High	Enhancement
	Resolved		
Duray, Jim	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2709.10668	Resolved	Rating Results – Show up to date – Show Current Only

Description

FROM: dteal DATE: 5/25/2000 11:37 AM

How do I remove/delete a rating event. The administrator has the Access Privilege to Delete a Rating Event. But where the heck do you delete it from??

FROM:jduray DATE:05/26/2000 13:15:33

At this time the only way to delete is to visit each member alternative and open the Analysis Event window. You can delete from there.

FROM: dteal DATE: 5/30/2000 7:31 AM

Complete Issue Information

Issue ID: 2709
Subject: Rating Results – Show up to date – Show Current Only

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	5/25/2000 4:43:07 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 5/25/2000 11:39 AM

After doing two or more ratings in the same day, how do I view the only one of them??

FROM:jduray DATE:05/26/2000 13:12:04

The reporting tool when available will allow for this. In the mean time I'm going to see if we can add print and some filtering to the existing report.

4/19/2016 3:14:15 PM

HRS AASHTO

493

Complete Issue Information

FROM:jduray DATE:06/26/2000 10:28:28

FROM:hlee DATE:4/30/2008 2:22:39 PM

Issue ID: 2711
Subject: Enhancement Request - Reports

Folder: /Virtis/Support Center	
Primary Contact: Generated, task force	
Submitted By: Thompson, Todd	5/25/2000 6:55:16 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Generated, task force	Suspended	High	Enhancement
Generated, task force	Suspended	High	Enhancement

Contacts

4/19/2016 3:14:15 PM

HRS AASHTO

494

Complete Issue Information

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2712.10665	Resolved	Deleting a User - Need table of active users

Description

FROM: tthompson DATE: 5/25/2000 1:36 PM

(1)

I would like to see the following reports have the following data printed with each report:

Bridge ID
Bridge Alt
Structure
Structure Alt
Structure Definition
Member
Member Alt

We are currently trying to import our structures from BARS into VIRTIS and at the completion of importing, we are analyzing and printing the results. Unfortunately, the following reports do not contain any information about which structure it deals with:

Rating Results Summary Report
Dead Load Actions Report
Live Load Actions Report
LFD Critical Loads Report (Probably is a LRFD report also)
Any of the graphs

Some of the other reports contain at least the structure number/bridge id in a BRASS comment card, so there is a little help as to which part of the structure and which structure the output is for. Currently, one frequently ends up with printouts that one is not sure for which structure or which member for a structure is which. One is pretty much forced to print one report, pick up that report, hand label it, and then repeat the process.

(2)

I would like to see a more detailed summary report for a BRIDGE.

We currently have a VERY detailed report from BRASS that is very complete.

We currently have a very BRIEF Rating Results Summary report for a given member alternative.

BUT we don't have a Rating Results Summary Report for the BRIDGE. I would like to propose a report

4/19/2016 3:14:15 PM

HRS AASHTO

495

Complete Issue Information

similar to the Rating Results Summary report for a member alternative, but expand it to include all Members that are Current and existing for the bridge. Currently, one has to look at each member alternative rating results and then manually select the ratings that control for a given structure. There may or may not be some additional items to include on this report when compared to the Rating Results Summary report.

(3)

I would like to propose to the Task Force that a Reports/Output TAG be formed to address the topics of on-screen reports, printed reports and the like. We can have the greatest GUI, greatest DB, greatest engine, but if a user can't easily extract out the necessary data - it's useless and not very productive. Also, the reports that one needs when doing a design is much different than the user rating/analyzing a bridge for NBI purposes or for load posting purposes and is much different than the user analyzing an overweight load over a stretch(es) of highways for one given load over many structures.

FROM: tthompson DATE: 5/25/2000 1:52 PM

FROM: jduray DATE: 05/26/2000 12:20:17

We are working on a reporting tool that should address these needs.

FROM: tthompson DATE: Tuesday, December 11, 2007 5:10:32 PM

Task Force needs to address Reports at the Strategic Level, including creation of a Reports TAG. Maybe use Crystal to take the xml data to create reports.....

Issue ID: 2712
Subject: Deleting a User - Need table of active users

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Thompson, Todd	5/25/2000 7:39:50 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Enhancement
Ordoobadi, Mehrdad	Resolved	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:14:16 PM

HRS AASHTO

496

Complete Issue Information

Tasks

Name	Current State	Summary
2713.10664	Closed	Added a span to Example 7 and could not save

Description

FROM: tthompson DATE: 5/25/2000 2:34 PM

What impacts are there if one deletes a user? (If any)

Example: If he/she has a rating event (results) saved, can the user be deleted but the rating event results stays? I'm just not sure of the relationships of the abw_person table with the other tables.

FROM:jduray DATE:05/26/2000 09:02:57

Deleting a user causes all of the events for that user to lose the information about the user. All of the results remain in the database but they are no longer associated with a user.

More detail...

We delete the user from abw_person. That causes the entered_by column in abw_event to be set to NULL. Prior to the delete is contained the person_id. Because the person_id no longer exists in the abw_person table entered_by must be set to NULL.

Perhaps we should do this a little differently. We should add a column to abw_person to track active users (for security) and when a user is deleted change the flag to inactive if he/she has ownership of any objects (like events). He/she would be removed from abw_person if no ownership. We would have to add an indicator to the Configuration Browser and to the Person window so you can tell if the person is active, or inactive with ownership of objects.

An alternative approach is to add another table of active users. I like this better. The table would be as follows:

user_id short (PK)
person_id short (FK to abw_person::person_id)

With this approach the abw_person table remains a generic table of persons. The use of the persons is moved to the abw_active_users table.

Issue ID: 2713

Subject: Added a span to Example 7 and could not save

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim 5/25/2000 7:33:15 PM

Modified By: administrator 6/19/2008 4:02:12 PM

Priority: Urgent

4/19/2016 3:14:16 PM

HRS AASHTO

497

Complete Issue Information

Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2714.10663	Resolved	Number of supports not correct after changing the number of spans

Description

FROM:jduray DATE:05/25/2000 15:31:43

Added a PS I span of 120 feet, added stirrups, assigned same shape as span 1 and tried to save. Error indicated strand config was null.

FROM:mordoobadi DATE:05/30/2000 16:02:08

Fixed for version 3.0 and 4.0.

Jim, should this be included in Patch 2?

Affected DLL: ABOCNCB

FROM:jduray DATE:10/09/2000 09:17:42

Gale reported this is not fixed then reported back that it is for Version 3.0 SP4.

Complete Issue Information

Issue ID: 2714
Subject: Number of supports not correct after changing the number of spans

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	5/26/2000 1:20:57 PM
Modified By: administrator	6/19/2008 4:02:12 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:05/26/2000 09:17:18
Dave Foremsky reported the following:

GS struct def - changed the number of spans from 4 to 2 and the supports window shows 5 support instead of three. He is also unable to save.

FROM:jduray DATE:05/30/2000 14:27:49
Let's get this in patch 2.

Complete Issue Information

Issue ID: 2716
Subject: Hardware key not recognized

Folder: /Virtis/Support Center	
Primary Contact: Smyers, Bill	
Submitted By: Duray, Jim	5/26/2000 5:07:29 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Smyers, Bill	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2716.10661	Resolved	Hardware key not recognized

Complete Issue Information

Description

FROM:jduray DATE:05/26/2000 13:05:55

This was from Manitoba from Travis Herntier (EDS Canada):

FROM:wsmyers DATE:05/26/2000 13:10:07

User:

Travis Herntier

EDS Canada

2200 One Lombard Place

Winnipeg, Manitoba R3B0X7

(204) 926-2615

Travis.Herntier@eds.com

Note: EDS Canada provides full time computer support for the Manitoba Department of Highways.

Problem:

Travis was installing Virtis 3.0 on a PC. When he tried to run Virtis, the Virtis Splash Screen displays and then he received an error message similar to: "Security Key Not Found".

Additional Information:

1. Installed Virtis 3.0, basic installation, no database, restarted the computer after installation.
2. PC is an IBM model 627559U 300 GL running NT 4.0 w/SP3 (Note: Virtis readme says SP4 is required). The LPT1 port is enabled in the BIOS as EPP (bi-directional communication). The PC has 64 MB of RAM and a 6 GB hard drive. The C: drive is a 2 GB NTFS partition that contains the operating system and Virtis. NT is configured to use a 164 MB swap file.
3. There is no other software installed on the PC. The PC was recently formatted and the NT image reinstalled.

Troubleshooting Steps:

1. Reviewed records which shows the Virtis hardware lock should not expire until 9/30/2000.
2. Interviewed the user to obtain detailed information about the type and configuration of the computer.
3. The event log was cleared, the PC was rebooted and there were no errors or warnings in the System or Application event logs.
4. The virus protections software was turned off.
5. Task Manager was used to determine the Physical Memory is 64 MB with only 22 MB in use. Also, Commit Change Limit is 222 MB with a peak of only 50 MB.
6. The NET USE command was executed at a command prompt which verified that none of the LPT ports were mapped to network printers.
7. Tried installing Virtis on another PC and got the same error message.
8. Tried connecting a ZIP drive to the LPT port and it worked.
9. Installed an older version of Virtis and also received the same error message.

4/19/2016 3:14:17 PM

HRS AASHTO

501

Complete Issue Information

- 10. Ran the HardwareKeyView.exe program from the Virtis installation directory and it displays UNKNOWN for all the license information, even after clicking on the Read button.
- 11. Looked in CONTROL PANEL / DEVICES and the device SENTINEL which is required to communicate with the hardware lock was started.
- 12. Mailed a new hardware lock and it worked.

Future Considerations:

Future versions of Virtis would benefit by including two utility programs on the CD.

- 1. The first program would be the HardwareKeyView.exe program for users to verify they can communicate with the hardware lock.
- 2. The second program would be a HardwareKeySet.exe program that would permit the user to program the hardware lock when the user payed for an additional year of support and the lock had expired. When this situation occurred the user would call for technical support, after checking the records, a fax would be sent with a long string of encoded characters on it and instructions for the user to run the HardwareKeySet.exe program and enter the encoded characters. The program would decode the characters and store the proper information into the lock. Then the user would run the first program to verify the lock was configured properly.
- 3. Future troubleshooting should include steps 1-6,11,10,8 in that order.

Issue ID: 2719
Subject: Problem saving imported bridge

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Koenig, David	5/30/2000 5:31:56 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
	010025.log	
	010025.dat	

Tasks

Name	Current State	Summary
2721.10656	Resolved	BARS import error - RC equivalent I section

Description

FROM:jduray DATE:05/30/2000 13:32:04
David reported the following via e-mail:

A bridge user was having problems saving a bridge, and he tried exporting the bridge and importing it into one of our other databases. The error he received is in the note below this note.

I tried to import the file he sent me into two of our other Virtis 3.0 databases.

I could not get the bridge to be saved on either database.

I exported another bridge from the database to a .bbd file. I could not get this bridge to be saved either.

For both bridges, I received the same message, and it is different than the one the user received. Here is the error it gave me:

Unable to save Bridge data!

07:18:17 AM - Line 745 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Unable to generate database primary key.

07:18:17 AM - Line 491 in source file E:\virtis\Dev\data management\ABMSYS\DmEvent2.cpp.

SQLBindCol failed.

07:18:17 AM - Line 812 in source file E:\virtis\Dev\data management\abmgnr\DmObject.cpp.

Unable to generate a new primary key ID.

07:18:17 AM - Line 811 in source file E:\virtis\Dev\data management\abmgnr\DmObject.cpp.

-----end of e-mail-----

He later reported the following via e-mail:

Jim, I tried importing and saving two structures again this morning and got an

Complete Issue Information

error again. The error message is shown below. This message is different than the one shown at the bottom of this note, so I thought that I would send you a copy of this message for your benefit in trying to debug this part of the program.

I have played around with these two import structures some more, and I have finally been able to get them to save. To get them to save, I changed both the bridge ID and the NBI structure ID. When you initially import a bridge, it comes in at the bridge description window. You can hit okay there and it will go to the bridge workspace. If you then try to save, you get the error shown below. I then went in and modified the NBI structure ID and tried to apply it and it prompted me that the Bridge ID was not unique. If I then changed the Bridge ID and hit okay, it would go to the bridge workspace. I could then save the file. The problem seems to be that the program will not check to make sure that the Bridge ID and the NBI structure ID are unique when you first import a bridge. If you don't change anything, you can just hit okay and go to the workspace. If you change one of the above mentioned ID's, then it forces you to make them unique. What probably needs to be done is make sure that this check is done when you initially import a bridge and have the system force you to change these two ID's before it will allow you to go to the bridge workspace. I hope this helps in debugging this problem.

As a side note, the two structures that I I have been getting errors on are the same two structures that I have been unable to delete from our production database. (See incident #2698) I updated incident #2698 this morning and attached the bbd file for both structures.

Unable to save Bridge data!
10:53:52 AM - Line 745 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Error updating database record set.
10:53:42 AM - Line 573 in source file E:\virtis\Dev\data management\abmbrdg\DmBridge.cpp.
State:23000,Native:1,Origin:[Oracle][ODBC Oracle Driver][Oracle OCI]
ORA-00001: unique constraint (VIRTISADM.XAK2PONTIS_BRIDGE) violated.

-----end of e-mail-----

FROM:jduray DATE:10/09/2000 09:27:26
This is the same as 2707 which was corrected by version 3.0 SP4.

Issue ID: 2721
Subject: BARS import error - RC equivalent I section

Folder: /Virtis/Support Center
Primary Contact: Martin, Ed
Submitted By: Thompson, Todd 5/30/2000 7:11:21 PM

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Closed	High	N/A

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	24291032.bbd	

Tasks

Name	Current State	Summary
2722.10655	Closed	I- Section top flange - BRASS error message

Description

FROM: tthompson DATE: 5/30/2000 2:03 PM

I have a structure that is an I section on Card Type 13 in BARS. Even though the data set has the second card 13 (with the B) second, during the import process it appears to be placed before the first card 13. When this happens, it only imports the bottom flange width and thickness. And it ignores the "first" card 13 and the rest of the data. A user then gets the following error message:

Unable to convert cross section based R/C beam to BRASS cross sections!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating BRASS cross section commands!
02:07:20 PM - Line 173 in source file D:\Virtis\GUI\abxbrass\BrassCrossSections.cpp.

Unable to get cross section dimensions!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

One or more R/C cross section dimensions are missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error getting cross section from R/C cross section ranges!
02:07:20 PM - Line 3716 in source file D:\Virtis\GUI\abxbrass\BrassCrossSections.cpp.

4/19/2016 3:14:17 PM

HRS AASHTO

505

Complete Issue Information

The top flange tributary width dimension is missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

One or both web thickness dimensions are missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

The top flange thickness dimension is missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

One or both effective top flange dimensions are missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

The height of the R/C section is missing!
02:07:20 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

I've attached the bars data file and log file from the import.
FROM: tthompson DATE: 5/30/2000 2:08 PM
FROM: tthompson DATE: 5/30/2000 2:10 PM
Although it does bring in the correct resteel and that is found in the "first" card 13. SO I'm not sure why all the concrete dimensions are not imported.

FROM: emartin DATE: 10/9/2000 3:13 PM
Changed sort keys for CARD TYPE 13.

Issue ID: 2722
Subject: I- Section top flange - BRASS error message

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	5/30/2000 7:58:32 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
2724.10653	Resolved	PS strand layout window after adding spans

Description

FROM: tthompson DATE: 5/30/2000 2:53 PM

For incident 2721, I manually entered the correct dimensions for the I section. But now I keep getting the following error message:

Unable to convert cross section based R/C beam to BRASS cross sections!
02:52:27 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating BRASS cross section commands!
02:52:27 PM - Line 173 in source file D:\Virtis\GUI\abxbrass\BrassCrossSections.cpp.

Unable to get cross section dimensions!
02:52:27 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

The actual top flange dimensions must be greater or equal to the effective top flange dimensions!
02:52:27 PM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

The actual top flange dimension is exactly equal to the effective top flange dimension, yet I keep getting this error message. Any ideas.

I attached the bdd file.

FROM: jduray DATE: 05/31/2000 15:21:09
Krisha - please investigate.

FROM: kkennelly DATE: 06/01/2000 08:16:35
This error message is referring to the thickness of the top flange. The actual top flange thickness is entered as 5" but the effective thickness is entered as 18".

FROM: tthompson DATE: 6/1/2000 7:47 AM
Thanks.

Issue ID: 2724

Subject: PS strand layout window after adding spans

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Kennelly, Krisha

5/31/2000 5:41:27 PM

Modified By: administrator

6/19/2008 4:02:11 PM

4/19/2016 3:14:18 PM

HRS AASHTO

507

Complete Issue Information

Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2725.10652	Resolved	Adding new spans - deck panel length not reset

Description

FROM:kkennelly DATE:05/31/2000 13:37:54

I have a girder system struct def, add spans in struct def window. PS member alts - Assign beam to span in beam details window, open Strand Layout window and the strand configuration type is not set. All of the controls for both strand config types are displayed in the window on top of each other until you select a radio button for strand config type.

FROM:jduray DATE:05/31/2000 15:24:38

Joe - this may have already been fixed. Please check.

FROM:jihnat DATE:05/31/2000 16:07:35

Patch 2 doesn't fix this problem.

FROM:jduray DATE:10/03/2000 16:59:46

Is this a problem in the adding of spans?

FROM:mordoobadi DATE:10/05/2000 16:42:15

It is fixed in version 4.0. I'll investigate whether it works in 3.0 patch 4.

FROM:mordoobadi DATE:10/05/2000 17:12:02

This bug is fixed in patch 4.

Complete Issue Information

Issue ID: 2725
Subject: Adding new spans - deck panel length not reset

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Kennelly, Krisha	5/31/2000 5:56:06 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kennelly DATE:05/31/2000 13:53:21

When we create a new structure definition, the gui sets the length of the deckpanelrangeset equal to the length of the struc def ref line (only when we create a new struct def). If you add or delete a span, the deckpanelrangeset length does not get reset. Validate will tell you the deck panel ranges not over entire length or not on struc def but user has no way to change the deck panel range length.

FROM:mordoobadi DATE:10/09/2000 10:45:35

Fixed for 4.0 Alpha build 3.

FROM:mordoobadi DATE:10/09/2000 11:20:37

The status is Resolved. It has not been fixed for 3.0 yet.

Jim, do you want to include this in a patch for 3.0?

FROM:mordoobadi DATE:10/09/2000 11:30:09

4/19/2016 3:14:18 PM

HRS AASHTO

509

Complete Issue Information

NOTE: affected DLL abgbrdg.dll.

Issue ID: 2726
Subject: Getting rating results that were not asked for

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Thompson, Todd	6/1/2000 12:47:48 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Assigned	High	Bug - GUI 2
	On Hold		
	Suspended		
Ordoobadi, Mehrdad	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Complete Issue Information

Documents

Name	Resource Identifier	Description
	51065080.bbd	

Tasks

Name	Current State	Summary
2727.10650	Duplicate	Validation gives warning/error message - but can't update/correct in GUI

Description

FROM: tthompson DATE: 6/1/2000 7:37 AM

I noticed that when I analyzed a structure (LFD) from the Bridge Explorer, that it gives results that I did not ask for.

I selected 1 structure from the Explorer and selected RATE. By default I have the following: LFD , Inventory - HS20 vehicle, Operating - HS20, SD Type 3, SD Type 3S2, SD Type 3-2. After the analysis completed, I selected View Rating Results. And for the following windows Bridge Rating Result, Structure Rating Result, and Member Rating Result it gave me the 5 results I was asking for PLUS it gave me the inventory rating results for the 3 SD Type trucks. This appears to be similar to Incident 103. There it was doing this when one analyzed a bridge from the bridge workspace. It turned out to be a problem where BRASS appears to analyze each vehicle for all load levels, regardless of which vehicles were chosen and whether it was inventory/operating levels. Can we make this fix also.

Side Note: Is this why the analysis seems slow? That BRASS is doing more work than is really necessary.

FROM: tthompson DATE: 6/1/2000 7:45 AM

FROM: jduray DATE: 06/01/2000 08:58:44

Brian - please investigate and let me know what can be done.

FROM: tthompson DATE: 6/1/2000 8:43 AM

Brian - I noticed that when I reviewed the analysis results from the Bridge Workspace, that for LFD Critical Loads, I am getting many trucks and their results showing up under Inventory Load level, even though those trucks were not selected for Inventory Level (same happens at Operating Level). We may want to review all the reports and/or graphs for this. If one asks for a given truck at only one level (inv or op) and one should not expect it to show up in other levels. I know about the limitations of BRASS, but VIRTIS should be reporting the results that were asked for.

FROM: bgoodrich DATE: 6/8/2000 1:10 PM

BRASS has no way to assign a particular truck to an inventory or operating rating. BRASS performs an analysis for each truck only once. It then combines the loads as necessary for both the inventory and operating ratings. Finally, BRASS passes both the inventory and operating results for each truck to the results object. It appears that when the bridge is rated from the Bridge Workspace, the GUI filters the rating results, however, when run from the Bridge Explorer, the GUI does not. I really don't know why there is any difference.

4/19/2016 3:14:18 PM

HRS AASHTO

511

Complete Issue Information

We need to correct this problem, so the user only sees the inventory rating results for the trucks assigned to inventory ratings and similar results for the operating rating. We could correct this problem in the GUI as was done for the Bridge Workspace. Alternatively, we could modify the dualinterface.f90 file with functions that determine if a truck is applied to a certain rating type (inventory, operating, both). This result could be utilized when writing data to the results object.

Note that the analysis may be slow due to the variable axle spacing of the HS20 truck.

FROM:jduray DATE:08/18/2000 15:07:19

We will investigate this a part of the management of analysis results enhancements.

FROM:jduray DATE:3/16/2005 11:27:30 AM

This is not a bug. Change to enhancement.

Issue ID: 2727
Subject: Validation gives warning/error message - but can't update/correct in GUI

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	6/1/2000 2:19:00 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Duplicate	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 6/1/2000 9:12 AM

4/19/2016 3:14:18 PM

HRS AASHTO

512

Complete Issue Information

I get the following:

Girder 1 (Girder Line Structure Definition)
 G01 (Girder Line Member)
 Existing member alternative: Mbr Alt 1
 Current member alternative: Mbr Alt 1
 Mbr Alt 1 (Member Alternative)
 Warning: Slab effective thickness not defined for cross section

'G0101'.
 Warning: Slab effective thickness not defined for cross section

'G0102'.
 Warning: Slab effective thickness not defined for cross section

'G0103'.
 Warning: No shear reinforcements defined for concrete beam.
 Warning: LRFD live load distribution factors not defined.
 Warning: Diaphragm locations not defined for member alternative.

But for the R/C Slab that I have entered, there are not fields to update/enter an effective slab thickness in the Cross Section window for slabs. The Validate should not be flagging these checks for RC Slab bridges.

FROM:kkennelly DATE:06/01/2000 16:23:16
 Duplicate of 2639, has been fixed for Release 4.0. (Since it's not causing a crash or a problem running Virtis and 4.0 will be coming out relatively soon I don't think we need to issue it in a patch.)
 FROM: tthompson DATE: 6/2/2000 7:33 AM
 Agreed, sorry I missed it previously in the list, but as this list as grown to almost 2000, it's pretty hard to remember them all. Too bad there isn't a better way to query based on category of problem reported..

Issue ID: 2728
Subject: RC Slab - Brass doesn't see resteel where entered in VIRTIS?

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	6/1/2000 2:36:01 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Bug

Contacts

4/19/2016 3:14:19 PM

HRS AASHTO

513

Complete Issue Information

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2729.10648	Suspended	Brass Question - RC Slabs with Tension and Compression reinforcement

Description

FROM: tthompson DATE: 6/1/2000 9:22 AM

I have a RC Slab bridge that was originally imported from BARS into VIRTIS.

It is a parabolic varying slab.

For Section G0101, the h = 16.12 inches, +As = 2.40 inches and is 14.23 inches from top of slab, -As = 2.68 inches and is 3.32 inches from top of slab.

For Section G0102, the h = 21.36 inches, the area of steel and location is the same as section G0101.

The cross section ranges are:

Section G0101 for a distance

Section G0101 varying parabolically to Section G0102

Section G0102 across the bent/pier

Then varying parabolically from G0102 to G0101 at midspan and the rest of the bridge is symmetrical.

I reviewed the analysis of this structure, and found at Span Point 2.50:

REINFORCED CONCRETE SECTION - STRENGTH DESIGN/RATING

ANALYSIS POINT 205.00

SECTION DIMENSIONS (in)

SECTION DEPTH : 16.12

WEB THICKNESS : 12.00

TOP FLANGE THICKNESS : 0.00 TOP FLANGE WIDTH : 0.00

BOTTOM FLANGE THICKNESS: 0.00 BOTTOM FLANGE WIDTH: 0.00

REINFORCING DETAILS

BOTTOM STEEL: AREA1 = 2.400 (in²) DIST FROM BOT. D1 = 7.130 (in)

AREA2 = 0.000 D2 = 0.000

AREA3 = 0.000 D3 = 0.000

TOP STEEL : AREA4 = 0.000 DIST FROM TOP D4 = 0.000

AREA5 = 2.680 D5 = 3.320

4/19/2016 3:14:19 PM

HRS AASHTO

514

Complete Issue Information

AREA STIRRUPS, A_v = 0.000 (in²)
STIRRUP SPACING = 0.000 (in)

MATERIAL STRENGTH

REINFORCEMENT YIELD, f_y : 40.00 (ksi)
CONCRETE, f_c (top) : 4.000 (ksi)
CONCRETE, f_c (bot) : 4.000 (ksi)
CONCRETE, f_c (shear) : 4.000 (ksi)

The value of D1 in the BRASS output states $d = 7.13$. The correct value should be 16.12 inches - 14.23 inches = 1.89 inches. This incorrect d is causing incorrect analysis results. I'll attach the 51065080.bbd and mbr_alt_1.out files. Maybe I'm just missing something in the VIRTIS input. I also even attempted revising the data for G0101 so that the bottom steel distance was referenced from the bottom of the slab, but I still got the $d = 7.13$ value and not the 1.89 inch value.

FROM: tthompson DATE: 6/1/2000 9:33 AM

FROM: tthompson DATE: 6/7/2000 4:19 PM

Brian, I've come across another structure with same/similar deal.

I attached another file: 21424228.bbd

At Span Point 2.5 the bottom steel was located 12.94 inches from the top with a total section depth of 14.75. So the distance from the bottom of the slab should have been 1.81 inches. BUT the brass output shows it being 7.06 inches from the bottom. Thus giving a very low rating. Must be some bug in the export routine into BRASS?

FROM: bgoodrich DATE: 6/8/2000 3:54 PM

For cross section G0102, there is an entry on the Reinforcement tab of 2.40 #9 bars at 14.23" from the top of slab. This places the rebar for this cross section at 7.13" measured from the bottom of slab. BRASS interpolates section dimensions if they vary along the length, however, rebar is not allowed to vary. BRASS uses the rebar information from the start of a cross section range, which is why the 7.13" is reported. Because the bottom of the section varies parabolically, the bottom rebar location should also vary parabolically. Therefore, I think the BARS data file or possibly the BARS import may be at fault. Please check.

FROM: tthompson DATE: 6/9/2000 7:38 AM

The rebar for structure 51065080 does not vary with the parabola. It is a constant 14.23 inches from the top of the slab.

Incidentally the second structure that I reported with this problem 21424228, does not vary parabolically. Both of these structures are our 'typical' reinforced concrete slab bridges. We have probably 600 +/- on our state highway system.

I'm not sure what to think, other than I've entered the data on the GUI (originally from BARS import) and the data described in the GUI is as the bridge actually is.

At section G0102, the rebar is referenced from the top of the slab as 14.23 inches from the top and even though the concrete section varies from G0102 to G0101, the rebar at G0101 is 14.23 inches from the top of the slab. SO I guess I don't understand how BRASS sees it as 7.13 inches from the top.

FROM: bgoodrich DATE: 6/9/2000 11:46 AM

There was a bug in the export when generating cross sections. Two cross sections may be defined identically except for the web depth. If the web depths are different and the top and bottom rebar locations are referenced from the top of the section, the sections are different. Because the export was comparing the section dimensions excluding web depth and the rebar area, distance, and distance reference (top or bottom), it thought some sections were the same even though they were not.

Therefore, I adjusted the rebar locations to reference the bottom of the section before comparing them

4/19/2016 3:14:19 PM

HRS AASHTO

515

Complete Issue Information

to ensure that the correct cross sections are exported. This fixes only the problem with the structure with horizontal cross section ranges.

There is still a problem with defining rebar in the bottom of the section that does not follow the linear or parabolic haunch. This is a limitation of BRASS and I see no way to address it with the export. BRASS uses the rebar area and distance from the cross section at the start of a cross section range. BRASS will need to be enhanced to address this issue. BridgeTech will discuss this issue with WYDOT and possibly get permission to correct the problem.

FROM: bgoodrich DATE: 6/9/2000 5:07 PM

E-mail from Todd:

The one structure does vary parabolically but the other one does not vary parabolically. The bottom resteel is horizontal with the top of the slab and does not vary with the bottom of the slab. This is the way it was input in BARS and this is how it appears in VIRTIS after being imported from BARS.

FROM: bgoodrich DATE: 6/9/2000 5:11 PM

Another e-mail from Todd:

I think I need to clarify/correct a statement I made earlier.

The Parabolic bridge was designed and built with the bottom mat of resteel that followed the bottom of the slab. Only for the BARS analysis was it input as being parallel with the top of the slab.

So, I think if I modify the location of the bottom mat and reference it from the bottom of the slab, that should fix my problems with about 200 parabolic changing bridges.

I did try that and it appears to work. I just have to go in and reference all the bottom steel from the bottom instead of the top for 200 +/- bridges. Too bad the BARS import didn't place them reference top for top mat and bottom for bottom mat. I might not have had this problem.

But I'm not sure how to handle the other structure(s), what we call the SQUARE HAUNCHED slab bridges. Those structures have a drop down (square) haunch at the Piers. The structure 21424228, that I attached previously to VI, is typical of our 400 +/- bridges that we have in the state system.

FROM: bgoodrich DATE: 6/9/2000 5:13 PM

The SQUARE HAUNCHED slab bridges should be able to be analyzed correctly after making the code correction described earlier today. The parabolically haunched girders should be analyzed correctly after Todd modifies the reinforcement distances to follow the bottom of the section. I will send the export source code modifications.

Jim - I think this issue is resolved as far as the export goes. However, should the BARS import be modified to reference the bottom rebar from the bottom of the section?

Issue ID: 2729

Subject: Brass Question - RC Slabs with Tension and Compression reinforcement

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	6/1/2000 8:04:12 PM
Modified By: hlee	6/10/2009 1:47:50 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
	00427.bbd	
	00426.bbd	

Tasks

Name	Current State	Summary
2731.10646	Closed	Copy Bridge & change number spans

Description

FROM: tthompson DATE: 6/1/2000 2:51 PM

Is there a way to neglect the effect of Compression Reinforcement if it's been entered on the section - Reinforcement tab. We would like to have the ability to neglect the compression steel. We would like to have the option to use only AASHTO Section 8.16.3.2 and neglect the compression reinforcement. This would be especially true for our R/C slab bridges for the slab steel over the Piers. We typically only butt the positive (bottom) steel at the Piers.

During early Beta versions of 3.0, it only used tension steel, but later versions of Beta 3 started using AASHTO Section 8.16.3.4. I couldn't locate in any of the BRASS help any "switches" for using tension only or tension and compression.

Thanks

FROM: jduray DATE: 06/02/2000 10:14:01

Brian - is there any way to do what Todd is asking for in our current version?

4/19/2016 3:14:19 PM

HRS AASHTO

517

Complete Issue Information

FROM: bgoodrich DATE: 6/8/2000 3:56 PM

No. BRASS-LFD now uses the BRASS-LRFD flexural resistance functions. We would have to add an option to BRASS (and engine properties) to ignore the compression rebar. Let me know if I need to request this as a BRASS enhancement from WYDOT.

FROM: tthompson DATE: 6/9/2000 7:21 AM

If the compression steel does not have adequate lap length at these locations, one is not getting correct results as the program currently stands. Couldn't a check box be added that states "Ignore Compression Steel effect" and then have the BRASS export ignore the compression steel? This would be similiar to the check box that states to Ignore Shear. We're just not very happy with what we have. The BRASS version during the early BETA testing we were very happy with since it behaved as we designed our concrete slab bridges.

FROM: bgoodrich DATE: 8/18/2000 11:14 AM

Jim - Please review.

FROM: jduray DATE: 08/18/2000 15:04:32

This is about a 60 hour effort. Add parameter to the member alt (beam def for R/C), revise both BRASS programs to ignore comp. reinf.

FROM: Herman Lee DATE: 6/10/2009 9:45:51 AM Eastern Daylight Time

Discarded by Beta TAG 6/9/09.

Issue ID: 2731
Subject: Copy Bridge & change number spans

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Kennelly, Krisha	6/6/2000 12:54:38 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Complete Issue Information

Tasks

Name	Current State	Summary
2732.10645	Suspended	Need a New Parapet GUI

Description

FROM:kkennelly DATE:06/06/2000 08:49:16

Reported by Aaron Stover for Arizona bridges. Attached bridge is a copy of a bridge. Aaron then changed the number of spans and tried to copy a member alt to different members and got the following error:

Invalid object id assigned.

08:51:05 AM - Line 476 in source file D:\Virtis\Dev\domain\abobrdg\DoMbrAltSupportDetailsSet.cpp.

I tried testing his bridge after I imported it and found the following: I can copy the member alt to another member immediately after I import the bridge. I changed the number of spans from 3 to 2 and then tried to save the bws. Virtis crashed. Reimported bridge, changed number of spans from 3 to 2 and tried to copy member alt to another member and got the same error message that Aaron got.

FROM:mordoobadi DATE:06/07/2000 13:04:56

I do not think this is related to the adding or removing of spans. Because after importing the bdb file, if I try to save the bridge virtis crashes.

I guess I need to investigate more.

FROM:kkennelly DATE:06/08/2000 13:32:13

Attached file 00426.bbd is the original bridge aaron started with. He copied 00426 to 00427. Changed the number of spans from 5 to 3 in 00427, deleted mbr alts from G2 and G3, made some changes to G1 mbr alt, tried to copy G1 mbr alt to G2 and G3 and got error message about invalid object id. attached file 00427.bbd is file he exported to me. 00427 has a mbr alt under G2 but none under G1.

FROM:kkennelly DATE:06/08/2000 13:36:06

FROM:kkennelly DATE:06/08/2000 13:54:36

FROM:mordoobadi DATE:06/09/2000 14:28:46

I think we have three problems here.

1 - Adding removing spans added member alt support details to steel member alts which caused some problems. Fixed.

2 - The BBD file contains some invalid ids for current and existing member alts. Which I do not know how it happened.

3 - Because of the corrupted data virtis crashes when BWS is saved. Fixed.

FROM:jduray DATE:08/03/2000 09:43:09

We need to trace down how the invalid ids got into the bbd file. this may be related to the problem with bbd files containing deleted objects.

FROM:mordoobadi DATE:09/11/2000 15:17:13

abobrdg.dll fixes 1 and 3.

FROM:mordoobadi DATE:10/04/2000 10:14:06

4/19/2016 3:14:19 PM

HRS AASHTO

519

Complete Issue Information

Jim, I do not know how to reproduce the corruption of the BBD file, or why it was corrupted. Please advise what you'd like me to do.

Please note that the crash and support details problem is fixed.

FROM:mordoobadi DATE:10/04/2000 10:44:14

I talked to Jim, he says if it is not reproducible, mark as resolved.

FROM:jduray DATE:10/09/2000 09:22:55

Item 2 is no longer reproducible.

Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2732
Subject: Need a New Parapet GUI

Folder: /Virtis/Support Center	
Primary Contact: Generated, task force	
Submitted By: Teal, Dean	6/6/2000 4:05:19 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Generated, task force	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	Parapet Description.doc	

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:14:20 PM

HRS AASHTO

520

Complete Issue Information

FROM: dteal DATE: 6/6/2000 11:01 AM

KDOT has a parapet that we use often. It can not be described using the standard GUI that is supplied. I have attached a sketch that explains our dilemma. How do we get a GUI added??

FROM: jduray DATE: 06/08/2000 10:37:02

Others have also requested different parapet configurations. This should be discussed with the TF and perhaps at the User Group meeting. I would like to add a parapet that is more generic. the most generic would be one that the user can define the number of sides or the number of vertices and then give the coordinates of the vertices relative to the lower left corner with a coordinate of (0,0). this would take a little more effort for users to define but would be able to accommodate any type of parapet.

If the above is too complex then we should poll the users to find out how many more dimensions are needed to cover most of the configurations. Maybe one with five points defining each side for a total of 10 points.

Issue ID: 2733
Subject: Shear connector range not adjusted when spans deleted

Folder: /Virtis/Support Center
Primary Contact: Ordoobadi, Mehrdad
Submitted By: Kennelly, Krisha 6/8/2000 6:01:45 PM
Modified By: administrator 6/19/2008 4:38:35 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	High	Bug
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

4/19/2016 3:14:20 PM

HRS AASHTO

521

Complete Issue Information

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2734.10643	Resolved	Grid Control of Bridge Explorer - Check Out of Brridges

Description

FROM:kkennelly DATE:06/08/2000 13:57:43

Shear connector range not adjusted (like deck concrete profile or girder profile, etc.) when spans deleted.

FROM:mordoobadi DATE:10/09/2000 12:04:27

In the AdjustMbrAltAndBeamDef function we have a block of code that takes care of this, and it has been there for a long time.

I deleted a span and the shear connector ranges get removed properly. Can you tell me which bridge you tried?

FROM:kkennelly DATE:10/09/2000 13:47:22

Training Bridge 3 in the sample database. I changed from the 3 spans to 2 spans and it doesn't adjust the shear connector range.

FROM:mordoobadi DATE:10/12/2000 17:22:53

Resubmitted.

FROM:mordoobadi DATE:10/18/2000 11:50:09

I figured this happens when deck is composite (no shear connectors).

FROM:mordoobadi DATE:10/18/2000 15:04:54

Fixed.

Version 4 code fixed.

FROM:mordoobadi DATE:10/18/2000 15:27:26

I asked Jim, whether we need this in the next service pack for version 3, he said because the user can adjust the range in a GUI window, there is no need to include this in a version 3 service pack.

FROM:kkennelly DATE:12/19/2000 12:58:09

Accepted

Issue ID: 2734

Subject: Grid Control of Bridge Explorer - Check Out of Brridges

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Thompson, Todd	6/8/2000 7:15:48 PM
Modified By: administrator	6/19/2008 4:02:11 PM
Priority: High	
Category: Bug - GUI 2	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2735.10642	Resolved	Display of Live Load Distribution Factor - extra 9999999

Description

FROM: tthompson DATE: 6/8/2000 2:08 PM

More of a question.

If I use the CONTROL key and select a series of structures to check out, it does not allow one to check out bridges. One can use the SHIFT key and select a series of bridges and one is allowed to check out bridges.

The CONTROL key and selecting a series of bridges on the Bridge Explorer works to analyze structures, but it doesn't work to check out bridges. Just not sure if this is a bug or just a system shortcoming with the grid control.

If it is supposed to work, it would be great to get it fixed. Thanks.FROM: tthompson DATE: 6/8/2000 2:12 PM

FROM:jihnat DATE:11/18/2003 10:41:32 AM
Fixed (allows CONTROL key to be used) for 5.1.1

Complete Issue Information

back, it once again is displaying 1.6059999. This does not happen just to one structure either, but to most. Is this a problem with the GUI or what?

FROM:jihnat DATE:06/20/2000 14:05:33

Doesn't look like a GUI problem. The problem seems to be somewhere between the database and the little bucket. When 1.606 is entered, the window can be closed and reopened and the value remains 1.606. It's only after a Save is done that the value becomes 1.6059999. I stepped through some of the code and the GUI passes 1.606 to the Domain, but after the bridge is saved the Domain passes back 1.6059999. The value does appear as 1.606 in the database.

FROM:kkennelly DATE:10/09/2000 11:52:24

I can enter 1.606, Ok to close, Save bridge, reopen window and 1.606 appears. Only shows up as 1.6059999 when I save, close the BWS and reopen the BWS.

FROM:kkennelly DATE:10/09/2000 15:38:14

This grid doesn't have the restriction of typing in digits beyond the edit mask + 4. I can type in as many digits as I want in version 4.0.

FROM:kkennelly DATE:10/09/2000 16:02:17

Added SetGridColAttributes() to version 4.0 to fix number of digits beyond edit mask. Still have 1.6059999 problem.

FROM:kkennelly DATE:10/09/2000 16:07:01

Must be some problem with unitless data because I can reproduce this on the Member alt window, sustained modular ratio factor. Enter 1.606, close BWS and save, reopen Member Alt window, it's 1.605999

FROM:kkennelly DATE:10/10/2000 08:55:17

I've found the following pattern:

Following attributes are unitless and have a data type 10208 (real). Enter 1.606 for all and GetValue() returns 1.6059999 for all even though value in db is 1.606.

abw_super_struc_spng_mbr_alt: modular ratio, lfd dist factors, asd factors (except for timber which has data type 10203)

abw_girder_sys_struc_def: modular ratio

abw_ll_distfactor_range: dist factors

Following attributes are unitless and have a data type 10203 (double). Enter 1.606 and GetValue() returns 1.606.

abw_shear_reinf_def: vert_num_legs

abw_super_struc_spng_mbr_alt: asd factor for timber

FROM:kkennelly DATE:10/13/2000 16:19:16

I changed data type to double in Sybase Central and 1.606 gets passed back ok.

FROM:mordoobadi DATE:10/18/2000 16:39:09

There are 320 attributes in the Sybase database that have float datatypes.

The SQL command to change the datatype of a column for Sybase database is:

```
ALTER TABLE table_name MODIFY coumn_name new_data_type;
```

Jim, decided to do this change for Sybase database. for version 4.0.

4/19/2016 3:14:20 PM

HRS AASHTO

525

Complete Issue Information

Migration scripts should be created to change column data types.

FROM:mordoobadi DATE:10/19/2000 09:38:41

FROM:mordoobadi DATE:11/01/2000 17:14:11
ERWin model updated.

FROM:mordoobadi DATE:11/02/2000 14:22:03
Database regenerated.

Issue ID: 2736
Subject: Problems with decimal feet

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Thompson, Todd	6/15/2000 6:49:11 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	06154150.bbd	

Tasks

Name	Current State	Summary
2736.10641	Resolved	Problems with decimal feet

Description

4/19/2016 3:14:21 PM

HRS AASHTO

526

Complete Issue Information

FROM: tthompson DATE: 6/15/2000 1:42 PM

I have a structure that keeps giving me error messages. I believe after visiting with Gale Barnhill, that this may be similar or the same as VI #2687.

I am submitting this bridges bbd. If this has been fixed, please confirm that this bridge is fixed. This is the error I keep getting. The error goes away if I make the span lengths and ranges even feet and get rid of the decimals.

Input Errors (1103) - Cross-section area less than or equal to zero

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTO BridgeWare\Viridis\Opis30\06154150\Girder_1\G01\Mbr_Alt_1.ERR

Fatal Error Encountered - Unexpected Termination

Data File: tisOpis30\06154150\Girder_1\G01\Mbr_Alt_1.dat

Error No.: 1103

Type : Input Error

Location : prgen.for

****ERROR**** A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN
1 SPAN POINT = 22

RUN STOPPED.

REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

----- End of Contents of BRASS Error File -----

FROM: bgoodrich DATE: 7/3/2000 12:00 AM

This is basically a problem with transferring data using ASCII files. We will try to do something on the BRASS side to correct this problem. We will probably add some checking to determine if the start distance of one range is within some tolerance of the end distance of the previous range.

FROM: jduray DATE: 08/03/2000 10:13:15

We are working on a fix for this and it will be in version 4.0.

We are adding a window where the user can enter the tolerance to be used for comparison for the different units of length. All comparisons will be made using the user defined tolerances. It will be the

4/19/2016 3:14:21 PM

HRS AASHTO

527

Complete Issue Information

users responsibility to input descriptions to consistent accuracy. For example: suppose three top flange plate lengths measuring (25-2 + 31-2 + 25-2) are entered by the user as 25.1667, 31.1667 and 25.1667 for a total of 81.5001 and the span length input by the user is 81.5. Essentially the same number. If the comparison tolerance is smaller than .0001 the two are considered to be different. If the user defines the tolerance for comparison of feet units to be greater than or equal to 0.0001 the two numbers will be considered to be the same. This new feature will resolve this problem by allowing the user to decide the tolerance for each length unit. It will be set in the database for all users. We will deliver the db with tolerances we feel are appropriate values.

It will be the responsibility of the export to resolve these differences appropriately for the analysis engine. One approach might be to always force the last length in a series of n ranges or lengths to be the distance the engine uses for comparison minus the sum of n-1 lengths. Using the above example, for a tolerance of .0001 or larger the two numbers are the same and the GUI would have accepted this input. The export must also recognize these as the same and for the length of the last plate pass $81.5 - 25.1667 - 31.1667 = 25.1666$ not 25.1667 as input by the user (unless the engine can be told what tolerance to use for comparison).

FROM: bgoodrich DATE: 10/16/2000 11:01 AM

I implemented the tolerance modifications in the BRASS export to address this issue. I imported the BBD file into version 3.0, migrated the DB to version 4.0 alpha 1, exported the bridge to a 4.0 alpha 1 BBD file, imported the BBD file into 4.0 alpha 2, and analyzed the bridge. I received no errors from BRASS this time. Now, the last cross section range exported to BRASS equals the span length. Fixed for Version 4.0.

Issue ID: 2737

Subject: Loading for Optional Live Load Deflection

Folder: /Virtis/Support Center

Primary Contact: Generated, task force

Submitted By: Teal, Dean

6/15/2000 8:26:51 PM

Modified By: hlee

7/12/2012 6:36:29 PM

Priority: High

Category: Enhancement

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Suspended	High	Enhance BRASS
Generated, task force			
Generated, task force	Suspended	High	Enhance BRASS Enhancement

4/19/2016 3:14:21 PM

HRS AASHTO

528

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2738.10639	Suspended	Find in the Spec Checker

Description

FROM: dteal DATE: 6/15/2000 3:22 PM

During the IBC a designer from New Jersey asked this question.

Does Opis use "AASHTO 3.6.1.3.2 Loading for Optional Live Load Deflection Evaluation" or not. If yes – how do you turn it on or off? New Jersey uses this option.

FROM: dteal DATE: 6/21/2000 12:09 PM

Kansas Also uses this option.

FROM: bgoodrich DATE: 6/22/2000 2:41 PM

BRASS does not currently perform this computation. BRASS provides the live load deflections (reported for each live load separately), so there is enough information to do this check by hand. If you feel BRASS needs to perform this computation, please make a request.

FROM: dteal DATE: 6/23/2000 10:22 AM

Kansas feels that this computation should be done. How do we make a request?

FROM:jduray DATE:11/08/2000 12:11:33

You just did...

Brian - please check with Jay about this and if necessary forward to Wyoming as an enhancement request.

FROM: bgoodrich DATE: 11/20/2000 7:06 AM

I have forwarded this issue to Jay.

FROM: bgoodrich DATE: 11/28/2000 6:30 AM

WYDOT has approved this enhancement. It is currently scheduled for the Spring release of BRASS.

FROM:bgoodrich DATE:07/10/2001 14:24:03

I have implemented live load deflection checks in BRASS-GIRDER(LRFD) for release with Version 4.1. Some export modifications are still required.

Jim - Have any methods been implemented/planned in Opis to control if this deflection check (or any limit state for that matter) is performed or not? Currently, concrete shear seems to be the only limit

4/19/2016 3:14:21 PM

HRS AASHTO

529

Complete Issue Information

state we can control from Opis. Incidents 2513 and 3162 request the ability to control bearing. There are bound to be others more engineers begin using Virtis/Opis.

FROM:jduray DATE:7/11/01 10:35:03 AM
No

FROM:bgoodrich DATE:08/01/2001 10:50:27
I modified the export (BrassLrfdLoadControl.cpp) to generate the new LOAD-LIVE-DEFLECTION commands when a design type truck is detected. The two combinations that are exported are the truck alone (1.0*Truck) and 25% of the truck plus the lane (0.25*Truck+1.0*Lane). The second combination is only exported if a corresponding lane exists. The results can be seen in the specification check window.

FROM:dteal DATE:Monday, March 04, 2002 8:55:20 AM
This is an optional control - how do we turn it on or off?
The way the code reads for 3.6.1.3.2 is "If the owner invokes the optional live load deflection criteria". I can't find a way to turn it off and on?

FROM:dteal DATE:Monday, March 04, 2002 9:02:17 AM
I think this is related to #3623

FROM:bgoodrich DATE:Friday, June 28, 2002 12:46:05 AM
The specification check filter could be set to ignore the specification check, however, the design ratio could still show up as a fail.

FROM:dteal DATE:Thursday, January 16, 2003 10:32:25 AM
As it stands right now, BRASS can handle this as OPTIONAL but the GUI can not. So we need to have the GUI give us this option.

FROM:dteal DATE:Wednesday, November 07, 2007 10:32:10 AM
This is incorrectly called a BRASS enhancement
Please see VI#7141 for clarification

FROM:dteal DATE:Wednesday, November 07, 2007 10:37:51 AM
7141, 5008, 4979 & 2737 are all related to LL Deflection problems

FROM: Herman Lee DATE: 7/12/2012 2:35:34 PM Eastern Daylight Time
Changed Category from Enhance BRASS to Enhancement.

Issue ID: 2738 Subject: Find in the Spec Checker

Folder: /Virtis/Support Center Primary Contact: Duray, Jim Submitted By: Teal, Dean 6/15/2000 8:27:53 PM

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Resolved	High	Education
	Closed		
Ihnat, Joseph	Closed	High	Education

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2739.10638	Closed	Copy not always available in Analysis Results window

Description

FROM: dteal DATE: 6/15/2000 3:23 PM

The Spec checker needs to have a "find" tool. It would be very handy to zero in on a key word.

Complete Issue Information

Issue ID: 2739
Subject: Copy not always available in Analysis Results window

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	6/15/2000 8:28:50 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 6/15/2000 3:24 PM

While in the Analysis Results window, I would highlight some text to copy.

1. The "Copy" tool bar button never becomes active
2. In the edit pull down menu, copy is sometimes available and sometimes not. Very reproducible.

FROM: kkennelly DATE: 1/22/2002 3:41:49 PM

I tested this in version 4.1.0 and I can't really reproduce it. I think the grid is very touchy when you try to select a row or text to copy. If you select a row with the mouse hovering directly over a number in the grid, that cell becomes the active cell and then the copy button isn't available. But if you select a row with the mouse not directly over a number in the grid, the entire row is selected and copy is available and works. I think this is resolved.

4/19/2016 3:14:22 PM

HRS AASHTO

532

Complete Issue Information

Issue ID: 2742

Subject: Dist Factor used for Exterior Girder

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

6/16/2000 4:19:53 PM

Modified By: administrator

6/19/2008 4:02:10 PM

Priority: Urgent

Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Closed	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:14:22 PM

HRS AASHTO

533

Complete Issue Information

Steve.bbd

Tasks

Name	Current State	Summary
2743.10634	Closed	Live Load Dist Factor Summary

Description

FROM: dteal DATE: 6/16/2000 11:15 AM

Attached structure – reference Exterior girder for Structure Definition “5 Spans 5-wwGC”
Opis doesn’t check to see which DF controls, single or multi lane, in an exterior girder. If the roadway width is adequate for multi lane, then it uses multilane. I know I can always override this – but shouldn’t this be an item Opis (BRASS) checks and applies properly. In the attached bridge – the DF used for the exterior girder was for multi lane. It should have been the single lane DF.

FROM:jduray DATE:06/23/2000 08:53:29

Krishna - please investigate.

FROM:kkennelly DATE:06/28/2000 10:19:08

This is a BRASS LRFD change request issue. When LRFD distribution factors are not entered into Virtis, they are calculated by BRASS LRFD. Since you haven't overridden the number of lanes loaded, the export tells BRASS to figure out single or multi based on structure definition. I think BRASS would need changed internally to use the controlling df instead of number of lanes. The export doesn't know the df's since they are calculated by BRASS so it can't be responsible to tell BRASS to use single instead of multi.

I did notice when I was testing that if the user inputs single and multi lane LRFD distribution factors, the export will check if the structure definition has single or multi lanes and then export only the single or only the multi as appropriate. So when you look at the LRFD output file, you will see the same value for single and multi lanes. That seems a bit confusing to the user.

FROM: dteal DATE: 6/29/2000 10:26 AM

See also #2754

FROM: bgoodrich DATE: 7/5/2000 1:25 PM

BRASS-GIRDER(LRFD) already contains a flag to indicate if the critical distribution factor is to be used for the live loads. However, Opis does not support it. The export gets the number of lanes loaded specified by the user (girder line) or computed based on the deck travelway widths (girder system). The export only outputs those distribution factors that correspond to the number of lanes loaded. At one point, I had the export generate both the single and multiple lane loaded distribution factors, but we changed it so the user did not have to input distribution factors that did not control. Also, distribution factors are optional for girder systems.

Here are my suggestions to address this issue:

1. The number of lanes loaded will no longer be used to determine which distribution factors are exported or used by BRASS. Would there ever be a case when you would not want to analyze for the critical distribution factors?
2. BRASS-GIRDER(ASD/LFD) does NOT support both single and multiple lanes loaded distribution factors, so the export must determine the critical.
3. BRASS-GIRDER(LRFD) does support both single and multiple lanes loaded distribution

4/19/2016 3:14:22 PM

HRS AASHTO

534

Complete Issue Information

factors, so BRASS can internally determine the critical. BRASS-GIRDER(LRFD) requires both because the Fatigue truck always uses the single lane loaded factors. This fatigue check is not being performed now, so this is a flaw in the 3.0 export. This change may affect existing structures that do not have both single and multiple lanes loaded distribution factors specified. However, this would eliminate the confusion that may occur when the export populates the single and multiple lane distribution factor parameters on the BRASS command with only the multiple lane loaded factors.

Jim - Let me know how to proceed.

FROM:jduray DATE:08/18/2000 14:47:12
Krisha - let's discuss this.

FROM:jduray DATE:5/17/01 11:13:50 AM
Brian - If I understand what you say above it seems like you need to change the export to have BRASS LRFD use the critical factor unless the user has specified distributions factor within Opis. If the user inputs df then the export should determine the critical and send to BRASS.

If we do this then how are the travelways used (or aren't they)?

FROM:bgoodrich DATE:05/17/2001 13:29:41
The travelways will still be needed if the lever rule distribution factors are necessary or if dead loads are to be distributed to the girders.

I can modify the export to generate the TRUCK-CODE command with the critical-lanes loaded option specified. For fatigue type vehicles and vehicles that are manually set to one-lane loaded in the Vehicle Properties, the one-lane loaded code can be exported. Currently (in version 4.0), if the bridge is only wide enough to support one lane, the one-lane loaded distribution factors will be exported and the multi-lane loaded DFs will be neglected.

FROM:bgoodrich DATE:05/18/2001 14:35:14
Per Jim's instructions, I modified the export to generate the TRUCK-CODE command with the critical-lanes loaded option specified for most vehicles. For fatigue type vehicles and vehicles that are manually set to one-lane loaded in the Vehicle Properties, the one-lane loaded code is exported for that vehicle. If the bridge is only wide enough to support one lane (as obtained from the domain), the export will continue to populate the one-lane and multi-lane loaded distribution factors parameters with the one-lane loaded DFs, i.e., the multi-lane loaded DFs will be neglected. If more than one lane can be supported, then one- and multi-lane loaded DFs will populate the command parameters (if specified by the user). The engine will continue to compute the appropriate DFs when they are not specified in Opis.

FROM:jduray DATE:6/4/01 8:59:04 AM
Dean accepted resolution of this incident.

FROM:bgoodrich DATE:06/13/2001 07:51:54
Closed.

Issue ID: 2743

Subject: Live Load Dist Factor Summary

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	6/16/2000 4:22:37 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Accepted	High	Help

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2744.10633	Accepted	Help - incorrect/incomplete link

Description

FROM: dteal DATE: 6/16/2000 11:18 AM

Attached structure – reference Exterior girder for Structure Definition “5 Spans 5-wwGC”
Beam Dist Factor Schedule (Shear or Moment).

For single lane, the text under the DF is shown as (LRFD). This should be (LR) or Lever Rule.

FROM: jduray DATE: 06/23/2000 08:53:11

I assume he is referring to a BRASS output file.

FROM: dteal DATE: 6/26/2000 11:20 AM

Yes

FROM: bgoodrich DATE: 7/5/2000 1:27 PM

The "LRFD" code indicates that the provisions outlined in the AASHTO LRFD distribution factor tables were utilized, which may be a formula or lever rule as indicated in the table. The "LR" code indicates that the lever rule method override was used, which only occurs when a range of applicability check from the AASHTO LRFD distribution factor tables is not satisfied. The legend at the end of the distribution factor schedule report indicates this by the override in "LR = Lever Rule Override".

4/19/2016 3:14:22 PM

HRS AASHTO

536

Complete Issue Information

FROM: bgoodrich DATE: 7/10/2000 5:22 PM

I have been instructed by WYDOT to change the summary output codes. "LR-T" will indicate the lever rule as specified in the AASHTO LRFD distribution factor tables was used and "LR-O" will indicate that a range of applicability check was not satisfied and the lever rule override controls.

FROM: dteal DATE: 11/15/2000 2:32 PM

FROM:bgoodrich DATE:01/11/2001 15:35:40

Issue ID: 2744
Subject: Help - incorrect/incomplete link

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	6/19/2000 4:04:01 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Help	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 6/19/2000 10:58 AM

Under the Structure Framing Plan Details; Diaphragms help section, after the first paragraph, the link for Engine Related Help gives an error message for our users.

FROM:kkennelly DATE:06/21/2000 08:55:30

Complete Issue Information

I'm not able to reproduce this. Do you get this message for the Engine Related Help link in every topic or just the Diaphragms help? If the engine help is not configured properly, you get a message about the enginehelp.hlp not being found for every Engine Related Help link. If that is the message you are getting, go to the Help menu, Engine Help Configuration and select either BRASS LFD or BRASS LRFD. This will set the help file to be opened when you select the Engine Related Help link. If this does not solve your problem, please list the exact error message you are getting.

FROM: tthompson DATE: 6/22/2000 9:36 AM
User had not selected which engine help.

FROM:kkennelly DATE:07/11/2000 08:26:46
Accepted based on A in track field.

Issue ID: 2745
Subject: Error message when creating a new load case

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krishna	
Submitted By: Thompson, Todd	6/19/2000 6:47:46 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: Medium	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Kennelly, Krishna	Resolved	Medium	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285
---------------	------------------	---------------------------	--------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2746.10631	Closed	Description Area

Description

FROM: tthompson DATE: 6/19/2000 1:39 PM

I have a user creating a new LRFD structure. When he attempts to create a new load case description he keeps getting an error message.

Error message is Setting Load Case Name to None will cause the grid to be cleared. Proceed? Yes No (I attached word document with snap shot of error message).

I watched him create a load case description and he had all the columns filled in. He had to hit Yes numerous before it gave control back to the Load Case Description.

FROM:kkennelly DATE:06/21/2000 08:43:27

The window that you are seeing this message occur in is the Member Loads - Settlement tab. You do not create new load case descriptions in this window. You select a load case from the list of load cases previously entered in the Load Case Description window. The settlement values you enter in this grid are applied to the load case you select in this window. If you select None as the load case, that means you don't have any settlement values to apply so the values in the grid are wiped out. If you want to create a new load case, use the Load Case Description window. Then the new load case you created will appear in the list box on the Member Loads - Settlement tab. The help for this tab also explains this window.

FROM: tthompson DATE: 6/22/2000 9:22 AM

No, I watched him create (attempt to create) the load case in the Load Case Description window. He has never gone to the member loads - settlement tab. I'm not sure where you would have gotten that it comes from Settlement - I never mentioned it and the error message doesn't say it. He definitely gets this error message from the Load Description window. If this error message goes with another window, I'm not sure how he's getting that error message to be generated then.

FROM:kkennelly DATE:06/22/2000 14:34:50

I searched the entire gui for that error message and the only place it is used is in the Member Loads - Settlement tab so that is why I assumed you were in that window. I really don't have any idea how you could get that error message from another window. Do you get this message when you hit apply or ok in the Load Case Description window?

Are you able to reproduce this? If you can, can you tell me exactly how you produce it? And also let me know which service packs you have applied?

4/19/2016 3:14:23 PM

HRS AASHTO

539

Complete Issue Information

FROM:kkennelly DATE:06/22/2000 14:42:33

FROM:kkennelly DATE:06/26/2000 07:46:31

Reproducible if Member Loads window is open and the settlement is assigned to load case None while a new load case is being entered in the Load Case Description window. Code in Settlement tab needs changed so message about setting Load Case to None is only displayed when user picks from list box not update list box.

FROM:kkennelly DATE:07/26/2000 12:37:37

Fixed for Version 4.0

Issue ID: 2746
Subject: Description Area

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	6/19/2000 7:20:01 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:14:23 PM

HRS AASHTO

540

Complete Issue Information

FROM: dteal DATE: 6/19/2000 2:15 PM

Is the description area for the Structure Alt. Limited to 256 characters? If so, the area the user assumes he can use is much too large. The Help should also state that, instead of just stating "a brief description".

FROM:jduray DATE:06/23/2000 08:40:13

Joe - please check on the allowable size. do we restrict the input to match the db? If not, can we?

FROM:jihnata DATE:06/23/2000 12:48:23

We do.

FROM: dteal DATE: 12/8/2000 8:33 AM

We haven't fixed anything!

The user is lead to beleive that he/she can enter a MUCH larger description than is allowed. No warnings are giving - user input is unknowingly lost.

FROM:jihnata DATE:12/18/2000 14:43:11

Fixed for Bridge Description, Structure Def Description, Member Description and Member Alt Description.

Fixed for Version 4.0.0 Release.

FROM:dteal DATE:08/28/2001 15:15:52

Issue ID: 2747
Subject: Rating Results that persist but were not saved

Folder: /Virtis/Support Center
Primary Contact: Generated, task force
Submitted By: Thompson, Todd 6/19/2000 7:21:17 PM
Modified By: administrator 6/19/2008 4:02:10 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Generated, task force	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

4/19/2016 3:14:23 PM

HRS AASHTO

541

Complete Issue Information

Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285
---------------	------------------	---------------------------	--------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2748.10629	Accepted	Importing bbd file containing deleted data

Description

FROM: tthompson DATE: 6/19/2000 1:58 PM

I'm not sure if this is the same or similiar to VI 2708 and 2709.

- 1) I selected various bridges on the Bridge Explorer to do an overweight analysis.
- 2) I selected the RATE button, opened a template, made necessary adjustments (ie. selected the overweight vehicle that I had defined) and selected OK.
- 3) The analysis was performed for the bridges selected
- 4) I went to view the rating results (window Bridge Rating Results)and everything is okay.
- 5) I never saved any of the results (nor is there an option to do so like there is when within a given bridge).
- 5b) I exited from virtis/opsis.
- 6) I had another overweight truck to analyze on a another group of bridges. (some of these bridges overlapped with the first batch of structures). I got back into virtisopsis.
- 7) I selected the necessary bridges
- 8) I selected the RATE button, opened a template, made necessary adjustments (ie. selected the overweight vehicle that I had defined) and selected OK.
- 9) The analysis was performed for the bridges selected
- 10) I went to view the rating results (window Bridge Rating Results) and all of the results from the first overweight analysis were still showing up along with the latest/current.

I didn't think analysis results were going to persist in the database, unless the user explicitly saved those results. Why do these results persist? It is very impractical and extremely time consuming to go to each and every bridge and delete these results.

I would propose that there be a mechanism to remove/unload these rating results from the database (or at least not save these results when rating a batch of structures).

I see that based on Incident 2708 that the solution proposed was to manually delete these results. I find this as a very poor solution. It's just too time consuming to 1) keep track of the structures that you need to go to 2) to open up each structure and delete the necessary analysis results

I see that based on Incident 2709 that the solution proposed was to create a report with the much needed and awaited report generator. While this is a reasonable solution, it want to see better control over the data/results stored in the database.

4/19/2016 3:14:23 PM

HRS AASHTO

542

Complete Issue Information

A given overweight analysis may cross only a few structures or it may cross hundreds of structures. We need a mechanism to be able to batch rate these structures and be able to get results. A program can produce the best and most correct results, but if the user can not easily get to these results and present them in a logical, clean, and user definable manner - the program is pretty much useless (or it's use will be minimal).

FROM: tthompson DATE: 6/19/2000 2:18 PM

A secondary problem is that until a user manually deletes these rating results, a user can not remove the rating vehicle from the library of trucks. We have historically average about 600 to 700 overweight analysis requests a year. Luckily we have low ADT and truck traffic. But we don't want hundreds of vehicals stored in the truck library. We will want to remove these at a fairly frequent basis (weekly), but it's going to take considerable effort to delete all these rating results to do so.

FROM: jduray DATE: 06/20/2000 15:46:40

This is very important as you are aware. I will present to the TF to approve of a solution to this.

FROM: jduray DATE: 06/27/2000 10:23:42

Issue ID: 2748
Subject: Importing bbd file containing deleted data

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	6/20/2000 7:44:17 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Accepted	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

4/19/2016 3:14:24 PM

HRS AASHTO

543

Complete Issue Information

Description

FROM:jduray DATE:06/20/2000 15:36:02

CDmStlComponent (and perhaps all other top-level sub-type objects) do not properly initialize the sub-type objects in the ImportData function. There is a for loop that does not set pDeStlComponentImport to NULL before moving on to the next steel component. This causes an exception to be thrown when a different steel component sub-type is being imported. Also, pDeStlComponent should be set to NULL at the top of the function.

FROM:jduray DATE:06/20/2000 15:44:29

This should be fixed for version 4. After I know the extent of the changes required we should decide whether to apply to version 3.0.

FROM:jduray DATE:06/20/2000 16:44:14

CDmStructDefRefLine are also incorrect. A similar line must be added to the end of the loop. I looks to me at this point as though any time a bbd file contains deleted objects the import will fail. We need to review the ImportData function in all DM objects.

FROM:jduray DATE:06/21/2000 08:53:31

The above problems stem from the fact that there are five use cases for the import/export. Each should be handled a little differently within the code but aren't and so we end up with none of them being handled correctly. Number 1 is the primary goal and it is the closest to being handled properly.

- 1) bridge transfer between different instances of the same-version database.
- 2) auto-recovery if a BWS is lost due to unexpected termination of Virtis/Opis.
- 3) technical support - so we can investigate user problems using "exactly" their data (similar to #1 but slightly different).
- 4) saving a work-in-progress for later import if needed. (useful in a design iteration for different scenarios)
- 5) used to rollback the BWS if adding or deleting spans and/or members fails

FROM:jduray DATE:06/21/2000 09:11:06

Bridge Description Exchange (1 and 3 above)

Import/export for transfer of a bridge description from one database to another should reset the DataStatus flag to NewModified if the object is new and Modified if it can reuse a previous object. The import can be initiated from the BWS or the Bridge Explorer. The import marks all objects as deleted and then tries to reuse objects if the primary keys match objects in the bbd file.

Suggested changes for Import/Export for bridge exchange:

- 1) no changes to the export
- 2) change the import to not import Deleted objects (consider adding an option to the Import file selection dialog to allow the user to import deleted objects - for tech support primarily).
- 3) add a parameter to the ImportData function to indicate the type of import (data exchange or recovery) This flag indicates how to set the DataStatus flag and how to handle deleted objects.

Add RecoverData(LPCTSTR lpszFileName) function to CDoBridge. CDoBridge::RecoverData should call CDmBridgeCache::RecoverBridgeData and CDoBridge::ImportData should call

Complete Issue Information

CDmBridgeCache::ImportBridgeData.

I created two new functions in CDmBridgeCache named RecoverBridgeData and ReadBridgeDataFromFile. The code that was in ImportBridgeData is now in ReadBridgeDataFromFile. RecoverBridgeData and ImportBridgeData call ReadBridgeDataFromFile with a parameter indicating exchange or recovery.

Change
CBridgeWorkSpaceDoc::RevertData() and
CBridgeWorkSpaceDoc::RestoreData()
to call CDoBridge::RecoverData(LPCTSTR lpszFileName).

Bridge Description Recovery (2, 4 and 5 above)

Import/export for recovery of a bridge description should set the DataStatus flag to exactly what is in the bbd file since there could be objects marked for delete that exist in the db. Recovery files should not be used for exchange between databases. Since the export is always the same a bbd file from Export and a bak file for recovery can be interchanged.

Suggested changes for Import/Export for bridge recovery

- 1) no changes to the export
- 2) change the import to set the DataStatus flag according to the bbd file.

Issue ID: 2749
Subject: Bridge Explorer Window - scrolling after checkout

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	6/21/2000 8:52:15 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2751.10626	Closed	Specification Check

Description

FROM: dteal DATE: 6/21/2000 3:47 PM

Enhancement Needed

After you scrolled down the list to a particular bridge, you select Bridge – Check out. The window automatically scrolls back to the top. This is very annoying when your bridge list is long. You have to scroll back through it again to find your bridge to open it up.

FROM:jihnat DATE:10/19/2000 09:33:54

This incident is fixed for Version 4.0 Alpha Build 3 and for Version 3.0 Patch 5.

FROM: dteal DATE: 11/15/2000 11:19 AM

FROM:jihnat DATE:11/15/2000 12:29:31

Accepted by dteal ("A" in Track field).

Issue ID: 2751
Subject: Specification Check

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	6/22/2000 2:26:30 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: High	

Complete Issue Information

Category: Bug

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Duplicate	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Missing2.zip	
	Missing.bbd	

Tasks

Name	Current State	Summary
2752.10625	Duplicate	Inventory Rating Results

Description

FROM: dteal DATE: 6/22/2000 9:22 AM

Is Opis still using the 1994 AASHTO Spec? Where do I verify which Edition is being used? KDOT has been using the Second Edition, 1998 for 2 years now. I just received my 1999 Interim's.

FROM: dteal DATE: 6/22/2000 3:06 PM

I guess I know we are still use the 1994 Spec. - I guess the question is, when are we updating?

FROM: bgoodrich DATE: 6/26/2000 8:46 AM

BRASS-GIRDER(LRFD) is current with the 1998 AASHTO LRFD Spec. Check the BRASS help file (GIRDER(LRFD).HLP) to find the specification version.

Jim - Is there a table that the user could access to view a read-only table containing the engine name, versions, and corresponding specification version? If not, could this be added?

FROM: dteal DATE: 6/29/2000 10:34 AM

I verified that BRASS is using the up to date 1998 Spec's but in the Bridge Workspace under "Factors - LRFD" the only Spec. to copy from the library is 1994.

FROM:jduray DATE:10/03/2000 16:57:00

This will be fixed in version 4.

4/19/2016 3:14:24 PM

HRS AASHTO

547

Complete Issue Information

Issue ID: 2752
Subject: Inventory Rating Results

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	6/22/2000 8:12:39 PM
Modified By: administrator	6/19/2008 4:02:10 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 6/26/2000 1:24 PM

Why are we missing the descriptions of the original problem?

I am able to reproduce this. And will attach the structure again.

If I do a rating on the bridge in question from the Bridge Workspace I get 0.00 for the Inventory Rating Factor. I don't buy zero.

If I do a rating on the same structure from the Bridge Explorer Window I get 0.00 for the Inventory Rating Factor. But also, I didn't enter a vehicle for Operating Rating Factor, but a value is displayed on the Bridge Rating Results table.

FROM: dteal DATE: 6/26/2000 1:26 PM

I was using an HS20-44 Truck, if it makes any difference.

4/19/2016 3:14:25 PM

HRS AASHTO

548

Complete Issue Information

FROM: dteal DATE: 6/27/2000 11:08 AM

If you still can not reproduce this Inventory Rating Factor of zero, could you run the rating for an HS20 truck and attach the inventory results for an exterior and interior girder. Thanks,

FROM: jduray DATE: 11/08/2000 12:14:04

Dean - I don't know why the original description is missing but if you have more you can tell us please do so within this incident. Thanks

FROM: kkennelly DATE: 11/30/2000 15:08:06

FROM: kkennelly DATE: 11/30/2000 15:19:49

Brian, Member 1 run for HS20 LFD has a fatigue rating of zero at point 303.0. I think this may be a duplicate of incident 2941 because there seems to be a small gap in the Steel-Girder-Control command in span 3. But it might also be a duplicate of incident 2625. (This bridge has SI units at all levels but the export file and output file for BRASS is in US units. I think that is contributing to this problem.)

FROM: bgoodrich DATE: 12/1/2000 2:56 PM

The modifications made to address Incident 2941 fixed this problem also.

FROM: dteal DATE: 01/27/2001 10:09:56

Issue ID: 2754
Subject: Vehicle Scale Factor for LRFD Fatigue Truck

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	6/23/2000 2:33:34 PM
Modified By: hlee	7/12/2012 6:45:05 PM
Priority: Urgent	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	Urgent	Enhancement
Duray, Jim	Suspended	Urgent	Enhancement
			Enhance BRASS
			Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001
-----------	--------------------------------	----------------	---------------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2756.10621	Closed	Importing Multiple Structures

Description

FROM: dteal DATE: 6/23/2000 9:29 AM

AASHTO 3.6.1.1.2 states that the Multiple Presence factors do not apply to the fatigue limit state for which one design truck is used, regardless of the number of design lanes. When calculating the live load distribution factor for one lane load, a multiple presence factor of 1.2 is used. To remove this multiple presence factor the live load scale factor should be coded as $1.0/1.2=0.8333$. This scale factor is editable in Opis under the advanced features button of the analysis settings window.

In the BRASS LRFD Technical Manual under moving loads, page 2-14, it states: "For a fatigue truck, several items must be adjusted. The % impact defaults to $15\%/33\%=45.45\%$ of the standard impact value, thereby making the fixed impact factor 0.15 (0.4545×0.33). The scale factor defaults to $1/1.2$ to remove the multiple presence factor from the distribution factors (see AASHTO 3.6.1.1.2). Finally, the number of lanes loaded defaults to one. The user may override any of these items."

BRASS seems to neglect this command and use one lane load.

It is asking a lot of the user to adjust the scale factor under the advanced settings button. The engineer (user) is going to miss this one 9 times out of ten.

FROM:kkennelly DATE:06/28/2000 08:32:28

I'm not sure of exactly what your request is. When you say "BRASS seems to neglect this command...", are you saying that the export is generating the wrong commands? I found the following when I tested this:

For the LRFD Fatigue truck with nothing set on the Advanced window, the export generates the following command:

Truck-Code 5, FAT_....., 45.455, 1.0, MULT

The 45.455 is the % impact. The export gets this from the Member Alt Impact window if nothing is entered for the impact on the Advanced window. The 1.0 scale factor is used since nothing is entered on the Advanced window and MULT is used since the Structure has more than one lane and this is not overridden on the Advanced window. If you override data on the Advanced window, the export uses that override data to generate the Truck-Code command. That all seems to work as expected. If you think the export or BRASS is using the wrong command, please let me know the details.

Are you requesting that we default the Truck-Code command for a fatigue vehicle to use 0.83 scale factor and Single instead of Multi? That does seem to make sense but that would be a change request and I'll have to talk to Jim about that. I'm not sure if we want to set the scale factor and # lanes to something other than what we get from the structure and have it hidden on the Advanced window.

4/19/2016 3:14:25 PM

HRS AASHTO

550

Complete Issue Information

FROM: dteal DATE: 6/28/2000 4:01 PM

Yes, that's exactly what I'm asking for. The user is very seldom going to catch this under the advanced window.

I don't feel this is a change request, I think it's an error. Opis isn't passing on the correct scale factor for a fatigue truck when one lane is used.

FROM:kkennelly DATE:07/11/2000 08:03:00

Opis correctly passes on what is entered on the Advanced tab for the vehicle. If you select one lane and enter a scale factor in the Advanced tab, Opis will pass that on correctly to the export.

Jim, do you want the gui to set the scale factor to 0.83 on the Advanced tab if the user selects the Single Lane Loaded? I'm not sure if this will satisfy Dean since the user still has to open the Advanced tab to set the Single Lane Loaded checkbox.

FROM:kkennelly DATE:07/11/2000 08:32:56

I think this incident is related to 2766.

FROM: dteal DATE: 11/16/2000 10:51 AM

I think you hit it just right when you restated the request.

Default the Truck-Code command for a fatigue vehicle to use 0.83 scale factor and Single instead of Multi. We wouldn't be hiding it on the Advanced tab. To my mind it is already hidden and it is our responsibility to see that it has the correct settings to start with.

FROM: Herman Lee DATE: 7/12/2012 2:42:26 PM Eastern Daylight Time
Changed Category from Enhance BRASS to Enhancement.

Issue ID: 2756
Subject: Importing Multiple Structures

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	6/23/2000 8:35:35 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@	307 222-4688

4/19/2016 3:14:25 PM

HRS AASHTO

551

Complete Issue Information

BridgeTech-Laramie.com

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2757.10620	Closed	Importing WSD

Description

FROM: dteal DATE: 6/23/2000 3:31 PM

We have around 225 structures in the state that are made up of multiple structures (jumpspans). In the past using BRASS we have labeled these structures like 021-42A and B a C, etc. When imported, they will create one file each, correct? There is no way to append a structure and add another one to it is there? If we want to create a bridge that is made up of several structures from our existing BRASS data we will have to import lets say 021-42A and then enter the data manually for B and C, correct?

FROM: dteal DATE: 6/23/2000 3:55 PM

The same questions apply to when importing 5 girder lines for the same structure. You can import the exterior girder, but I assume that you can not append the structure and import the interior girders also? All this BRASS data out there will be in girder lines.

FROM:jduray DATE:06/26/2000 10:13:55

Brian - can you answer these questions about the BRASS import?

FROM: bgoodrich DATE: 6/26/2000 9:02 AM

You are correct about the contents of one data file being assigned to one bridge (i.e., one file). There are two options to get the bridges into Virtis. Option 1 would be to import all the bridges as is, and then copy the all structure definitions for a particular bridge to a common bridge file. The materials, shapes, etc. should automatically be copied in this process. This would require quite a bit of work I think. Option 2 would be move all the structures that make up a bridge into one BRASS data file where each structure is separated by and END command. Then, each of these new data files could be imported and the Virtis bridge would contain all the structures. Then, if you needed to move things around or change any information, you only have to work with one file.

FROM: dteal DATE: 12/8/2000 8:23 AM

FROM:bgoodrich DATE:01/11/2001 15:36:40

Issue ID: 2757

Subject: Importing WSD

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:14:25 PM

HRS AASHTO

552

Complete Issue Information

Submitted By: Teal, Dean	6/23/2000 8:39:18 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: Low	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Suspended	High	Enhancement
	Closed		
	Discard		
Ihnat, Joseph	Discard	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2758.10619	Discard	User Manual

Description

FROM: dteal DATE: 6/23/2000 3:34 PM

Can we import BRASS files that were created for working stress designed structures and then Rate them in LFD?

FROM:jduray DATE:06/26/2000 10:21:25

You should be able to I think. Brian - can you answer?

FROM: bgoodrich DATE: 6/26/2000 8:56 AM

Yes. However, you may have to add some point of interest information for steel, such as stiffeners and bracing lengths. The export should tell you what you are missing.

FROM: dteal DATE: 12/8/2000 8:21 AM

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:51:59 AM

Track field marked with "A", so status set to Accepted.

4/19/2016 3:14:25 PM

HRS AASHTO

553

Complete Issue Information

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:02:09 PM
Closed.

Issue ID: 2758
Subject: User Manual

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Teal, Dean	6/26/2000 8:28:52 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 6/26/2000 3:24 PM

I have been finding out that users are missing the "Users Manual" that comes on the root directory of the installation CD. Maybe along with asking if the user wants the Virtis/Opis icon added to the desktop they should also be asked if they want a shortcut to the user manual also. (assuming that the user manual would get installed on the local pc)

FROM: dteal DATE: 6/26/2000 3:25 PM

The Manual is there, they just don't know it's there.

FROM:jduray DATE:06/27/2000 16:12:58

4/19/2016 3:14:26 PM

HRS AASHTO

554

Complete Issue Information

Joe - can we do thid for version 4?

FROM:dteal DATE:Tuesday, October 26, 2004 11:27:15 AM
5.2 Beta 4 is still on the CD only

FROM:dteal DATE:Monday, February 26, 2007 11:56:55 AM
I don't know when we started doing it but in 5.6 beta 1 it has been done - Accepted

FROM:hlee DATE:4/30/2008 2:22:48 PM
Discarded by TAG 12/07.

Issue ID: 2763
Subject: Unable to import a bbd file

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	6/28/2000 4:43:20 PM
Modified By: hlee	10/26/2012 1:20:40 PM
Priority: High	
Category: Unknown	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Information Needed	High	Bug
			Unknown

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2764.10613	Not Reproducible	BRASS Import into a defined structure

Description

FROM: rmbest DATE: 6/28/2000 11:38 AM Version 3.0 - We are unable to import a bbd file into a database when that structure already exists in the database. The imported bridge comes over but when we go to save it we get an error message "Unable to save Bridge data, Error updating database record set. We foresee instances when it will be necessary to do this.

FROM: rmbest DATE: 6/28/2000 1:12 PM

FROM: rmbest DATE: 6/28/2000 1:13 PM

FROM: jduray DATE: 6/29/2000 10:15 PM

This is probably happening because you may not have duplicate bridge names, etc. Try importing and changing the names in the Bridge Description window.

FROM: rmbest DATE: 7/7/2000 8:23 AM

I tried as you suggested. Making the the name identical in both existing Bridge Description window and in the bbd file but the bbd will not save after importing.

FROM: jduray DATE: 10/09/2000 10:21:29

Richard - are you still having this problem? If not I would like to close this incident.

Tha above advice seems to be in error. You should get an error if the Bridge Id and NBI number are the same as one that is already in the db.

Issue ID: 2764
Subject: BRASS Import into a defined structure

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: fulton, keith	6/28/2000 5:06:46 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: High	

Complete Issue Information

Category: Bug

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Single Lane Dist.bbd	

Tasks

Name	Current State	Summary
2766.10611	Closed	BRASS Uses Single Lane but displays Multi in the output.

Description

FROM: kfulton DATE: 6/28/2000 10:55 AM

I am working on importing all of my brass data sets into the db. i have prepopulated the pontis_bridge tables and the abw_bridge table. When i use BRASS import I get the following error messages:

Run time error abnormal program termination

the instruction at '0x5f4012a1' referenced memory at '0x00000004'. the memory could not be read.

I get the same messages if I use the program to create a structure and then try to import the brass file.

The import works fine if the structure is not in the DB.

FROM: jduray DATE: 6/29/2000 10:13 PM

FROM: emartin DATE: 10/30/2000 5:16 PM

FROM: emartin DATE: 10/30/2000 5:47 PM

Jim -- I was not able to create the error. If this is still a problem should Brian be assigned to it?

Complete Issue Information

Issue ID: 2766
Subject: BRASS Uses Single Lane but displays Multi in the output.

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Teal, Dean 6/28/2000 9:07:25 PM
Modified By: administrator 6/19/2008 4:02:09 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 6/28/2000 4:02 PM
In the attached structure in the output for G1 (exterior) the following command line is found:
Truck-Code 5, FAT_LRFDFA-6, 45.455, 1.00, MULT
For the fatigue truck, BRASS uses the one lane distribution factors even though MULT is shown.
BRASS seems to neglect this command and use one lane loaded.

FROM: jduray DATE: 6/29/2000 10:04 PM

FROM: bgoodrich DATE: 7/5/2000 1:32 PM
For BRASS to analyze a truck for the Fatigue limit state, the first three characters of the truck name must be "FAT". When a vehicle is placed in the Fatigue truck category in the Analysis Settings window, the export adds an "FAT" prefix to the truck name. When BRASS detects this prefix, it sets the number of lanes loaded for that truck to one lane loaded as outlined in the LRFD specification.

Complete Issue Information

Jim - Should I modify the export to set the lanes loaded indicator for a fatigue truck to one lane loaded and generate an informational message?

FROM:jduray DATE:08/18/2000 14:38:50
Sounds like a good idea since that is what BRASS is really doing.

FROM: bgoodrich DATE: 8/23/2000 3:28 PM
I modified the export to set the lanes loaded indicator for a fatigue truck to one lane loaded in the BRASS export.

FROM: dteal DATE: 11/15/2000 2:34 PM

FROM:bgoodrich DATE:01/11/2001 15:38:43

Issue ID: 2767
Subject: import of brass files-patch 3

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Jensen, Paul	6/29/2000 7:37:29 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	High	Bug
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	mt_virt_ora805_exp.exe	

Complete Issue Information

brassimport_err.gif

Tasks

Name	Current State	Summary
2768.10609	Resolved	Possible bug in the Strand Layout window

Description

FROM: pjensen DATE: 6/29/2000 1:19 PM

I was trying to import a brass file into an existing bridge and I received an error message and the software termination. Attached is the error.

FROM: pjensen DATE: 6/29/2000 1:25 PM

FROM: bgoodrich DATE: 7/5/2000 1:36 PM

This error message is issued by the operating system and indicates there is a serious error in the import that is not detected and trapped. Please attach the data file you were trying to import, so I can duplicate the error.

FROM: bgoodrich DATE: 7/18/2000 11:07 AM

Jim - I am assigning this incident to you. We discussed this issue with Paul in Minneapolis and he said he would send you the BRASS data file. Paul also indicated that the problem might be with the Oracle database.

FROM: pjensen DATE: 7/20/2000 3:42 PM

I attached a zip file with the Oracle export (8.0.5) and the import files that will not import into that database.

FROM: mordoobadi DATE: 10/06/2000 09:48:38

Importing of the BRASS data file was successful in both Sybase and Oracle (not the Oracle database that Paul sent us) databases.

The included BBD file does not contain structure definition and below, so I think the abnormal program termination happened when Import was saving the bridge.

Paul, is this reproducible, or did it happen just once?

I'll import the Oracle dump file into my system and try to reproduce it.

FROM: mordoobadi DATE: 10/06/2000 11:48:01

Jim advised me not to import Oracle dump file at this time.

FROM: mordoobadi DATE: 2/21/2006 3:06:32 PM

Incident closed.

Issue ID: 2768

Subject: Possible bug in the Strand Layout window

Complete Issue Information

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: Ordoobadi, Mehrdad 6/30/2000 8:01:29 PM
Modified By: administrator 6/19/2008 4:02:09 PM
Priority: High
Category: Bug - GUI 2

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	High	Bug - BRASS
	Closed		
Goodrich, Brian	Closed	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2769.10608	Closed	Right Equation – Wrong Equation Number in BRASS

Description

FROM:mordoobadi DATE:06/30/2000 15:47:09

The user would get a few errors in the strand layout window if the rows in the strand grid window are not sorted based on the vertical distance of the row from the bottom of the beam.

We should not assume that the DoPsShapeStrandGrid->MoveFirst(), MoveNext() provides us with a sorted list. GetRowNumber() could be called to determine the row number for each strand row.

FROM:jduray DATE:Sunday, November 09, 2003 7:44:32 AM

I think the problem described above has been resolved. There is code to effectively sort the rows.

However, there MAY be another problem. I'm not sure if this is a problem. The strand layout (the actual locations of strands (abw_ps_precast_strand_layout), not the strand grid(abw_ps_shape_strand_grid))

Complete Issue Information

is stored by row_id (relative location rather than absolute location). That row_id is not a foreign key to abw_ps_shape_strand_grid. row_id is not stored in abw_ps_shape_strand_grid. So, if the user deletes a row from abw_ps_shape_strand_grid we do not modify abw_ps_precast_strand_layout until the strand layout window is opened. Then we try to match strands to locations based on a row number (row_id from abw_ps_precast_strand_layout). The row number in the grid is determined by querying a list of sorted row vertical distances.

Example 1: A beam has three rows (2, 4 and 6 inches from the bottom of the beam - b-o-b) of possible strand positions with equal number of positions in each row. In the strand layout window the user places strands in row 1 (2 inches from b-o-b). Then deletes row 1 from the grid. The strand layout window will show the strands in the row that previously was row 2 (4 inches from b-o-b). This behavior seems reasonable except the user is not aware this happened unless the strand layout window is opened.

Example 2: A beam has two rows (2 and 6 inches from the bottom of the beam - b-o-b) of possible strand positions with equal number of positions in each row. In the strand layout window the user places strands in both rows. Then adds a row at 4 inches from b-o-b. The strand layout window will show strands in the bottom two rows, 2 and 4 inches from b-o-b (effectively moving the strands that were 6 inches from b-o-b to 4 inches from b-o-b). This seems ok too if we warn the user.

FROM:jduray DATE:9/19/2005 8:50:35 AM
TF mtg Aug 31, 2005 - add a warning message.

The message should be generic and inform the user that adding or deleting rows may change strand locations and the strand layout should be reviewed for beams that use the current beam shape. Investigate the effort to determine if the shape is being used and report the name of the member and member alt that uses it.

FROM:jihnata DATE:9/21/2005 3:59:43 PM
Message added for 5.4.0 (Alpha Build 2)

FROM:jihnata DATE:9/21/2005 4:09:15 PM
I changed the project back to Support Center.

FROM:xli DATE:9/22/2005 1:19:40 PM
Only deleting causes message, adding doesn't.

FROM:jihnata DATE:10/10/2005 10:23:47 AM
Recheck in Alpha Build 2.

Issue ID: 2769

Subject: Right Equation – Wrong Equation Number in BRASS

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

7/3/2000 1:46:29 PM

Modified By: administrator

6/19/2008 4:02:09 PM

Priority: High

4/19/2016 3:14:28 PM

HRS AASHTO

562

Complete Issue Information

Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	High	Bug - BRASS
	Closed		
Goodrich, Brian	Closed	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2770.10607	Closed	Computation of bottom flange forces at brace points

Description

FROM: dteal DATE: 7/3/2000 8:42 AM

In the Performing AASHTO Specification Checks – 6.10.4.2 Definitions of Flexural Resistance, I the bottom flange with no Longitudinal Stiffeners Provided. BRASS states that equation 6.10.4.3.2a-2 was used. When it really used equation 6.10.4.3.2a-1.

BRASS used the correct equation but printed the wrong equation number.

FROM: bgoodrich DATE: 7/18/2000 1:15 PM

I corrected the equation number in BRASS source code. This will be available in the next service pack or release.

FROM: dteal DATE: 11/15/2000 2:35 PM

FROM:bgoodrich DATE:Wednesday, April 10, 2002 11:52:44 AM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:02:31 PM

Closed.

Complete Issue Information

Issue ID: 2770
Subject: Computation of bottom flange forces at brace points

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Teal, Dean 7/3/2000 1:47:22 PM
Modified By: administrator 6/19/2008 4:02:09 PM
Priority: High
Category: Bug - BRASS

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 7/3/2000 8:42 AM
The BRASS output for my structure on the flange force Summary gave a Pu value that was negative. In Equation 6.10.4.2.5a-4 we are calculating the Cb value, the pl value it is using for the input parameter is shown as a positive value instead of a negative value. The equation deals with the number as a negative and gives the correct results. The BRASS output is displaying the input parameter with the wrong sense.

FROM: bgoodrich DATE: 7/18/2000 4:50 PM
Dean is correct that the computation is performed correctly. The lower force (PI) was being incorrectly output as an absolute value, so I corrected it.
FROM: dteal DATE: 11/15/2000 2:35 PM

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:16:40 PM
Track field marked with "A", so status set to Accepted.

Complete Issue Information

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:25:23 PM
Closed.

Issue ID: 2771
Subject: BRASS output doesn't match Steel Shape library values for section properties

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Thompson, Todd 7/5/2000 1:08:10 PM
Modified By: administrator 6/19/2008 4:02:09 PM
Priority: High
Category: N/A

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	N/A

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	sd_07112327.bbd	
	Wizard_Alternative.out	

Complete Issue Information

Tasks

Name	Current State	Summary
2772.10605	Closed	Longitudinal Stiffeners - Material

Description

FROM: tthompson DATE: 7/5/2000 8:00 AM

I have a user trying to match a hand analysis vs. OPIS. He used the W 30 X 148 steel shape from the library. (It shows an AREA = 43.5 in² and I = 6680 in⁴)

But when he reviews the BRASS output, it shows an AREA = 43.1 in² and I = 6609 in⁴. We're not sure why BRASS is using different section properties than was selected with the member. Of course, both I and A impact the LRFD distribution factors.

Why are different section properties being used than from the library?

FROM: tthompson DATE: 7/5/2000 8:05 AM

I attached the bbd and BRASS out file.

FROM:kkennelly DATE:07/11/2000 08:34:26

The engine related help for BRASS LRFD explains that BRASS LRFD does not use the properties entered on the Properties tab but calculates the properties based on the dimensions entered on the Dimensions tab. (I don't know why it does that.)

Engine related help can be accessed by:

1. Selecting Help/Engine Help Configuration/BRASS LRFD from the menu
2. While on the Properties tab of the Steel I Shape window, select F1 to display the Virtis/Opis help.
3. Select Engine Related Help shown in red to display the BRASS LRFD engine help for this Virtis/Opis window.

Issue ID: 2772

Subject: Longitudinal Stiffeners - Material

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Thompson, Todd 7/5/2000 1:53:21 PM

Modified By: administrator 6/19/2008 4:02:09 PM

Priority: High

Category: Bug

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:14:29 PM

HRS AASHTO

566

Complete Issue Information

Ihnat, Joseph	Closed	High	Bug
---------------	--------	------	-----

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Bearing Force.bbd	

Tasks

Name	Current State	Summary
2774.10603	Closed	Rating Factor Comp for Bearing Force

Description

FROM: tthompson DATE: 7/5/2000 8:47 AM

I entered a structure with longitudinal stiffeners. I left the material blank (it is blue, so I thought it was optional) but when I attempted to analyze (LF) the structure, I kept getting error messages that material was missing for stiffener. I then added the Material for the stiffener and was able to get the analysis to work.

If material is needed, then the GUI needs to be fixed so that it doesn't show blue as being optional.

FROM: jduray DATE: 07/19/2000 13:21:18

Joe - please confirm with Brian that the material is required and then fix the window. Add it to the next patch.

FROM: jihnat DATE: 07/20/2000 13:02:33

Brian, this is reproducible. Can you confirm that the material is required (by BRASS)?

FROM: bgoodrich DATE: 7/21/2000 8:29 AM

In general, Virtis is supposed to collect complete information about a bridge. Allowing users to omit a component's material is not a wise thing to do just because an engine does not use the data. I think the longitudinal stiffener material label font should be changed from blue to black, so it is treated as a required input.

Regarding the export, the longitudinal stiffener material is not required for BRASS-LFD, however, it is required for BRASS-LRFD. Both exports use a common class to generate the longitudinal stiffener groups and schedules because the commands were identical except for the yield stress of the material. I missed checking for this condition. Should I change the export so an error is not generated if the longitudinal stiffener material is not specified for BRASS-LFD?

FROM: kkennelly DATE: 07/25/2000 13:52:59

4/19/2016 3:14:29 PM

HRS AASHTO

567

Complete Issue Information

As per discussion with JAD on 7/21, domain validation added to give warning if steel material not selected for a longitudinal stiffener.

FROM:jihnata DATE:07/25/2000 15:08:47

Changed GUI for Version 4.0 (changed heading from blue to black). Because there is fairly simple workaround for this problem, this change will only be included in a Version 3.0 patch if abgstl3 needs to be changed due to a more critical error.

FROM:jduray DATE:10/09/2000 09:22:32

Gale confirmed this is fixed for Version 3.0 SP4.

FROM: tthompson DATE: 10/11/2000 11:30 AM

Yes, this is fixed and I'm marking it A for accept.

Issue ID: 2774
Subject: Rating Factor Comp for Bearing Force

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	7/10/2000 4:57:48 PM
Modified By: administrator	6/19/2008 4:02:09 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	High	Bug - BRASS
	Closed		
Goodrich, Brian	Closed	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1

Documents

Name	Resource Identifier	Description

Tasks

Name	Current State	Summary

Description

4/19/2016 3:14:29 PM

HRS AASHTO

568

Complete Issue Information

FROM: dteal DATE: 7/10/2000 11:53 AM

In the attached bridge, G1, Span 3. The rating factor computation never appears for the Bearing force for the truck train in the Spec. Checker. But the values do appear in the Steel Limit State Summary Report.

FROM: bgoodrich DATE: 7/19/2000 4:02 PM

In an effort to reduce the amount of intermediate output, I "think" BRASS internally shuts off some output when the same check has been performed and output for the first truck. I'll check into this further.

FROM: bgoodrich DATE: 8/23/2000 1:08 PM

I modified BRASS to output this additional information only when BRASS is called from Opis. This will be available in the 4.0 release of Opis.

FROM: dteal DATE: 11/15/2000 2:36 PM

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:17:21 PM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:25:44 PM

Closed.

Issue ID: 2778
Subject: Oddity with check-out (service pack 3)

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	7/18/2000 9:00:07 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

4/19/2016 3:14:29 PM

HRS AASHTO

569

Complete Issue Information

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515
Brian Goodrich	BridgeTech, Inc.	Goodrich@BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2781.10597	Closed	Live Load Distribution window bug for R/C slabs

Description

FROM: tthompson DATE: 7/18/2000 3:52 PM

I logged on as user "toddt" and checked out a structure definition (not the entire bridge, just the structure definition).

I then logged on as user "virtis" and checked out the BRIDGE. The user virtis then had complete control over the bridge and all lower levels of structures and members.

I then logged on as user "toddt" and had NO control over the structure definition that I had previously checked out.

Is this intended to work this way? Shouldn't one be able to check out a structure definition and then if somebody else tries to either check out the structure (or bridge), that they would not be able to? Seems to be a bug in how it works now.

FROM: jduray DATE: 07/19/2000 13:44:05

You should be able to do what you describe. I will investigate. Did it work correctly prior to SP 3?

FROM: gbarnhill DATE: 7/19/2000 4:48 PM

I reloaded Virtis without any Service Packs and was able to duplicate what Todd did. I authorized two designers to check out a bridge. Logged in as designer1, opened the BWS, highlighted the bridge description name and checked it out. I was able to change something and save the BWS. I could not change any items above the bridge description.

I logged out and the logged in as designer2. I highlighted the bridge and checked it out. I opened the BWS. The tree indicated that I had the bridge and the description both checked out. I was able to change something in the description and save the BWS.

I logged out and logged in as designer1. The Explorer indicated the bridge was checked out to designer2. I opened the BWS and could not change anything.

I agree with Todd that there should be a security check to see if a description is checked out before a second person can check out the entire bridge.

FROM: tthompson DATE: 7/20/2000 11:22 AM

I agree with Gale. I did not see this problem before SP 3, but then again, I did not check it either.

4/19/2016 3:14:29 PM

HRS AASHTO

570

Complete Issue Information

FROM: gbarnhill DATE: 7/20/2000 1:15 PM

From the HELP for CHECKIN/CHECKOUT. Note the last sentence.

Security of bridge data in a multi-user environment is provided by a Checkin/Checkout feature that allows a user to "checkout" a bridge for modification. While a bridge is checked out, it can only be modified by the person that has checked it out. Other users may view the bridge but not modify it. This also applies for structure definitions. When a bridge is checked out, all of its structure definitions are also checked out. Individual structure definitions can be checked out. To modify objects that are owned by the bridge (such as materials, appurtenances, and factors), the bridge must be checked out. A bridge can not be checked out if other users have one or more structure definitions checked out.

FROM:jduray DATE:07/20/2000 16:12:16

In CDoBridge::GetStructDefCheckOutStatus when the bridge is checked out we need to check if the struct def is checked out to a different user than the bridge.

FROM:jduray DATE:07/20/2000 16:24:11

In CDoBridgeManager::CheckOutBridge we need to check if any struct defs are checked out to others and prohibit the bridge checkout if there are. Allow the checkout if struct defs are checked out to the user checking out the bridge.

FROM:jduray DATE:08/01/2000 13:44:43

Added code to prohibit a bridge from being checked out if struct defs are already checked out to another user.

New problem: When a bridge is checked in that contains a struct def that was previously checked out by the same user that is checking in the bridge the checkin of the bridge fails because StructDefCheckedOutDataArray does not contain any rows. Don't know why yet...

UpdateReadOnlyStatus is the where all De objects are set to read-only or read-write.

FROM:jduray DATE:08/09/2000 08:59:24

Fixed for version 4.0.

Issue in Version 3.0 Patch 4 if possible.

FROM:jduray DATE:08/29/2000 13:28:50

FROM:jduray DATE:10/09/2000 09:20:03

Gale confirmed this is fixed for Version 3.0 SP4.

FROM: tthompson DATE: 10/11/2000 11:43 AM

Yes, this all appears to be functioning. I marked A to accept the results.

Issue ID: 2781

Subject: Live Load Distribution window bug for R/C slabs

Folder: /Virtis/Support Center

Primary Contact: lhnat, Joseph

4/19/2016 3:14:29 PM

HRS AASHTO

571

Complete Issue Information

Submitted By: Goodrich, Brian	7/20/2000 6:45:59 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	bracing 3.txt	
	bracing 2.txt	
	bracing bitmap.zip	
	bracing 1.txt	
	check bracing.bbd	

Tasks

Name	Current State	Summary
2785.10593	Closed	3.0 SP3 - Bracing (and other) ranges difficult to set up

Description

FROM: bgoodrich DATE: 7/20/2000 12:35 PM

For R/C slabs, there is a bug in the Live Load Distribution window (Standard tab). For slabs, the multi-lane row is grayed so no values can be entered, and the values from the 1-lane row are supposed to be automatically copied to the multi-lane row. A problem occurs when the user enters a value on the 1-lane row and then selects the OK or Apply buttons. The 1-lane value is not copied to the multi-lane row. This problem occurred during the Minneapolis training. There is not a 3.0 Release version in VI, so I set the version to 4.0 Dev.

FROM: jihnat DATE: 07/26/2000 08:36:55

Fixed for Version 4.0.

FROM: bgoodrich DATE: 12/19/2000 11:19 AM

Tested with Version 4.0 beta 2. Accepted.

4/19/2016 3:14:30 PM

HRS AASHTO

572

Complete Issue Information

Issue ID: 2785
Subject: 3.0 SP3 - Bracing (and other) ranges difficult to set up

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Barnhill, Gale	7/21/2000 7:56:40 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: gbarnhill DATE: 7/21/2000 2:45 PM
HELP !! I've fallen into my bracing ranges and can't get up.

In trying to understand how to correctly set up bracing ranges with spans of 49'2", 65'8", 49'2" (Incident 2687), I created a structure def with 40-60-40 spans and then tried different ways to model the bracing ranges. The BRASS BRACING-SCHEDULE command seems to be very sensitive. I've attached a bitmap showing 3 setups for the Virtis DIPHRAGM tab, 3 text files showing partial BRASS output for the analysis and the bbd file.

For BRACING 1, the Virtis ranges are set to exactly fill the span lengths. BRASS finds the correct

4/19/2016 3:14:30 PM

HRS AASHTO

573

Complete Issue Information

spacing left and right of each pier.

For BRACING 2, I indentionally shortchanged the ranges in each span. BRASS couldn't fine a brace 10' left of pier 1 or 12' left of pier 2.

For BRACING 3, I intentionally overran the ranges in span 1 & span 2. BRASS found a brace 8.5' left of pier 1 but put one at 12.5' rt instead of 2' right of pier 1. At pier 2, BRASS couldn't find a brace left of the pier and set one at 10' rt instead of 4.5' rt.

In the bbd file, the first struc def is the 49-2,65-8,49-2 bridge. The EVEN SPANS struc def is the 40-60-40 bridge.

FROM: bgoodrich DATE: 9/22/2000 2:46 PM
For the bracing tests 2 and 3 that you performed, there are some warnings in the export regarding diaphragms missing at the start and end of some of the spans, which will affect the BRASS analysis. The export does not assume that the supports are braced, which is why there are some gaps in the BRASS bracing schedules. BRASS assumes that bracing ranges will be specified to fill up the entire span, with no gaps.

Jim - I spoke with Dan Glandt and we cannot think of a case where the support would not be braced. Should we assume the supports are braced, so there are no bracing gaps generated by the export? If not, we may need to issue errors instead of warnings.

FROM:jduray DATE:09/22/2000 17:00:56
I don't think we should make any assumptions. The user should define the bridge.

FROM: bgoodrich DATE: 10/16/2000 11:07 AM
I spoke with Keith Fulton about a similar bracing issue where he has the ends of his girders embedded in the abutment and there are no diaphragms at those locations. The user would have to enter a bracing location at the abutments, but exclude entering any weight.

Basically, you must always enter a cross frame at each support even when there is no physical diaphragm. Any deviation will cause incorrect analysis results.

FROM: gbarnhill DATE: 12/19/2000 11:16 AM
OK as is V4.0 Beta 2. Based on clarification of input requirements for BRASS.

FROM:bgoodrich DATE:01/11/2001 15:40:01

Issue ID: 2786
Subject: Low Rating for TrainingBridge1

Folder: /Virtis/Support Center
Primary Contact: Kennelly, Krisha
Submitted By: Goodrich, Brian 7/25/2000 11:57:50 PM
Modified By: administrator 6/19/2008 4:02:08 PM
Priority: High

Complete Issue Information

Category: Unknown

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2788.10590	Resolved	Library factors spec. year

Description

FROM: bgoodrich DATE: 7/25/2000 5:46 PM

Jay noticed that the exterior girders in the girder system in TrainingBridge1 gave low ratings where shear controlled. It appears that the some transverse stiffeners are missing from the schedules in Virtis/Opis. This example was taken from the HDR examples handbook, but the example only provided stiffener information for the interior girder. The transverse stiffener schedules in Virtis/Opis need to be modified, so the ratings do not fail. Jay suggested contacting Mike Grubb to obtain the complete information.

FROM:kkennelly DATE:08/03/2000 16:10:25

I added some stiffeners to the exterior girders so the ratings don't fail. Note that shear at the beam ends of the interior girders does fail but that is because the HDR example handbook uses an eta factor (AASHTO Article 1.3.2.1) of 0.95. Our TrainingBridge1 uses the AASHTO default of 1.0 so our loads are slightly higher than the handbook's and the shear fails.

FROM:bgoodrich DATE:12/15/2001 13:22:03

Accepted.

Complete Issue Information

Issue ID: 2788
Subject: Library factors spec. year

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	7/28/2000 8:28:16 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:07/28/2000 16:25:55

The spec. year for the Library factors is currently 1994 but should be 1998. Please confirm with Brian then change in the database. We will need a script to modify the user's Sybase and Oracle databases.

FROM:mordoobadi DATE:11/01/2000 14:45:51

Fixed.

WL factors for STRENGTH V and SERVICE I limit states were different.

Complete Issue Information

Issue ID: 2791
Subject: 3.0 SP3 - Stiffener Duplicate probelm

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	8/1/2000 2:38:14 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

4/19/2016 3:14:31 PM

HRS AASHTO

577

Complete Issue Information

2791.10587	Resolved	3.0 SP3 - Stiffener Duplicate probelm
------------	----------	---------------------------------------

Description

FROM: tthompson DATE: 8/1/2000 9:31 AM

I don't think the Duplicate feature is working correctly for Transverse Stiffener Ranges. It duplicates/copies everything but the spacing (in) . It leaves this blank.

The duplicate for Diaphragms under Bracing Ranges works correctly. It copies all the data correctly.

FROM:kkennelly DATE:08/04/2000 09:44:55

That is the intended behavior for this window based on incidents reported in early testing (#701, 716, 717, 735). We've tried to make some assumptions about why a user would want to use the duplicate button. For a transverse stiffener, duplicate will calculate the start distance as the previous row's end distance, copy the stiffener definition and leave the spacing blank. We figured the user would use the same stiffener definitions along the beam more than use the exact same spacing.

Issue ID: 2792
Subject: Bridge Explorer - selected bridge loses focus when a bridge checkout/in is selected

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Duray, Jim	8/1/2000 3:39:56 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Resolved	High	Bug

4/19/2016 3:14:31 PM

HRS AASHTO

578

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
Gale Barnhill	Earth Tech	gale.barnhill@aecom.com	(402)363-9515

Documents

Name	Resource Identifier	Description
	PS shear reinforcement ranges.bbd	
	PS shear reinforcement ranges.zip	
	PS shear reinforcement ranges validate message.txt	

Tasks

Name	Current State	Summary
2793.10585	Accepted	3.0 SP3 - negative zero in grid for PS shear reinforcement ranges

Description

FROM:jduray DATE:08/01/2000 10:25:32

FROM: tthompson DATE: 8/2/2000 4:08 PM
Also see Incident 2723 for more on same action.

FROM:jihnat DATE:10/19/2000 09:32:23
The subject of this incident is fixed for Version 4.0 Alpha Build 3 and for Version 3.0 Patch 5.
Incident 2723 is a separate problem.

Issue ID: 2793
Subject: 3.0 SP3 - negative zero in grid for PS shear reinforcement ranges

Complete Issue Information

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Barnhill, Gale	8/2/2000 3:21:02 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2795.10583	Closed	Checkin/out from BWS problem

Description

FROM: gbarnhill DATE: 8/2/2000 10:06 AM

In the window for input of vertical & horizontal shear reinforcement ranges for PS, for the interior spans of a multi span bridge, if zero is entered for the start distance of the first range in the span, a VALIDATE error indicates that shear reinforcement definitions are outside of the beam. The Bridge Workspace Report shows negative zero for the start distances for all spans after Span 1.

The work-around is to start at a distance greater than zero.

Since Virtis/Opis convention is to place an item at the end of a range and not the beginning, it seems reasonable that we should be able to start the range at zero to get the first stirrup placed at some distance from the left end of the beam.

The attached zip file is a bitmap showing the VERTICAL SHEAR REINFORCEMENT tab and the BWS for that data. The same situation occurs for HORIZONTAL REINFORCEMENT.

I've also attached a text file of part of the VALIDATE messages and the BBD file for this bridge.

FROM:kkennelly DATE:08/04/2000 13:14:14

Validation problem is due to tolerances and precision. Domain thinks actual beam in Span 2 starts at 21.1328 m. User entered 0 for reinf start distance in span 2, this got saved to the domain as 21.13279989m. Validation checks if 21.13279989 is less than start of beam in span 2 (21.1328 -

4/19/2016 3:14:32 PM

HRS AASHTO

580

Complete Issue Information

0.0000001 tolerance) which returns true so validation thinks it should check shear reinf like it is in Span 1 not Span 2 which returns an error cause it ends in Span 2 not Span 1. We're working on precision and tolerances now so hopefully that will get fixed.

(I checked the validation for a case where the continuous support distances were 12" not 10" and setting the first shear reinf to start at 0.0 in an interior span works ok. Think problem is trailing 3's in 10/12 = 0.83333333')

FROM:kkennelly DATE:08/04/2000 13:46:22

Getting -0 in BWS report because it reports start distance as Start Dist of shear reinf - Start Dist of precast beam = 69.33333 - 69.333333333333 = -0.000000333333 or -0.000 when it gets formatted. Don't see the -0.000 in the gui window because the gui checks if Shear Start Dist = Beam Start Distance within hardcoded tolerance of 0.000001 which is true and sets Start Dist to 0.000000

FROM:kkennelly DATE:08/04/2000 13:53:06

FROM:kkennelly DATE:08/31/2000 08:35:45

User tolerance has been added to Version 4.0 which should solve the problem in Validation. BWS report formatting fixed to show 0.00 instead of -0.0.

FROM: gbarnhill DATE: 11/15/2000 8:07 AM

OK in V4.0.0 Beta 1

Issue ID: 2795
Subject: Checkin/out from BWS problem

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	8/3/2000 1:39:28 PM
Modified By: administrator	6/19/2008 4:02:08 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

4/19/2016 3:14:32 PM

HRS AASHTO

581

Complete Issue Information

Name	Current State	Summary
------	---------------	---------

Description

FROM:jduray DATE:08/03/2000 09:30:14

This problem existed since 2.0. If a bridge is checked out from within the BWS and then checked in and the BWS closed and then reopened the database did not get read because the bridge still existed in memory.

This problem was occurring because the BWS document class stores the BridgeObjectId when the BWS is opened. Checking a bridge out causes the Domain to assign a new BridgeObjectId which never gets sent to the BWS document. When the BWS closes it calls CDoBridgeManager::RemoveBridge which is supposed to remove the bridge from its list of bridges. The BridgeObjectId that is passed is the original one and RemoveBridge doesn't find it in the list so it does nothing to remove the bridge from memory. The next time the BWS is opened (during the same session) for that same bridge the CDoBridgeManager::RetrieveBridge function first checks if the bridge is in memory. Because it finds it in memory it never reads the database.

Solution:

Modified BWS document to always query DoBridge for the BridgeObjectId instead of relying on the stored value in the document.

Fixed for Version 3.0 service pack 4 and version 4.0.

FROM:jduray DATE:08/03/2000 09:52:21

FROM:jduray DATE:10/09/2000 09:19:47
Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2796
Subject: SP 3 - Problem with Grids control not being greyed out

Folder: /Virtis/Support Center	
Primary Contact: lhnat, Joseph	
Submitted By: Thompson, Todd	8/4/2000 2:22:07 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Medium	
Category: Cosmetic	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	shear_connector_definition.doc	
	sd_43403308.bbd	

Tasks

Name	Current State	Summary
2797.10581	Resolved	SP3 - Problem Defining Channel Shear Connectors - crash

Description

FROM: tthompson DATE: 8/4/2000 9:13 AM

I noticed on a structure (reinforced concrete slab) (structure not checked out) that on the Cross Sections, Reinforcement Tab that the fields are not greyed out. Also the Cross Section Rages also are not greyed out. These fields should be greyed out. One can still not revise the data as it should, just the looks are incorrect.

Thanks

Complete Issue Information

Issue ID: 2797
Subject: SP3 - Problem Defining Channel Shear Connectors - crash

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	8/7/2000 7:13:13 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Open	High	Bug - GUI 2
	On Hold		
	Rejected by TAG		
Ihnat, Joseph	Rejected by TAG	High	Bug - GUI 2

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2798.10580	Rejected by TAG	SP3 - Beam Details - Continuity Diaphragm - Rows not initializing correctly (Objective Grid bug)

Description

FROM: tthompson DATE: 8/7/2000 2:02 PM

I have a user who is not able to Add a Channel Shear Connector Definition. He creates a new shear connector definition, selects channel, then selects Create New Shape. After selecting this he gets a C++ runtime library error message, followed by a VirtisOpis.EXE application error. I get the same results on the same structure. I tried some other structures and I don't get this error message. I've attached the bbd file for the structure. Any help on the error/crash would be

4/19/2016 3:14:33 PM

HRS AASHTO

584

Complete Issue Information

appreciated.

FROM:kkennelly DATE:08/10/2000 15:57:12

I'm able to reproduce a crash by doing the following: New Shear Conn, pick channel, select Create New Shape, enter my own channel, say OK twice to close shear conn window. Reopen shear conn window, change selection from my channel to create new shape, cancel new shape window, then pick Channel radio button while "create new shape" is in list box, get crash.

FROM:kkennelly DATE:08/14/2000 11:39:05
Fixed for Version 4.0.

Issue ID: 2798
Subject: SP3 - Beam Details - Continuity Diaphragm - Rows not initializing correctly (Objective Grid bug)

Folder: /Virtis/Support Center	
Primary Contact: Ihnat, Joseph	
Submitted By: Thompson, Todd	8/8/2000 1:45:22 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: High	
Category: Bug - GUI 2	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 8/8/2000 8:36 AM

Complete Issue Information

I've observed the following problem with the rows initializing incorrectly:

- 1) Created a new row and left it as support one. This row is ok.
- 2) Created a new row and using the number pad, select support two. The row initially populates the same as support one. That is the left side is greyed out and not able to enter the data. If I use the mouse and the drop down window, the row is initialized correctly.
- 3) The same happens if I create another row, using the number pad and select support 3 (3 span bridge). The row is initialized like the previous row but it should be greyed out on the right side. Works okay if I select with the mouse and the drop down data window.

I'm not sure if this is a bug in VIRTIS/OPIS or a bug in the grid control product used to create this window.

FROM:jihnat DATE:08/09/2000 08:52:13

This looks alot like a known grid problem. See incident 77.

The same workaround works here also: Press the number key on the keypad twice.

Issue ID: 2799
Subject: Checkout of structure definitions

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Duray, Jim	8/8/2000 8:52:17 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Resolved	High	Bug

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2801.10577	Resolved	Checking in a structure def while the bridge is checked out

Description

FROM:jduray DATE:08/08/2000 16:15:13

After enabling checkin/out I opened TrainingBridge 1 and copied the struct def twice (and saved to the db) so I then had three struct defs. I then checked out the first two. When I attempted to checkout the third one I got the following error message:

```
E:\Virtis\Dev\data management\abmbrdg\DmStructDefRefLine.cpp(986) : Unsaved data detected.  
03:50:43 PM - Line 986 in source file E:\Virtis\Dev\data  
management\abmbrdg\DmStructDefRefLine.cpp.
```

Doing an export to a txt file after checking each of the struct defs out revealed that after the second one is checked out there are eight new reference lines in the txt file marked as "NewModified" and 12 new reference lines marked as "NotModified".

FROM:jduray DATE:08/08/2000 17:08:06

This appears to be a problem in the bridge cache with the retrieve code. Probably exists since 2.0 - need to confirm.

FROM:jduray DATE:08/09/2000 15:09:30

Comparison of txt export files:

- A - after opening the BWS (tb1 no checkout.txt),
- B - after checking out one SD (tb1 1 checkout.txt),
- C - after checking out second SD (tb1 2 checkout.txt),

No differences between A and B.

The following differences between A and C:

- CDmStructDefRefLine - 20 extra rows (18 vs 38)
- CDmStlComponent - 48 extra rows (72 vs 120)
- CDmSuperLoadCase - 8 extra rows (12 vs 20)
- CDmSuperLoadScenario - 2 extra rows (3 vs 5)
- CDmSpngMbrDef - 8 extra rows (12 vs 20)
- CDmDeckPanel - 2 extra rows (3 vs 5)
- CDmSupportLine - 4 extra rows (6 vs 10)
- CDmSuperStructMbr - 8 extra rows (12 vs 20)
- CDmStlBeamAssembly - 40 extra rows (60 vs 100)
- CDmSuperStructSpngMbrAlt - 8 extra rows (12 vs 20)

4/19/2016 3:14:33 PM

HRS AASHTO

587

Complete Issue Information

CDmSupport - 16 extra rows (24 vs 40)
CDmAnalPt - 8 extra rows (12 vs 20)
CDmConcRailingLoc - 4 extra rows (6 vs 10)
CDmDiaphLoc - 24 extra rows (36 vs 60)
CDmGirderSysStructDefFk - 2 extra rows (3 vs 5)
CDmHaunchRange - 8 extra rows (12 vs 20)
CDmLanePosition - 2 extra rows (2 vs 5)
CDmMbrAltConcDeckRange - 8 extra rows (12 vs 20)
CDmMbrAltShearConnRange - 12 vs 20
CDmMbrDistribLoad - 12 vs 20
CDmStlBearingStiffLoc - 24 vs 40
CDmStlSpliceLoc - 12 vs 20
CDmStlTransStiffLocRange - 129 vs 215
CDmSuperLoadScenarioItem - 12 vs 20
CDmSuperStructDefFk - 3 vs 5
CDmSuperStructSpngMbr - 12 vs 20
CDmTopFInglatSupportRange - 12 vs 20
CDmSuperStructSpngMbrFk
CDmSuperStructMbr

and probably many more!

bbd files are attached.

FROM:jduray DATE:08/09/2000 15:39:37

Checking out the 1st SD makes no inappropriate changes to the domain but must cause the retrieve code to be incremented in the bridge cache thereby causing the above listed Dm objects to reread the db during the checkout of the second SD.

FROM:jduray DATE:08/14/2000 10:29:38

Open the BWS (without anything checked out). Set a break in CDmStructDefRefLine::Retrieve and monitor iRetrieveCode being passed in.

Checkout the first SD, iRetrieveCode = 3, m_iRetrieveCode = 2 executes else if (iRetrieveCode > m_iRetrieveCode) block

Checkout the second SD, iRetrieveCode = 4, m_iRetrieveCode = 3 executes else if (iRetrieveCode > m_iRetrieveCode) block

Checkout the third SD, CDmBridgeCache::SaveBridge fails, never gets to CDmStructDefRefLine::Retrieve.

Failure is due to the extra rows in the cache with an incorrect status.

FROM:jduray DATE:08/14/2000 10:36:10

The retrieve code is being incremented by CDoBridge::CheckOutStructDef(long IStructDefObjectId, LPCTSTR lpszComment) when it calls pDmBridgeCache->SetCheckOutStatus(IStructDefId, TRUE). It appears that this causes m_xDoDataControlCom.Retrieve(TRUE) that is a few lines later to retrieve all objects that are children of the structure def. The problem is that these objects were not purged prior to their retrieval and as a result we get extra copies in the cache. When checking out a bridge the cache creates a new cache and then retrieves into it.

FROM:jduray DATE:08/14/2000 13:55:51

4/19/2016 3:14:33 PM

HRS AASHTO

588

Complete Issue Information

Determine if we are trying to only retrieve the struct def being checked out?

FROM:jduray DATE:08/28/2000 15:21:55

FROM:jduray DATE:08/29/2000 10:12:15

The problem is in the Dm Retrieve function. The where clause generated to exclude structure definitions from the retrieve is incorrect when one or more SD's are checked out. The generated where clause is:

where bridge_id = 1 AND (struct_def_id <> 1 OR struct_def_id <> 2)

It should be:

bridge_id = 1 AND struct_def_id <> 1 AND struct_def_id <> 2

This needs to be changed in all of the above listed Dm's (by changing the template and regenerating the Dm's).

There is still a problem with CDmStructDefRefLine and 8 extra rows with a status flag set to NewModified. Check on whether this will be corrected when the other Dm's are fixed.

FROM:jduray DATE:08/29/2000 10:56:19

Fixing DmSuperStructMbr also fixed the 8 extra rows in CDmStructDefRefLine.

FROM:mordoobadi DATE:10/04/2000 10:25:02

The template changed, code regenerated for the structure definition level Dm objects.

Issue ID: 2801
Subject: Checking in a structure def while the bridge is checked out

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	8/14/2000 1:45:04 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
	No Delete 32.bbd	
	Dean BID32 detail.txt	
	Dean BID58.LST	
	Dean BID32.LST	
	reference line relationships.sql	
	No Delete 58.bbd	

Tasks

Name	Current State	Summary
2802.10576	Closed	Problems deleteing bridges

Description

FROM:jduray DATE:08/14/2000 09:42:35

Versions up through 3.0 allow the user to checkin a structure def while the bridge is checked out. This can be confusing to the user since the struct def continues to appear as checked out as long as the bridge is checked out. This is correctbecause of the confusion should not be allowed.

Disabled for version 4.0.

Issue ID: 2802
Subject: Problems deleteing bridges

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Teal, Dean	8/17/2000 12:20:01 PM

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Martin, Ed	Resolved	Urgent	Bug

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285
Ed Martin	Michael Baker Jr., Inc.	emartin@mbakercorp.com	(304) 769-2126

Documents

Name	Resource Identifier	Description
	sd_36309106.bbd	
	027100.dat	

Tasks

Name	Current State	Summary
2806.10573	Resolved	SP3 - Error messages with Shear Connectors on PS Girder bridge

Description

FROM:jduray DATE:08/17/2000 08:19:46

The following is from a e-mail from Carol Baldry at KsDOT on behalf of Dean:

Jim,

We are running Virtis/Opis version 3 with an Oracle database v. 7.3.3.4 on Windows NT.

Dean Teal is having problems deleting structures. He has been able to delete several structures, but sometimes the delete fails. Yesterday, he was able to delete one structure, but the second one failed. He received the following error messages:

Unable to delete bridge!

03:39:17 PM - Line 2715 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Error deleting record from database record set.

03:39:17 PM - Line 1099 in source file E:\virtis\Dev\data management\abmbrdg\DmStructDefRefLine.cpp.

4/19/2016 3:14:34 PM

HRS AASHTO

591

Complete Issue Information

No rows were affected by the update or delete operation.

We talked with you about this same error in May. You gave us your settings for the rollback segments and Open cursors parameters. We did enlarge our rollback segments to :

Initial_Extent = 106496 bytes
Next_Extent = 262144 bytes
Min_extent = 3
Max_extent = 160
and open cursors = 10,000

These settings exceed your recommendations.

We have watched the rollback segments while Dean Teal executed a delete. The first delete used approximately 22 meg of space with approx 40 meg available, the second delete failed and did not use any of the rollback segment.

FROM:jduray DATE:08/17/2000 08:21:19

This could be related to MoDOT delete problems (VI 2698).

We should send Dean a 3.0 DmBridgeCache.dll with the code that posts an error message indicating the object where the delete failed. Send same dll to MoDOT.

FROM:jduray DATE:08/17/2000 08:23:58

FROM:jduray DATE:08/21/2000 12:23:09

It appears the problem is related to the data stored in the database table abw_struct_def_ref_line. The x and z coordinates for reference lines are computed within the domain for girder system struc defs. I have been able to reproduce the described behavior if I enter a value with more than 15 significant digits into the row. For example:

1. and 29 decimal digits e-15 -> can delete
1. and 30 decimal digits e-15 -> can not delete

123456789012345 -> can delete
1234567890123456 -> can not delete

I have tested both Oracle's and Microsoft's ODBC drivers.

Next - ask Dean to run the following:

```
select bridge_id, struct_def_id, struct_def_ref_line_id,  
       to_char(x),  
       to_char(y),  
       to_char(z),  
       to_char(direction_angle_x),  
       to_char(direction_angle_y),  
       to_char(direction_angle_z),  
       to_char(straight_line_length) from abw_struct_def_ref_line where bridge_id = 32
```

FROM:jduray DATE:08/23/2000 09:03:39

I imported Dean's bid 32 and compared the values in our Oracle db with the values Dean (carol)

4/19/2016 3:14:34 PM

HRS AASHTO

592

Complete Issue Information

reported to us. The values that differ are as follows:
reference line 7 (the one that fails to delete):

	Dean	Our Import
x	0.00000000000000590803911327231	
y	9.54468858735449000000000000000000E-30	

Reference line 10 has the same differences. The other lines are identical between Dean's data and the import from his bbd file.

I suspect that changing the values to 0.0 will correct the problem and allow the rows to be deleted.

update abw_struct_def_ref_line set x=0.0, y=0.0 where bridge_id=32 and struct_def_id=1 and (struct_def_ref_line_id=7 or struct_def_ref_line_id=10)

At this point this problem is only occurring in abw_struct-def_ref_line. We are going to modify CDoReferenceLine and CDoGirderSystemStructDef to set the coordinates of the reference line to zero if the computed values are less than the tolerance.

Incidents such as this one will be resolved as necessary by preparing a script to correct the data in the user's database. The script should set very small numbers (abs(1.0 e-14) and smaller) to zero.

For the long term we are going to investigate a change to CDeDouble and CDeFloat SetValue function to truncate the value to 14 and 6 significant digits respectively. We will write a test program to test the algorithm on thousands of generated numbers to make sure it works properly.

FROM:jduray DATE:08/23/2000 10:38:21

FROM:jduray DATE:08/23/2000 15:45:49
Dean (Carol) ran the script to change the values and Dean was then able to delete the bridge (BID 32).

FROM:jduray DATE:08/23/2000 16:17:39
Dean (Carol) ran the script to change the values and Dean was then able to delete the bridge (BID 58).

FROM:jduray DATE:08/23/2000 16:46:10
Procedure for resolving this problem:

- 1) Replace abmbche.dll with the version that shows us which cache object is causing the problem - should be CDmStructDefRefLine.
- 2) Replace abmbrdg.dll with the version that shows us which reference line is causing the problem - code is in CDmStructDefRefLine::ProcessDbDelete.
- 3) Have the user execute the select statement show above using the correct bridge_id.
- 4) Verify the problem is the same as the Kansas problem.

Complete Issue Information

- a) Load the bbd file for the bridge into Virtis (here in our db) and save.
- b) Compare the the user's data to what was imported into our db
- c) If the 15th significant digit differs between the user's db and the same bridge in our db and the value is nearly zero the problem can be fixed by this procedure.

5) Have the user execute the following script for each offending reference line (as determined in 2 above):

```
update abw_struct_def_ref_line set x=0.0, y=0.0 where bridge_id= xxx and struct_def_id= xxx and struct_def_ref_line_id = xxx
```

6) Delete the bridge.

7) Restore the original dll's.

FROM:kkennelly DATE:09/11/2000 14:16:00
Abobrdg.dll has reference line changes.

FROM:jduray DATE:10/09/2000 09:19:06
Gale confirmed this is fixed for Version 3.0 SP4.

FROM:jduray DATE:10/19/2000 08:16:21
The code revisions to reslove this had to be backed-out due to side affects. Continue investigating.

FROM:jduray DATE:10/19/2000 08:52:55
I have written a utility TestDigits.exe that allows me to add floating point values to the test_digits table in Oracle. The utility accepts floating point numbers and equations which it can parse and perform the required calculation including trig functions. The only way I can reproduce this problem is to use Oracle SQLWorksheet and input a number with more than 15 significant digits. The TestDigits utility never inserts more than 15 sign. digits into the database no matter what the calculation is or what the number(s) are. TestDigits can always delete what it inserts. It cannot delete a number containing more than 15 sign. digits input using SQLWorksheet.

I am using Oracle 8.00.05 ODBC driver. This may be an Oracle ODBC problem. Dean is using 7.3.3.4 of Oracle. I don't know what driver version.

FROM:jduray DATE:10/19/2000 12:53:49
Set x and y (in abw_struct_def_ref_line to 0 if the actual value is nearly 0. Do nothing with z.

FROM:kkennelly DATE:10/24/2000 08:36:10
In DoGirderSystemStructDef.cpp, x and y for the struct def ref line are set to 0 if actual value almost zero. In DoReferenceLine.cpp, x and z are still set to zero in the SetFiniteLine and SetInfiniteLine functions. It seems to be ok to keep setting z to zero, it's not having any affect on the order of the girders. Also if the direction angle is equal to $\text{Pi}/2$, its cos value is set to zero in the FindIntersection function so that we don't get values back that are very close to zero when they should be exactly zero. Fixes made for Version 3.0 Patch 5 and Version 4.0.

FROM: dteal DATE: 11/15/2000 2:37 PM

FROM:kkennelly DATE:12/14/2000 08:24:01
Investigation of incident 3015 led me to discover that the girders are still being added out of order when creating a new struc def system in Version 4.0 Beta 2. My previous statement from 10/24 about keep

4/19/2016 3:14:34 PM

HRS AASHTO

594

Complete Issue Information

setting z to zero is incorrect. That change will be backed out for Version 4.0 Release.

Issue ID: 2806
Subject: SP3 - Error messages with Shear Connectors on PS Girder bridge

Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Thompson, Todd	8/18/2000 4:28:05 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 8/18/2000 11:20 AM

I have a PS girder bridge and I keep getting error messages that SHEAR CONNECTOR ranges overlap and SHEAR CONNECTOR ranges not on member alternative.

I have no shear reinforcement added.. PLUS there is no way to access SHEAR CONNECTORS in the GUI.

I have attached the bbd file. Bridge was originally imported from BARS.

FROM:kkennelly DATE:08/22/2000 08:24:58

There must have been a problem with the import from Bars because I imported your bridge into virtis and checked the database. This bridge has 4 shear connector ranges in the database. I'll check into the import from Bars.

FROM:kkennelly DATE:08/22/2000 10:22:42

4/19/2016 3:14:35 PM

HRS AASHTO

595

Complete Issue Information

Can you attach the bars file so I can check the import?

FROM: tthompson DATE: 8/28/2000 11:28 AM

I added the BARS data set.

When you run an analysis or do a validation, do you get the error messages I reported? I doesn't surprise me that there are 4 ranges in the database. that wasn't the problem.

FROM:kkennelly DATE:08/29/2000 08:21:13

I get the same error messages you got. I'm not sure why you say the 4 ranges of shear connectors doesn't surprise you and that that's not the problem. In our gui, you can't enter shear connectors for a ps bridge. I think it is a problem if you import a ps bridge and the import creates shear connectors that shouldn't be there or can never be accessed.

FROM: tthompson DATE: 8/31/2000 8:49 AM

Oops, never mind my comment on the shear connectors, I was thinking of shear reinforcement. Sorry for the confusion.

FROM:kkennelly DATE:08/31/2000 11:11:54

I also get shear connectors when I import 027100.dat. I think the problem is the import sees the "C" in column 27 of the card 14 line and sets the slab as composite (which is ok I think). Line 7155 in BarsImportDoc.cpp creates DoMbrAltShearConnectorRangeSet when the slab is composite. I think for a ps beam, maybe we should be creating DoBeamShearReinfLocationSet and adding a Horizontal range, setting it to composite instead of creating shear connectors.

FROM:kkennelly DATE:08/31/2000 16:26:14

I spoke to Brian about how export determines if PS is composite. It first looks if any Horizontal PS Shear Reinf ranges exist. If they do, then composite flag is set. (Engine related help not really clear on this, it says nothing on tab used. It really means doesn't use spacing, etc. but is used to determine compositeness). If Horiz PS Shear Reinf ranges don't exist, export then checks if Vert PS Shear Reinf extends into deck.

Fix for import: If slab is described in data file as composite, create a Horizontal PS Shear Reinf range over whole length of mbr that is default "Composite".

Will we need to write a script to remove shear connectors from ps beams previously entered?

FROM:jduray DATE:10/09/2000 10:07:16

Krishna - please prepare a workaround description for the web page.

Then assign to Ed to fix the import.

Then assign to Mehrdad to prepare the script.

Let's get this in Patch 5 ASAP.

FROM: emartin DATE: 10/9/2000 10:30 AM

FROM:kkennelly DATE:10/09/2000 14:20:55

Received code from Ed and checked in to Virtis version 4.0. Needs checked into 3.0Maintenance after Ed gets back to me about some other incidents.

FROM:kkennelly DATE:10/09/2000 15:18:14

FROM:kkennelly DATE:10/13/2000 10:04:06

Tested and repinned in 3.0Maintenance for Patch 5.

Issue ID: 2808

4/19/2016 3:14:35 PM

HRS AASHTO

596

Complete Issue Information

Subject: Harped strands inverted during import of BARS data file	
Folder: /Virtis/Support Center	
Primary Contact: Martin, Ed	
Submitted By: Goodrich, Brian	8/18/2000 10:16:09 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	RC Slab.bbd	

Tasks

Name	Current State	Summary
2809.10570	Closed	Rating Factors = 0 in the Results Graph

Description

FROM: bgoodrich DATE: 8/18/2000 4:04 PM

While working on Incident 2794, I imported a prestress file from Gale Barnhill. It appears that the harped strands are inverted during import, i.e., the harped strands at the beam ends are below those as the middle of the beam. The attached data file is correct as far as I know. Please investigate.

FROM: bgoodrich DATE: 8/21/2000 12:57 PM

Note that this occurs in the Version 4.0 development build, not the 3.0 Release.

FROM:mordoobadi DATE:11/01/2000 12:04:59

Ed, problem with sorting of the strands is fixed, I will send you source code today.

4/19/2016 3:14:35 PM

HRS AASHTO

597

Complete Issue Information

FROM: emartin DATE: 11/2/2000 5:04 PM
FROM: emartin DATE: 11/3/2000 2:06 PM
Fixes for Incident 2924 (sorting strands) corrected problems with import.

FROM: gbarnhill DATE: 11/15/2000 8:09 AM
OK in V4.0.0 Beta 1

FROM: bgoodrich DATE: 12/19/2000 11:30 AM
Accepted for Gale.

Issue ID: 2809
Subject: Rating Factors = 0 in the Results Graph

Folder: /Virtis/Support Center
Primary Contact: Ordoobadi, Mehrdad
Submitted By: Teal, Dean 8/21/2000 6:37:44 PM
Modified By: administrator 6/19/2008 4:02:07 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/21/2000 1:31 PM
In the attached RC Slab structure all the rating factors are zero in the Results Graph (LRFD Design Review). Why?? In the Spec Checker the Rating Factors are Non-zero.

Complete Issue Information

FROM:mordoobadi DATE:10/09/2000 10:03:10

I imported the rating BBD file and did an LRFD Design Review analysis with HL-93 Design Review template I got non-zero results for moment rating factors.

I didn't get any values for SHEAR rating factors. I compared th e results with the tabular reports they seem to match.

Brian, I assign this to you to investigate why we are not getting shear rating factors from BRASS.

FROM:bgoodrich DATE:10/10/2000 11:38:00

Dean specified to ignore shear on the member alternative, which is why there are no shear rating factors. Also, I ran this bridge with the HL-93 Design Review template and got non-zero rating factors for moment, but only after turning on the R/C output options on the Output tab of the Analysis Settings window.

FROM:dteal DATE: 11/15/2000 2:38 PM

FROM:mordoobadi DATE:11/15/2000 16:15:22

Accepted by Dean.

Issue ID: 2810
Subject: Results Graph – Duplicate Location

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Teal, Dean 8/21/2000 6:39:22 PM
Modified By: administrator 6/19/2008 4:02:07 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Assigned	High	Bug
	Duplicate		
	Closed		

4/19/2016 3:14:35 PM

HRS AASHTO

599

Complete Issue Information

Goodrich, Brian	Closed	High	Bug
-----------------	--------	------	-----

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2811.10568	Suspended	User Group - Improve management of Analysis Output

Description

FROM: dteal DATE: 8/21/2000 1:33 PM

In the attached RC Slab structure I found that for span 1, Location 13.50 m is listed twice. Should it be?

FROM: dteal DATE: 11/16/2000 11:48 AM

see #2658

FROM:mordoobadi DATE:11/9/2001 10:36:01 AM

This seems to be caused by BRASS supplying duplicate points (very close) to Virtis. The Tolerance that we are using right now is 0.0000001. I changed it to 0.001. This resolves the problem. In the meantime Brian is going to investigate why we get two different set of data for some points.

FROM:bgoodrich DATE:12/05/2001 11:14:54

This is a duplicate issue to 2658.

Issue ID: 2811
Subject: User Group - Improve management of Analysis Output

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim

Complete Issue Information

Submitted By: Duray, Jim	8/23/2000 2:56:25 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	Urgent	Enhance BRASS
	Closed		
Goodrich, Brian	Closed	Urgent	Enhance BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	RC Slab.bbd	

Tasks

Name	Current State	Summary
2812.10567	Closed	RC Slab Error

Description

FROM:jduray DATE:08/23/2000 10:51:59

This incident organizes several other incidents for resolution for version 4 and 4.1.

E-mail from Brian:

I think we need a domain function for getting the export path and base file name without any extension. There is a function called GetInputOutputFilePath in UiAnalysisProgressDlg.cpp, BrassAnalysisCtl.cpp, and MaderoAnalysisCtl.cpp that all do the same thing, so there is a possibility for inconsistencies to occur.

The path should contain the following (the only new item is the engine string which can be retrieved using the domain):

4/19/2016 3:14:36 PM

HRS AASHTO

601

Complete Issue Information

Drive:\VirtisOpisPath\Bridge\StructureDef\Member\MemberAlt\Engine

The base file name should be derived from the member alternative name. Then for Madero, I can append the vehicle name as we discussed.

Also, occasionally, I cannot open the LOG file with the Virtis viewer even though it exists in Windows Explorer. I think the viewer may not use the same method for constructing the path for which to open the LOG file. Here is another case instance of where a domain function would be handy.

The following needs to be scoped to improve the way we manage output:

Bridge Explorer:

- 1) a utility for viewing and maintaining the analysis events stored in the database. (80)
- 2) a utility for viewing and maintaining the engine output files on the disk. (80)
- 3) add the option to not write batch rating results to the database but still review them the way we do now (from the Bridge Explorer). (80) -----done for 4.1

Bridge Workspace:

- 1) a utility for viewing and maintaining the analysis events stored in the database. (40)
- 2) a utility for viewing and maintaining the engine output files on the disk. -----done for 4.0

FROM:jduray DATE:12/04/2000 12:24:08

Need to add a user preference for the user to chose whether to delete analysis events from memory when a new analysis is performed. (24)

FROM:jduray DATE:5/21/02 9:08:31 AM

Some of this work was authorized by the Task Force and has been completed. The remaining work is not authorized, therefore, this incidnet is changed back to Suspended.

FROM:jduray DATE:5/22/02 11:39:55 AM

Issue ID: 2812
Subject: RC Slab Error

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	8/23/2000 7:40:43 PM
Modified By: administrator	6/19/2008 4:02:07 PM
Priority: Urgent	
Category: Enhance BRASS	

Complete Issue Information

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Accepted	Urgent	Bug - BRASS
	Closed		
Goodrich, Brian	Closed	Urgent	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	Updated Slab Error.bbd	
	RCSH Slab Error.bbd	

Tasks

Name	Current State	Summary
2815.10564	Closed	Analysis Point – Node Point

Description

FROM: dteal DATE: 8/23/2000 2:34 PM

I have attached a RC Slab structure. The member alternative named "Good One" works fine. The member alt. Named "Bad One" is the problem. Both of these member alt's have the same number of sections and ranges. The only difference is "Bad One" has one less section in span 1 and one more section in span 2 and "Good One" (hence, they both still have the same number of sections). I received the following message when Rating "Bad One".

Error generating BRASS span commands!

No. of ranges = 16 (Maximum = 15)

Maximum number of web profile ranges exceeded for BRASS!

Error generating BRASS span commands!

The error message says I have 16 ranges. I believe that I have 40 ranges total (20 per half). So what does this error message mean and what is wrong with the member alt "Bad One"?

FROM: bgoodrich DATE: 8/29/2000 3:49 PM

For BRASS-GIRDER(LFD), there are a maximum of 15 web profile ranges per span. For BRASS-GIRDER(LRFD), the limit is 20 ranges web profile per span.

Jim - Should this be treated just as a limitation of the engine?

4/19/2016 3:14:36 PM

HRS AASHTO

603

Complete Issue Information

FROM:jduray DATE:08/30/2000 10:04:44

Dean says he has 20 in each span. Why does the error message indicate 16? Why does he have so many ranges? How would he model this bridge using BRASS without Virtis/Opis? Does he have this many because we include the depth of section in the cross section?

FROM: bgoodrich DATE: 8/30/2000 8:39 AM

There are three spans not two in Dean's structure, with 12 ranges for spans 1 and 3 and 16 ranges for span 2. There are several parabolic segments at the right end of span 1, all of span 2, and the left end of span 3. I imagine that several of the parabolic web segments could be merged to create fewer segments in each span. However, this would require writing an algorithm in the export to do so. Months ago, we chose to add an algorithm to BRASS to merge the web segments, so it benefited both BRASS and Virtis/Opis user.

I think we are going to run into these engine limitations more often as more engineers start using Virtis/Opis and enter unusual and complex structures.

FROM: dteal DATE: 8/30/2000 11:02 AM

Jim asked why I had so many ranges. This is a KDOT standard Reinforced Concrete Haunched Slab bridge. Being steel can not be entered over a range it has to be entered in a cross section defined at each bar cut off point. With both top (3 bar pattern) and bottom (4 bar pattern) longitudinal steel, the number of bar cut off points add up. Cross section can not be combined and still model the slab correctly.

FROM:jduray DATE:08/30/2000 12:11:48

Being referred to Wyoming as a BRASS enhancement.

FROM: bgoodrich DATE: 8/30/2000 11:07 AM

For an R/C slab, the rebar is basically located in the web. BRASS cannot analyze this structure by only defining the web and rebar. The work-around in BRASS would be to define a portion of the web as the top and bottom flange, so rebar could be defined independently from the web profile. The number of cross section change points per span in BRASS-LFD is 18 or 19, so I think this structure could be analyzed with BRASS by defining cross sections as equivalent I-shapes where the flange widths equal the web thickness. The export simply generates commands as the structure is defined. The same problem could also occur in T-beams where there is no bottom flange.

Jim - Please consider this and let me know if I should still forward this issue to WYDOT.

FROM:jduray DATE:08/30/2000 13:26:20

Our goal in Virtis/Opis is to model the bridge without consideration of the engine to be used for analysis and its shortcomings. I don't think the user should model this slab bridge as an I-beam. The export could do this but then when the user reviews the BRASS output he/she may be confused by I-beam output instead of slab output. I think BRASS should be changed to accept more ranges and I think the total ranges within a beam should be equal to or greater than the max per span * number of spans.

FROM:jduray DATE:11/29/2000 14:40:54

Brian - did we ask WyDOT about increasing the number of ranges per span?

FROM:bgoodrich DATE:08/09/2001 13:20:32

The number of cross section and web ranges has each been increased to 40 per span in both BRASS-GIRDER and BRASS-GIRDER(LRFD). This is related to Incident 2938. Fixed for Version 4.1.

4/19/2016 3:14:36 PM

HRS AASHTO

604

Complete Issue Information

FROM: bgoodrich DATE: Wednesday, April 10, 2002 12:20:02 PM
Track field marked with "A", so status set to Accepted.

FROM: bgoodrich DATE: Wednesday, April 10, 2002 12:27:27 PM
Closed.

Issue ID: 2815
Subject: Analysis Point – Node Point

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Teal, Dean	8/25/2000 4:38:15 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: Urgent	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 8/25/2000 11:32 AM

Structure is a 3 span RC slab with an integral pier beam. The structure definition is the second one (15-20-15 MS22.5) I received the below error in Opis. Virtis runs to completion. The error message is too ambiguous (undefined terminology) for me as a non-BRASS user to find the input error. I'm sure other non-BRASS users would have the same problems. I know the error location is at the face of the pier beam. I have a POI defined there.

I don't know what to fix!

Structural Analysis Errors (2300) - Analysis point and node point do not coincide
Structural Analysis Errors (2300) - Analysis point and node point do not coincide

4/19/2016 3:14:36 PM

HRS AASHTO

605

Complete Issue Information

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTO BridgeWare\VirisOpis30\RCSH_Error\15-20-15_MS22_5
MS_22_5,_11_m_Rdwy\Interior_1800_mm_Strip.ERR
Fatal Error Encountered - Unexpected Termination
Data File: C:\Program Files\AASHTO BridgeWare\VirisOpis30\RCSH_Error\15-20-15_MS22_5
MS_22_5,_11_m_Rdwy\Interior_1800_mm_Strip.dat

Error No.: 2300

Type : Structural Analysis Error

Location : Data File

** ERROR: Analysis points must be at node point locations. Node point locations are 1/10 points, cross-section change points, hinge locations, special analysis point locations, and web depth change points.
109.667 is not at a node point. Adjust its position so that it is.

Error No.: 2300

Type : Structural Analysis Error

Location : Data File

One or more analysis points to not coincide with node points. See detailed error messages above.

----- End of Contents of BRASS Error File -----

FROM: dteal DATE: 8/25/2000 12:53 PM

For this problem structure, I found an error in Cross Section 12, it's depth should be 740.724 mm. This didn't change the original error message.

The structure definition 15-20-15 MS18, Member MS18, 11 m Rdwy has had the structure defined in the same way, and that one works just fine. That's why I don't understand the error message meaning.

FROM: dteal DATE: 8/25/2000 2:34 PM

New Attachment

For the 15-20-15 MS18 structure definition, Member Alt. "Interior 1800 mm Strip", it works fine. Then I reordered the POI's – mind you, they are all the same, just a different order, Member Alt "Reordered POI's). Then I will get the same error I got with the 15-20-15 MS22.5 Structure Definition.

FROM:kkennelly DATE:08/30/2000 16:26:29

I think the problem is the point of interest at Span 1 14.5m. $14.5/15 = 0.9667$ which is similar to the error you get (109.667). BRASS is telling you that this point is not a node point as defined by BRASS (For BRASS, Analysis points must be at node point locations. Node point locations are 1/10 points, cross-section change points, hinge locations, special analysis point locations, and web depth change points.). You don't have a cross-section change point at 14.5m so BRASS won't run.

15-20-15 MS18, Member MS18, 11 m Rdwy works cause it does not have analysis point at Span 1 14.5m.

The error message you get about 109.667 is misleading but that is an internal message from BRASS. BRASS refers to Span 1 14.5m as 109.667 , the data file generated by the export uses the 109.667 connotation.

FROM:kkennelly DATE:08/31/2000 08:10:35

Updated Slab Error.bbd: 15-20-15 MS18 structure definition, Member Alt. "Interior 1800 mm Strip"

4/19/2016 3:14:36 PM

HRS AASHTO

606

Complete Issue Information

runs ok but "Reordered POI's" doesn't. They both have a poi at 14.5m but only Reordered POI's gives the error about 14.5m not being a node point.

FROM: bgoodrich DATE: 8/31/2000 2:45 PM

The problem stems from specifying too many non-tenth points of interest per span. The BRASS maximum was set to 5 and Dean had 12 for span 1. The work-around until version 4.0 is release is to reduce the number of non-tenth points of interest per span. I have corrected the problem in BRASS for the version 4.0 release.

FROM: dteal DATE: 9/1/2000 10:52 AM

Reducing the number of non-tenth point POI's is not an option. These POI's are the bar cut off points and are not adjustable on existing structures. I need another work around

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:20:32 PM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:28:06 PM

Closed.

Issue ID: 2816
Subject: Longitudinal Stiffener Ranges tab, % should be in column heading

Folder: /Virtis/Support Center	
Primary Contact: Boukamp, Sabine	
Submitted By: Teal, Dean	8/25/2000 4:39:45 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Bug - GUI 2	

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Assigned	High	Bug - GUI 2
	On Hold		
Boukamp, Sabine	Resolved		
	Resubmit		
	Resolved		
	Closed		
Boukamp, Sabine	Closed	High	Bug - GUI 2

Contacts

4/19/2016 3:14:37 PM

HRS AASHTO

607

Complete Issue Information

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2817.10562	Suspended	Metric Reinforcing Steel

Description

FROM: dteal DATE: 8/25/2000 11:33 AM

The following is an excerpt from the help screen related to the Longitudinal Stiffener Ranges tab. When you use % of Web option, the units at the top of the column are still in inches. So the user doesn't get confused, this column heading should reflect the "%" option being used.

Y

Enter the distance or percentage from the location selected in the "Measured From" column to the centroid of the longitudinal stiffener plate, as shown in the sketch.

Measured From

Select from the following:

% of Web – Bottom Flange – the Y distance is measured from the top of the bottom flange and is entered as a percentage of the web depth (with units of percent)

% of Web – Top Flange – the Y distance is measured from the bottom of the top flange and is entered as a percentage of the web depth (with units of percent)

FROM:kkennelly DATE:1/22/2002 3:56:03 PM

We can't change the title of the column since each row in the grid can be referenced in a different way (inches or percent).

FROM:jduray DATE:4/12/2005 10:59:15 AM

REmove the units from the header and put them in the Measured From text.

FROM:sboukamp DATE:5/16/2005 10:54:45 AM

Made the above described changes. Fixed in 5.3.0 Service Pack 1.

FROM:dteal DATE:Monday, June 27, 2005 3:36:53 PM

5.3.0 SP1 Beta 1

The "measured from" pulldown doesn't display the correct units. I was in a structure created in SI, I changed my unit of measure to US Customary. The units in the pulldown stayed in SI, everything else on the window displayed correctly for the units requested.

4/19/2016 3:14:37 PM

HRS AASHTO

608

Complete Issue Information

FROM:dteal DATE:Tuesday, June 28, 2005 8:10:18 AM
Maybe the pulldown needs the text (in,mm) - I think we have this format in some other places.

FROM:sboukamp DATE:7/1/2005 9:29:16 AM
Pulldown should get updated with the correct unit now. Resolved for 5.3.1.

FROM:dteal DATE:Thursday, November 17, 2005 10:39:49 AM

Issue ID: 2817
Subject: Metric Reinforcing Steel

Folder: /Virtis/Support Center	
Primary Contact: Generated, task force	
Submitted By: Fempel, Glenn	8/25/2000 8:02:00 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
Generated, task force			
Generated, task force	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:gfempel DATE: 8/25/2000 2:42 PM
The steel suppliers in Canada supply metric bars. How can we select and use Metric Bars in our designs and ratings with the actual Metric bar properties not soft-metrification.

Complete Issue Information

FROM:jduray DATE:08/28/2000 12:42:36

Please investigate adding hard metric bars to the db. Does BRASS need to be revised for this?

FROM:kkennelly DATE:08/31/2000 08:27:28

I think all we have to do to the db is add rows for the metric bars. Based on the help for BRASS LFD, I think it only does US bars. The BRASS commands use the bar size and a number of bars so the export would have to manipulate the metric bars into an equivalent US bar or BRASS LFD would need revised. BRASS LRFD help says it uses US, Metric ("hard" sizes like 10, 15, 20) and soft metric (10, 13, 16) which BRASS LRFD calls hybrid.

Issue ID: 2820
Subject: Load type changes for copied bridges

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Koenig, David 8/29/2000 8:13:01 PM
Modified By: administrator 6/19/2008 4:02:06 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	Duplicate	High	Bug

Contacts

Name	Company	Email 1	Phone 1
David Koenig	Missouri DOT	david.koenig@modot.mo.gov	(573) 526-0556

Complete Issue Information

Documents

Name	Resource Identifier	Description
	sd_poi_43403308.bbd	

Tasks

Name	Current State	Summary
2821.10558	Resolved	SP3 - Composite Steel and Concrete Structures - Composite/Non-composite problem

Description

FROM: dkoenig DATE: 8/29/2000 3:03 PM

There is a conceptual problem that occurs when a bridge is copied which contains data in the Member Loads-Uniform Load tab. The new copied bridge will take the uniform load and place it in the Distributed Load Tab. The load is technically still correct, just in the wrong place. This problem can create confusion for our users. This window is tedious enough when there are many load cases, and the user needs to check for loads contained in the Member Loads window.

I expect that this will also occur during importing and exporting. My assumption is, that this is a bug. Let me know if I am mistaken.

FROM: jduray DATE: 08/30/2000 09:40:15
This is the same as incident 2661.

We use the 0.0000001 tolerance defined in SysComparisonFunctions to compare the load at the start and end. If they are equal using 0.0000001 tolerance and the load spans over a complete span (using 0.0000001 as the tolerance on the length of the load) then we assume the load is uniform and display it on the Uniform tab. Else it is displayed on the distributed tab.

Version 4 will have an improved scheme for comparison of floating point numbers.

Issue ID: 2821
Subject: SP3 - Composite Steel and Concrete Structures - Composite/Non-composite problem

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Thompson, Todd	8/31/2000 6:32:14 PM
Modified By: administrator	6/19/2008 4:02:06 PM

4/19/2016 3:14:37 PM

HRS AASHTO

611

Complete Issue Information

Priority: Urgent
Category: Bug

History

Primary Contact	Status	Priority	Category
Ordoobadi, Mehrdad	Assigned	High	Bug
	Resolved		
	Accepted		
	Closed		
	Resubmit		
	Resolved		
	Accepted		
	Closed		
Ordoobadi, Mehrdad	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Dean Teal	Kansas Dept. of Transportation	teal@ksdot.org	(785)291-3001

Documents

Name	Resource Identifier	Description
	More Junk.bbd	

Tasks

Name	Current State	Summary
2823.10556	Closed	Another Deleting Bridge Problem

Description

FROM: tthompson DATE: 8/31/2000 1:20 PM

We have been trying to analyze a structure using Virtis and we want the entire structure to be composite. Even though we are able to create all the Cross Sections as composite, the analysis only considers the structure to be composite based on the dead load contraflexure locations described. It always leaves the regions over the piers, between the DL contraflexure locations as non-composite. In fact, even on structures that are composite in pos moment regions and non-composite in neg moment regions, if this location is different than the DL contraflexure locations, they are regions that are coded as composite based on cross section but the analysis forces them to be non-composite.

4/19/2016 3:14:38 PM

HRS AASHTO

612

Complete Issue Information

In visiting with Keith Fulton and Brian Goodrich, if we make the dead load contraflexure points at 0 and 100 % of the spans, we are then only able to make the structure composite the entire length.

Is this how this is supposed to work? Or why does the composite/non-composite regions get any influence from the dead load contraflexure locations? Just not sure if this is a bug, or just an undocumented thing that one must know and understand or ????

FROM: bgoodrich DATE: 8/31/2000 3:34 PM

Please attach your bridge BBD file. I want to see what the POI Control engine data field is set to. If POI are to be generated, the export uses the contraflexure locations to generate the STEEL-GIRDER-CONTROL commands, which set the BRASS section type to a 4 or 5 for composite structures. If no POI are generated, the BRASS uses data from the Virtis points of interest windows. If these are used, then you must manually set the BRASS Section Type on the Point of Interest engine properties window because it defaults to a non-composite code.

FROM: ttompson DATE: 9/1/2000 8:57 AM

Brian, I've attached the bbd for a given bridge with the problem(s) I've described. Look at Structure Definition TJO's Deck Replacement and Member S03(Int - 4 Span Cont). It appears that the POI control is 5 - Generate user defined POI only. We changed the contraflexure locations to 0 and 100 as you suggested to Keith Fulton. Appears it may be just a problem of not understanding what controls what. I just couldn't find anything on this in the BRASS or VIRTIS/OPIS help.

FROM: bgoodrich DATE: 10/13/2000 11:56 AM

The way you had originally defined the bridge, BRASS would have definitely considered the regions over the piers, between the DL contraflexure locations, as non-composite. However, if rebar would have been defined over the interior piers, the rebar areas would have been included in the BRASS cross sections, but the slab still would not have been considered. It appears that you would like to consider the slab for all positive bending calculations. However, when sections experience negative bending, the slab cannot be considered by BRASS in its section analysis. Note that BRASS performs the structural analysis using the positive bending properties of each section as entered on the BRASS cross section commands.

Would it help if I added the following note to the BRASS-GIRDER(LFD) Properties help file, i.e., the help file that is available from the window in which the contraflexure locations are specified? Under the Points of Contraflexure section (as the first note), I could add:

Entering points of contraflexure other than 0 and 100 will result in regions over the interior piers being considered as either:

1. Composite where dead load moment is negative. This will occur when a slab and/or rebar are present, but only the rebar will be considered in the analysis.
2. Non-composite. This will occur when no slab or rebar are present.

FROM: bgoodrich DATE: 10/16/2000 2:54 PM

Begin e-mail from Todd:

What you suggest is probably okay.

When we normally design a steel girder bridge, we do not consider the slab or resteel over the Piers (negative moment) as composite or contributing to the section properties. But on some rehab projects with deck replacements, in order to maintain a reasonable load rating, our designers must sometime consider composite throughout (with or without resteel contributing to section). This doesn't happen

4/19/2016 3:14:38 PM

HRS AASHTO

613

Complete Issue Information

often.

I think as long as the designer understands the limitaions of BRASS and it's analysis, that what you suggest is okay.
End e-mail from Todd

FROM: bgoodrich DATE: 10/17/2000 3:34 PM
I made the modification described above to the BRASS-GIRDER(LFD) Properties help file. Fixed for version 4.0.

Issue ID: 2823
Subject: Another Deleting Bridge Problem

Folder: /Virtis/Support Center	
Primary Contact: Ordoobadi, Mehrdad	
Submitted By: Teal, Dean	9/5/2000 2:51:03 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: dteal DATE: 9/5/2000 9:44 AM
It has happened to us again. I have another bridge that I can not delete. Here is how it happened. A designer has had some problems with a bridge. Last week after entering some description stuff (diaphragms, etc.) he was unable to save it. Had to exit the bridge and lose his work. Was able to work on bridge after that and (I think) save his work. This morning now he tried to work on this bridge again, but could not save his work. So we made a copy of it and was able to continue on working and saving. I tried to delete the original bridge from the deleted bridges folder. I get the same old error messages I got before when it would not let me delete it.

4/19/2016 3:14:38 PM

HRS AASHTO

614

Complete Issue Information

Unable to delete bridge!
Delete process failed while deleting CDmStructDefRefLine (SaveOrder object 107).
Error deleting record from database record set.
No rows were affected by the update or delete operation.

FROM: dteal DATE: 9/5/2000 9:46 AM
I think the most important part would be how this file became corrupt to begin with. Why couldn't we save it??

FROM: jduray DATE: 09/06/2000 12:22:54
I will send you scripts to fix it. Patch 4 will fix the problem so it shouldn't happen anymore. Patch 4 will be available next week.

FROM: dteal DATE: 9/7/2000 8:01 AM
Are you talking about fixing the deleting after it has become corrupt or the reason it got corrupt in the first place????

FROM: jduray DATE: 11/08/2000 12:17:53
This is difficult to fix since we cannot reproduce it and don't know exactly why it happens.

However, we know what is happening and when it happens can provide a script to fix the bad rows in the database. Patch 4a includes code revisions that should prevent it from happening in the future, however, rows that are already "corrupt" can only be repaired by a script.

Here is what is happening...
What is happening is numbers with more than 15 significant digits are getting into the database in the abw_struct_def_ref_line table. The number is a result of geometry calculations for the coordinates of reference lines. On our systems at Baker Virtis never sends more than 15 significant digits to Oracle but your (and Missouri's) ODBC driver seems to be sending more. The numbers are always nearly zero (something like 1.2345398374628234628 E-30). When you delete Virtis reads the value and because a double precision number in memory is only significant to 15 digits the value in memory is different than the number in the db. During the delete operation the number in memory is compared to the value in the db and if they differ Virtis cannot complete the delete. The script sets this value to zero and then Virtis can delete the row.

It would be helpful to know what version of Oracle's ODBC driver you are using.

FROM: dteal DATE: 11/14/2000 10:40 AM
Oracle 7 32 bit ODBC Driver 2.0.3.1.1

FROM: dteal DATE: 02/15/2001 10:20:34
I still need the script so we can delete this rouge file and clean up our database.

FROM: dteal DATE: 09/21/2001 14:33:13
I am still in need of the script you referred to - we have since updated to Oracle 8.x

4/19/2016 3:14:38 PM

HRS AASHTO

615

Complete Issue Information

FROM:dteal DATE:10/18/2001 08:21:44

I still need the script so I can clean up the deleted bridges folder. Being there is a bridge in there that we can not delete (for over one year now) I can never use the "Empty Deleted Bridge Folder" option being the first one in the list is the bridge I can't delete. I can only select and then delete the selection.

FROM:dteal DATE:10/18/2001 11:00:10

The first time we ran into this was on incident #2612 back on 4/12/00. That incident was closed after you sent me a script to run against our database to delete the roug bridges.

FROM:mordoobadi DATE:11/5/2001 9:43:25 AM

The following SQL scripts will reduce the number of significant digits of some fields in abw_struct_def_ref_line table to 13.

Please ask your DBA to login as the owner of database tables and run the scripts.

```
UPDATE abw_struct_def_ref_line
SET X = ROUND(X*POWER(10, 12 - FLOOR(LOG(10, ABS(X)))))*POWER(10, FLOOR(LOG(10, ABS(X))) - 12)
WHERE X IS NOT NULL AND X != 0 AND BRIDGE_ID = XXXX;
```

```
UPDATE abw_struct_def_ref_line
SET Y = ROUND(Y*POWER(10, 12 - FLOOR(LOG(10, ABS(Y)))))*POWER(10, FLOOR(LOG(10, ABS(Y))) - 12)
WHERE Y IS NOT NULL AND Y != 0 AND BRIDGE_ID = XXXX;
```

```
UPDATE abw_struct_def_ref_line
SET Z = ROUND(Z*POWER(10, 12 - FLOOR(LOG(10, ABS(Z)))))*POWER(10, FLOOR(LOG(10, ABS(Z))) - 12)
WHERE Z IS NOT NULL AND Z != 0 AND BRIDGE_ID = XXXX;
```

```
UPDATE abw_struct_def_ref_line
SET DIRECTION_ANGLE_X = ROUND(DIRECTION_ANGLE_X*POWER(10, 12 - FLOOR(LOG(10, ABS(DIRECTION_ANGLE_X))))*POWER(10, FLOOR(LOG(10, ABS(DIRECTION_ANGLE_X))) - 12)
WHERE DIRECTION_ANGLE_X IS NOT NULL AND DIRECTION_ANGLE_X != 0 AND BRIDGE_ID = XXXX;
```

```
UPDATE abw_struct_def_ref_line
SET DIRECTION_ANGLE_Y = ROUND(DIRECTION_ANGLE_Y*POWER(10, 12 - FLOOR(LOG(10, ABS(DIRECTION_ANGLE_Y))))*POWER(10, FLOOR(LOG(10, ABS(DIRECTION_ANGLE_Y))) - 12)
WHERE DIRECTION_ANGLE_Y IS NOT NULL AND DIRECTION_ANGLE_Y != 0 AND BRIDGE_ID = XXXX;
```

```
UPDATE abw_struct_def_ref_line
SET DIRECTION_ANGLE_Z = ROUND(DIRECTION_ANGLE_Z*POWER(10, 12 - FLOOR(LOG(10, ABS(DIRECTION_ANGLE_Z))))*POWER(10, FLOOR(LOG(10, ABS(DIRECTION_ANGLE_Z))) - 12)
```

4/19/2016 3:14:38 PM

HRS AASHTO

616

Complete Issue Information

WHERE DIRECTION_ANGLE_Z IS NOT NULL AND DIRECTION_ANGLE_Z != 0 AND BRIDGE_ID = XXXX;

You should replace the XXXX in the scripts with the bridge_id (BID) of the bridge you have problem with.

Please make sure to backup the database before doing this.

FROM:dteal DATE:01/14/2002 10:13:20
Script has been run - Still unable to delete this bridge.

FROM:mordoobadi DATE:9/5/2002 3:50:08 PM
Kansas DOT is using Oracle 8.1.6 for database server. They use Oracle 7 ODBC driver on their client machines.
I recommended that they upgrade the odbc drivers on client machines to Oracle 8.1.7.
To prove that the problem is related to their old ODBC driver I asked them to use "Microsoft ODBC for Oracle". After using the MS driver they were able to delete the bridge.

FROM:dteal DATE:Friday, September 06, 2002 9:00:08 AM

FROM:mordoobadi DATE:8/22/2003 1:34:38 PM
Accpeted by Dean Teal on 9/6/2002.

Issue ID: 2825
Subject: SP3 - Export routine has PS commands for Steel Girder bridge

Folder: /Virtis/Support Center	
Primary Contact: Kennelly, Krisha	
Submitted By: Thompson, Todd	9/5/2000 9:32:18 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Education	

History

Primary Contact	Status	Priority	Category
Kennelly, Krisha	Resolved	High	Education

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2828.10551	Closed	Missing Units in Error Message

Description

FROM: tthompson DATE: 9/5/2000 4:18 PM

I have a 3 span cont comp steel girder bridge, that when I reviewed the log file created, has a

COMMENT The TRANSFER command specifies locations of non-10th pt POI.

TRANSFER 3, 41.9000

But since this is a Steel Girder bridge, I don't see any way to fix this. This bridge was imported from BARS.

I've attached the bbd and the log file.

FROM: tthompson DATE: 9/5/2000 4:27 PM

This is for member G02. And as a side note, I'm getting poor analysis results for this structure. I've typically gotten good results on the Steel Girder Bridges I've imported into Virtis from BARS. It might also be related to another incident I reported that had some PS girder problems but on a steel girder bridge.

FROM: tthompson DATE: 9/5/2000 4:30 PM

Actually incident 2806 was a problem with Steel Girder commands showing up on a PS girder bridge, so never mind.

FROM: kkennelly DATE: 09/07/2000 16:28:35

The Transfer command can be used for all material types (steel, ps concrete, rc concrete). It is used for steel and rc concrete girders to specify points of interest that are not at tenth points. For PS concrete girders it is used to specify poi at non-tenth points and transfer lengths for ps strand. The point of interest at Span 3 41.900001 is slightly different from the 0.6 point so the Transfer command is issued. I'm not sure why you're getting poor analysis results but the Transfer command is not the reason. If you move the point of interest slightly so it is at 41.9 exactly, the analysis runs without the Transfer command and you get the same rating results.

Issue ID: 2828

Subject: Missing Units in Error Message

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:14:38 PM

HRS AASHTO

618

Complete Issue Information

Submitted By: Teal, Dean	9/7/2000 4:33:08 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Closed	High	Bug
Duray, Jim	Closed	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	POI's.bbd	

Tasks

Name	Current State	Summary
2829.10550	Closed	Tenth points and user defined POI's both reporting

Description

FROM: dteal DATE: 9/7/2000 11:26 AM

The following error message was created when a cross section in a RC Parabolic section didn't match up a range. The problem is that the error message specifies a distance without units. SI or US??

The reason I am red flagging this is because when you are using SI units, error messages are generated in US units. This particular message contains no units.

Error No.: 1203

Type : Input Error

Location : new_paraabola.for

****ERROR**** In span 1 the input web depth of adjacent parabolas does not equal the depth of a single parabola at that point. Input parabolic segments can not be converted to a single parabola. Distance to point from left end of span = 23.218
----- End of Contents of BRASS Error File -----

FROM: bgoodrich DATE: 9/8/2000 8:10 AM

4/19/2016 3:14:39 PM

HRS AASHTO

619

Complete Issue Information

This is not a five minute fix because there are several error messages throughout BRASS that do not indicate units. This issue should be forwarded to WYDOT.

FROM: jduray DATE: 09/08/2000 10:20:03
Please do so.

FROM: bgoodrich DATE: 9/12/2000 11:06 AM
I forwarded this issue to WYDOT.

FROM: bgoodrich DATE: 10/17/2000 3:38 PM
WYDOT approved addressing this issue and Dan Glandt will be addressing it.

FROM: bgoodrich DATE: 11/20/2000 11:35 AM
Dan Glandt added units to this error message. Fixed for Version 4.0 Beta 1.
FROM: dteal DATE: 12/8/2000 8:19 AM

FROM: bgoodrich DATE: 01/11/2001 15:41:08

Issue ID: 2829
Subject: Tenth points and user defined POI's both reporting

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Teal, Dean	9/7/2000 6:56:56 PM
Modified By: administrator	6/19/2008 4:02:06 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

4/19/2016 3:14:39 PM

HRS AASHTO

620

Complete Issue Information

FROM: dteal DATE: 9/7/2000 1:50 PM

The following message is found in the Analysis Progress window when doing a rating.

WARNING (Low):

The POI Control engine property for the member alternative has been set to generate tenth points. Any user-defined points of interest will be ignored even if they are located at tenth points.

It is correct, I have POI's defined but have requested output at 10th points only. When I look at the Analysis Results tables (DL or Live Load), all points have been reported, user defined POI's along with 10th points. I don't think the user defined points should be there, they where not requested.

FROM: bgoodrich DATE: 9/8/2000 8:12 AM

Dead and live load actions are always produced at tenth points and sometimes at all "node" points if the appropriate output option is specified. The points of interest referred to in the message represent locations where detailed section analyses is performed and specification articles are checked.

FROM: dteal DATE: 11/15/2000 2:40 PM

Issue ID: 2831
Subject: Problem linking exterior girders and BRASS issues

Folder: /Virtis/Support Center
Primary Contact: Goodrich, Brian
Submitted By: Kennelly, Krisha 9/8/2000 2:31:28 PM
Modified By: administrator 6/19/2008 4:02:05 PM
Priority: High
Category: Unknown

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

4/19/2016 3:14:39 PM

HRS AASHTO

621

Complete Issue Information

Goodrich, Brian	Resolved	High	Unknown
-----------------	----------	------	---------

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
	Ext_Girder.out	
	sd_68120077.bbd	
	Int_Girder.out	

Tasks

Name	Current State	Summary
2833.10546	Duplicate	SP3 - Girder System problems

Description

FROM:kkennelly DATE:09/08/2000 10:28:24
Submitted for Todd Thompson from his email on 9/7:
Using version 3.0, Service Pack 3, LF load rating

1)

I created a Steel Girder type Girder System for a new structure. I created an interior girder and an exterior girder. I linked G3 and G4 from G2. I linked G5 from G1. But I keep getting this error message:

Girder System (Girder System Structure Definition)

Warning: Member G5 linked to Member G1 but the girder spacings are not identical.

I've attached the binary file for the bridge.

I had first created G2. Then linked G3 and G4. I then copied G2 info to G1 and modified the deck dimensions to reflect the exterior girder dimensions.

2)

Also, in reviewing the output, I had entered a .035 k/ft uniform load (load case description misc attachments). In reviewing the output, it appears to be using .135 k/ft. Not sure if it combined some other load with mine to get it, or if it's a misprint in the output. The BWS report doesn't print applied loads.

4/19/2016 3:14:39 PM

HRS AASHTO

622

Complete Issue Information

3)

Also, in reviewing the output, I noticed that while I entered a deck of 8.25 inches, the output says the deck is 0.00 but the topping is 8.25 inches thick.

I'm not sure what is happening here. (happens for both G1 and G2)

DECK GEOMETRY AND LOAD SUMMARY REPORT

No. Girders: 5

Bay No. Girder Spacing, in

1 107.000

2 107.000

3 107.000

4 107.000

Cantilevers:

Left = 42.000 in

Right = 42.000 in

Deck Width = 512.002 in

Slab Thickness = 0.000 in

Topping Thickness = 8.250 in

FROM:kkennelly DATE:09/08/2000 14:50:17

1) The warning in validation that spacings are not equal is due to the tight tolerance (0.0000001) used in the comparison of the overhangs and the floating point numbers that result from the domain calculations when it calculates the overhangs. Domain (in metric) calculates left oh 1.0668 m and right oh 1.06673904 m. Difference between these 2 numbers is 0.000061 > 0.0000001 so it thinks they're not equal. Version 4.0 will let you enter your own tolerances that would think these numbers are equal.

FROM:kkennelly DATE:09/08/2000 15:19:05

Brian, can you answer 2 and 3? The input file generated by the export has the 0.035k/ft load in it so I don't know why the BRASS output says it's 0.135 k/ft.

FROM: bgoodrich DATE: 9/12/2000 11:11 AM

Regarding issue 3, the BRASS export populates the total deck thickness parameter with the value entered in Virtis, i.e., the 9 inches. There is also another BRASS parameter available for entering the structural thickness, which is used primarily for deck analysis and is not supported by Virtis/Opis. The difference between the total thickness and structural thickness is the topping thickness. The structural thickness is specified on a schedule basis, so the thickness could potentially vary, which is why nothing is entered for the structural thickness. I have forwarded this issue to Jim for his input.

FROM: bgoodrich DATE: 9/13/2000 8:34 AM

Regarding issue 2, the 0.135 klf is due to the two barriers being uniformly distributed to all of the girders in stage 2. The 0.035 klf is applied in stage 1. There are no computational problems with the program. Note that BRASS only performs the dead load distribution computations for deck loads (appurtenances, slab, wearing surface, etc.). Girder line loads such as girder selfweight and any member loads (i.e., the 0.035 klf load) are not included in the dead load distribution output.

FROM: tthompson DATE: 9/25/2000 12:17 PM

4/19/2016 3:14:39 PM

HRS AASHTO

623

Complete Issue Information

FROM: bgoodrich DATE: 10/31/2000 7:41 AM

I modified the BRASS export so the deck thickness is placed on another parameter (see the DECKC-DIM3 command). This will cause the topping to be zero and the deck thickness to be reported as entered in Virtis. I modified BrassStdDeck.cpp, which affects Abxbrass.ocx. Fixed for version 4.0.

Issue ID: 2833
Subject: SP3 - Girder System problems

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Thompson, Todd	9/11/2000 3:29:02 PM
Modified By: administrator	6/19/2008 4:38:35 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Duplicate	High	Bug

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: tthompson DATE: 9/11/2000 10:21 AM
Using version 3.0, Service Pack 3, LF load rating

1)
I created a Steel Girder type Girder System for a new structure. I created an interior girder and an exterior girder. I linked G3 and G4 from G2. I linked G5 from G1. But I keep getting this error message:

Girder System (Girder System Structure Definition)

Complete Issue Information

Warning: Member G5 linked to Member G1 but the girder spacings are not identical.

I've attached the binary file for the bridge.

I had first created G2. Then linked G3 and G4. I then copied G2 info to G1 and modified the deck dimensions to reflect the exterior girder dimensions.

2)

Also, in reviewing the output, I had entered a .035 k/ft uniform load (load case description misc attachments). In reviewing the output, it appears to be using .135 k/ft. Not sure if it combined some other load with mine to get it, or if it's a misprint in the output. The BWS report doesn't print applied loads.

3)

Also, in reviewing the output, I noticed that while I entered a deck of 8.25 inches, the output says the deck is 0.00 but the topping is 8.25 inches thick. I'm not sure what is happening here. (happens for both G1 and G2)

DECK GEOMETRY AND LOAD SUMMARY REPORT

No. Girders: 5

Bay No. Girder Spacing, in

1 107.000

2 107.000

3 107.000

4 107.000

Cantilevers:

Left = 42.000 in

Right = 42.000 in

Deck Width = 512.002 in

Slab Thickness = 0.000 in

Topping Thickness = 8.250 in

FROM:kkennelly DATE:09/11/2000 13:45:28

4/19/2016 3:14:39 PM

HRS AASHTO

625

Complete Issue Information

I input this as incident 2831 on 9/8 as based on your email of 9/7.

Issue ID: 2834
Subject: SP3 - Unknown or obscure error message

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Thompson, Todd	9/12/2000 7:40:41 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
	sd_17309046.bbd	

Tasks

Name	Current State	Summary
2834.10545	Resolved	SP3 - Unknown or obscure error message

Description

FROM: tthompson DATE: 9/12/2000 2:33 PM

In analyzing a single span steel girder bridge, I got this error message:

Input Errors (1003) - Length of parameter greater than 40 characters
02:30:20 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

----- Contents of BRASS Error File -----

4/19/2016 3:14:40 PM

HRS AASHTO

626

Complete Issue Information

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

File: C:\Program Files\AASHTO BridgeWare\VirtisOpis30\17309046\Girder_1\S01\Mbr_Alt_1.ERR

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Fatal Error Encountered - Unexpected Termination

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Data File: tisOpis30\17309046\Girder_1\S01\Mbr_Alt_1.dat

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 1003

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Input Error

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : freerd.for

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

ENTRY LONGER THAN 40 COLUMNS IN SUBROUTINE FREERD.

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

***** PROGRAM ABORTED.

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

----- End of Contents of BRASS Error File -----

02:30:20 PM - Line 908 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

I've attached the bbd file.

FROM: jduray DATE: 9/14/2000 11:12 AM

Brian - I can't tell from the messages if the problem is in the export, BRASS or the results object. Can you help?

FROM: bgoodrich DATE: 9/22/2000 12:05 PM

There was some kind of problem in the lateral bracing export. In the lateral bracing window of the BBD file, there is only one range that starts at zero and has a length of zero, which for some reason, causes the range exported to BRASS to be extremely large and exceed the 40 character parameter length maximum. The export now checks to make sure the length is non-zero, which prevents the problem from occurring. If the length is set correctly, the problem does not occur. Fixed for Version 4.0.

Issue ID: 2836

Complete Issue Information

Subject: Online Support

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Best, Richard 9/14/2000 1:35:29 PM
Modified By: administrator 6/19/2008 4:02:05 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
Richard Best	Illinois DOT	BESTRM@nt.dot.state.il.us	217-785-2922

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2837.10542	Suspended	Preview Model Enhancement

Description

FROM: rmbest DATE: 9/14/2000 8:27 AM I would like to see more timely updates to the Virtis/Opis Technical Support Homepage. For instance some news about the development of 4.0, FAQs, training examples in PDF format and a user discussion forum.

FROM: jduray DATE: 9/14/2000 10:29 AM
AASHTO is preparing the discussion forum. My understanding is that they have changed the appearance or format of their web pages a few times and have not completed the forum yet.

Joe - Add info to the News page regarding 4.0 in Alpha testing and scheduled for Beta testing in mid-Oct. We need to discuss adding another link to a new page for documentation and add the training manual, etc.

Assign to me. We then need to review incidents and common questions and prepare the FAQ file.

4/19/2016 3:14:40 PM

HRS AASHTO

628

Complete Issue Information

FROM:jihnat DATE:09/14/2000 13:13:31
Web page has been updated with Version 4.0 news.

Issue ID: 2837
Subject: Preview Model Enhancement

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Best, Richard	9/14/2000 1:39:30 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: rmbest DATE: 9/14/2000 8:29 AM When a user first opens a bridge, it is difficult to tell at a glance what the model actually looks like. It takes about a dozen clicks in the right branches of the tree to get the particulars (Number of spans, beam types, cross section etc.). I would like to see an

Complete Issue Information

enhancement that with a single click on a button ("Preview Existing Model") it would display the cross section, framing plan etc. for the portion of the model that is marked as existing. It would be nice if this could be done from Bridge Explorer as well as Bridge Workspace.

FROM: rmbest DATE: 9/14/2000 8:49 AM

FROM: jduray DATE: 9/14/2000 11:27 AM

Need to discuss with Task Force.

FROM: rmbest DATE: 9/15/2000 9:26 AM Does that mean that it will be presented to the task force for consideration or does it mean that the Support Center is not the proper forum for enhancement ideas?

Issue ID: 2839
Subject: Reporting of Section Properties

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	9/14/2000 4:01:30 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
Duray, Jim	Suspended	High	Enhancement

Complete Issue Information

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2840.10539	Duplicate	BRASS shear rating

Description

FROM: jduray DATE: 9/14/2000 10:53 AM

Provide reporting of section properties in Results Summary, maybe add graph of moment of inertia or section modulus to alert user where section properties change.

Issue ID: 2840

Subject: BRASS shear rating

Folder: /Virtis/Support Center

4/19/2016 3:14:41 PM

HRS AASHTO

631

Complete Issue Information

Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	9/14/2000 4:04:37 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: N/A	

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Documentation

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2841.10538	Resolved	Location of vehicle to produce LL moment (BRASS LFD)

Description

FROM: jduray DATE: 9/14/2000 10:56 AM

User at Louisiana training questioned BRASS reporting that shear rating is unreliable.

FROM:kkennelly DATE:09/15/2000 11:09:22

Jim also entered this as incident 2845

Complete Issue Information

Issue ID: 2841
Subject: Location of vehicle to produce LL moment (BRASS LFD)

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	9/14/2000 4:06:46 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Documentation	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: jduray DATE: 9/14/2000 10:59 AM

User at Louisiana training wants to know if BRASS LFD tells you location of vehicle that produces max LL moment and is there someway in Virtis to get that info?

FROM: bgoodrich DATE: 9/21/2000 9:28 AM

The Critical Loads LFD report indicates the max/min moments (factored DL + factored LL) and the live load that caused those combined actions.

Jim - Is this what you are looking for?

4/19/2016 3:14:41 PM

HRS AASHTO

633

Complete Issue Information

FROM: jduray DATE: 09/22/2000 12:51:29

No, The user would like to know the position of the vehicle that causes an effect.

FROM: bgoodrich DATE: 9/22/2000 11:47 AM

I missed the "location" keyword. The user must specify option 3 or 4 on the Action Output Level of the Analysis Event engine properties to get the truck "positions". The truck positions are located at the end of the BRASS output file after the rating summary.

Issue ID: 2842
Subject: Voided RC slabs

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Duray, Jim	9/14/2000 4:13:33 PM
Modified By: hlee	7/7/2013 4:48:37 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement
	Resolved		

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

4/19/2016 3:14:41 PM

HRS AASHTO

634

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2844.10535	Resolved	Add limitations to Help

Description

FROM: jduray DATE: 9/14/2000 11:05 AM

From Louisiana training, can rc slabs with voids be added to Virtis? We need to find out what BRASS would do with that type of beam.

FROM: tthompson DATE: 9/14/2000 3:47 PM

I've attempted by using an equivalent I-section with reasonable results.

FROM: jduray DATE: 09/15/2000 13:00:53

FROM: Herman Lee DATE: 7/7/2013 12:46:14 PM Eastern Daylight Time
Support for voided RC slab system is available in the 6.5 release.

Issue ID: 2844
Subject: Add limitations to Help

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	9/14/2000 4:47:44 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	

Complete Issue Information

Category: Help

History

Primary Contact	Status	Priority	Category
Goodrich, Brian	Resolved	High	Bug - BRASS

Contacts

Name	Company	Email 1	Phone 1
Brian Goodrich	BridgeTech, Inc.	Goodrich@ BridgeTech-Laramie.com	307 222-4688

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2845.10534	Resolved	BRASS P/S LFD shear computation

Description

FROM: jduray DATE: 9/14/2000 11:38 AM

Users in the LaDOTD workshop have asked for a list of limitations of Virtis. Add a Help topic where we can list things like types of members supported and any limitations Virtis/Opis has.

Assign to Brian to do the same to the engine-specific help. Add limitations such as number of cross-sections, number of spans, number of girders, etc.

FROM: kkennelly DATE: 09/19/2000 16:07:02

Added to Virtis/Opis help for Version 4.0. I've also added "Limitations" topic to BRASS LFD, BRASS LRFD and Madero engine help files which I'll send to Brian so he can add engine specific limitations.

FROM: bgoodrich DATE: 10/16/2000 2:59 PM

I added information to the Limitations topic of each engine and sent the files to Krisha. I am waiting on a list of BRASS-GIRDER limitations from Dan Glandt. I will make the final update after I add his list.

FROM: bgoodrich DATE: 11/20/2000 11:36 AM

I updated the help topic per comments from Dan Glandt. I sent the new help file to Baker.

Complete Issue Information

Issue ID: 2845
Subject: BRASS P/S LFD shear computation

Folder: /Virtis/Support Center	
Primary Contact: Goodrich, Brian	
Submitted By: Duray, Jim	9/14/2000 5:04:41 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Bug - BRASS	

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: jduray DATE: 9/14/2000 11:56 AM

BRASS LFD gives a warning in the output regarding the accuracy of the shear computation. What is this?

FROM: bgoodrich DATE: 9/22/2000 9:42 AM

I spoke with Dan Glandt and he will be removing this warning for the upcoming release.

FROM: bgoodrich DATE: 10/4/2000 9:08 AM

The warning has been removed from BRASS. Fixed for Version 4.0 release.

Complete Issue Information

Issue ID: 2846

Subject: SP3 - Bridge ID and Name doesn't display in Bridge Workspace

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Thompson, Todd 9/14/2000 9:53:17 PM

Modified By: administrator 6/19/2008 4:02:05 PM

Priority: High

Category: Bug - GUI 1

History

Primary Contact	Status	Priority	Category
Ihnat, Joseph	Assigned	High	Bug - GUI 1
	Information Needed		
	Closed - Inactive		
Ihnat, Joseph	Closed - Inactive	High	Bug - GUI 1

Contacts

Name	Company	Email 1	Phone 1
Todd Thompson	South Dakota DOT	todd.thompson@state.sd.us	605-773-3285

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

4/19/2016 3:14:42 PM

HRS AASHTO

638

Complete Issue Information

58101321.doc
045062.dat

Tasks

Name	Current State	Summary
2847.10532	Suspended	Display warning messages issued within BRASS output

Description

FROM: tthompson DATE: 9/14/2000 4:43 PM

I imported a BARS structure into Virtis. Appeared to be successful - no error messages. From the Bridge Explorer, the Bridge ID and Bridge Name are displayed correctly. When I open up the structure, it doesn't display the bridge id and name. It also won't let me enter and save the correct bridge id from the bridge workspace (says it's not unique). It also won't let me edit any of my data and save, because it says that it needs valid entries for the bridge id/name. I got this the first time and thought there was just a bug in the import. So I deleted the structure and removed it from the deleted folder. I did let me import based on the correct unique bridge number, but it won't let me enter it. I'm sort of stuck with this structure.

I've attached the bbd file and the bars data file.

FROM: tthompson DATE: 9/15/2000 8:11 AM

FROM: jihnat DATE: 09/15/2000 13:37:14

I haven't been able to reproduce this.

Is your database Oracle or Sql Anywhere?

When you run the BarsImport for this dat file, do you accept the defaults for Bridge IDs and Name (i.e. "58101321" and "Imported Bridge") or do you enter new values?

FROM: tthompson DATE: 9/21/2000 10:04 AM

Sorry but couldn't respond until today because baker web site was down until today.

For Bridge ID, I leave it as 58101321

For NBI Bridge ID, I use it as 000000058101321

For Bridge Name, I use 58101321

Gale Barnhill from NE imported it into his database and didn't have a problem, so the BARS data appears to be okay. I wonder if there's a problem with having had deleted the structure and then import it in again.

We are using Sybase SQL Anywhere 5.5.03 Build #1666.

When I import a bridge from BARS I use

Bridge ID 58101321

NBI BRIDGE ID 000000058101321

Bridge name 58101321

I wonder if the problem deals with having deleted the structure and imported again. I know that Dean Teal from KS DOT has had problems with deleting structures. Gale Barnhill from NE imported the data ok. SO the BARS data appears to be okay. Appears the problem may be in the database.

4/19/2016 3:14:42 PM

HRS AASHTO

639

Complete Issue Information

I could submit our database if necessary. I could upload to your FTP site.
FROM: tthompson DATE: 9/21/2000 10:18 AM

I added screen shots of the screens. Word Doc

FROM: jduray DATE: 10/09/2000 10:06:14
Fix for Version 4.0.

FROM: jduray DATE: 4/22/02 4:56:19 PM
Is this still an issue?

Issue ID: 2847
Subject: Display warning messages issued within BRASS output

Folder: /Virtis/Support Center
Primary Contact: Duray, Jim
Submitted By: Kennelly, Krisha 9/15/2000 3:34:52 PM
Modified By: administrator 6/19/2008 4:02:05 PM
Priority: High
Category: Enhancement

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM: kkennelly DATE: 09/15/2000 11:31:52
I am looking at a BRASS LFD output file and buried within the file is a warning from BRASS:
*** WARNING ***
AT ANALYSIS POINT 105.00, THE WEB THICKNESS REQUIREMENT, AASHTO 10.48.5.1

Complete Issue Information

EQ. (10-104) OR AASHTO 10.49.2 EQ. 10-120), HAS NOT BEEN SATISFIED. LONGITUDINAL STIFFENERS THEREFORE REQUIRED. NO LONGITUDINAL STIFFENERS WERE ENTERED AT THIS LOCATION,ENGINEER SHOULD REVIEW

We should have a window in Virtis where the user can see these types of warnings since most users don't wade through all of the BRASS output.

FROM:jduray DATE:09/22/2000 13:55:17

This could be added to the results object for viewing after the analysis is completed.

Issue ID: 2848
Subject: Analysis Chart Enhancements

Folder: /Virtis/Support Center	
Primary Contact: Duray, Jim	
Submitted By: Kennelly, Krisha	9/18/2000 12:39:25 PM
Modified By: administrator	6/19/2008 4:02:05 PM
Priority: High	
Category: Enhancement	

History

Primary Contact	Status	Priority	Category
Duray, Jim	Suspended	High	Enhancement

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Complete Issue Information

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
2849.10530	Closed	Adding girders causes girders to be out of order when using FindGirderBay()

Description

FROM:kkennelly DATE:09/18/2000 08:37:23

Would be nice to be able to display the moment and shear diagrams for the sum of a group of loads (eg, select all individual DL1 and plot the sum of them) or plot the max LL moment and shear envelopes instead of the positive and negative moments individually.

Issue ID: 2849

Subject: Adding girders causes girders to be out of order when using FindGirderBay()

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Kennelly, Krisha

9/18/2000 5:02:27 PM

4/19/2016 3:14:43 PM

HRS AASHTO

642

Complete Issue Information

Modified By: administrator	6/19/2008 4:02:04 PM
Priority: Urgent	
Category: Bug	

History

Primary Contact	Status	Priority	Category
Martin, Ed	Resolved	High	Bug

Contacts

Name	Company	Email 1	Phone 1
Ed Martin	Michael Baker Jr., Inc.	emartin@mbakercorp.com	(304) 769-2126

Documents

Name	Resource Identifier	Description
	B16FT.txt	

Tasks

Name	Current State	Summary
2861.10518	Resolved	BARS import of RC beam that used "same as" command in Card 13

Description

FROM:kkennelly DATE:09/18/2000 12:47:24

DoGirderSystemStructDef->AddGirder() is called in UiStructDefDlg with a bay spacing of 0.000000001 when we add a girder. AddGirder() calculates the offset position of the new mbr ref line to be -0.000000001 and sets the new mbr ref line Z value to be right exterior girder Z + -0.000000001. When DoGirderSystemStructDef->SetGirderMbrSpacing() is called, it sorts the Z values of all girders before setting the bay spacing. This sort makes the right ext girder be before the first int girder. When Compute From Typical Section is called to calculate the distribution factors the wrong df are calculated for the first int girder on right and right ext girder. Becomes very obvious in 4.0 where we changed the code in the HaunchProfile to determine if we have an exterior girder based on FindGirderBay(). In 3.0 we check for rt ext girder based on last member in list so it looked ok.

FROM:jduray DATE:09/19/2000 09:21:34

Fix for patch 4.

FROM:mordoobadi DATE:09/21/2000 08:44:57

Fixed for Version 3.0 and 4.0.

FROM:jduray DATE:10/09/2000 09:16:44

Gale reported this is not fixed then reported back that it is for Version 3.0 SP4.

4/19/2016 3:14:43 PM

HRS AASHTO

643

Complete Issue Information

Issue ID: 2861
Subject: BARS import of RC beam that used "same as" command in Card 13

Folder: /Virtis/Support Center
Primary Contact: Martin, Ed
Submitted By: Kennelly, Krisha 9/26/2000 3:31:34 PM
Modified By: administrator 6/19/2008 4:02:04 PM
Priority: High
Category: Bug

History

Primary Contact	Status	Priority	Category
-----------------	--------	----------	----------

Contacts

Name	Company	Email 1	Phone 1
------	---------	---------	---------

Documents

Name	Resource Identifier	Description
------	---------------------	-------------

Tasks

Name	Current State	Summary
------	---------------	---------

Description

FROM:kkennelly DATE:09/26/2000 11:24:46
Entered on behalf of Mac Hasan, Colorado DOT

Import of attached BARS file fails. Following message given when importing:
This reinforced concrete member appears to consist of a combination of cross section types. For a given member the cross sections must all be of the same type. Either Rectangular (Slab) Beam, T - Beam, or I - Beam type. You may skip this structure or member and continue reading data or abort without reading additional data.

Unexpected or missing data in the following command line:
13D83002G01 4 2A 54.0 4B 211 46.4
~~~~~ (columns 9 - 43)



**Complete Issue Information**

Import processes first Card 13's as RC tee beams. When Import tries to determine cross section type for above card, it thinks it is a rc slab member.

FROM: emartin DATE: 9/27/2000 7:53 AM

FROM: emartin DATE: 9/28/2000 8:53 AM

"same as" commands for card type 13 were not being correctly processed.

FROM: kkennelly DATE: 10/09/2000 11:01:11

Ed Martin sent me this code on 9/27 and I checked it into Version 4.0. It also needs checked in to 3.0Maintenance for Patch 5. Check in to 3.0Maintenance after receive code for incident 2806.

FROM: kkennelly DATE: 10/13/2000 10:04:49

Tested and repinned in 3.0Maintenance for Patch 5

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 2869                                                      |
| Subject: Can't save bbd file ("dirsuffix" in table 'pontis_bridge') |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 9/28/2000 8:36:44 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM |
| Priority: High                 |                      |
| Category: Bug - Database 2     |                      |

**History**

| Primary Contact | Status   | Priority | Category                             |
|-----------------|----------|----------|--------------------------------------|
| Duray, Jim      | Resubmit | High     | Bug - Database 1<br>Bug - Database 2 |
|                 | On Hold  |          |                                      |
|                 | Resolved |          |                                      |
| Duray, Jim      | Resolved | High     | Bug - Database 2                     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

for pontis.bridge dirsuffix = 0 when Not Applicable  
and  
= 1 for Northbound  
= 2 for Eastbound  
= 3 for Southbound  
= 4 for Westbound

This is the same as NBI Item #5E.

This is the one of the items we really need to display on the desktop and be able to do queries against in order to be able to do overload requests on batches of structures.

FROM: tthompson DATE: 10/11/2000 11:13 AM

Also note the original request was Incident 2707 and not 2778.

FROM: tthompson DATE: 10/11/2000 1:18 PM

After testing several other structures, it appears this problem occurs whenever the pontis\_bridge.dirsuffix contains values of 2, 3 or 4. It appears to function correctly when values of 0 and 1 occur. It leads me to believe that the virtisopis database does not match the pontis database for this field. (are there probably other fields that are also incorrect?).

Also, on another note: Pontis 2000 will contain the following database changes to the pontis.bridge table. This will impact the virtis pontis\_bridge table.

The following fields are being dropped from pontis.bridge:

nhs\_ind, funcclass, kind\_hwy, routenum, dirsuffix, and kmpost. There are some additional items being dropped that weren't being used anyway, other items being added and others having their datatype changed. The roadway info that was "duplicated" in the bridge table and is being dropped is information that virtis uses and is important. I haven't seen what the proposed changes are to the Virtis-Opis database to accomodate the Pontis changes.

FROM: jduray DATE: 10/11/2000 5:21 PM

I have a list (the new Pontis schema) of changes for Pontis 2000. Unfortunately we are not going to make any changes for version 4.0. WE just got the changes a few weeks ago and it's too late to implement them.

As far as dirsuffix goes, we set it to 0 intentionally since it is a required field in the pontis bridge table (that we are using). I will chack on why 2, 3, 4 make a difference. How do they get there?

FROM: tthompson DATE: 10/30/2000 7:09 AM

FROM:mordoobadi DATE:4/12/2005 9:01:00 AM

The dirsuffix is no longer included in the BBD file. Because it does not exist in the abw\_overflow table.

The problem no longer happens because the dirsuffix is not stored in the BBD file.

Issue ID: 2872

Subject: Assign % of Fixity

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

4/19/2016 3:14:44 PM

HRS AASHTO

647

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 10/2/2000 7:29:29 PM |
| Modified By: administrator | 6/19/2008 4:02:03 PM |
| Priority: High             |                      |
| Category: Education        |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 2874.10505 | Resolved      | POIs and BRASS support |

**Description**

FROM: dteal DATE: 10/2/2000 2:22 PM

In a RC monolithic slab structure – monolithic at both the pier beam and the abutment. We can assign Pinned, Fixed or Free. The abutment fixity not 100% pinned, fixed or free. It is a certain % fixed. We need a way to assign this fixity to properly model the support

FROM:jduray DATE:10/03/2000 08:44:37

There is an Elastic" tab on the Supports window. It can be used to input a translational and rotational stiffness for the support. The support degree of freedom must be constrained on the General tab.

FROM:dteal DATE:Monday, January 27, 2003 9:29:59 AM

## Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 2874                  |
| Subject: POIs and BRASS support |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 10/3/2000 5:19:11 PM |
| Modified By: administrator       | 6/19/2008 4:02:03 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dkoenig DATE: 10/3/2000 12:22 PM

I have some questions regarding the use of POIs in Virtis, and how BRASS uses these data fields.

Question 1: From my understanding, BRASS does not support any of the parameters or overrides in the POIs. For now, the POIs can be used only for more detail in the BRASS output. Is this true? If it is, is BRASS planning on upgrading to these capabilities?

Question 2: This is related to item 2821. Assuming BRASS can handle the POIs, do these fields override the contraflexure points? The contraflexure points set up the boundaries for composite and

4/19/2016 3:14:44 PM

HRS AASHTO

649

### Complete Issue Information

non-composite action for positive moment. I am not sure how these fields relate.

FROM: dkoenig DATE: 10/6/2000 10:49 AM

I have another question that I cannot remember seeing an answer for yet.

Question 3: For example, tie down location often has a Brass Analysis error involving the location being too close to an analysis point (10th points). Will this problem be handled by Virtis/Brass in the near future, or does the user need to adjust appropriately.

FROM: bgoodrich DATE: 12/5/2000 3:00 PM

Question 1: BRASS-LFD has been enhanced to allow POI overrides, but the export does not support this feature yet. This may be implemented in Version 4.1.

Question 2: The POI commands will override the information generated on the STEEL-GIRDER-CONTROL command which uses the contraflexure locations to set the BRASS section type.

Question 3: For now the user must adjust their bridge data if they want to use BRASS. The small element issue is being brought before the Task Force for consideration, which is basically the issue as described here.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 2876                                        |
| Subject: Enhancement Request - Bride Explorer desktop |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Thompson, Todd   | 10/4/2000 2:14:00 PM |
| Modified By: administrator     | 6/19/2008 4:38:35 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

4/19/2016 3:14:44 PM

HRS AASHTO

650

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 2880.10499 | Closed        | Checkin saves BWS without warning user |

### Description

FROM: tthompson DATE: 10/4/2000 8:58 AM

We need a more robust and user customizable desktop for the bridge explorer. Currently a user can only display, sort and manipulate a limited selection of data items.

I would request at a minimum the following additional fields be able to be displayed, sorted and queried:

pontis\_bridge.funcclass  
pontis\_bridge.kind\_hwy  
pontis\_bridge.level\_srvc  
pontis\_bridge.dirsuffix  
pontis\_bridge.yearbuilt  
pontis\_bridge.yearrecon  
pontis\_bridge.designload  
structure types

Yes, this is similar to request 2704, submitted on 5-24-2000. Hopefully in these 5 months, some progress has been made on this?

|                                                 |
|-------------------------------------------------|
| Issue ID: 2880                                  |
| Subject: Checkin saves BWS without warning user |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Barnhill, Gale   | 10/6/2000 6:24:29 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM |
| Priority: High                 |                      |

4/19/2016 3:14:44 PM

HRS AASHTO

651

## Complete Issue Information

Category: Bug - GUI 2

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
| Ihnat, Joseph   | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

## Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                          |
|------------|---------------|--------------------------------------------------------------------------------------------------|
| 2882.10497 | Closed        | 3.0 with SP4 - beta check - need message when trying to delete a bridge with checked out str def |

## Description

FROM:jduray DATE:10/06/2000 14:24:05

When the user checks a bridge in using BWS he/she is not informed that the data is being saved. Add a dialog asking user if he/she wants to continue saving. He has the option to cancel the checkin. We should explain the he can close the BWS and check the bridge in from the Bridge Explorer.

The dialog can be added to BWS::OnCheckinBridge.

If the bridge is still checked in (which means the domain was saved to the db) we should clear the flag that indicates the data has been modified. During the checkin process the domain saves the data to the db, clears the checkout status and retrieves the bridge and the BWS rebuilds itself.

FROM:jduray DATE:10/20/2000 13:52:04

Fix for version 4.0.

FROM:jihnmat DATE:8/17/2005 2:36:01 PM

Fixed for 5.4.0

4/19/2016 3:14:44 PM

HRS AASHTO

652



**Complete Issue Information**

FROM:xli DATE:9/19/2005 10:18:28 AM

It worked except the "Check out" icon in bridge explorer. The "Check out" icon doesn't turn off after bridge is checked in.

FROM:jihnat DATE:9/19/2005 2:55:18 PM

That is a separate issue. It was brought up in a separate incident (1244) and it was decided to leave it as is.

|                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|
| Issue ID: 2882                                                                                            |
| Subject: 3.0 with SP4 - beta check - need message when trying to delete a bridge with checked out str def |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Barnhill, Gale   | 10/6/2000 7:01:06 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: gbarnhill DATE: 10/6/2000 1:55 PM

During verification of INCIDENT 2778, I came across the following. I tried to delete a bridge with a structure def checked out to someone else. I got the error message that I couldn't delete the bridge, but no other explanation as to why. Can we get the same message as when I try to check out a bridge that has parts checked out to another user ?? Maybe we need to add a new symbol to the CHECKED OUT column on EXPLORER to indicate a part of the bridge is checked out.

4/19/2016 3:14:45 PM

HRS AASHTO

653

**Complete Issue Information**

FROM:jduray DATE:4/12/2005 11:11:56 AM  
 See if we can provide info about checked out components.

Also investigate adding an icon to indicate part of the bridge is checked out.

FROM:jhnat DATE:8/19/2005 9:49:16 AM  
 Fixed for 5.4.0  
 I added the message as requested. No action taken on displaying an icon.  
 We currently show different icons if another user has a bridge checked out as opposed to the current user having a bridge checked out.  
 No icon is currently shown in the Bridge Explorer if only structure defs are checked out.  
 Don't know what we could show if, say, another user and current user each had a structure def checked out.

FROM:xli DATE:9/19/2005 11:07:28 AM  
 Message is added.

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 2883                                                                                                 |
| Subject: 3.0 with SP4 - beta check - delete is available with focus on All Bridges and Deleted Bridges folders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Barnhill, Gale   | 10/6/2000 7:05:15 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |

**Contacts**

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

**Documents**

4/19/2016 3:14:45 PM

HRS AASHTO

654

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 2884.10495 | Resolved      | BWS and Validation for PS Horizontal Shear Reinforcement Ranges |

### Description

FROM: gbarnhill DATE: 10/6/2000 1:59 PM

During verification of INCIDENT 2762, I came across the following.  
As I was working with deletes, while in BRIDGE EXPLORER, I tried to delete with focus on ALL BRIDGES folder name. Nothing happened, which is good, but I got no messages or any indication that I had done something wrong or that anything at all had resulted from the click of Delete. It seems that DELETE shouldn't even be available if focus is on ALL BRIDGES or DELETED BRIDGES folder names.

FROM:jihnmat DATE:10/09/2000 14:37:19

This has already been fixed. (Working OK in Version 4.0 Alpha Build 2)

FROM: gbarnhill DATE: 11/15/2000 8:10 AM

OK in V4.0.0 Beta 1

Issue ID: 2884

Subject: BWS and Validation for PS Horizontal Shear Reinforcement Ranges

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Kennelly, Krishna

10/9/2000 6:20:45 PM

Modified By: administrator

6/19/2008 4:02:03 PM

Priority: High

4/19/2016 3:14:45 PM

HRS AASHTO

655

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Ihnat, Joseph   | Closed | High     | Enhancement |

## Contacts

| Name          | Company                        | Email 1                                                                  | Phone 1       |
|---------------|--------------------------------|--------------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech                     | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>     | (402)363-9515 |
| Dean Teal     | Kansas Dept. of Transportation | <a href="mailto:teal@ksdot.org">teal@ksdot.org</a>                       | (785)291-3001 |
| Todd Thompson | South Dakota DOT               | <a href="mailto:todd.thompson@state.sd.us">todd.thompson@state.sd.us</a> | 605-773-3285  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 2886.10493 | Closed        | Service Pack Information for Administrators |

## Description

FROM:kkennelly DATE:10/09/2000 14:16:23

In the BWS report, if the Horizontal Shear Reinf Def is selected as the default "Composite", we should list that in the Shear Reinforcement column. Right now, it is blank like the user forgot to specify a reinforcement def for the range. When Validate is done for the Horizontal Shear Reinf Ranges, we shouldn't issue a warning if the spacing and number of spaces is undefined if they have selected the default "Composite" as the shear reinf def.

FROM:mordoobadi DATE:10/02/2001 3:01:22 PM  
Fixed.

## Complete Issue Information

|                                                      |
|------------------------------------------------------|
| Issue ID: 2886                                       |
| Subject: Service Pack Information for Administrators |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 10/11/2000 3:40:57 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dteal DATE: 10/11/2000 10:34 AM

We should add the Service Pack update number to the About Virtis/Opis in the help pulldown. This would be a great time saver to system administrators!

FROM: tthompson DATE: 10/11/2000 10:44 AM

Also in the Title Bar of the Connect Screen and the Splash Screen.

FROM: gbarnhill DATE: 10/11/2000 12:46 PM

Me, too, Me, too !!!!! How about a quick utility that reads the date stamps of the dll's, etc in the folder & checks against what everything should show according to which Service Pack is installed.

FROM: jduray DATE: 10/11/2000 5:13 PM

This feature is planned for version 4.

FROM: dteal DATE: 11/20/2000 10:38 AM

4/19/2016 3:14:46 PM

HRS AASHTO

657

### Complete Issue Information

As far as I can tell - it's not included in the version 4 beta. This that correct?

FROM:jhnat DATE:11/20/2000 15:19:20

The Version 4 Betas and the Version 4 Release will all show version 4.0.0 (but the Betas show "Beta Build x" on the Splash Screen and About window). When the Service Packs for Version 4 are released, they will be version 4.0.1, 4.0.2, etc.

FROM:jduray DATE:1/16/01 11:42:47 AM

This feature is in the Service Pack 1 for version 4.0 being prepared today. All program files will be updated with the patch number. The Splash screen, About box and the Login dialog all display 4.0.1. Also, if you use Explorer to view the properties of the dll's it will show version 4.0.1 (Build 3002). The date of the dll is also changed.

FROM:dteal DATE:01/25/2001 13:16:59

FROM:jhnat DATE:1/25/01 3:12:09 PM  
Accepted by dteal ("A" in Track field).

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 2887                                                             |
| Subject: SP4 - System Shortcoming - Data/Results stored on local harddrive |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Thompson, Todd   | 10/11/2000 7:19:24 PM |
| Modified By: administrator     | 6/19/2008 4:02:03 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 1          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Assigned  | High     | Bug - GUI 1 |
|                 | Duplicate |          |             |
| Ihnat, Joseph   | Duplicate | High     | Bug - GUI 1 |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:14:46 PM

HRS AASHTO

658

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 2888.10491 | Closed        | Training Manual – Deflection Dist Factor |

### Description

FROM: tthompson DATE: 10/11/2000 1:59 PM

I came across a situation in which I have multiple databases, which may have the same structure on different databases. I had originally analyzed a structure on db A. I then made a change in the grade of structural steel and re-analyzed the structure. I came back to Virtis later and was using db B. I then went to View the Latest Analysis Results and View Analysis Log. Things didn't look right and after further investigation, the results I was seeing was from the db A results.

I think it's important that users realize this system shortcoming when we save data on a local hard drive that may or may not be current for the structure that they are looking at.

This is similar to Incident 1550 in having structures that are deleted have their results persist on the local harddrive. I have since learned to frequently clean out these files and subdirectories. I have found typically that each bridge consumes about 1.5 MB of hard drive space.

FROM: jduray DATE: 10/11/2000 5:06 PM

Please add to the bridge delete (from the bridge explorer) cleanup of the files on the hard drive.

FROM:jihnate DATE:2/27/2002 12:57:04 PM

Cleanup after bridge delete was added to incident 1550, which has been completed by Herman Lee.

|                                                   |
|---------------------------------------------------|
| Issue ID: 2888                                    |
| Subject: Training Manual – Deflection Dist Factor |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/11/2000 8:31:00 PM |
| Modified By: administrator        | 6/19/2008 4:02:02 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

### History

4/19/2016 3:14:46 PM

HRS AASHTO

659

### Complete Issue Information

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Kennelly, Krisha | Closed   | High     | Enhancement    |
| Duray, Jim       | Resolved | High     | Bug - Export 2 |
| Duray, Jim       | Resolved | High     | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | testcoverplates.bbd |             |

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 2890.10489 | Resolved      | Brass creating web depth of zero |

### Description

FROM: dteal DATE: 10/11/2000 3:24 PM

In the Virtis/Opis Training Manual page RC2-17 we have an example of LRFD Moment and Shear distribution factor calculations. We don't have an example of calculating the Dist. Factors for single and multi lane deflection.

This calculation is # of lanes divided by # of girders. In the case of the equivalent width of longitudinal strips, the # of girders are equal to lane width divided by strip width.

FROM: jduray DATE: 10/11/2000 5:14 PM

Krisha - please add to manual.

FROM: kkennelly DATE: 10/26/2000 16:07:46

I've added the following to the Training Manual. Dean, let me know if it doesn't sound right.

The deflection distribution factor is calculated as the number of lanes divided by the number of girders. For a reinforced concrete slab bridge, the number of girders is taken as the lane width divided by the strip width. Our lane width is 12 feet and our strip width is 12" or 1 foot.

$$\text{Deflection DF} = \frac{1 \text{ lane} * 2 \text{ wheels/lane}}{(12' / 1')} = 0.1667 \text{ wheels/ft}$$

FROM: dteal DATE: 11/17/2000 8:42 AM

No – following is my interpretation of how Jay explained it to me.

$$\text{Deflection DF} = (\# \text{ Lanes} / \# \text{ of Girders}) * \text{Multi Presence Factor}$$

4/19/2016 3:14:46 PM

HRS AASHTO

660



**Complete Issue Information**

# of Girders = (Lane Width/Strip Width)  
 Therefore, Defl DF = (# lanes/(Lane Width/Strip Width))xMulti Presence Factor

For this example:  
 # Lanes = 1 or 2  
 Lane Width = 12 feet  
 Strip Width = 1 foot  
 Multi Presence factor = 1.20 for 1 lane and 1.00 for 2 lanes (Jay suggested using max number of lanes for multilane)

Single Lane DF = (1 Lane/(12' Lane/1' Strip)) x 1.20 = 0.100  
 Multi Lane DF = (2 Lane/(12' Lane x 2/1' Strip)) x 1.00 = 0.0833

FROM:kkennelly DATE:11/20/2000 08:13:35  
 The calculation that I put in above was for the LFD deflection df, I put that on page RC2-11. I've put the LRFD calculation in also on page RC2-17.  
 FROM: dteal DATE: 11/20/2000 10:34 AM  
 How do I get a copy of the most current training manual?  
 FROM: dteal DATE: 11/21/2000 11:42 AM  
 As of Nov 20th. the example manual is on the web. Thanks  
 FROM: dteal DATE: 12/8/2000 8:16 AM

FROM:kkennelly DATE:12/08/2000 13:06:01  
 Changed to Accepted based on A in track field.

Issue ID: 2890  
 Subject: Brass creating web depth of zero

Folder: /Virtis/Support Center  
 Primary Contact: Duray, Jim  
 Submitted By: Kennelly, Krisha 10/12/2000 5:24:17 PM  
 Modified By: administrator 6/19/2008 4:02:02 PM  
 Priority: High  
 Category: Bug - Export 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 2896.10483 | Resolved      | Incorrect Analysis Error Message |

### Description

FROM:kkennelly DATE:10/12/2000 12:58:43

I was trying to test some changes to the domain when I came across the following in the testcoverplates.bbd bridge.

Member G1 has a steel rolled beam cross section based alternate with 2 cross sections defined. Both cross sections have top and bottom cover plates defined. For the cross section ranges, I have 3 ranges. The middle range is over the pier. I defined section 2 at the left end of the range and section 1 at the right end of this range. When I try to run BRASS LFD, I get a zero web depth in this range. The sections.lby file has the correct shape dimensions in it so I'm not sure why BRASS is getting zero web depth.

FROM: bgoodrich DATE: 10/12/2000 3:52 PM

This bridge contains rolled beams with bottom cover plates that taper along the length of the girder. I don't think BRASS supports this type of definition. I think we ran into this issue before, but BRASS was not enhanced. I will forward this issue to WYDOT.

FROM:kkennelly DATE:10/13/2000 08:59:56

Maybe we should just have the export issue an error and stop.

FROM:jduray DATE:11/27/2000 14:40:23

I think the export should halt and inform the user that BRASS can't analyze this situation. It sounds to me like the error BRASS gives is not correct since it is referring to the web depth but the problem is tapering cover plates. Perhaps BRASS should be fixed too.

FROM:jduray DATE:11/28/2000 16:09:27

FROM: bgoodrich DATE: 11/29/2000 6:09 AM

I modified the export (BrassCrossSections.cpp) to detect this type of structure and halt execution. Fixed for Version 4.0 Beta Build 2.

Jim - Please change status of this incident to Resolved unless you think we should keep it around as a Suspended enhancement until we get approval from WYDOT to modify BRASS to address this structure type.

Issue ID: 2896

Subject: Incorrect Analysis Error Message

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Koenig, David

10/12/2000 8:57:37 PM

4/19/2016 3:14:47 PM

HRS AASHTO

662

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:02:02 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | Urgent   | Bug      |

**Contacts**

| Name         | Company                 | Email 1                   | Phone 1        |
|--------------|-------------------------|---------------------------|----------------|
| David Koenig | Missouri DOT            | david.koenig@modot.mo.gov | (573) 526-0556 |
| Jim Duray    | Michael Baker Jr., Inc. | jduray@mbakercorp.com     |                |

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Dist Factors Off 1&3.bbd |             |
|      | Dist Factors Off 1&2.bbd |             |

**Tasks**

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 2898.10481 | Resolved      | Incorrect distribution factors (patch 4) |

**Description**

FROM: dkoenig DATE: 10/12/2000 4:01 PM

When contraflexure points are located to close to tenth points, an error message will appear explaining that these two cannot coincide. Similarly, the same thing happens when a contraflexure point is located at a change point. However, the error message will refer to a change point being located at a tenth point. This is inaccurate. Here is an error message for a 114.8294 ft (35m) span. The 7th tenth point is located at 80.3806 ft., and the contra point is located at the field splice at 83.62 ft.

Structural Analysis Errors (2103) - Element too small  
 Structural Analysis Errors (2103) - Element too small

----- Contents of BRASS Error File -----

File: D:\AASHTO BridgeWare\Virtis30\A5783\Continuous\_2\_Span\_-\_Composite\_4\_Girder\_Bridge\G1  
 \Plate\_Girder\_Shape.ERR  
 Fatal Error Encountered - Unexpected Termination  
 Data File: ite\_4\_Girder\_Bridge\G1\Plate\_Girder\_Shape.dat

4/19/2016 3:14:47 PM

HRS AASHTO

663

## Complete Issue Information

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File

\*\*\*\* ERROR \*\*\*\*  
THE CHANGE POINT LOCATED 83.62 FEET FROM THE LEFT END OF SPAN 1 IS WITHIN  
0.099 FEET  
OF THE 7TH TENTH POINT OF SPAN 1. NUMERICAL INSTABILITY WILL RESULT. ADJUST  
THE LOCATION  
OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 7TH TENTH POINT. SEE PAGE 10.1 OF  
VOL 1

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File

One or more elements are too small. See detailed error messages above.

----- End of Contents of BRASS Error File -----

I assume the error message is needed, but is incorrect and misleading.

In addition to the above, I found that a contra point could be located exactly at a change point (High precision). Is this a problem? I think it would be, even though contra points are often located at 70, 30% (tenth points). Maybe a brief explanation would clear things up for me.

FROM: jduray DATE: 10/13/2000 9:22 AM

FROM: bgoodrich DATE: 10/13/2000 5:43 PM

I am not able to reproduce the problem based on the information you provided. Please attach your the BBD file for this bridge and I will investigate further.

FROM: dkoenig DATE: 10/16/2000 8:18 AM

I have attached a bbd file. G1 - Member Alternative's Engine is set with contra-points that will give the analysis error. The other girders, G2 - G5, have more precise contra-points defined. These girders do not give the error described above.

FROM: bgoodrich DATE: 10/23/2000 10:42 AM

I have forwarded the error message issue to Dan Glandt with some suggestions on wording. The issue regarding the precision to which contraflexure percents must be entered should be somewhat addressed by the new user-defined tolerance available in version 4.0. Currently, it is the users responsibility to enter contraflexure locations that do not create small elements, so some care must be taken when entering the contraflexure location percentages. This incident is related to the small element issue of Incident 2498.

FROM: bgoodrich DATE: 10/26/2000 9:43 AM

Dan Glandt corrected the error message in the BRASS-LFD engine. I will send the new BRASS DLL to

4/19/2016 3:14:47 PM

HRS AASHTO

664

### Complete Issue Information

Baker when I receive Dan's source code containing other corrects found during testing. Fixed for Version 4.0.

|                                                   |
|---------------------------------------------------|
| Issue ID: 2898                                    |
| Subject: Incorrect distribution factors (patch 4) |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Koenig, David       | 10/13/2000 1:07:46 PM |
| Modified By: administrator        | 6/19/2008 4:02:02 PM  |
| Priority: Urgent                  |                       |
| Category: Bug                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dkoenig DATE: 10/13/2000 7:57 AM

For bridges created after the release of patch 4, the distribution factors calculated from the "compute from typical section" are incorrect. I created 2 bridges from scratch, a 4 girder and a 5 girder. Exterior G1's factors are calculated like that of an interior girder for both bridges. The 4 girder bridge's G2 is given exterior distribution factors. G3 and G4 are OK. The 5 girder bridge's G3 has exterior factors while the rest of the girders are OK. It seems like certain girder's references are being switched. I assume this error occurred from the correction of Incident 2849.

The two bridges bbd files are attached to this document.

FROM: dkoenig DATE: 10/13/2000 8:16 AM

FROM: jduray DATE: 10/13/2000 9:20 AM

FROM:kkennelly DATE:10/13/2000 12:53:41

Problem is with skew being set before girder spacing and changes we made to prevent Oracle db

4/19/2016 3:14:47 PM

HRS AASHTO

665

**Complete Issue Information**

having too many digits. Temporary workaround is to set the girder bay spacing in the Structure Framing Plan Details window, Ok to close window, reopen window and then enter the skews, Ok to close window.

FROM:kkennelly DATE:10/17/2000 12:59:00

Service Pack 4a is being issued which removes this problem. (We backed out the changes that we had made for #2802 that caused this problem.)

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 2899                                                              |
| Subject: Virtis allows 2 rebar materials to be input but export only uses 1 |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Kennelly, Krisha   | 10/13/2000 4:49:54 PM |
| Modified By: administrator       | 6/19/2008 4:02:02 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | East Main Bridge.bbd |             |

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 2900.10479 | Q/A           | SP4 - How do I go back to SP3 |

### Description

FROM:kkennelly DATE:10/13/2000 12:47:01

Submitted on behalf of Mark Bucci, LADOTD. 2 rebar materials, one 40 ksi and one 60 ksi, used over pier but export only recognizes the 40 ksi material. BBD file attached.

FROM:kkennelly DATE:10/13/2000 12:48:52

FROM: bgoodrich DATE: 10/13/2000 11:51 AM

I spoke with Jay about this issue. His suggestion is to modify the export to scale the number of bars in each row by the ratio of the yield stress of the that row to the yield stress of the first row. Say the first row contained 10-#8 bars (fy = 40 ksi) and the second row contained 12-#8 bars (fy = 60 ksi). The first row would be exported as is, but the second row would be exported as  $60/40 * 12 = 18$ -#8 bars (fy = 40 ksi). A warning message would definitely have to be issued for this case. I estimate I could make this modification in 4 hours. This affects steel structures as well as R/C and P/S. Please let me know what you decide.

Entered for Jim Duray:

Sounds good to me. Go for it!

FROM: bgoodrich DATE: 11/1/2000 9:35 AM

I modified the export (BrassCrossSections.cpp) to export the rebar as described in my comments from 10/13/2000. This affects Abxbrass.ocx. I tried testing this bridge using the latest BRASS-LFD engine (containing the omnibus steel changes) and I am getting a zero rating for several points. I am checking with Dan Glandt to determine if BRASS is truly correct.

FROM: bgoodrich DATE: 11/7/2000 3:52 PM

Dan Glandt corrected the rating factor problem. Fixed for Version 4.0. I sent the new BRASS DLL to Baker today.

FROM:kkennelly DATE:12/19/2000 10:51:38

Tested for Version 4.0 Release, export looks ok. BRASS LFD seemed to run ok.

FROM: bgoodrich DATE: 12/19/2000 11:07 AM

Issue ID: 2900

Subject: SP4 - How do I go back to SP3

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thompson, Todd 10/13/2000 9:49:08 PM

Modified By: administrator 6/19/2008 4:02:02 PM

4/19/2016 3:14:48 PM

HRS AASHTO

667

**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: N/A  |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | Urgent   | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | hps metric.bbd      |             |

**Tasks**

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 2907.10472 | Closed        | 3.0 - not getting symmetrical results for steel girderline |

**Description**

FROM: tthompson DATE: 10/13/2000 4:41 PM

We updated all our PC's in the office this week to SP4. IS there an easy way to get back to SP3? Or will a fix to SP4 be coming soon?

FROM: jduray DATE: 10/14/2000 11:10 PM

I hope to have a revised SP4 (SP4a) on Monday that replaces the faulty DLL and allows the other dll's that are part of SP4 to remain inplace.

If that isn't possible we will post the DLL's that were replaced by SP4 so you can easily remove SP4 (by going back to SP3).

Sorry for the inconvenience.

FROM: tthompson DATE: 10/18/2000 11:00 AM

Thanks for SP4A



**Complete Issue Information**

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 2907                                                      |
| Subject: 3.0 - not getting symmetrical results for steel girderline |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Barnhill, Gale     | 10/18/2000 9:50:46 PM |
| Modified By: administrator       | 6/19/2008 4:02:01 PM  |
| Priority: Urgent                 |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: gbarnhill DATE: 10/18/2000 4:41 PM

I've created a girderline in metric that's a symmetrical 3 span steel composite. The critical rating comes out at POI 203 but the ratings at POI 207 do not agree. The difference seems to be in the calculation of  $\Phi * Mn$ . At 203 BRASS calculates +/- 3200 ftkip. At 207 the number is +/- 5100. The schematic appears to be symmetrical. If the number at 207 is correct, then the critical rating will be at 104 which gives a symmetrical result with 306.

I've attached the bbd file.

FROM: gbarnhill DATE: 10/19/2000 3:59 PM

update

I looked closer at the output. Virtis defaults the counterflexure change to 0.3 and 0.7 span. BRASS apparently always uses section properties at the left side of a change. The slab rebar stops at 2.274. 2.3 left is composite negative so no rebar or slab exist (the composite slab starts at 2.3 right). 2.7 left is composite positive and the composite slab exists. I changed the counterflexure location away from 2.3

4/19/2016 3:14:48 PM

HRS AASHTO

669

**Complete Issue Information**

and 2.7 and the results were then symmetrical (2.3 does not govern with composite positive sense). However, the capacities at 109 and 201 are approximately reversed from 301 and 209. The capacities at 110 and 200 are exactly reversed from 300 and 210.

FROM: jduray DATE: 10/19/2000 7:39 PM

FROM: bgoodrich DATE: 10/20/2000 10:49 AM

I imported this bridge with Version 3.0, analyzed it, and received unsymmetrical results just as Gale did. Then, I migrated by 3.0 database to 4.0 and analyzed it. This time the results were approximately symmetrical. The BRASS data files exported from both versions are nearly identical (comments differ slightly). It appears that the BRASS-LFD engine has been fixed between now and the last release. Fixed for version 4.0.

FROM: gbarnhill DATE: 11/15/2000 8:14 AM

OK in V4.0.0 Beta 1

FROM:bgoodrich DATE:01/11/2001 15:42:29

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 2915                                            |
| Subject: Equation parser for edit controls and grid cells |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 10/20/2000 1:05:17 PM |
| Modified By: administrator     | 6/19/2008 4:02:01 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

## Complete Issue Information

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 2918.10461 | Closed        | Bracing Schedule |

### Description

FROM:jduray DATE:10/20/2000 08:54:25

To help with investigating the digits problem (VI 2802) I wrote an equation parser that can be used with edit controls. It is CParseEquation class in the TestDigits (CParseEquation) project in Source Safe. The following is a summary of what it does, how it works and what is needed to implement it within Virtis.

#### Summary of CParseEquation

-----

CParseEquation uses two stacks, one for numbers and the other for operators and functions. The advantage of this approach is it is easy to look at the next operator. This is necessary to determine how processing should proceed. A single stack could be used but a function would be required that can iterate the stack to look at the next function. I haven't found a situation with the two stacks where operations and values can get out of sync with each other, although that is a risk.

The equation is parsed and values are placed on the value stack and operators and functions are placed on the operator stack. Values are computed when ), \*, / or a function is the next operator ("compute" operators). The result of a calculation is pushed onto the value stack. As values and operators are used they are popped of their respective stack. As long as the next operator is a "compute" operator values continue to be computed. If the next operator is not a "compute" operator parsing of the equation continues.

Example of the two-stack approach:

=16\*cos(45+15)/4+(3+5)\*2

| Value Stack                                             | Operator Stack |
|---------------------------------------------------------|----------------|
| 16                                                      | *              |
|                                                         | cos            |
|                                                         | (              |
| 45                                                      | +              |
| 15                                                      | )              |
| -----compute because ) is next on the operator stack    |                |
| 16                                                      | *              |
|                                                         | cos            |
| 60                                                      |                |
| -----compute because function is next of operator stack |                |

## Complete Issue Information

```
16          *
.5
-----compute because * is next of operator stack
8          /
4
-----compute because / is next of operator stack
2          +
3          (
5          +
           )
-----compute because ) is next on the operator stack
2          +
8          *
2
-----compute because * is next of operator stack
2          +
16
-----compute because end of equation
18
```

Remaining to be completed:

- 1 - general cleanup of the code, can be more efficient and more testing
  - 2 - add more functions
- Suggestions:
- sqrt()
  - tan()
  - atan()
  - power 2^4
  - ToRadians()
  - ToDegrees()
  - PI
- 3 - add capability to convert feet inches and fraction to decimal feet  
(12 6 1/2 should convert to 12.5416667)
  - 4 - need to report why an equation cannot be evaluated (error reporting)
  - 5 - need to figure out how to implement in the GUI

Some issues are:

- do we store the equation for viewing after it is evaluated
  - need a wide edit control for entering/viewing the equation
- 6 - perhaps improve the equation scanner to identify syntax that may confuse the parser

It currently supports +, -, \*, /, cos, sin, acos, asin, ( & ) with nesting. The stacks are currently fix-dimensional arrays but could be changed to CArrays so they can grow as necessary. The values are stored in the CStack object and the operators are in COperatorStack object.

FROM:jduray DATE:10/20/2000 09:06:24

FROM:jduray DATE:10/20/2000 09:15:52

4/19/2016 3:14:48 PM

HRS AASHTO

672

**Complete Issue Information**

FROM:hlee DATE:4/30/2008 2:23:07 PM  
Discarded by TAG 12/07.

|                           |
|---------------------------|
| Issue ID: 2918            |
| Subject: Bracing Schedule |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: fulton, keith      | 10/20/2000 9:58:39 PM |
| Modified By: administrator       | 6/19/2008 4:02:01 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: kfulton DATE: 10/20/2000 3:45 PM

I have several structures where there is not a diagram at the beginning of the span. When I try to run an analysis, I get the following error message:  
Input Errors (1878) - BRACING-SCHEDULE: The first range used for defining cross bracing for a span, must begin at 0.0 feet.

----- Contents of BRASS Error File -----

File: D:\VirtisOpis30\LDL\6\_Girder\_-\_W\_Beam\_-\_Simple\_Span\G3\interior\_-\_G3.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: r\_-\_W\_Beam\_-\_Simple\_Span\G3\interior\_-\_G3.dat

## Complete Issue Information

Error No.: 1878  
Type : Input Error  
Location : Input Data File

### \*\*ERROR\*\* BRACING-SCHEDULE

The first range used for defining cross bracing for a span, must begin at 0.0 feet.

----- End of Contents of BRASS Error File -----

This is a BRASS limitation, but it should not require the user to input bracing that does not actually exist. I feel that the export should take care this problem.

FROM: gbarnhill DATE: 10/25/2000 12:54 PM

Please be sure to check this out both in system and girderline. In Girderline in the BRACING RANGES window, you MUST put in a zero start distance and a zero space for Virtis to correctly export the first BRACING SCHEDULE command to BRASS.

FROM: bgoodrich DATE: 10/31/2000 7:46 AM

Keith - I spoke with Jim and he said you should enter a diaphragm at the support to indicate that the beam ends embedded in the abutments are brace. Virtis is not currently capturing diaphragm materials and geometry. He does not want the export to "assume" that the ends of the beam are braced.

FROM: kfulton DATE: 12/12/2000 2:11 PM

FROM:bgoodrich DATE:01/11/2001 15:33:49

Issue ID: 2919

Subject: Strand Layout window - possible error arranging strands

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

10/23/2000 8:58:09 PM

Modified By: administrator

6/19/2008 4:02:01 PM

Priority: High

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Bug      |

## Contacts

4/19/2016 3:14:49 PM

HRS AASHTO

674

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A5783.bbd           |             |

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 2920.10459 | Resolved      | Low Rating - Mixup in Brass Stiffener Commands? |

**Description**

FROM:jduray DATE:10/23/2000 16:52:45

If the strand position rows are not in order from the bottom of the beam to the top the window may not arrange the strands correctly. This is fixed for version 4.

FROM:jduray DATE:12/05/2000 13:36:05

Issue ID: 2920

Subject: Low Rating - Mixup in Brass Stiffener Commands?

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:14:49 PM

HRS AASHTO

675

### Complete Issue Information

|                             |                       |
|-----------------------------|-----------------------|
| Submitted By: Koenig, David | 10/24/2000 3:51:39 PM |
| Modified By: administrator  | 6/19/2008 4:02:01 PM  |
| Priority: High              |                       |
| Category: Bug               |                       |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Ordoobadi, Mehrdad | Resolved | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 2930.10449 | Resolved      | Virtis/Opis does not run on Sybase SQL Anywhere 6.0 and 7.0 |

### Description

FROM: dkoenig DATE: 10/24/2000 10:53 AM

A low rating (0.13) occurred on a 2 span continuous plate girder bridge. The tabular report shows that shear controls at the 200.00 point of the bridge (2nd support – Right side). Looking at the Brass data, the low rating occurs because Brass considers this point unstiffened when it should be considered stiffened. Looking at the Brass schedule commands, the STIF-TRAN-SCHEDULE commands for span 1 are OK, but the two stiffener spacings just to the right of support 2 are incorrect (Virtis is correct). This spacing would give this low rating. The tabular report supports this, but I can only analyze the low rating when a 110.00 POI is created not a 200.00 POI. It seems like there is some switching going on here between data.

The correct stiffener spacing near the support in mm is:

[ 3350 [ 1675 [ 1675 [ 3350 [

with the center being the bearing stiffener.

In addition to this, the following warning message was given at the 107.00 location.

\*\*\* WARNING \*\*\*

AT ANALYSIS POINT 107.00, THE WEB THICKNESS REQUIREMENT, AASHTO 10.48.5.1 EQ. (10-104) OR AASHTO 10.49.2 EQ. 10-120), HAS NOT BEEN SATISFIED. LONGITUDINAL STIFFENERS THEREFORE REQUIRED. NO LONGITUDINAL STIFFENERS WERE ENTERED

4/19/2016 3:14:49 PM

HRS AASHTO

676



## Complete Issue Information

AT THIS LOCATION, ENGINEER SHOULD REVIEW

This plate girder is comprised of 50 grade steel and a 10 mm web throughout.

I have attached the bbd file for this bridge (A5783).

Any information leading to the cause of the low rating is appreciated.

FROM: bgoodrich DATE: 10/26/2000 9:48 AM

The low rating is caused due to round-off when the stiffener ranges are written to the BRASS data file. The span length is 111.5485564 ft which is written to the data file as 111.5486 ft. The start distance and range for the problem stiffener are 106.0531496 ft (106.0531 ft in data file) and 5.4954068 ft (5.4954 ft in data file), respectively. When the start distance and range in BRASS are added together, we get 111.5485 ft. Therefore, the small gap of 0.0001 ft within BRASS contains no information regarding stiffener spacing, so it is treated as unstiffened. Because the gap is adjacent to the 110.0 point, this is why the low rating occurs. I don't think there is any work-around that can be done because the problem stems from round-off problems. You might try defining the stiffeners in each span by referencing the start of the span, i.e., do not define ranges that cross supports. I am currently working on a correction to this problem.

FROM: dkoenig DATE: 10/27/2000 8:39 AM

I forgot to tell you that I corrected the Brass stiffener schedule (Visually it looked correct) data by entering the stiffeners near the support referenced from the support. This did not correct the rating.

FROM: bgoodrich DATE: 10/31/2000 7:52 AM

The problem with the stiffener ranges being switched for span 2 was due to an export error when interpreting the ranges that crossed interior supports. I corrected this problem so stiffener ranges are correctly generated and I tested several configurations to verify the modifications. I also addressed a similar problem with the generation of the BRASS stirrup and bracing schedules. This affected the following Abxbrass files:

- BrassStifTranScheduleGroupCmd.cpp
- BrassStirrupScheduleGroupCmd.cpp
- BrassBracingScheduleCmd.cpp

I corrected the round-off problem for the last range of a span by comparing the sum of the start distance and range that BRASS will use to the span length that BRASS will use. The export basically adjusts the BRASS range so when added to the BRASS start distance, it adds up to the BRASS span length. This affected the following Abxbrass files:

- BrassCmd.cpp
- BrassCmd.h
- BrassLrfdStifTranScheduleGroupCmd.cpp
- BrassLrfdStifLongScheduleGroupCmd.cpp
- BrassLrfdBracingScheduleCmd.cpp
- BrassLrfdLatSupportScheduleCmd.cpp
- BrassShearConnScheduleCmd.cpp
- BrassLrfdStirrupScheduleGroupCmd.cpp
- BrassConcStlimScheduleGroupCmd.cpp
- BrassStdStifTranScheduleGroupCmd.cpp
- BrassStdStifLongScheduleGroupCmd.cpp
- BrassStdBracingScheduleCmd.cpp
- BrassStdLatSupportScheduleCmd.cpp
- BrassSteelGirderControlCmd.cpp

4/19/2016 3:14:49 PM

HRS AASHTO

677

**Complete Issue Information**

· BrassStdStirrupScheduleGroupCmd.cpp  
Fixed for Version 4.0.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 2930                                                       |
| Subject: Virtis/Opis does not run on Sybase SQL Anywhere 6.0 and 7.0 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Duray, Jim            | 10/27/2000 1:31:27 PM |
| Modified By: administrator          | 6/19/2008 4:02:00 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:10/27/2000 09:28:22  
Modify the dll that restricts to accept Sybase 6.0 and 7.0 and add it to the Patch 5 directory. Aaron and Sandor have been testing with it so we believe it works ok.

FROM:mordoobadi DATE:10/27/2000 09:45:18  
Done.

**Complete Issue Information**

|                                                            |
|------------------------------------------------------------|
| Issue ID: 2931                                             |
| Subject: Problems entering vertical stirrups in RC T-Beams |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Shah, Shyam         | 10/27/2000 6:02:00 PM |
| Modified By: administrator        | 6/19/2008 4:02:00 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Kennelly, Krisha | Duplicate | High     | Bug      |

**Contacts**

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Problem Bridge.bbd  |             |

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 2938.10441 | Resolved      | Request to increase BRASS max number of cross section ranges in span |

**Description**

FROM: snshah DATE: 10/27/2000 12:52 PM

I am getting an error from VIRTIS while attempting to enter vertical stirrups in reinf. concrete T-girders. I am being told that the end distance is not equal to the beam length; however, this is NOT correct. The information that is entered does actually equal the beam length. It seems as though VIRTIS does not acknowledge the last stirrup line entered.

In the attached file, the problem can be found in girder G2.

FROM: kkennelly DATE: 11/03/2000 08:25:46

Validate checks if the end distance is within 1' of the end of the span and issues a message asking if you want to change the spacing so that the end distance = the end of the span. It doesn't consider which row of the grid the data is in because a user could enter data into the grid out of order (for example the first row in the grid could contain the data for the rightmost range of stirrups on the girder). If you say no to the warning message you can continue in Virtis without any errors.

FROM: kkennelly DATE: 12/19/2000 12:53:58

I'm marking this as duplicate of 3017. Another user reported same behavior in incident 3017. This functionality will be changed in Version 4.1 under incident 3017.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 2938                                                                |
| Subject: Request to increase BRASS max number of cross section ranges in span |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Kennelly, Krishna  | 10/31/2000 2:21:02 PM |
| Modified By: administrator       | 6/19/2008 4:02:00 PM  |
| Priority: High                   |                       |
| Category: Enhance BRASS          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:14:50 PM

HRS AASHTO

680

**Complete Issue Information**

|                 |          |      |               |
|-----------------|----------|------|---------------|
| Goodrich, Brian | Resolved | High | Enhance BRASS |
|-----------------|----------|------|---------------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 002562.bbd          |             |

**Tasks**

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 2939.10440 | Resolved      | Request to increase BRASS max number point loads |

**Description**

FROM:kkennelly DATE:10/31/2000 10:16:42  
Submitted from email received on 10/10/00 from AIMS Group

Jim,

I've been having some problems in analyzing this steel bridge with VIRTIS 3.0. With this e-mail, I'm attaching its the .bbd file.

I have looked at both the BWS file and performed validation for the bridge but unable to fixed the errors. I hope you can give me some pointers on how to resolve the described problems. Below are brief descriptions of the bridge and its error messages from

VIRTIS.

File Name: 002562.BBD

Bridge Description:

It is a 5-spans continuous & 4-girders steel bridge with concrete deck. The exterior girders are continuous steel plate girders with various size of webs and flanges. The interior girders (stringers) are both standard steel rolled shapes (W21X68). The weight of both stringers and their loads are supported by floor beams (various sizes along the bridge). The floor beams then transferred the loads to both exterior steel plate girders (so both stringers sit on top of the floor beams). The top flanges of all the girders are embedded in the haunch.

Bridge Creation Method:

I used the girder system method and specified the floor beams as diaphragms. I created the exterior Steel Plate Girders and the interior standard rolled shape stringers using the schedule method. The contributing dead loads: girders' & floorbeams selfweight, concrete deck and two road barriers.

Live Load: Standard HS-20

Error during analyzing process:

4/19/2016 3:14:50 PM

HRS AASHTO

681

**Complete Issue Information**

- 1. Error Msg: Error Generating BRASS span commands.  
 No. of Ranges = 20 (max=18)  
 Max. number of cross-section ranges exceeded for BRASS  
 Error Generating BRASS span commands.

My email response 10/11/00:

Hi,

Jim Duray asked me to look into the problems you are having analyzing Bridge 002562. I've found the following:

- 1. Error Msg: Error Generating BRASS span commands.  
 No. of Ranges = 20 (max=18)  
 Max. number of cross-section ranges exceeded for BRASS  
 Error Generating BRASS span commands.

BRASS LFD has a limitation of a maximum of 20 cross section ranges in a span. A cross section range exists between points where the girder cross section (plate widths & thicknesses, deck thickness, etc.) changes properties. Span 3 of your bridge has 18 cross section ranges in BRASS due to the changes in the web and flange properties. BRASS LFD also internally creates a cross section change point at the points of contraflexure in the span. This adds another 2 ranges to Span 3 causing it to have 20 ranges which exceeds the BRASS maximum.

**Workaround:**

BRASS is placing the 2 points of contraflexure at 30% and 70% of the Span 3 length. This can be found on the STPLGR(outside) Member Alternative:

Engine tab. Select BRASS LFD as the engine, click the Properties button and a window will appear displaying a table of the points of contraflexure.

The default locations are 30% and 70%. This turns out to be 90' and 210' into Span 3. Based on the flange profiles that you have entered, this span has a flange change point at 96' and 204'. Change the locations of the points of contraflexure to 32% (96') and 68% (204') of Span 3. This reduces the number of cross section ranges in BRASS to 18 for Span 3 and this member will run (probably without a major effect on the analysis).

Another workaround is to slightly modify the top and bottom flange profiles so that they match the web profile to eliminate 2 small cross section ranges. The web profile in Span 3 has a change point at 47.5244' and 252.2574'. The top and bottom flanges have change points at 47' and 253'.

If you modify the top and bottom flange profiles to change at 47.5244' and 252.2574' as follows, this will reduce the number of cross section ranges

in this span and the member will run (again, probably without a major effect on the analysis)

Top and Bottom Flange Profile (I've only shown a portion of the grid)

| Support Number | Start Dist | Length  |
|----------------|------------|---------|
| 3              | 29.0000    | 18.5244 |
| 3              | 47.5244    | 48.4756 |
| 3              | 96.0000    | 21.0000 |
| etc. etc.      |            |         |
| 3              | 204.0000   | 48.2574 |
| 3              | 252.2574   | 18.7426 |
| 3              | 271.0000   | 58.0000 |

etc.

I will forward this incident to Bridgetech (the writers of BRASS) so that they can check into increasing

**Complete Issue Information**

the maximum number of cross section ranges in a span.

FROM: bgoodrich DATE: 11/1/2000 5:46 AM  
I forwarded this issue to WYDOT around a couple weeks ago, but a decision has not been reached.

FROM: bgoodrich DATE: 08/09/2001 13:18:32  
The number of cross section and web ranges has each been increased to 40 per span in both BRASS-GIRDER and BRASS-GIRDER(LRFD). This is related to Incident 2812. Fixed for Version 4.1.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 2939                                            |
| Subject: Request to increase BRASS max number point loads |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Kennelly, Krisha   | 10/31/2000 2:21:53 PM |
| Modified By: administrator       | 6/19/2008 4:02:00 PM  |
| Priority: High                   |                       |
| Category: Enhance BRASS          |                       |

**History**

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Goodrich, Brian | Resolved | High     | Enhance BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: kkennelly DATE: 10/31/2000 10:22:18  
Submitted from email received on 10/10/00 from AIMS Group

Jim,  
I've been having some problems in analyzing this steel bridge with VIRTIS 3.0. With this e-mail, I'm attaching its the .bbd file.

## Complete Issue Information

I have looked at both the BWS file and performed validation for the bridge but unable to fixed the errors. I hope you can give me some pointers on how to resolve the described problems. Below are brief descriptions of the bridge and its error messages from VIRTIS.

File Name: 002562.BBD

Bridge Description:

It is a 5-spans continuous & 4-girders steel bridge with concrete deck. The exterior girders are continuous steel plate girders with various size of webs and flanges. The interior girders (stringers) are both standard steel rolled shapes (W21X68). The weight of both stringers and their loads are supported by floor beams (various sizes along the bridge). The floor beams then transferred the loads to both exterior steel plate girders (so both stringers sit on top of the floor beams). The top flanges of all the girders are embedded in the haunch.

Bridge Creation Method:

I used the girder system method and specified the floor beams as diaphragms. I created the exterior Steel Plate Girders and the interior standard rolled shape stringers using the schedule method. The contributing dead loads: girders' & floorbeams selfweight, concrete deck and two road barriers.

Live Load: Standard HS-20

Error during analyzing process:

2. Error Msg: Error Generating ASF/LFD loads commands.
  - Error generating load group commands.
  - Load Case: Haunches & Diaphragms.
  - The number of concentrated loads exceeds the maximum allowed by BRASS.
  - No. of concentrated loads = 92 (Maximum = 70)

My email response 10/11/00:

Hi,

Jim Duray asked me to look into the problems you are having analyzing Bridge 002562. I've found the following:

2. Error Msg: Error Generating ASF/LFD loads commands.
  - Error generating load group commands.
  - Load Case: Haunches & Diaphragms.
  - The number of concentrated loads exceeds the maximum allowed by BRASS.
  - No. of concentrated loads = 92 (Maximum = 70)

This message is being produced when trying to analyze Member G2. This structure has a total of 46 diaphragms in each girder bay. When Member G2 is analyzed, the export applies the weight of each diaphragm as a concentrated load to the member in the BRASS LFD input file. Since this member is an interior member, it gets the load of the diaphragms from both bay 1 and bay 2 which results in a total of 92 point loads due to the diaphragms.

Workaround:

Eliminate the diaphragms in bay 2 and double the weight of the diaphragms in bay 1 to produce the

4/19/2016 3:14:50 PM

HRS AASHTO

684



**Complete Issue Information**

same loading effect on the member. This will cause only 46 point loads to be applied in BRASS LFD which is below the maximum of 70. I will forward this incident to Bridgetech (the writers of BRASS) so that they can check into either increasing the maximum number of point loads or combining diaphragm point loads that exist at the same location along the length of the member to reduce the number of loads.

As an aside, I don't think that your attempt to model the floorsystem of this bridge in Virtis is creating an accurate model. The 2 interior stringers that you have modeled are going to have span lengths of 150'/225'/300'/225'/150' not the true span lengths between the floorbeams. The diaphragms in Virtis do not provide any support below the members, just lateral support. Also, the diaphragms in Virtis are not transferring any live load to the exterior girders as floorbeams would.

FROM: bgoodrich DATE: 11/1/2000 5:48 AM  
I forwarded this issue to WYDOT around a couple weeks ago, but a decision has not been reached.

I did modify the export (LoadsUtility.cpp) to combine concentrated loads due to diaphragms when they are applied at the same location. This affects Abxbrass.ocx. Fixed for version 4.0.

Jim - Should we still be making the point load increase request to WYDOT? Is it necessary for us to update the engine help to indicate that the combining of diaphragms at the same location is done by the export?

FROM: jduray DATE: 11/28/2000 15:25:21  
I don't think we need to now. What the export is doing (with your recent change) is what an engineer would do. With this change Virtis should be able to analyze any diaphragm arrangement that BRASS can analyze.

Issue ID: 2940  
Subject: Effective Width Terminology

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 10/31/2000 4:11:02 PM  
Modified By: administrator 6/19/2008 4:38:35 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status | Priority | Category |
|------------------|--------|----------|----------|
| Kennelly, Krisha | Closed | High     | Bug      |
| Kennelly, Krisha | Closed | High     | Bug      |

**Complete Issue Information**

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A0458.bbd           |             |

**Tasks**

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 2941.10438 | Resolved      | Fatigue Rating of Zero - Virtis/Brass |

**Description**

FROM: dteal DATE: 10/31/2000 11:03 AM  
Effective Width is named by 2 things in Virtis/Opis and a third in AASHTO.

In the "Structure Definition Wizard – Deck" it is called Effective Slab Width.  
In the "Deck Profile" window it is called Effective Width.  
And in AASHTO it is called Effective Flange Width.

We should be calling it the same as AASHTO does in the Spec book - Effective Flange Width.

FROM: jduray DATE: 11/07/2000 08:53:05  
Seems reasonable.

FROM: jihnat DATE: 11/28/2000 10:01:06  
Also changed the Cross Sections - Slab tab.  
GUI changed for Beta Build 2.  
Krisha - the Help needs updated.

FROM: kkennelly DATE: 12/01/2000 10:10:52  
Help updated for Version 4.0 Beta Build2.

FROM: kkennelly DATE: 12/21/2000 09:14:08  
Accepted based on A in track field.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 2941<br>Subject: Fatigue Rating of Zero - Virtis/Brass |
|------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 11/2/2000 6:10:11 PM |
| Modified By: administrator       | 6/19/2008 4:02:00 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Goodrich, Brian | Not Reproducible | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary            |
|------------|------------------|--------------------|
| 2942.10437 | Not Reproducible | POI Side Reporting |

### Description

FROM: dkoenig DATE: 11/2/2000 1:13 PM

During the rating of a continuous non-composite WF bridge, a fatigue rating of zero occurred. The following information is what I know about the situation.

1. Rating control point is 207.00.
2. Contraflexure points were defaulted to 30, 70.
3. The error occurs when the contraflexure point is set as 70.  
70.0001 and 69.9999 does not give this rating or anything even similar (Serviceability controls).
4. Setting the contraflexure points to 20 and 80 does not cause a fatigue rating of zero.
5. The zero rating occurs because the Allowable Fatigue Stress is shown to be zero in Brass at this point.
6. This is the first time I have ever seen Brass give a value for the Allowable Fatigue Stress (usually gives \*\*\*\*\* for the value).
7. The 70 point is in between a diaphragm and a change in section, but so is the 80 point.

This fatigue rating is incorrect, and I do not believe it should have occurred. I am attaching the .bbd file for this bridge. The contraflexure points are only defaulted for G1 and G2, and only the second spans

4/19/2016 3:14:51 PM

HRS AASHTO

687

## Complete Issue Information

of each. This may help with comparisons.

FROM: bgoodrich DATE: 11/20/2000 11:22 AM

There is a 0.0001 ft gap in the STEEL-GIRDER-CONTROL schedule commands, which is caused by rounding of floating point values when generating the BRASS commands. Basically, the start distance one command does not exactly equal the start distance plus the range of the previous one. The tolerance modifications do not address this problem because it is all in how the rounding is done. This gap problem can potentially occur in all BRASS schedules depending on the values input by the user. It would be straight-forward to modify BRASS to check the schedule ranges and adjust them slightly so there are no gaps. If this is not done, then the export will have to be modified to store all schedules as they would be output to BRASS, i.e., a Virtis value of 45.55555555 is basically 45.5556 to BRASS because of rounding. I think modifying the export would take much more time than modifying BRASS.

FROM: bgoodrich DATE: 12/1/2000 2:58 PM

I modified the following files to address the issue regarding the minor gap or overlap due to rounding. Because the schedules were generated from left to right in consecutive order, I stored the end distance of each range, so the next time a command was generated, the distance written to the previous BRASS command could be used to determine if the current start distance and length should be adjusted.

- . BrassCmd.cpp
- . BrassCmd.h
- . BrassStifTranScheduleGroupCmd.cpp
- . BrassLrfdStifTranScheduleGroupCmd.cpp
- . BrassStdStifTranScheduleGroupCmd.cpp
- . BrassStifLongScheduleGroupCmd.cpp
- . BrassLrfdStifLongScheduleGroupCmd.cpp
- . BrassStdStifLongScheduleGroupCmd.cpp
- . BrassBracingScheduleCmd.cpp
- . BrassLrfdBracingScheduleCmd.cpp
- . BrassStdBracingScheduleCmd.cpp
- . BrassLatSupportScheduleCmd.cpp
- . BrassLrfdLatSupportScheduleCmd.cpp
- . BrassStdLatSupportScheduleCmd.cpp
- . BrassStirrupScheduleGroupCmd.cpp
- . BrassLrfdStirrupScheduleGroupCmd.cpp
- . BrassStdStirrupScheduleGroupCmd.cpp
- . BrassConcStimScheduleGroupCmd.cpp
- . BrassShearConnScheduleCmd.cpp
- . BrassSteelGirderControlCmd.cpp
- . BrassDistBeamScheduleCmd.cpp

Fixed for Version 4.0 beta build 2.

Issue ID: 2942

Subject: POI Side Reporting

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

11/2/2000 6:25:12 PM

4/19/2016 3:14:51 PM

HRS AASHTO

688

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:02:00 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Resolved | Urgent   | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A6018.bbd           |             |
|      | A6017.bbd           |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 2943.10436 | Resolved      | Material Deleting for Copied Bridges |

### Description

FROM: dteal DATE: 11/2/2000 1:17 PM

On a steel welded plate structure I have indicated that I wanted my POI to be on the "Right" side (Opis). In Stage 1 it reported correctly (right side) but for stage 3 it switched and reported shear values for the left side. I believe that this should be fixed.

FROM: bgoodrich DATE: 11/7/2000 3:43 PM

Note that BRASS computes actions at the element ends, but it reports them at nodes. BRASS should report the actions for the element with the smallest area and moment of inertia. Please attach the BBD file and indicate the POI for which you think an error exists. Also indicate the truck, limit state, and any other information that you think will help.

FROM: dteal DATE: 11/15/2000 9:27 AM

I have tried to duplicate the problem - could not reproduce it! I will go back and check it from time to time to see if it happens again.

FROM: bgoodrich DATE: 11/28/2000 6:34 AM

Marked as Not Reproducible.

4/19/2016 3:14:51 PM

HRS AASHTO

689

**Complete Issue Information**

Issue ID: 2943  
Subject: Material Deletng for Copied Bridges

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Koenig, David 11/2/2000 8:01:34 PM  
Modified By: administrator 6/19/2008 4:02:00 PM  
Priority: Urgent  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dkoenig DATE: 11/2/2000 3:05 PM

When a bridge is copied for ease in creation of another bridge, the materials cannot always be deleted. I have noticed this on the concrete materials, and assume it is the same for the rest. The materials that cannot be deleted are from the bridge originally created from scratch. If the materials were created at the beginning of the process of creating the bridge, these materials cannot be deleted for the copies of this bridge. These materials can be changed, but not deleted. If a material is added to a bridge after the bridge is created from scratch and then copied, the copy can delete this material. This leads me to believe that the materials are being referenced somewhere behind the scenes when a bridge is created.

Note: The materials that cannot be deleted have had all the references removed that are attainable by

**Complete Issue Information**

the user.

I have attached two bbd files. A6017 is the bridge created from scratch. A6018 is the copied bridge. Neither bridge uses the Class B1 concrete. This material cannot be deleted in the A6018 Bridge.

FROM:jduray DATE:11/07/2000 09:02:12

I was able to reproduce this by creating a new bridge, add a conc matl, add a gl struct def, add a member, add a slab member alt, add a cross section and assign the conc matl. Save the bridge, copy using the BE, open the copy and add a new conc matl. Change the conc matl for the cross section to the new matl and apply, then delete the original conc matl. The delete fails because it is assigned. After stepping through GetAssignmentStatus(CDeMatlConc\* pDeMatlConc,...) I found that the original conc matl is still assigned to the top flng. Changing the conc matl for the cross section changes m\_peiFkConclCom but not m\_peiFkTopFngConclCom.

FROM:jduray DATE:11/07/2000 09:59:38

I don't think this has anything to do with copied bridges.

When a new cross section is created CUIBWSTreeRcXSectionLabelItem::OnFileNew() calls DoRcXSectionPtr->SetConcreteld(IConcreteld) and DoRcXSectionPtr->SetTopFlangeConcreteld(IConcreteld) which set the top flange conc. id. For a slab xsect there is no way to ever change the top flg conc id so the one assigned to it can never be deleted. This value is probably not used anywhere. We either should not set the top flange conc id here or we should reset it when the conc id is changed.

FROM:jihnat DATE:11/10/2000 09:27:34

I made both changes. Not setting the ID when the slab xsec is created will fix the problem for new xsecs, and setting ID to zero in the slab xsec view will allow existing slab xsecs to function correctly, Fixed for Version 4.0 Beta Build 2.

\*\*\* Users should also be aware that a material cannot be deleted if it is a default material for a member alt. \*\*\*

|                             |
|-----------------------------|
| Issue ID: 2958              |
| Subject: Timber Enhancement |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: fulton, keith    | 11/13/2000 5:13:53 PM |
| Modified By: administrator     | 6/19/2008 4:01:59 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph | Suspended | High | Enhancement |
|---------------|-----------|------|-------------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 2965.10414 | Resolved      | Undo for Folder Management |

**Description**

FROM: kfulton DATE: 11/13/2000 9:55 AM

Since Madero requires all of the LL distribution factors (both single and multiple lanes) and I can not import my existing brass files I will be entering (if i decide to enter the bridges) all of the timber structures as girder systems. Because of this, I will let madero calculate the LL distribution factors. When we have a structure with broken/split/repared stringer, we increase the wheel fraction to the adjacent stringers. I would like to have a field that allows for a percent increase/decrease to the wheel fraction and since I am asking for enhancements, I would also like to see a place to mark if the stringer is broken/split/cracked/repared/etc.

FROM: jduray DATE: 8/1/01 10:13:11 AM  
 Moved to Support Center.

|                                     |
|-------------------------------------|
| Issue ID: 2965                      |
| Subject: Undo for Folder Management |



### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/15/2000 5:12:57 PM |
| Modified By: administrator     | 6/19/2008 4:01:59 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 2967.10412 | Suspended     | Change Folder from Private to Public |

### Description

FROM: dteal DATE: 11/15/2000 11:05 AM

There is definitely a need for an UNDO option when it comes to folder management.

FROM: jduray DATE: 11/16/2000 10:07:51

Can you be more specific?

FROM: jduray DATE: 11/22/2000 16:04:00

This would be a significant undertaking since everything in the explorer goes directly to the database.

FROM: dteal DATE: 11/27/2000 12:58 PM

"UNDO" or "UNDELETE"

A chance to retrieve a folder or folders if they got deleted in error. Or at least a warning before the delete is executed.

4/19/2016 3:14:52 PM

HRS AASHTO

693

**Complete Issue Information**

FROM:jduray DATE:12/04/2000 09:45:24

We do warn before the delete. What else do you suggest we do. We could add a Deleted Folders folder and security similar to what we do for the Delete Bridges folder.

When a folder is deleted we would move it to be a sub-folder of Deleted Folders. We would allow undelete if the parent folder is still present.

FROM:dteal DATE:Tuesday, February 26, 2002 3:46:48 PM

An option like that would be wonderful - when can we have it??

FROM:dteal DATE:Tuesday, June 17, 2008 11:35:50 AM

Exactly what was resolved?

Anything to test here?

|                                               |
|-----------------------------------------------|
| Issue ID: 2967                                |
| Subject: Change Folder from Private to Public |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/15/2000 5:15:32 PM |
| Modified By: administrator     | 6/19/2008 4:01:58 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dteal DATE: 11/15/2000 11:06 AM

Is there any way to change a folder from private to public once it has been created? And visa-versa? Or does the folder have to be re-created, copy the contents to it, and then delete the original?

Changing a radio button would be easier.

4/19/2016 3:14:52 PM

HRS AASHTO

694

## Complete Issue Information

FROM:jduray DATE:11/16/2000 10:06:08

Sounds like a good idea to me. I will check on how to code that.

FROM:jduray DATE:11/22/2000 15:56:40

Looks like we could allow a user to change the folder, however, we would have to iterate the tree to check the folders along the branch.

We do not allow private folders to have public children. To keep with this (I think this makes sense) we must do the following:

When changing a private to public:

Check that no folders up the tree are private (a public folder may not have a private ancestor).

When changing a public to private:

Check that no folders down the tree are public (a private folder may not have public children).

Issue ID: 2969

Subject: Enhancement - Distribution Factor Manipulations

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Shah, Shyam

11/15/2000 7:51:59 PM

Modified By: administrator

6/19/2008 4:01:58 PM

Priority: High

Category: Enhancement

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

4/19/2016 3:14:53 PM

HRS AASHTO

695

### Complete Issue Information

| Name           | Company          | Email 1                         | Phone 1      |
|----------------|------------------|---------------------------------|--------------|
| Shyam Shah     | Louisiana DOTD   | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 2972.10407 | Closed        | 4.0 beta 1 - SCALE FACTOR in Analysis Settings not used by BRASS |

### Description

FROM: snshah DATE: 11/15/2000 1:32 PM

When performing analyses for overweight permit vehicles, we are often required to recalculate distribution factors using methods besides the AASHTO standard equations, or reduce the impact factor. However, in VIRTIS, you must be able to check out a bridge in order to change the distribution or impact factors, which also allows you to alter the entire set of bridge data.

If possible, it would be quite useful if it were possible to manipulate impact and distribution factors without being able to change the structural data within the file. That way, a technician could manipulate these factors without worry that they could drastically alter the data file.

FROM: jduray DATE: 12/11/2007 5:55:34 PM  
Done for LFD. Need to do for LRFR.

Issue ID: 2972

Subject: 4.0 beta 1 - SCALE FACTOR in Analysis Settings not used by BRASS

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:14:53 PM

HRS AASHTO

696

### Complete Issue Information

|                              |                        |
|------------------------------|------------------------|
| Submitted By: Barnhill, Gale | 11/15/2000 10:32:58 PM |
| Modified By: administrator   | 6/19/2008 4:01:58 PM   |
| Priority: High               |                        |
| Category: Enhancement        |                        |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Closed    |          |             |
| Duray, Jim      | Closed    | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 2973.10406 | Closed        | RC Schedule Based Input |

### Description

FROM: gbarnhill DATE: 11/15/2000 4:18 PM

I checked to see how the VEHICLE PROPERTIES (the ADVANCED button on ANALYSIS SETTINGS) could be used for Incident 2969.

Virtis Help says:

Scale Factor

For the displayed vehicle, enter a scale factor by which the live load is to be increased or decreased. For example, if the displayed vehicle is an HS20 vehicle, a scale factor of 1.25 can be entered to represent an HS25 vehicle.

Since the SINGLE LANE LOADED check on the properties is no good for Girder Line definitions, it would seem possible to generate a single lane distribution factor by entering 5.5/7.0 as the scale factor value.

HOWEVER, the export log says:

WARNING (High):

4/19/2016 3:14:53 PM

HRS AASHTO

697

## Complete Issue Information

The Vehicle Properties scale factor is not used by BRASS!

FROM: bgoodrich DATE: 11/28/2000 2:43 PM

The scale factor is not supported by BRASS-LFD as indicated by the warning message and the Vehicle Properties topic in the BRASS-LFD engine help.

The export could modify the axle weights based on the scale factor, but the BRASS output would not indicate that this was done. BRASS could be enhanced by adding this factor to a command and modifying the engine appropriately. Therefore, this issue will be considered an enhancement and suspended until approved by the Task Force.

FROM:bgoodrich DATE:06/08/2001 14:17:02

Incident 3154 is a duplicate of this incident. Incident 3154 contains instructions from Jim Duray to address the scale factor issue by adjusting the wheel fractions of the appropriate vehicle.

FROM:bgoodrich DATE:06/08/2001 15:28:13

I modified the export for versions 4.0 and 4.1 to include the scale factor in the wheel fraction passed on to BRASS. I also added an export warning message when a scale factor other than 1.0 is specified.

Krishna - Please update the BRASS LFD engine help. In the Vehicle Properties (BRASS LFD) topic, remove:

Scale Factor  
Not used by BRASS LFD.

and replace it with:

No exceptions to this window for BRASS LFD.

FROM:kkennelly DATE:6/25/01 10:40:11 AM

Brian, When did you send us the changed code? Will this change be in Service Pack 4 for 4.0?

FROM:kkennelly DATE:6/29/01 1:25:46 PM

BRASS LFD engine help updated for Service Pack 4.

FROM:gbarnhill DATE:07/06/2001 12:45:47

4.0.4 - OK to input a scale factor on the VEHICLE PROPERTIES.  
EXPORT uses the factor to adjust the WFR provided to BRASS.  
LOG FILE includes an explanation of how the factor is used.

NEED TO MAKE THE CORRECTIONS IN THE BRASS(LFD) ENGINE HELP IN A LATER RELEASE.  
OK in service pack 4 for version 4

FROM:hlee DATE:7/10/2006 8:48:58 AM

Changed Project to Support Center.

Issue ID: 2973

Subject: RC Schedule Based Input

4/19/2016 3:14:53 PM

HRS AASHTO

698



### Complete Issue Information

#2812 address's BRASS LFD's shortcomings in number of allowed sections. Going to schedule based input would greatly reduce the amount sections entered and the problems with finding economical designs.

Think of this design scenario to find the bar cut off point in the top steel near a pier beam. Every time you want to do a design review with a bar a foot shorter or a foot longer you have to: 1. Calculate a slab thickness of the haunch at the new section 2. Enter the new section (which will not be numerical order – it will be placed at the end of the listing) 3. Change all the range information from that point on. Sounds messy!

FROM:dteal DATE:Friday, September 05, 2003 2:02:00 PM  
500 not 5,000 of this style bridge.

FROM:dteal DATE:Tuesday, October 26, 2004 11:01:11 AM  
Schedule base is here - please close

FROM:jihnat DATE:10/26/2004 3:11:06 PM  
Deleted "Please Close" from Track field and changed Status to Closed.

|                        |
|------------------------|
| Issue ID: 2979         |
| Subject: Output viewer |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Duray, Jim       | 11/17/2000 2:26:32 PM |
| Modified By: administrator     | 6/19/2008 4:01:58 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:14:53 PM

HRS AASHTO

700



## Complete Issue Information

### Description

FROM:jduray DATE:11/17/2000 09:25:46

The output file tree is quite nice. Note that once that the file has been opened with Wordpad, perhaps that should be the default. ??

Issue ID: 2980

Subject: Structure Def wizard

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Duray, Jim

11/17/2000 2:28:02 PM

Modified By: administrator

6/19/2008 4:01:58 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:14:54 PM

HRS AASHTO

701

### Complete Issue Information

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Resolved  | High     | Enhancement |
| Duray, Jim       | Suspended | High     | Enhancement |
|                  | Closed    |          |             |
| Duray, Jim       | Closed    | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 2983.10396 | Closed        | Re-Order Cross Sections |

### Description

FROM:jduray DATE:11/17/2000 09:26:44

Using the template for the deck, I thought that the selection of the upper left option (typical) would automatically default the table. We had discussed this for Version 4, I think.

FROM:kkennelly DATE:12/08/2000 11:11:23

Done for Version 4.0 Release.

FROM:hlee DATE:7/10/2006 10:01:53 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

## Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 2983                   |
| Subject: Re-Order Cross Sections |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/17/2000 8:39:02 PM |
| Modified By: administrator     | 6/19/2008 4:01:58 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | S208_STEEL.BBD         |             |
|      | WIZARD_ALTERNATIVE.LOG |             |
|      | WIZARD_ALTERNATIVE.OUT |             |
|      | WIZARD_ALTERNATIVE.ERR |             |
|      | WIZARD_ALTERNATIVE.DAT |             |

## Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 2984.10395 | Resolved      | shear stud operational problems |

## Description

FROM: dteal DATE: 11/17/2000 2:31 PM

There is definitely a need for a way to re-order the cross section listing for a RC bridge. When cross sections are first entered they are in order from left to right. During the design process we find that re-steel needs to be either extended or shortened. So a new cross section may be added. This new cross section will be added to the end of the list. Once the final design is accepted the cross sections

4/19/2016 3:14:54 PM

HRS AASHTO

703

### Complete Issue Information

list is no longer in order. This makes things hard to follow. If we could alphabetize or number them it would be a great improvement.

FROM:dteal DATE:Tuesday, October 26, 2004 11:00:16 AM  
No longer an issue with schedule based input - please close

FROM:jihnat DATE:10/26/2004 3:10:52 PM  
Deleted "Please Close" from Track field and changed Status to Closed.

|                                          |
|------------------------------------------|
| Issue ID: 2984                           |
| Subject: shear stud operational problems |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Jensen, Paul       | 11/18/2000 12:18:51 AM |
| Modified By: administrator       | 6/19/2008 4:01:58 PM   |
| Priority: High                   |                        |
| Category: Bug                    |                        |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: pjensen DATE: 11/17/2000 5:06 PM  
When we are placing studs at the begining and end of the beam and have a different spacing than than

4/19/2016 3:14:54 PM

HRS AASHTO

704

**Complete Issue Information**

in the center of the beam, the program can not resolve the spacing and export it correctly to BRASS-LRFD (OPIS)

Attached is the export of the bridge and also the error message during the run. The distance for the 40 middle rows is 15.4 m not 15.399.

attached are some files that may help on the problem

Thanks

FROM: jduray DATE: 11/21/2000 9:01 AM

FROM:kkennelly DATE:11/30/2000 14:56:46

This problem is due to the fact that you have entered a shear connector range with a length = 0. If you delete the shear connector row with a start dist = 0 and length = 0, BRASS LRFD will run ok.

Brian, The export is generating an incorrect Shear-conn-schedule command for the shear connector row that has length=0. One of the variables in that command must not be initialized and a garbage number is passed to the BRASS input file. (Structure name: Single, Member 2)

FROM: bgoodrich DATE: 12/1/2000 2:55 PM

I corrected the export (BrassShearConnScheduleCmd.cpp) so it does not try to export a zero length for shear connectors. Fixed for Version 4.0 beta build 2.

Issue ID: 2987  
Subject: Enhance Tabular Reports window to allow selection of columns

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Kennelly, Krisha 11/21/2000 2:37:39 PM  
Modified By: administrator 6/19/2008 4:01:57 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Enhancement |

**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
|                 | Suspended |      |             |
| Ihnat, Joseph   | Suspended | High | Enhancement |
| Goodrich, Brian | Resolved  | High | Education   |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 3008.12340 | Resolved      | BRASS LFD Serviceability check at transfer pt vs. CL Brg |

**Description**

FROM:kkennelly DATE:11/21/2000 09:32:55

When viewing analysis results (especially LRFD critical loads) it would be nice to show moment, then shear, then axial across the grid. We currently show moment, axial, shear. Once you scroll over to see shear, the span and location are no longer visible in the grid. It would be even nicer to be able to turn off some columns in the grid.

FROM:jduray DATE:11/21/2000 14:56:39

Joe - please arrange the columns the way Krishna suggests.

FROM:jihnmat DATE:2/6/2003 3:06:21 PM

Done for version 5.0.0 beta build 4 (columns arranged Moment-Shear-Axial).

Incident now changed to Suspended/Enhancement for the second part of this request.

Issue ID: 3008

Subject: BRASS LFD Serviceability check at transfer pt vs. CL Brg

Folder: /Virtis/Support Center

4/19/2016 3:14:55 PM

HRS AASHTO

706

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Kennelly, Krisha   | 12/12/2000 3:07:42 PM |
| Modified By: administrator       | 6/19/2008 4:06:13 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

### History

| Primary Contact | Status              | Priority | Category    |
|-----------------|---------------------|----------|-------------|
| Duray, Jim      | Resubmit<br>On Hold | High     | Bug - GUI 2 |
| Ihnat, Joseph   | Resolved            |          |             |
| Ihnat, Joseph   | Resolved            | High     | Bug - GUI 2 |

### Contacts

| Name         | Company     | Email 1            | Phone 1       |
|--------------|-------------|--------------------|---------------|
| keith fulton | Wyoming DOT | kfulto@state.wy.us | (307)777-3950 |

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | framing.bbd<br>vi3012 (531).bbd |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3012.12336 | Resolved      | Framing Plan Schematic - Timber Bridge |

### Description

FROM:kkennelly DATE:12/12/2000 10:04:45

Submitted based on phone call from Mike Perham, Bayside Engrs. 617-625-4696:

BRASS LFD box beam, serviceability (tension in top of beam) at 100 point is controlling. He is used to checking serviceability at transfer pt so little bit of DL there helps reduce the tension. His question is BRASS checking the serviceability at CL bearing or transfer point. I think he also wants to know how to check serviceability at transfer pt instead of cl brg.

I spoke to Brian this morning and he is going to return call to user.

FROM: bgoodrich DATE: 12/12/2000 9:54 AM

I called Mr. Perham and suggested that he add a point of interest at the transfer location and that he could change the POI generation option to only generate user-defined POI.

4/19/2016 3:14:55 PM

HRS AASHTO

707

### Complete Issue Information

He also inquired about where he could find the loss output. This output is available from BRASS-LFD, but it has not been implemented in the engine properties. I added this issue as Incident 3010.

|                                                 |
|-------------------------------------------------|
| Issue ID: 3012                                  |
| Subject: Framing Plan Schematic - Timber Bridge |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: fulton, keith    | 12/12/2000 8:40:47 PM |
| Modified By: administrator     | 6/19/2008 4:06:13 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: kfulton DATE: 12/12/2000 1:31 PM

The framing plan schematic has some problems. In some bays, lines are shown which are not shown in others.

FROM: jduray DATE: 12/13/2000 08:16:24

Please provide a bbd file so I can reproduce. Are you running on NT or 2000?

FROM: kfulton DATE: 12/13/2000 9:09 AM

I am running NT. The bbd file will be in incident 3015.

4/19/2016 3:14:55 PM

HRS AASHTO

708



**Complete Issue Information**

FROM:jduray DATE:12/18/2000 10:56:00  
Does it still draw incorrectly since you got the abobrdg.dll?

FROM: kfulton DATE: 12/21/2000 11:02 AM  
The new dll helped, but the picture still has some problems when small girder spacings are entered. For most of our timber structures we have small spacings (<2ft). If you enter a girder system with variable spacing (all spacing less than 3 ft) the length of the diaphragm (red line) is not scaled correctly. For one. bay it is only a small dot and the next it is full length. See attached bbd file.

FROM:jduray DATE:12/21/2000 13:38:56  
Since I couldn't reproduce the problem and didn't hear from you I assumed this was resolved. We have already done the release build so this will have to be addressed in a future service pack or release.

FROM:jduray DATE:1/5/01 10:13:10 AM  
I am changing this to a release bug.

FROM:kkennelly DATE:1/23/2002 8:10:42 AM  
I can reproduce this in 4.1.0

FROM:jihnata DATE:7/19/2005 11:56:43 AM  
The space between the girder and the diaphragm is constant, not the length of the line representing the diaphragm.  
I tweaked the schematic to look a little better when small girder spacings are used.  
For future testing, a version 5.3.1 BBD file is attached.  
Fixed for 5.4.0

Issue ID: 3016  
Subject: Skewed Divergent Steel Girders

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Shah, Shyam 12/13/2000 3:08:25 PM  
Modified By: administrator 6/19/2008 4:06:13 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Bug      |

**Contacts**

4/19/2016 3:14:55 PM

HRS AASHTO

709

## Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1       |
|----------------|------------------|-------------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |
| keith fulton   | Wyoming DOT      | kfulto@state.wy.us                  | (307)777-3950 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2286.bbd            |             |
|      | lrfd-40-beta-2.bbd  |             |
|      | lrfdtest.bbd        |             |

## Tasks

| Name       | Current State | Summary                                                                                                                 |
|------------|---------------|-------------------------------------------------------------------------------------------------------------------------|
| 3017.12331 | Suspended     | LRFD Analysis (Change validate to scan for largest end distance before asking user if they want to change the distance) |

## Description

FROM: snshah DATE: 12/13/2000 8:58 AM

This bridge has skewed girders that diverge and I am having problems getting girder G1 to run in Virtis. Attached is the exported bbd file for this bridge.

Below are the error messages produced when analysis of the girder is attempted:

Error generating LFD/ASD deck commands!

08:42:44 AM - Line 226 in source file D:\Virtis\GUI\abxbrass\BrassStdDeck.cpp.

Unable to retrieve overhang widths!

08:42:43 AM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating LFD/ASD deck commands!

08:42:43 AM - Line 554 in source file D:\Virtis\GUI\abxbrass\BrassStdDeck.cpp.

Unable to determine left exterior girder member!

08:42:43 AM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating LFD/ASD deck commands!

08:42:43 AM - Line 824 in source file D:\Virtis\GUI\abxbrass\BrassCmd.cpp.

Error generating DECK-CON command!

08:42:43 AM - Line 290 in source file D:\Virtis\GUI\abxbrass\BrassStdDeck.cpp.

Unable to find girder bay!

08:42:43 AM - Line 288 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error getting girder of interest!

4/19/2016 3:14:55 PM

HRS AASHTO

710

**Complete Issue Information**

08:42:43 AM - Line 6950 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

FROM: bgoodrich DATE: 12/18/2000 4:47 PM

I modified the export to address the errors reported above. Now, only one should be reported indicating that splayed girders and/or tapered overhangs were detected. BRASS does not support a splayed girder system. This is mentioned in the engine-specific help topic named "Structure Framing Plan Details: Layout" for both BRASS programs. You must define this structure using girder line structure definitions if you wish to use BRASS. Fixed for Version 4.0.

FROM: snshah DATE: 12/19/2000 12:24 PM

|                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 3017                                                                                                                   |
| Subject: LRFD Analysis (Change validate to scan for largest end distance before asking user if they want to change the distance) |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: fulton, keith       | 12/14/2000 8:58:52 PM |
| Modified By: administrator        | 6/19/2008 4:38:36 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Suspended | High     | Enhancement |
| Kennelly, Krisha | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: kfulton DATE: 12/14/2000 1:32 PM

Please see attached lrfdtest.bbd file (4.0 beta 2) - member 2. ( file 2286.bbd is the 3.0 version)

In the deck profile - shear connectors tab, I get a message when ever I hit the OK or Apply button that

## Complete Issue Information

states that the end distance is not the same as the beam length and if I want to change the length. If you look at the values, I have shear connectors defined for the full length. I would prefer not to have to hit the no button on the message popup everytime. In version 3.0, the an error occurs in the shear connect spacing export, but does work for 4.0beta2.

In 4.0beta2, I get an error about the diaphragm spacing needs to be greater than zero. The structure is a single span with one diaphragm in each bay.

Here is the error message I get:

Error generating LRFD schedule commands!

01:45:05 PM - Line 192 in source file D:\Virtis\GUI\abxbrass\BrassLrfdSchedules.cpp.

The number of diaphragm spaces must be greater than zero!

01:45:05 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating BRACING-SCHEDULE command!

01:45:05 PM - Line 465 in source file D:\Virtis\GUI\abxbrass\BrassBracingScheduleCmd.cpp.

No rows returned from database when expecting one row.

01:43:58 PM - Line 165 in source file E:\Virtis\Dev\data management\abmcfg\DmGroupAccessPrivilege.cpp.

No rows returned from database when expecting one row.

01:43:58 PM - Line 165 in source file E:\Virtis\Dev\data management\abmcfg\DmGroupAccessPrivilege.cpp.

FROM:jduray DATE:12/14/2000 16:01:46

Krishna - please investigate the problem in the deck profile window then assign to Brian.

FROM:kkennelly DATE:12/14/2000 16:29:55

I am unable to import this bridge into 4.0. Please try to export this bridge again and attach a new bbd file while we try to figure out why the import doesn't work.

FROM: kfulton DATE: 12/14/2000 5:01 PM

Try lrfd-40-beta-2.bbd file

FROM:kkennelly DATE:12/15/2000 08:04:06

I was able to import lrfd-40-beta-2.

1. The message you are getting in the Shear Connector window is telling you that the end distance for the next to last row is 15.7m. In the grids in the gui, if the end distance for an item is within 1' or 300 mm of the end of the beam, we issue a message to ask the user if they want the gui to change the length or spacing for them so the end distance matches the end of the beam. We did that because users previously requested help entering data particularly for skewed members that might have slightly different beam lengths. Since items can be entered in the grid in inconsecutive order, we do this check on every row in the grid, not just the last row. I'll check with Jim if we should change the behavior of the gui. I'm hesitant to do that because we would have to do that to every grid in Virtis and I don't want to introduce any widespread problems right before release.

2. The error message that you are getting about the diaphragms is "The number of diaphragm spaces must be greater than zero" not the spacing must be greater than zero. You have incorrect data entered in the Framing Plan window. For example, Girder Bay 1 has the following data:

4/19/2016 3:14:56 PM

HRS AASHTO

712

### Complete Issue Information

| Support | Start Dist Left | Start Dist Right | Spacing | # spaces |                     |
|---------|-----------------|------------------|---------|----------|---------------------|
| 1       | 0               | 0                | 0       | 1        |                     |
| 1       | 9.905           | 9.097            | 0       | 1        |                     |
| 1       | 9.905           | 9.097            | 0       | 0        | <----- invalid data |
| 1       | 16              | 16               | 0       | 1        |                     |

If you delete this row of data and the similar row in Girder Bay 2, Brass will run.

FROM:kkennelly DATE:12/15/2000 08:34:28

1. We are going to make this change for 4.1.

Programmer Resolution for 4.1: In the Validate functions for the grids in the gui in the if statement if the end distance is less than the end length of the beam within the max tolerance, call a function to scan every end distance in the grid and check if the current end distance is the largest of all the end distances. If it is the largest, issue the message to the user. If some other row contains the largest end distance, don't issue the message. (Note this scan function will have to add the span start distance to the end distance to get the true end distance from the left end of the beam for each row.)

Keith, I'm marking this incident as resolved until you read it and comment and then I will change its status to Assigned and Category to Enhancement to make sure it gets done for 4.1.

FROM: kfulton DATE: 12/15/2000 3:52 PM

The line you want me to remove from the diaphragm spacing is placed there by the diaphragm wizard.

FROM:jduray DATE:12/18/2000 10:28:35

FROM:kkennelly DATE:12/18/2000 13:29:40

Diaphragm wizard no longer creates a diaphragm range set with 0 number of spaces. Code fixed for Version 4.0 Release.

FROM:kkennelly DATE:5/17/01 2:01:19 PM

Estimate time for this enhancement:

24 hrs to make this change.

8 hrs to add and test function to UiMiniGrid to scan all rows for largest end distance.

Windows to visit to add this change:

Framing Plan Details:Diaphragms tab

Live Load Distribution: LRFD tab

Member Loads: 2 tabs

Deck Profile: 3 tabs

Haunch Profile

Lateral Support

Stiffener Ranges: Longitudinal tab\*\*

Bracing Ranges: 2 tabs

Cross Section Ranges: 2 tabs

Beam Details: Stress Limit Ranges tab

Shear Reinforcement Ranges: 2 tabs

Estimate 1/2 hr /window or tab

4/19/2016 3:14:56 PM

HRS AASHTO

713

**Complete Issue Information**

**\*\*Note:** Remove this validation completely from the Transverse Stiffener tab. You should never have a transverse stiffener at the very end of the beam, it would be a bearing stiffener.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3020                                        |
| Subject: Symmetry Feature in P/S Strand Layout Window |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: puckett, jay     | 12/18/2000 5:35:13 PM |
| Modified By: administrator     | 6/19/2008 4:06:12 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3020.12328 | Discard       | Symmetry Feature in P/S Strand Layout Window |

**Description**

FROM: bgoodrich DATE: 12/18/2000 10:22 AM

Entered for Jay Puckett:

The symmetry feature in the P/S strand layout window, I thought was going to be in this release, i.e., work with one side and the other automatically adjusts. Enhancement.

### Complete Issue Information

FROM:jpuckett DATE:07/16/2001 16:03:05

We should try to do this, it might be a mini task! Note, could show just half the strands and just populate the domain upon exit. jp

FROM:hlee DATE:4/30/2008 2:23:21 PM

Discarded by TAG 12/07.

|                                       |
|---------------------------------------|
| Issue ID: 3027                        |
| Subject: Rh Factor for Hybrid Girders |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 12/21/2000 9:32:50 PM |
| Modified By: administrator       | 6/19/2008 4:06:12 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Rh Factor.bbd       |             |

4/19/2016 3:14:56 PM

HRS AASHTO

715

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3028.12320 | Resolved      | bbd file imports - one per session |

**Description**

FROM: dteal DATE: 12/21/2000 3:23 PM

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (2000 INTERIM):

S 6.10.4.3.1a General

For homogeneous sections, Rh shall be taken as 1.0.

In the design example, the only material specified for use as "Structural Steel" is the "Copy from Library" values for A709M Grade 345W steel. Using a girder system and creating the members using the software's wizard, each plate girder is schedule based and has the above material specified for each of the top, and bottom flanges and the web.

The analysis settings are set for a Design Review for an HL-93 Design truck (SI) and an HL-93 Fatigue truck (SI). The design method is set to LRFD. The output includes the Dead and Live Load action reports, LRFD critical load report, LRFD specification check, and the Steel Limit State Summary.

After the analysis is run, regardless of whether shear studs are specified or the bridge is simple defined as "Composite", the software calculates a hybrid girder factor, Rh, of 0.0 at location 100. The software also calculates a flange stress of 0.010 MPa at this location. The girder system has supports defined as roller, pin, roller. The software either does not calculate the same 0.010 MPa stress at the opposite abutment or it does not calculate a hybrid girder factor of 0.0. The location 200 does not show up in the specification check as having failed.

FROM: bgoodrich DATE: 01/04/2001 11:17:30

I was able to duplicate the hybrid factor issue with the version of BRASS released with Opis 3.0, but not with the version of BRASS released with Opis 4.0. Please verify that you do not get an Rh of 0.0 using Opis 4.0.

FROM: dteal DATE: 01/30/2001 08:23:36

FROM: bgoodrich DATE: 03/22/2001 10:09:37

|                                             |
|---------------------------------------------|
| Issue ID: 3028                              |
| Subject: bbd file imports - one per session |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Best, Richard    | 12/29/2000 3:05:30 PM |

4/19/2016 3:14:57 PM

**HRS AASHTO**

716



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:06:12 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Unknown  |

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3029.12319 | Closed        | bbd file imports - only one per session |

### Description

FROM:rmbest DATE:12/29/2000 10:05:30 VIRTIS/OPIS 4.0 - It seems that I am only able to import one bbd file per session. In order to import additional bbd files I have to exit the database and then login again for each import. Can this be fixed?

FROM:jduray DATE:01/01/2001 17:07:40  
This is not the intended behavior.

FROM:rmbest DATE:01/02/2001 12:14:13  
I have discovered a workaround - if I refresh the bridge explorer window by changing folders then the next import works.

FROM:gbarnhill DATE:01/03/2001 15:29:53  
This problem evidently came up between Beta1 and Beta2. In Beta1 and V3.0, I am able to IMPORT a 2nd bbd file after saving the first one and without doing any folder change.  
In Beta2 and Rel 4.0, when I highlight the name of the second bbd file in the IMPORT window and click OPEN, nothing happens.

FROM:jduray DATE:1/5/01 3:08:03 PM

4/19/2016 3:14:57 PM

HRS AASHTO

717

**Complete Issue Information**

Resolved for SP 1 (4.0.1).

|                                                  |
|--------------------------------------------------|
| Issue ID: 3029                                   |
| Subject: bbd file imports - only one per session |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Best, Richard    | 12/29/2000 3:15:37 PM |
| Modified By: administrator     | 6/19/2008 4:06:12 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rmbest DATE:12/29/2000 10:15:37 VIRTIS/OPIS 4.0 - It seems that I am only able to import one bbd file per session. In order to import additional bbd files I have to exit the database and then login again for each import. Can this be fixed?

FROM:rmbest DATE:12/29/2000 10:25:08  
Sorry - This is a duplicate of the previous incident. Please delete it.

## Complete Issue Information

Issue ID: 3030

Subject: Improve export/import (bbd file) compatibility between versions

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Best, Richard

12/29/2000 3:22:27 PM

Modified By: administrator

6/19/2008 4:06:12 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Duplicate | High     | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

### Contacts

| Name         | Company                    | Email 1                   | Phone 1      |
|--------------|----------------------------|---------------------------|--------------|
| Richard Best | Illinois DOT               | BESTRM@nt.dot.state.il.us | 217-785-2922 |
| Jim Duray    | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com     |              |

4/19/2016 3:14:57 PM

HRS AASHTO

719

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LFDReport.XML       |             |
|      | LFDReport.XSL       |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3031.12317 | Resolved      | Printing from Report Tool Preview |

### Description

FROM:rmbest DATE:12/29/2000 10:22:27 VIRTIS/OPIS 4.0 - It seems that bbd files that were created in version 3.0 are incompatible with version 4.0. I had to first import the bbd files into a 3.0 database and then migrate that database to 4.0 and then re-export the bbd files. Is this the only way to do this? If this is true it means that all stand alone participants will have to be using the same version. It also means that it will be of no value to save bbd files for archival purposes or re-use later. It would be a welcomed enhancement if the import routine could be made downwardly compatible.

FROM:jduray DATE:01/01/2001 17:01:38

Correct. BBD files are not intended for archival purposes. That is a use case that perhaps we should consider. I will check the Help. We should describe the use cases that are supported by the BBD files.

FROM:hlee DATE:7/14/2005 12:54:04 PM

Duplicate of Incident 3725.

FROM:hlee DATE:7/10/2006 3:10:47 PM

Changed Status to Resolved.

|                                            |
|--------------------------------------------|
| Issue ID: 3031                             |
| Subject: Printing from Report Tool Preview |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Best, Richard    | 12/29/2000 3:26:59 PM |
| Modified By: administrator     | 6/19/2008 4:06:12 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

4/19/2016 3:14:57 PM

HRS AASHTO

720

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3033.12315 | Resolved      | 4.0 Release Analysis Output files not found |

### Description

FROM:rmbest DATE:12/29/2000 10:26:59 VIRTIS/OPIS 4.0 - The report tool produces a single window previewed in MS Internet Explorer. This is only a about a half a page worth of information for Overall Summary, however when I print this I get 3 pages of mostly white space. Can you adjust the XML so that this prints one page?

FROM:jihnat DATE:12/29/00 10:46:48 AM

Did you try unchecking the "Begin each topic on a new page when printed" checkbox (on the Report Tool window) before generating the report?

FROM:gbarnhill DATE:12/29/2000 12:26:02

Unchecking the "Begin each...." doesn't change the printout. There is a page break after the main header info and then a blank page is produced after the summary page. I've attached xml and xsl files from an LFD report.

FROM:jihnat DATE:1/12/01 12:35:50 PM

This problem exists in version 4.0.0 with two of the PS reports. Also, for all reports, an empty last page prints whether the checkbox is checked or not.

This is fixed in Service Pack 1.

### Complete Issue Information

|                                                      |
|------------------------------------------------------|
| Issue ID: 3033                                       |
| Subject: 4.0 Release Analysis Output files not found |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 1/2/2001 3:05:45 PM  |
| Modified By: administrator     | 6/19/2008 4:06:11 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0480059.bbd         |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3034.12314 | Resolved      | False error indicating tapered cover plates |

### Description

FROM:kkennelly DATE:1/2/01 10:00:48 AM

Submitted on behalf of Jason Mahoney, Bayside Engineers. Run BRASS ASD, open Analysis Output window, double click on name of a file, gets message about path not being specified, Notepad opens with an empty document. When he selects File/Save As in this empty Notepad document, the directory shows up as Virtis40 instead of a BRASS\_ASD directory. When he looks in Explorer, the tree was created correctly and the BRASS files exist in the BRASS\_ASD directory.

FROM:jihnmat DATE:1/12/01 1:18:03 PM

One of the names in this bridge (I think it was a struct def) had a comma in it, which was not being handled properly.

The workaround for Version 4.0.0 is to avoid using commas.

4/19/2016 3:14:58 PM

HRS AASHTO

722

**Complete Issue Information**

This is fixed (i.e. you can use commas) in Service Pack 1.

|                                                      |
|------------------------------------------------------|
| Issue ID: 3034                                       |
| Subject: False error indicating tapered cover plates |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Best, Richard       | 1/3/2001 3:52:30 PM  |
| Modified By: administrator        | 6/19/2008 4:06:11 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rmbest DATE:01/03/2001 10:52:26 Version 4.0 - We are getting a system error message that says that "A rolled beam with tapering cover plates was detected". However our model (4 span WF steel beam with cover plates at piers 2 and 3) does not have tapered plates and this same model did

4/19/2016 3:14:58 PM

HRS AASHTO

723

**Complete Issue Information**

run in Version 3.0. To illustrate the problem, our bbd file is attached. We finally got the analysis to work by eliminating breaks in the plates at the piers but we are not sure why it worked.

FROM:bgoodrich DATE:01/04/2001 11:21:43

I think there is a problem in the domain functions that generate cross sections and ranges from schedule input. The problem range is the first 2.0 meters of span 3. Using the domain cross sections and ranges, the export generates the SPAN-C command for span 3 as starting at the support with cross section 3 and ending with cross section 4 at 67.5853 ft (2.0 meters). I don't understand what is unique about this range that would cause this problem.

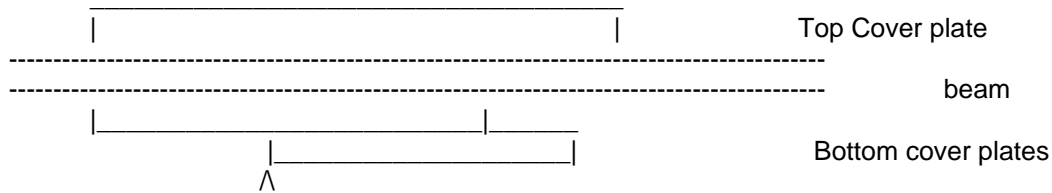
Krishna - Please check the domain functions that generate cross sections.

FROM:kkennelly DATE:1/5/01 9:29:12 AM

The domain is not processing all of the cover plates when it is generating the cross sections. Export shouldn't be getting a range starting at 0 in Span 3 and ending at 2 in Span 3 because the data is input with 2 section changes within that first 2 meters. Domain does generate the change point locations correctly, I'll fix the code to process all cover plates.

As an aside, are you sure the cover plates are entered correctly? The bottom cover plate at Pier 2 is entered as follows:

Top Cover plate starts in Span 2 at 19, 1.6 m long. Another top cover plate starts in Span 3 at 0, is 2 m long



Bottom cover plate starts in Span 2 at 19, is 2 m long so it goes into Span 3. Another bottom cover plate starts in Span 3 at 0, is 1.6 m long. There is an overlap in the bottom cover plates.

FROM:kkennelly DATE:1/8/01 3:36:59 PM

Programmer notes:

Deck Reinf and cover plates can be discontinuous along length of beam and also overlap.

abobrdg: code change in DoGirderMbrAlt->FillCrossSectionData() for deck reinf and cover plates to process all range sets.

MoveDistance failing on following situation for this bridge:

| Span 2: | Plate 1      | Plate 2      | Plate 3      | Plate 4      |
|---------|--------------|--------------|--------------|--------------|
| 19 m    | Cov PL Start | Cov PL Start |              |              |
| 20.6 m  |              | Cov PL End   | Cov PL Start | Cov PL Start |
| 0.4 m   | Cov PL End   |              |              |              |
| 1.6m    |              |              |              | Cov PL End   |
| 2m      |              |              | Cov PL End   |              |

Move Dist() tries to get range at 0.4m right, will return null after it cycles thru Plate 2 because it thinks there is a gap after Plate 2 when really there is an overlap. When section to left of 1.6 is filled in it has 2 cover plates so get section at left end of range with 0 cover plates, section at right end with 2 cover



**Complete Issue Information**

plates.

abognrl: DoRangeSetCmdTarget->MoveDistance() needs modified to keep cycling thru range sets instead of break at line 158 when it gets to gap in ranges. For Deck Reinf could overlap.

abostld: DoSteelAssemblyRangeSet->MoveDistance() line 330 change break to continue. For cover plates could overlap.

FROM:kkennelly DATE:1/9/01 11:58:39 AM  
Fixed for v4.0.1 (Service Pack 1).

FROM:jduray DATE:1/16/01 10:35:57 AM

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3038                                        |
| Subject: Oracle scripts missing grants for new tables |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: fulton, keith    | 1/4/2001 9:31:48 PM  |
| Modified By: administrator     | 6/19/2008 4:06:11 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3038.12310 | Resolved      | Oracle scripts missing grants for new tables |

**Description**

FROM:jduray DATE:1/4/01 4:30:37 PM

## Complete Issue Information

Keith reported that the scripts do not include grants for the new tables.

FROM:jduray DATE:1/5/01 3:11:57 PM

New tables:

For timber:

-----  
abw\_anal\_pt\_timber  
abw\_lib\_matl\_timber  
abw\_lib\_matl\_timber\_sawn  
abw\_lib\_matl\_timber\_sawn\_item  
abw\_lib\_nail  
abw\_lib\_timber\_beam\_shape  
abw\_lib\_timber\_commercialgrade  
abw\_lib\_timber\_grad\_rule\_agency  
abw\_lib\_timber\_rect\_beam\_shape  
abw\_lib\_timber\_size\_class  
abw\_lib\_timber\_species  
abw\_matl\_timber  
abw\_matl\_timber\_sawn  
abw\_mbr\_alt\_timber\_deck\_range  
abw\_nail\_def  
abw\_timber\_beam\_def  
abw\_timber\_beam\_shape  
abw\_timber\_component  
abw\_timber\_rect\_beam\_shape  
abw\_timber\_rect\_sawn\_beam\_def  
abw\_results\_crit\_load\_asd  
abw\_results\_crit\_stresses\_asd

For deterioration:

-----  
abw\_stl\_beam\_loss\_range  
abw\_stl\_cover\_plate\_loss\_range  
abw\_stl\_flng\_angle\_loss\_range  
abw\_stl\_flng\_flat\_loss\_range  
abw\_stl\_flng\_loss\_range  
abw\_stl\_ibeam\_loss\_range  
abw\_stl\_sch\_cplate\_loss\_range  
abw\_stl\_web\_loss\_range  
abw\_stl\_xsec\_cplate\_loss\_range

For system:

-----  
abw\_sys\_anal\_module\_mbr\_type  
abw\_unit\_tolerance

FROM:jduray DATE:1/5/01 3:21:22 PM

Sent sp1 - oracle.sql to Keith.

FROM:jduray DATE:1/8/01 11:55:13 AM

4/19/2016 3:14:58 PM

HRS AASHTO

726

## Complete Issue Information

Received the following e-mail from Keith:

-----begin e-mail-----

I ran the script you sent me and it ran without errors. Now when ever I try to log into the Oracle DB I get the following message:

Unable to verify database schema!  
Please contact database administrator.

Any idea on why I am getting this? Any help would be appreciated.

-----end e-mail-----

FROM:jduray DATE:1/8/01 1:00:31 PM  
My e-mail back to Keith:

-----begin e-mail-----

Did you do any beta testing of version 4 on Oracle?

I think your DBA should run the attached script that creates public synonyms. Since Virtis (I assume virtis is the owner of the tables) can run I believe one or more public synonyms are missing. You will get an error for each synonym that already exists that the script tries to create. Ignore the errors.

-----end e-mail-----

I attached Publicsynonyms40.sql from the oracle directory. Before sending I changed the schema owner to Virtis.

FROM:jduray DATE:1/8/01 3:59:42 PM  
I was able to reproduce this problem even with the public synonyms created. Need to check the role.

FROM:jduray DATE:1/8/01 4:14:25 PM  
If the grant to the role for abw\_sys\_database is missing we get this error.

Unable to verify database schema!  
Please contact database administrator.

After granting select on the role to abw\_sys\_database I get the following:

"Error opening SysDataDictionary record set."

FROM:jduray DATE:1/8/01 4:37:08 PM  
I copied the CreateVirtisReadOnlyRole.sql and CreateVirtisReadWriteRole.sql to GrantVirtisReadOnlyRole.sql and GrantVirtisReadWriteRole.sql and removed the create role command , changed the schema owner to the proper owner (virtis40ac on our server) and ran the scripts. Success! Virtis ran as it should except the checkin/out was not enabled.

Changed the schema owner to Virtis and sent the modified scripts to Keith.

4/19/2016 3:14:58 PM

HRS AASHTO

727

## Complete Issue Information

FROM:jduray DATE:1/10/01 8:56:38 AM

Conclusion:

For oracle - run "v40 sp1 - oracle.sql" (available in Service Pack 1)

|                              |
|------------------------------|
| Issue ID: 3039               |
| Subject: Version 4.0 Patch 1 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 1/5/2001 6:23:35 PM  |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Internal             |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Internal |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3039.12309 | Closed        | Version 4.0 Patch 1 |

## Description

FROM:jduray DATE:1/5/01 4:33:59 PM

Files included:

abgdtop.dll - 3028  
v40 sp1 - Oracle.sql - 3038  
v40 sp1 - Oracle Readme.txt - 3038  
v40 sp1 - Sybase.sql - 3043  
v40 sp1 - Sybase Readme.txt - 3043

4/19/2016 3:14:59 PM

HRS AASHTO

728

**Complete Issue Information**

absgnrl.dll - 3040

FROM:kkennelly DATE:1/9/01 11:59:06 AM  
Include abobrdg.dll, abognrl.dll and abostld.dll for incident 3034.

FROM:jduray DATE:1/16/01 10:19:45 AM

FROM:jduray DATE:1/18/01 12:25:54 PM  
Need to modify the patch and build number in the databases in source safe.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3040                                        |
| Subject: 4.0 Demo and Academic don't work with Access |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Duray, Jim 1/5/2001 6:52:53 PM    |
| Modified By: administrator 6/19/2008 4:06:11 PM |
| Priority: High                                  |
| Category: Bug                                   |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:14:59 PM

HRS AASHTO

729

### Complete Issue Information

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 3040.12308 | Resolved      | 4.0 Demo and Academic don't work with Access                        |
| 3041.12307 | Resolved      | Sybase database migration problem - ODBC configuration step missing |

### Description

FROM:jduray DATE:1/5/01 1:49:53 PM

When running the Evaluation and Academic versions against Access we get the following error message:

- Unable to grant write privileges.
- VirtisOpis will be started in read only mode.
- Please...

I checked CSysDatabaseSecurity and found ActivateReadWriteRole only handles Oracle and Sybase. I added a check for Access.

FROM:jduray DATE:1/16/01 10:29:12 AM

Issue ID: 3041

Subject: Sybase database migration problem - ODBC configuration step missing

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

1/8/2001 7:58:41 PM

Modified By: administrator

6/19/2008 4:06:11 PM

Priority: High

Category: Bug

4/19/2016 3:14:59 PM

HRS AASHTO

730

**Complete Issue Information****History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3043.12305 | Resolved      | Migration script for Sybase missing a few commands |

**Description**

FROM:jduray DATE:1/8/01 2:40:59 PM

Travix Fox with ABMD called with migration questions. while describing the process to him I realized our migration instructions omit a step. The instructions have the user copy the active db to the new installation directory and perform the migration. We do not tell the user to modify the ODBC connection info to point to the migrated db in the new directory.

I modified the instructions and sent them to Travis Fox at ABMD. The revised instructions are attached.

**Complete Issue Information**

Issue ID: 3043

Subject: Migration script for Sybase missing a few commands

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

1/10/2001 2:25:56 PM

Modified By: administrator

6/19/2008 4:06:11 PM

Priority: High

Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | Urgent   | Bug      |
| Goodrich, Brian | Closed | Urgent   | Bug      |

**Contacts**

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

**Documents**

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Standard Slab.bbd            |             |
|      | 401Standard Slab.bbd         |             |
|      | Rating Factor Variations.doc |             |
|      | Rating Factor Variations.bbd |             |

**Tasks**

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3045.12303 | Closed        | Slab Symmetry Not Working |

**Description**

FROM:jduray DATE:1/10/01 9:18:02 AM

The changes to the migration that were made on 12/21 did not make it to the CD. Those who have run the MigrateSybase40.sql from the CD should run "v40 sp1 - sybase.sql" (available in Service Pack 1).

4/19/2016 3:15:00 PM

HRS AASHTO

732



**Complete Issue Information**

FROM:jduray DATE:1/10/01 4:08:18 PM

The script in "d:\virtis\test migration to 40" has been tested and works. It is ready for release.

FROM:jduray DATE:1/16/01 10:26:27 AM

|                                    |
|------------------------------------|
| Issue ID: 3045                     |
| Subject: Slab Symmetry Not Working |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/12/2001 3:26:11 PM |
| Modified By: administrator       | 6/19/2008 4:06:11 PM |
| Priority: Urgent                 |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:01/12/2001 10:26:12

Version 3.0

I have entered a 3 span haunched slab. Cross sections represent the locations where the bars are

4/19/2016 3:15:00 PM

HRS AASHTO

733

## Complete Issue Information

terminated. POI's are set to these same points. Traffic in Both Directions has been selected. For the Design Review we have Design Loads = HL-93(SI), Permit Loads = None and Fatigue Loads = LRFD Fatigue Truck (SI). Select All was use to generate Output.

After the design review go to the Spec. Checker. Set your filter to only return the Failed items. Note that all is satisfied for Stage 1 Span 1 and Span 2 up to the center of the bridge. Past the center of the bridge I have found several locations that failed. For example, there should be no difference between Span 2 - 8260 mm and Span 2 - 11740 mm. One fails and one passes???

Being the user will only enter cross sections for half the bridge, should the results be the same on the symmetrical second half?

I came across this when I had only checked my POI's for the first half at user locations only. When I turned on the user locations and tenth-points, the tenth points are calculated for the entire structure, and I found these failures in the second half of span 2 and in span 3. I thought at first that I had my traffic going in one direction only, but that wasn't the case.

FROM:kkennelly DATE:1/26/01 3:17:48 PM

I imported the bbd file to Version 3.0, migrated to 4.0, applied patch for Version 4.0 Service Pack 1, exported, and attached new bbd file.

FROM:dteal DATE:01/31/2001 13:54:06

Here is another example:

I have entered x-sections for 1/2 of the reinforced concrete parabolic haunched slab bridge. This is a 3 span structure. Doing a design review I requested 2 POI's. One at the 4/10 point of span 1 and one at the 6/10 point of span 3. These two points should be identical.

I have attached the structure and also attached the output for Rating Factors at these two points. Being we are in the parabolic haunched area you should first look at the dead load. Notice that they are the same, therefore we are at the same spot in span 1 as we are in span 3. Notice that the resistance in span one is 20% greater than in span three. Also look at the Live load - they also are not the same, they should be. I have the trucks running in both directions which means that they should find the same maximum value. I tried running the trucks in one direction only, once up station and once down station. The live load values never changed, they should have.

FROM:bgoodrich DATE:02/23/2001 18:37:01

The structure is not defined symmetrically in Opis! The cross sections ranges must be defined so that the rebar does not change within a cross section range. See my comments in Incident 3121.

I am not sure what is going on with the live load symmetry. I am investigating this as part of Incident 3115.

Because these issues are described in other incidents, I am setting the status of this to duplicate.

FROM:dteal DATE:Monday, February 26, 2007 12:20:30 PM

Accepted - Schedule based input made this a mute point

Issue ID: 3046

Subject: Opening multiple BWS may cause Virtis/Opis to crash or behave improperly

4/19/2016 3:15:00 PM

HRS AASHTO

734

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 1/12/2001 4:04:23 PM |
| Modified By: administrator     | 6/19/2008 4:06:11 PM |
| Priority: Urgent               |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | Urgent   | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | False Fatigue Check.bbd |             |

## Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3047.12301 | Resolved      | Low rating based on fatigue in deck slab ??? |

## Description

FROM:kkennelly DATE:1/12/01 10:50:35 AM

I was testing incident 3028 in Patch 1 and found the following situation:

Tried importing the 3 attached bridges without saving after importing (their BWS was left open and went to Bridge Explorer to import next bridge). After 3rd file imported, its Bridge window displayed but a lot of edit controls were missing from the display. OK didn't work on that window so used Cancel to close it. Tried to open its Struc Def window and Virtis crashed.

FROM:kkennelly DATE:1/12/01 11:12:16 AM

FROM:jduray DATE:01/14/2001 14:11:46

Please test this on version 3.0. I removed the changes I made for incident 3028 and the problem still occurs. I will continue to try to find where the error occurs but it will be helpful to know if it is new to version 4.0.

4/19/2016 3:15:00 PM

HRS AASHTO

735

**Complete Issue Information**

FROM:kkennelly DATE:1/15/01 8:33:36 AM

I tested Version 3.0 and found the following: I imported 4 bridges without saving them. The 4th bridge when imported didn't open the Bridge window after importing. Then when I tried to import bridge #5, nothing happened when I picked Import off the menu. Bridge wasn't imported and didn't crash. I tried this same procedure while I had Intercept open, and when I tried to import bridge #4 Virtis crashed. I am able to reproduce this.

FROM:jihnata DATE:1/15/01 2:20:00 PM

I've found that I can reproduce this same problem just by clicking "New Bridge" three times. It crashes Developer Studio on my PC, so I can't debug it after the fact. Rather, I'm trying to step through the code before it crashes. Also loaded Version 2.0 -- it does the same thing after about 5 "New Bridges".

FROM:jihnata DATE:1/15/01 2:51:19 PM

I'm also seeing a maximum of about three or four \*existing\* bridges that I can \*open\* before bad things happen.

FROM:jduray DATE:1/15/01 2:59:00 PM

It also does this when using Oracle and creating three new bridges.

FROM:jihnata DATE:2/1/01 9:01:19 AM

I was able to trace this to the "Desktop Application Heap" in Windows NT. This is a global heap that Windows uses to store objects (menus, pens, brushes, etc.) When our BWS is created, we create a CMultiDocTemplate for each of our child windows, and each child window was getting its own copy of the BWS menu and this was filling the desktop heap until no more windows could be created. For the fix, I implemented menu sharing, as described in Microsoft Knowledge Base article Q118435. Now, more BWSs can be opened (I stopped at twenty).

Fixed for Version 4.1

FROM:dteal DATE:11/01/2001 16:32:36

Accepted

Issue ID: 3047  
Subject: Low rating based on fatigue in deck slab ???

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Best, Richard 1/12/2001 8:45:54 PM  
Modified By: administrator 6/19/2008 4:06:11 PM  
Priority: Urgent  
Category: Bug

**History**

4/19/2016 3:15:01 PM

**HRS AASHTO**

736

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3049.12299 | Closed        | Cannot turn some toolbars back on |

### Description

FROM:rmbest DATE:01/12/2001 15:45:55

VIRTIS 4.0 - We have discovered what appears to be a bug. Every once and awhile we are getting a false Inventory Rating Factor of 0.00 based on fatigue, where fatigue should not be an issue. This usually means that something is out of whack with our placement of the deck reinforcement. Is BRASS actually checking fatigue in the deck or is the misplacement of the bars forcing it to happen? I have attached an example illustrating the problem. I hope that it is not actually intended that the ratings be based on fatigue in the deck slab. If so, there should be an option to disable it.

FROM:jduray DATE:1/16/01 9:01:22 AM

FROM:bgoodrich DATE:01/17/2001 08:30:40

I am unable to reproduce the zero rating. I believe there may have been a small gap in the schedule of STEEL-GIRDER-CONTROL commands, which caused this problem. The allowable fatigue stress for this gap was never set to a large number ( $1 \times 10^{10}$ ), so it was controlling the rating. I recently corrected a problem in how the BRASS schedules were generated, which I believe has addressed this issue. This should be available in Patch 1.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 3049                             |
| Subject: Cannot turn some toolbars back on |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 1/17/2001 1:34:36 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: Urgent               |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3050.12298 | Closed        | Toolbars missing caption |

## Description

FROM:bgoodrich DATE:01/17/2001 08:34:37

If the two toolbars used for rating bridges and viewing results are undocked and then closed for some reason, they cannot be made visible again using the GUI. I had to go to the registry and turn them back on. A user in the training accidentally turned one off. Add items to the View menu to control all toolbars.

FROM:jihnat DATE:2/1/01 11:24:24 AM  
Fixed for Version 4.1

FROM:jihnat DATE:10/16/2001 1:01:42 PM  
Accepted via email by Brian Goodrich.

4/19/2016 3:15:01 PM

HRS AASHTO

738

## Complete Issue Information

FROM:dteal DATE:11/01/2001 16:37:03  
Accepted

|                                   |
|-----------------------------------|
| Issue ID: 3050                    |
| Subject: Toolbars missing caption |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 1/17/2001 1:36:53 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:01/17/2001 08:36:54

4/19/2016 3:15:01 PM

HRS AASHTO

739

**Complete Issue Information**

If the toolbars are undocked, there is no caption. Therefore, add captions to all toolbars that match the name in the View menu.

FROM:jhnat DATE:1/29/01 10:02:33 AM  
Fixed for Version 4.1 and Version 4.0 Patch 2.

FROM:bgoodrich DATE:09/19/2001 17:38:13  
Toolbars now have captions.

|                                      |
|--------------------------------------|
| Issue ID: 3051                       |
| Subject: Clarify "Member Alt. Types" |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 1/17/2001 1:38:13 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

4/19/2016 3:15:01 PM

HRS AASHTO

740



**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph | Suspended | High | Enhancement |
|---------------|-----------|------|-------------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3052.12296 | Suspended     | Clarify "Current" checkboxes throughout GUI |

**Description**

FROM:bgoodrich DATE:01/17/2001 08:38:14

In the structure definition window, change "Member Alt. Types" to "Member Alt. Types Display", "BWS Tree Display", or something that better indicates how these checkboxes are used (without going to the help).

Issue ID: 3052

Subject: Clarify "Current" checkboxes throughout GUI

4/19/2016 3:15:02 PM

HRS AASHTO

741

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 1/17/2001 1:40:19 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: High                 |                      |
| Category: Cosmetic             |                      |

### History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Ihnat, Joseph   | Suspended | High     | Change Request |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3053.12295 | Suspended     | Cannot Unset the Default Analysis Settings Template |

### Description

FROM:bgoodrich DATE:01/17/2001 08:40:20

The Existing and Current checkboxes continue to cause confusion during the training sessions. The "Current" text is misleading because the meanings of existing and current are similar. Suggestions include changing "Current" to "Current Display", "Current Schematic Display", or something to better indicate the true intension of this field.

## Complete Issue Information

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3053                                               |
| Subject: Cannot Unset the Default Analysis Settings Template |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 1/17/2001 1:41:35 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: High                 |                      |
| Category: Change Request       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:01/17/2001 08:41:36

In the Preferences window (Analysis tab), the Default Analysis Settings Template may be set. However, there is no option to unset the default template (without actually deleting it) once the OK button has been selected.

## Complete Issue Information

Issue ID: 3054  
Subject: BBD File Import Bug with Security Key

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Goodrich, Brian 1/17/2001 1:43:04 PM  
Modified By: administrator 6/19/2008 4:06:10 PM  
Priority: Urgent  
Category: Bug

### History

| Primary Contact | Status            | Priority | Category |
|-----------------|-------------------|----------|----------|
| Duray, Jim      | Closed - Inactive | Urgent   | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

4/19/2016 3:15:02 PM

HRS AASHTO

744

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 3060.12288 | Closed        | Bridge Parameters list does not populate |

### Description

FROM:bgoodrich DATE:01/17/2001 08:43:05

Two users (at the Boston training) exported a BBD file from Version 4.0 and then tried to import the BBD file. They received a message box indicating that the security key was removed or not available and were subsequently unable to import the BBD file. The import works fine on a computer without a security key.

FROM:jihnata DATE:6/19/2001 12:45:25 PM

Reported again 6/14/01 by Brian Boucher (Bayside - 617-625-4696). He was having this problem on Windows Me and Windows 98.

I was able to reproduce this on Windows 98, but not on Windows NT or Windows 2000.

FROM:jduray DATE:6/25/01 3:13:25 PM

We have tried again but are not able to reproduce this on NT or 2000. This seems to be a problem with the security key dll's on 98. Since for version 4.1 we are implementing different security mark as Closed - Inactive.

Issue ID: 3060

Subject: Bridge Parameters list does not populate

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim

1/23/2001 10:34:49 PM

Modified By: administrator

6/19/2008 4:06:10 PM

Priority: Urgent

4/19/2016 3:15:02 PM

HRS AASHTO

745

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3061.12287 | Closed        | Version 4.0 Patch 2 |

**Description**

FROM:jduray DATE:1/23/01 5:22:43 PM  
 I received the following e-mail from Bill Simons at Ks DOT:

-----begin e-mail -----

Jim,  
 We're having trouble with the Parameter views that are used in the V/O Configuration Browser. Six views apparently were not create/replaced when the migration script ran. I've taken care of three of these: County, District and NHS; although these views exist and data can be viewed in SQL, the V/O form still does not populate. With the other three views: Administrative, Functional Class and Owner-Maintain; I'm not sure what tables these are built from.

I'd appreciate any assistance you may be able to provide.  
 Thanks again,  
 Bill

Bill Simons  
 Kansas D.O.T.  
 Computer Services  
 Database Administration  
 785-368-7262  
 785-296-6222 (FAX)  
 simons@ksdot.org

-----end e-mail -----

**Complete Issue Information**

I am able to reproduce this behavior using version 4.01 schema owned by Bridgewater in our instance of Oracle. It doesn't appear to me as though we use the views he describes. The CDmParamtrsList class uses pontis\_paramtrs not the views. I searched the creation and migration scripts and could not find any views that uses these views. However, there is not data returned to the Dm from the Db even though there are rows in the db table.

FROM:jduray DATE:1/23/01 6:34:27 PM

The problem is due to the change in column data type from char to varchar2. The data has trailing spaces and our where clause does not so the query of the pontis\_paramtrs table with a typical where clause such as where table\_name='bridge' and field\_name='district' does not return any rows. I wrote script g:\...\v40 sp2 oracle test.sql thatl corrects the problem, however, there are several other tables where we made the same datatype change that we need to check.

FROM:mordoobadi DATE:2/1/01 8:47:27 AM

We made changes in column data types from char to varchar2 only in the following tables:  
pontis\_bridge - many attributes (we do not use most of these attributes in Virtis/Opis.  
pontis\_paramtrs - couple of attributes.  
abw\_bridge - brkey (FK from pontis\_bridge table).

a SQL script is created to trim the trailing spaces of the varchar2 attributes in these tables. (File G:\...\v40 sp2 oracle.SQL)

FROM:mordoobadi DATE:2/1/01 3:40:34 PM

This patch SQL script was tested on a database that was originally a version 3.o database and was migrated to version 4.0.

Before applying the patch I tried the parameters window. I didn't see anything listed in that window. Then I applied the patch and everything seems to be working OK.

I sent the patch to Bill but he indicated that he is still having problem updating old records in the parameters table (which I cannot reproduce).

I asked Bill to send me the contents of his pontis\_paramtrs table to investigate more.

FROM:mordoobadi DATE:2/6/01 1:27:44 PM

Accepted by Dean Teal.

|                              |
|------------------------------|
| Issue ID: 3061               |
| Subject: Version 4.0 Patch 2 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Duray, Jim            | 1/23/2001 11:39:02 PM |
| Modified By: administrator          | 6/19/2008 4:38:36 PM  |
| Priority: Urgent                    |                       |
| Category: Bug                       |                       |

**History**

4/19/2016 3:15:03 PM

HRS AASHTO

747

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State    | Summary                                   |
|------------|------------------|-------------------------------------------|
| 3063.12285 | Not Reproducible | BARS import for RC misses tributary width |

**Description**

FROM:jduray DATE:2/9/01 10:23:40 AM  
Let's release this patch. It is important for the database.

FROM:jduray DATE:2/9/01 10:29:33 AM  
Mehrddad - prepare the script and readme instructions for the database that includes updating the version (4.0.2) and the build number (3003).  
Do any of the other changes from char to varchar2 cause problems? Did you investigate this?

FROM:mordoobadi DATE:2/12/01 9:09:33 AM  
A SQL script named v40 sp2 - Oracle.sql is created on G:\PROJ\VIRTIS\LONGTERM\VirtisOpis Builds\Version 4.0\Release\VirtisOpis Version 4.0.0\Service Packs\Service Pack 2\ which takes care of trimming trailing blanks for old CHAR attributes in pontis\_paramtrs, pontis\_bridge, and abw\_bridge. Also Folder Properties(Find Bridge) code is changed to deal with the trailing blanks, so that if the user had an old SQL based folder, he'll be able to recover the folder by opening folder properties window and saving it.

FROM:jduray DATE:2/14/01 11:03:46 AM  
We also need a script to sybase, etc. to update the patch and build numbers.

FROM:mordoobadi DATE:2/16/01 1:30:09 PM  
Database related incidents (3060, 3108, 3110) verified for an oracle database which was migrated from version 3.0 to 4.0.0. Working fine.



## Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Issue ID: 3063                                     |
| Subject: BARS import for RC misses tributary width |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 1/25/2001 1:58:33 PM |
| Modified By: administrator     | 6/19/2008 4:06:10 PM |
| Priority: High                 |                      |
| Category: Bug - BARS Import    |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Accepted | Urgent   | Bug      |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug      |

## Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3066.12282 | Closed        | Administrator not able to Save Parameters |

## Description

FROM:jduray DATE:01/25/2001 08:58:34

The top flange tributary width is not imported from BARS or the export to BRASS is not handling it properly. CoDOT is not able to import any of their RC tee beam bridges and analyze without modifying the data.

FROM:xli DATE:4/14/2006 2:53:47 PM

4/19/2016 3:15:03 PM

HRS AASHTO

749

**Complete Issue Information**

I imported a RCTee with 5.5 development, not able to reproduce.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3066                                     |
| Subject: Administrator not able to Save Parameters |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 1/25/2001 6:52:50 PM |
| Modified By: administrator          | 6/19/2008 4:06:09 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:01/25/2001 13:52:51

After our database upgrade – we had problems getting the Configuration Browser - Parameters to

4/19/2016 3:15:03 PM

**HRS AASHTO**

750

**Complete Issue Information**

update. You helped us get that fixed. Now I can not save any changes to the parameters. I am logged in as the Administrator with all the proper privileges. Our database people have confirmed that I should be able to save to the database.

FROM:jduray DATE:1/31/01 11:47:38 AM  
Do you get error messages? I tried to reproduce this problem and could not.

FROM:mordoobadi DATE:2/1/01 3:46:45 PM  
This is duplicate. See incident 3060.

FROM:dteal DATE:02/05/2001 12:02:31

FROM:mordoobadi DATE:2/6/01 1:27:09 PM  
Accepted by Dean Teal.

FROM:dteal DATE:09/21/2001 15:23:44

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 3067<br>Subject: Default Settings not getting Saved |
|---------------------------------------------------------------|

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Ihnat, Joseph                  |
| Submitted By: Teal, Dean 1/25/2001 6:53:54 PM   |
| Modified By: administrator 6/19/2008 4:06:09 PM |
| Priority: High                                  |
| Category: Bug                                   |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Ihnat, Joseph   | Duplicate | High     | Bug      |

### Complete Issue Information

|               |           |      |     |
|---------------|-----------|------|-----|
| Ihnat, Joseph | Duplicate | High | Bug |
|---------------|-----------|------|-----|

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Slab.bbd            |             |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 3068.12280 | Closed        | Need improved method of describing reinf in R/C beams |

### Description

FROM:dteal DATE:01/25/2001 13:53:55

Sometimes (not all) when I log in I find that my last settings where not saved. Like toolbars would be all left justified or the Explorer window is no longer maximized. Doesn't appear to be consistent in what or when it changes things.

FROM:jihnata DATE:10/23/2001 8:14:03 AM

Duplicate of 3414.

Issue ID: 3068

Subject: Need improved method of describing reinf in R/C beams

Folder: /Virtis/Support Center

4/19/2016 3:15:04 PM

HRS AASHTO

752

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/25/2001 7:27:50 PM |
| Modified By: administrator       | 6/19/2008 4:06:09 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3069.12279 | Closed        | Version 4.0 is Slow |

### Description

FROM:dteal DATE:01/25/2001 14:27:51

We have over 5 thousand slab bridges similar to the one I have attached. The cross-sections have been cut at the bar termination points (less a development length). Cross sections are need at these points to perform the design analysis (to be sure the bars a long enough). Being these slabs have a variable haunch depth, simply moving x-sections around is very cumbersome and time consuming. Can you provide a reasonable workaround until this issue has been addressed? Please, also see August Incident #2812.

FROM:dteal DATE:01/26/2001 08:25:57

The only work around we have come up with is:

Using one set of x-sections and ranges to define the bar terminations for design. And another set to check critical sections for rating.

FROM:jduray DATE:01/26/2001 13:11:58

4/19/2016 3:15:04 PM

HRS AASHTO

753

**Complete Issue Information**

FROM:dteal DATE:Friday, September 05, 2003 1:57:42 PM  
500 RC Slab haunched bridges not 5,000

FROM:dteal DATE:Tuesday, October 26, 2004 10:58:39 AM  
With schedule based input is is no longer an issue - please close

FROM:jihnat DATE:10/26/2004 3:10:33 PM  
Deleted "Please Close" from Track field and changed Status to Closed.

|                              |
|------------------------------|
| Issue ID: 3069               |
| Subject: Version 4.0 is Slow |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/25/2001 7:30:17 PM |
| Modified By: administrator     | 6/19/2008 4:06:09 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:01/25/2001 14:30:18  
It was noticed right away. Version 4.0 database refresh rate in the Explorer window has really slowed down. I called our Oracle DBA, I am the only one hitting on it right now. I checked with our Network administrator, he found no processes using up resources. Any suggestions?

FROM:dteal DATE:01/25/2001 15:51:52  
Never mind! We rebooted our server and things straightened right out.

4/19/2016 3:15:04 PM

HRS AASHTO

754

## Complete Issue Information

Issue ID: 3070  
Subject: Problem copying transverse stiffener

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 1/25/2001 9:03:45 PM  
Modified By: administrator 6/19/2008 4:06:09 PM  
Priority: High  
Category: Bug - GUI 1

### History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Duray, Jim      | Assigned         | High     | Bug - GUI 1 |
|                 | Not Reproducible |          |             |
| Duray, Jim      | Not Reproducible | High     | Bug - GUI 1 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:04 PM

HRS AASHTO

755

**Complete Issue Information**

|           |                            |                       |
|-----------|----------------------------|-----------------------|
| Jim Duray | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |
|-----------|----------------------------|-----------------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 3071.12277 | Resolved      | Strand layout window doesn't open if strand grid is not defined |

**Description**

FROM:jduray DATE:01/25/2001 16:03:46

Copied a stiffener and the validation dialog opened and the stiffener was not copied. It occurs on the second copied. The first one was copied using drag n drop, the second one using the right mouse click menu.

FROM:jihnat DATE:1/29/01 8:01:48 AM

I'm not able to reproduce this. Can you provide some additional information? Was it a Plate or Angle Stiffener? Were you copying to the same Struct Def or a different Struct Def? Same or different BWS? Are you saying that the validation dialog opened as a result of the copy?

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 3071                                                           |
| Subject: Strand layout window doesn't open if strand grid is not defined |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 1/26/2001 4:24:03 PM |
| Modified By: administrator     | 6/19/2008 4:06:09 PM |
| Priority: High                 |                      |

4/19/2016 3:15:05 PM

HRS AASHTO

756



## Complete Issue Information

Category: Bug - GUI 2

## History

| Primary Contact | Status                            | Priority | Category    |
|-----------------|-----------------------------------|----------|-------------|
| Duray, Jim      | Development<br>Resolved<br>Closed | Urgent   | Enhancement |
| Duray, Jim      | Closed                            | Urgent   | Enhancement |

## Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3072.12276 | Closed        | Sharing of Agency Library Data |

## Description

FROM:jduray DATE:Saturday, November 08, 2003 8:28:11 AM  
Fixed for 5.1.1.

Need to test all ps shapes (box, I, Tee & tub)...delete strand grid and open strand layout window. It should open without a strand grid.

FROM:gbarnhill DATE:Monday, January 12, 2004 11:23:59 AM  
OK in v5.1.1 -- I can open all shapes without strand grids defined.

## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 3072                          |
| Subject: Sharing of Agency Library Data |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/26/2001 4:26:30 PM |
| Modified By: administrator     | 6/19/2008 4:06:09 PM |
| Priority: Urgent               |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:01/26/2001 11:26:31

Now that we have consultants on board we have the need to share agency library data. We need to give them access to our approved list of materials and appurtenances. How do we share this with them? If not electronically then how as a last resort how would we print out the text to a file?

FROM:dteal DATE:03/09/2001 10:45:01

Several consultants have asked for help in this area. It sure would be nice to have a way to export our agency libraries (all – including vehicles) to a .bbd file that we could make available to any consultant that is doing work for us.

It would also be nice if the consultants could have more than one agency library. For example – Consultant XYZ has headquarters in Kansas City. They do work for KS, MO, NE, IA, OK, etc. They need to name agency libraries for each state they do business with. As you know, no two states do anything the same!

4/19/2016 3:15:05 PM

HRS AASHTO

758

**Complete Issue Information**

FROM:jduray DATE:5/10/02 12:50:51 PM  
This enhancement is in development and will be released in the next release.

FROM:dteal DATE:Monday, January 27, 2003 9:28:51 AM

FROM:jduray DATE:7/19/2003 8:10:00 AM  
This feature wqas release in 5.0.  
Multiple agency libraries was not included in the release. I suggest the consultant use multiple databases instead.

Issue ID: 3073  
Subject: Training examples updates for use of templates

Folder: /Virtis/Support Center  
Primary Contact: puckett, jay  
Submitted By: Duray, Jim 1/26/2001 6:09:46 PM  
Modified By: administrator 6/19/2008 4:06:09 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| puckett, jay    | Assigned | High     | Enhancement |
|                 | Resolved |          |             |
| puckett, jay    | Resolved | High     | Enhancement |

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 3075.12273 | Suspended     | Analysis Progress Dialog needs a filter for the warnings |

### Description

FROM:jduray DATE:01/26/2001 13:09:46

We should have a template example and discuss the use of templates in detail.

FROM:kkennelly DATE:5/18/01 10:30:44 AM

5/17/01 Jim said Jay was working on this example.

Issue ID: 3075

Subject: Analysis Progress Dialog needs a filter for the warnings

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim

1/26/2001 6:18:30 PM

Modified By: administrator

6/19/2008 4:06:09 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:05 PM

HRS AASHTO

760

**Complete Issue Information**

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad | Suspended | High | Enhancement |
|--------------------|-----------|------|-------------|

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3076.12272 | Resolved      | Training example revisions |

**Description**

FROM:jduray DATE:01/26/2001 13:18:34

We need to be able to filter the warning messages based on low, medium and low coming from the export so users don't have to read all messages.

Also, consider adding to the preferences Analysis tab some options for messages to the Analysis Progress window.

Display Warnings

Low

Medium

High

Engine commands

Also consider color-coding the messages.

Issue ID: 3076

Subject: Training example revisions

**Complete Issue Information**

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Kennelly, Krisha               |
| Submitted By: Duray, Jim 1/26/2001 6:27:31 PM   |
| Modified By: administrator 6/19/2008 4:06:09 PM |
| Priority: High                                  |
| Category: Documentation                         |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3077.12271 | Resolved      | PS Strand Layout window - cannot enter fraction feet for harp pt |

**Description**

FROM:jduray DATE:01/26/2001 13:27:32

Add a PS P and CGS example. Could add as a derivative of an existing example.

FROM:kkennelly DATE:2/8/01 3:14:49 PM

PS5 example added. Based on example Arizona bridge. Skewed simple span I beam with P and CGS.

## Complete Issue Information

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 3077                                                            |
| Subject: PS Strand Layout window - cannot enter fraction feet for harp pt |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 1/26/2001 6:30:34 PM |
| Modified By: administrator          | 6/19/2008 4:06:09 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:01/26/2001 13:30:35  
PS Strand Layout window - cannot enter fraction feet for harp pt for P and CGS option.

FROM:jduray DATE:01/26/2001 13:32:05

FROM:jihnata DATE:1/26/01 2:16:39 PM  
This is a database problem. In the data dictionary, table\_name=abw\_ps\_precast\_beam\_span,

4/19/2016 3:15:06 PM

HRS AASHTO

763

**Complete Issue Information**

attribute\_name=p\_and\_e\_harp\_pt\_left/right\_dist, the us\_mask column is null.

FROM:mordoobadi DATE:2/9/01 11:24:43 AM  
Fixed for 4.1.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 3078                                                          |
| Subject: Library PS shapes do not have all properties entered in the db |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 1/26/2001 6:38:06 PM |
| Modified By: administrator          | 6/19/2008 4:06:09 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

**Contacts**

| Name      | Company            | Email 1               | Phone 1 |
|-----------|--------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., | jduray@mbakercorp.com |         |

4/19/2016 3:15:06 PM

HRS AASHTO

764



**Complete Issue Information**

Inc.

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3079.12269 | Resolved      | Analysis Errors window doesn't open |

**Description**

FROM:mordoobadi DATE:2/2/01 10:26:23 AM

The sources I used to populate the PS shape properties did not contain the following information:

- Volume/Surface Ratio
- Half-depth area for positive flexure
- Half-depth area for negative flexure
- St. Venant's Torsional constant

The user can hit Compute button to calculate these values after copying a PS shape from library.

FROM:mordoobadi DATE:2/2/01 11:51:24 AM

Values entered using compute button. Version 4.1

|                                              |
|----------------------------------------------|
| Issue ID: 3079                               |
| Subject: Analysis Errors window doesn't open |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 1/26/2001 6:39:34 PM |
| Modified By: administrator          | 6/19/2008 4:06:09 PM |

**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: Bug  |

**History**

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | studs.zip           |             |

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3080.12268 | Closed        | Shear Stud Pitch and Input Values ***** |

**Description**

FROM:jduray DATE:01/26/2001 13:39:37

The Analysis Errors window doesn't open (from the menu).

FROM:mordoobadi DATE:2/1/01 3:47:37 PM

Analysis Errors window is our standard System Error window and it does not open when there is no errors.

Maybe we should disable the corresponding menu item when there is no errors.

FROM:mordoobadi DATE:2/1/01 5:27:57 PM

We decided to disable the "Analysis Errors" menu item.

FROM:mordoobadi DATE:2/2/01 10:21:45 AM

Fixed for version 4.1.

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 3080                                   |
| Subject: Shear Stud Pitch and Input Values ***** |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/26/2001 7:41:07 PM |
| Modified By: administrator       | 6/19/2008 4:06:09 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:01/26/2001 14:41:07

Why are the values for Pitch and Input for shear studs stated (\*\*\*\*\* out in the spec checker? See attached .bmp file

FROM:bgoodrich DATE:02/19/2001 10:12:36

The pitch appears to be larger than that allowed by the format statement. I modified the format statement to allow larger numbers.

FROM:dteal DATE:02/26/2001 11:52:24

I will need to know which version or patch to verify this for acceptance.

FROM:jduray DATE:3/2/01 11:29:43 AM

We need to send the patch to Dean for testing prior to release. This requires a new BRASS dll from Wyoming.

4/19/2016 3:15:07 PM

HRS AASHTO

767

**Complete Issue Information**

FROM:jduray DATE:6/4/01 8:56:43 AM  
Dean accepted resolution of this incident.

FROM:bgoodrich DATE:06/13/2001 07:52:54  
Closed.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3081                                     |
| Subject: Girder System Structure Definition Window |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Generated, astover | 1/27/2001 5:36:22 PM |
| Modified By: administrator       | 6/19/2008 4:06:08 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Resolved | High     | Enhancement |
| Duray, Jim      | Resolved | High     | Enhancement |

**Contacts**

| Name         | Company                 | Email 1                | Phone 1  |
|--------------|-------------------------|------------------------|----------|
| Aaron Stover | Michael Baker Jr., Inc. | astover@mbakercorp.com | 269.7937 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 3083.12265 | Accepted      | BWS Report only contains data for first 2 girders in girder system |

**Description**

FROM:astover DATE:01/27/2001 12:36:22

I was trying to type a long description into the description window and was cut off after about 5 lines of entry into the window. This seems like a rather small limit for a window that fills 3/4 of the screen.

the following is the truncated description...

"Bridge is slightly curved, but is entered as straight in Virtis.

**Assumptions**

Approximate member loads are applied to Fascia Girders to approximate Curvature.

Travel Way has been adjusted to utilize maximum and minimum overhangs. Effective De"

FROM:jduray DATE:1/31/01 1:57:18 PM

Did he hit the db limit or is there some other problem? Db limit is 255.

This looks like the db limitation.

I'm changing this to an enhancement request to increase the field size or add comments capability.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 3083                                                              |
| Subject: BWS Report only contains data for first 2 girders in girder system |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 1/30/2001 2:05:21 PM |
| Modified By: administrator        | 6/19/2008 4:06:08 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:07 PM

HRS AASHTO

769

**Complete Issue Information**

|                  |          |      |             |
|------------------|----------|------|-------------|
| Kennelly, Krisha | Accepted | High | Bug         |
| Goodrich, Brian  | Closed   | High | Enhancement |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | TooManyLoadCases.bbd |             |

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3084.12264 | Closed        | PS Adj Box has too many load cases |

**Description**

FROM:kkennelly DATE:1/30/01 9:03:54 AM

Version 4.0.1 BWS Report only contains data for first 2 girders in a 4 girder system. Can reproduce in TrainingBridge1 in sample database.

FROM:kkennelly DATE:2/6/01 9:09:23 AM

Problem exists for schedule based steel girders. When writing the haunch profile for steel girders, IsMemberAltExteriorGirder() is called. This iterates through GirderMbrList. The members are written in a while loop iterating through the member list, it is in that while loop that IsMemberAltExteriorGirder() eventually gets called which advances the place in the GirderMbrList so not all members are written.

FROM:kkennelly DATE:2/6/01 9:40:00 AM

Not a problem for ps cause BWS report is printing out all of the ext girder haunch data for ps so it doesn't check for ExteriorGirder.

FROM:kkennelly DATE:2/6/01 11:16:11 AM

GirderMbrList reset to member which is being reported on after find out if mbr is exterior girder. Added code to print out PS haunch additional dimensions.

FROM:gbarnhill DATE:05/31/2001 12:26:46

OK in Service Pack 3 for version 4

Issue ID: 3084

Subject: PS Adj Box has too many load cases

4/19/2016 3:15:08 PM

HRS AASHTO

770

## Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 1/30/2001 2:25:45 PM |
| Modified By: administrator       | 6/19/2008 4:06:08 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | InterceptImportFailure.txt |             |

## Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3085.12263 | Resolved      | Structure Typical Section Schematic not drawing haunch correctly |

## Description

FROM:kkennelly DATE:1/30/01 9:17:36 AM

The attached bbd file is a modified version of the PCI Training Bridge 1 delivered with the db. A composite concrete deck has been added. (exported from Version 4.0.1). When try to run BRASS LFD, export gives error that there are too many load cases, try to merge some manually. If I take out the weight of the interior diaphragms BRASS runs. This member has following dead loads: Stage 1 (non-composite): beam selfweight, int diaphragms, slab. Stage 2 (composite): Member loads added for FWS and parapets. BRASS LFD limitations help says limit of 4 dead load groups with number 4 reserved for prestress. I think that this bridge only has 2 dead load groups plus the 1 for prestress = 3. Can the interior diaphragms be incorporated into the beam dead load group somehow? This member doesn't seem to have an excess number of loads.

FROM:bgoodrich DATE:01/30/2001 18:12:14

4/19/2016 3:15:08 PM

HRS AASHTO

771

**Complete Issue Information**

Krishna - When running P/S box beams with BRASS-LFD, BRASS load groups 1 and 4 are reserved for interior diaphragms and prestress loads, respectively. It looks like we need to document this in the engine help. Note that BRASS-LRFD allows the interior diaphragms to be applied to the internal BRASS beam selfweight load case. BRASS users are able to get around this because there is an additional dead load case that we did not implement in the export. This dead load case is a uniform dead load on all spans. We did not implement this load case because of the general way that the user entered loads with Virtis/Opis. Basically, we did not want to lose the Virtis/Opis load cases.

FROM:bgoodrich DATE:02/26/2001 13:52:55

I corrected a bug in the export (BrassStdLoadControl.cpp) with determining the number of available load cases. Krishna - I sent you the file to add to SourceSafe.

FROM:kkennelly DATE:5/31/01 3:11:02 PM

FROM:bgoodrich DATE:06/13/2001 07:53:54  
Closed.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 3085                                                            |
| Subject: Structure Typical Section Schematic not drawing haunch correctly |

|                                 |                      |
|---------------------------------|----------------------|
| Folder: /Virtis/Support Center  |                      |
| Primary Contact: Duray, Jim     |                      |
| Submitted By: Kennelly, Krishna | 1/30/2001 3:10:30 PM |
| Modified By: administrator      | 6/19/2008 4:06:08 PM |
| Priority: High                  |                      |
| Category: Bug - GUI 2           |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:15:08 PM

HRS AASHTO

772



**Complete Issue Information**

FROM:kkennelly DATE:1/30/01 10:08:08 AM

Attached bridge is exported from Version 4.0.1. Struc Typ Section schematic shows incorrect haunch for Member G1. Haunch entry for Member G1 has data 13.875 for Z3. For the left exterior girder, Z3 should be measured on overhang side of deck. Changing the value of Z3 for this member makes the schematic change to the right of member G1.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3086                                               |
| Subject: BWS Report output for Deck Profile not easy to read |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 1/30/2001 6:59:35 PM |
| Modified By: administrator        | 6/19/2008 4:06:08 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:08 PM

HRS AASHTO

773

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Kennelly, Krisha | Resolved | High | Unknown |
|------------------|----------|------|---------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3087.12261 | Closed        | AASHTO Specification Check - 6.10.7.4 Shear Connectors (STUDS) |

### Description

FROM:kkennelly DATE:1/30/01 1:57:05 PM

The Deck Concrete (Deck Profile) output in the BWS report should be reformatted and each row in database printed over a couple of rows in the BWS report. Right now each row in db is a row in BWS report but 8 1/2" wide paper too narrow for 1 for of Deck Concrete and text wraps/is abbreviated and hard to read.

FROM:kkennelly DATE:1/30/01 2:10:12 PM

Shear Reinforcement ranges spread over 2 lines and hard to read. It should fit on 1 line.

FROM:kkennelly DATE:1/31/01 11:26:02 AM

Sometimes the Bearing Stiffener Locations output is not in order from Support 1 to Support n. For example, I have a 3 span bridge and in the BWS report I get the following order of output: Support 4, Support 2, Support 3, Support 1.

FROM:kkennelly DATE:2/6/01 3:11:15 PM

Deck concrete - think it has to stay the way it is. User can copy BWS to Word and change margins, font size, etc.

Shear reinf ranges resolved.

Brg stiffener locations: I remember a conversation with Rick about the list of brg stiff groups not being in order in the domain. Now using GetItem() for BWS report. Resolved.

Issue ID: 3087

Subject: AASHTO Specification Check - 6.10.7.4 Shear Connectors (STUDS)

4/19/2016 3:15:09 PM

HRS AASHTO

774

**Complete Issue Information**

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/30/2001 8:41:44 PM |
| Modified By: administrator       | 6/19/2008 4:06:08 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | Assigned    | High     | Bug - GUI 2 |
|                 | System Test |          |             |
| Duray, Jim      | System Test | High     | Bug - GUI 2 |

**Contacts**

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3089.12259 | System Test   | Adding new user groups |

**Description**

FROM:dteal DATE:01/30/2001 15:41:44

This question relates to the AASHTO Specification Check - 6.10.7.4 Shear Connectors (STUDS). My point of interest is 202.00 at Construction Stage 3. For the calculation of the pitch (Shear Fatigue Resistance) (AASHTO 6.10.7.4.1b) lists under other the "I" and "Q" used in the equations. At this particular point it is using the "I" and "Q" determined in the Positive Sense. My question is what is Brass checking to determine whether the point is in the positive sense or negative sense?

FROM:bgoodrich DATE:02/23/2001 18:52:50

If the value of the maximum factored live load moment is greater than or equal to the minimum factored live load moment, the section properties for positive flexure are used.

## Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 3089                  |
| Subject: Adding new user groups |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 2/1/2001 1:57:35 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:2/1/01 8:56:32 AM

I can't find in the Help where we describe how to add new user groups.

FROM:kkennelly DATE:2/2/01 9:20:07 AM

I don't think we do. I tried to do this so I could update the help but I'm not sure this is working right in 4.0.1. I can add a new user group by sitting on Users in the Config Browser tree by selecting the New button on the toolbar. That creates a folder called New Item. I can rename this folder to whatever I

4/19/2016 3:15:09 PM

HRS AASHTO

776

### Complete Issue Information

want. If I sit on this new folder in the tree and select New I get the User window. I enter a new user, hit the Groups button and see that it says this user is a member of the new folder. Save and this user appears in the All Users folder but not the new folder I just created. I am able to add a new user to groups delivered with Virtis.

FROM:gbarnhill DATE:02/06/2001 09:40:05

Here's my two cents worth on this one.

I followed Krisha's path & get the same result. New Group folder is visible, but a new or existing user does not show up under the folder UNTIL I close the Config Browser and reopen it. After that, any new or existing user added to the folder shows up immediately.

FROM:mordoobadi DATE:12/11/2002 2:43:16 PM

Fixed For 5.0 Alpha 5.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3091                                    |
| Subject: More timber bridge types should be added |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Crovo, Daniel    | 2/2/2001 5:06:51 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:09 PM

HRS AASHTO

777

### Complete Issue Information

|                 |                         |                          |              |
|-----------------|-------------------------|--------------------------|--------------|
| Randall Mullins | Alabama DOT             | mullinsr@dot.state.al.us | 334-242-6015 |
| Jim Duray       | Michael Baker Jr., Inc. | jduray@mbakercorp.com    |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3093.12256 | Suspended     | Add Report Tool for ASD analysis |

### Description

FROM:dcrovo DATE:02/02/2001 12:06:52

In general, there are 4 types of timber bridges: (Referring to 'Timber Bridges' - U.S. Agriculture Department - 1992)

1. Glulam system: Deck: Glulam - Beam: Glulam
2. Sawn lumber system:
  - \* Deck: Nail-laminated deck or Plank deck
  - \* Beam: Sawn lumber
3. Longitudinal Deck Superstructures
4. Longitudinal Stress-laminated Deck Superstructures

Right now Virtis Version 4.0 just provides for rating of 'Sawn lumber system'. We have some timber bridges belonging to other types. Please add 3 more types on the nearest release

FROM:jduray DATE:02/07/2001 22:57:49

How many of each of these types do you have?

FROM:dcrovo DATE:02/08/2001 09:52:37

There are a total of roughly 170 timber superstructures in our inventory. There is no breakdown for these structures other than they are defined as timber stringers. Besides, we have one longitudinal glulam bridge constructed in 1999, one glulam bridge (glulam system) constructed in 2000.

|                                           |
|-------------------------------------------|
| Issue ID: 3093                            |
| Subject: Add Report Tool for ASD analysis |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Crovo, Daniel    | 2/5/2001 4:21:46 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |

4/19/2016 3:15:09 PM

HRS AASHTO

778

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

**History**

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Ihnat, Joseph   | Discard | High     | Enhancement |
| Ihnat, Joseph   | Discard | High     | Enhancement |

**Contacts**

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3094.12255 | Discard       | Default Column Widths |

**Description**

FROM:jihnat DATE:2/5/01 11:19:22 AM

The Report tool does LFD and LRFD but not ASD.

This incident was originally # 3092, but it had to be deleted then re-added due to database corruption.

## Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 3094                 |
| Subject: Default Column Widths |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/5/2001 5:48:37 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:02/05/2001 12:48:39

Version 4.0.1 did not remember column width settings from the last time the structure was viewed in version 3.0 SP4a.

When I open a structure that I haven't touched since version 3.0 I find that many of the column widths have been decreased. I have to touch each one of the columns that have been shrunk so I can view the contents.

I found the same problems with the libraries.

FROM:jduray DATE:02/05/2001 17:33:24

Correct. You uninstalled version 3.0. That deleted the window size/position/column size info stored in the registry. We do not preserve from one version to the next because the column widths are based on position within the grid. During Beta testing of 2.0 we found that sometimes new column would not

4/19/2016 3:15:10 PM

HRS AASHTO

780



### Complete Issue Information

appear because there was no column size for them but there was for the columns that existed in the previous version. To pass this info on to the next version is an enhancement.

Perhaps we could dump the registry to a ini type file in the installation directory or perhaps the windows temp directory. After install we could search for it and import and adjust as necessary.

FROM:dteal DATE:02/06/2001 08:27:40

It is one of those annoying things that should get fixed – sometime.

FROM:hlee DATE:4/30/2008 2:23:59 PM

Discarded by TAG 12/07.

|                                     |
|-------------------------------------|
| Issue ID: 3095                      |
| Subject: Timber Framing Plan Detail |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/5/2001 5:50:07 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:15:10 PM

HRS AASHTO

781

## Complete Issue Information

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3096.12253 | Closed        | test incident |

### Description

FROM:dteal DATE:02/05/2001 12:50:09

In the Structure Framing Plan Details – Layout Tab – Girder Spacing Orientation

There is a whole lot of excess real estate on this page. But when you view the Girder Spacing Orientation you have to use the up/down and right/left scroll bars to view the data. Can't we make the window bigger?

FROM:jduray DATE:04/06/2001 14:27:15

You should resize the columns (horiz) so you won't have to scroll right/left.

We can modify the window to resize the grids vertically.

|                        |
|------------------------|
| Issue ID: 3096         |
| Subject: test incident |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ihnat, Joseph    | 2/6/2001 5:19:45 PM  |
| Modified By: administrator     | 6/19/2008 4:06:08 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:10 PM

HRS AASHTO

782

**Complete Issue Information**

|                 |          |      |         |
|-----------------|----------|------|---------|
| Duray, Jim      | Closed   | High | Bug     |
| Goodrich, Brian | Resolved | High | Unknown |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C-2-28 (36A).bbd    |             |

**Tasks**

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3097.12252 | Resolved      | Top cover plate and slab reinforcement in negative moment region |

**Description**

FROM:jihnat DATE:2/6/01 12:04:15 PM  
this is a test.

Issue ID: 3097

Subject: Top cover plate and slab reinforcement in negative moment region

4/19/2016 3:15:11 PM

HRS AASHTO

783

## Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Crovo, Daniel      | 2/6/2001 5:19:56 PM  |
| Modified By: administrator       | 6/19/2008 4:06:07 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Unknown  |
| Ihnat, Joseph   | Closed | High     | Unknown  |

## Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 3099.12250 | Closed        | 4.0.1 - "n" value column missing on DECK CONCRETE tab of DECK PROFILE |

## Description

FROM:dcrovo DATE:02/06/2001 12:19:59

A report from Binh Ha, MassHighway

The same as incident 2632 for version 2.1 but with different aspects.

In the negative moment region for the rolled beam: If we input top cover plate, bottom cover plate and slab reinforcement:

- \* Version 3.0 ignores top cover plate
- \* Version 4.0 has been improved but the mistakes still exist

From Virtis version 4.0 output:

- \* Pages 5 and 6 (Construction stage 1 - Non-composite)

| Point | Xsect | Area    | Moment of | Flange thickness | Flange width |
|-------|-------|---------|-----------|------------------|--------------|
|       |       | Inertia | Top       | Top              |              |

4/19/2016 3:15:11 PM

HRS AASHTO

784

**Complete Issue Information**

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1.949 | 74.67 | 18101 | 1.799 | 11.17 |
| 2.000 | 74.67 | 18101 | 1.799 | 11.17 |
| 2.051 | 74.67 | 18101 | 1.799 | 11.17 |

Have to be:

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1.949 | 75.16 | 18214 | 1.260 | 12.11 |
| 2.000 | 75.16 | 18214 | 1.260 | 12.11 |
| 2.051 | 75.16 | 18214 | 1.260 | 12.11 |

- \* Pages 7 and 9 (Construction stage 2 - Composite)
- \* Pages 11 and 13 (Construction stage 3 - Composite)

| Point | Xsect Area Inertia | Moment of Top | Flange thickness Top | Flange width |
|-------|--------------------|---------------|----------------------|--------------|
| 1.949 | 83.96              | 23132         | 1.799                | 11.17        |
| 2.000 | 83.96              | 23132         | 1.799                | 11.17        |
| 2.051 | 83.96              | 23132         | 1.799                | 11.17        |

Have to be:

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1.949 | 84.45 | 23284 | 1.260 | 12.11 |
| 2.000 | 84.45 | 23284 | 1.260 | 12.11 |
| 2.051 | 84.45 | 23284 | 1.260 | 12.11 |

FROM:kkennelly DATE:2/7/01 9:17:58 AM

I think the export that takes the data from Virtis and puts it into the BRASS input file is working as intended. The log file that is created when you run BRASS from within Virtis contains the following warning message:

WARNING (Medium):

BRASS does not support a slab and a top cover plate in the same cross section. Therefore, the top cover plate was combined with the top flange to create a flange with an equivalent area and moment of inertia.

The top cover pl was combined with the top flange, that is why you do not see the 1.26" thick and 12.11" wide flange in the BRASS output. The values for the area and I of the section are only off by 0.6% between the modified section the export created and the actual section. I'll assign this to the person responsible for the export but I think that's probably as close as the export can get it. If that's not adequate for your needs, you'll have to request a change to the BRASS program through this incident.

FROM:bgoodrich DATE:02/19/2001 11:28:57

The previous comments made by kkennelly are correct. The top flange and top cover plate are combined when a slab/rebar are present. This is a work-around performed by the export to conform to the BRASS input requirements. BRASS does not know that the export has adjusted the top flange dimensions, so no message is printed from BRASS.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 3099                                                                 |
| Subject: 4.0.1 - "n" value column missing on DECK CONCRETE tab of DECK PROFILE |

**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Barnhill, Gale   | 2/7/2001 2:57:06 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Closed | High     | Education |
| Duray, Jim      | Closed | High     | Education |

**Contacts**

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3100.12249 | Closed        | Truck Position |

**Description**

FROM:gbarnhill DATE:02/07/2001 09:57:06

For schedule based input, I can't find a place to put in the "n" value for a composite steel & concrete member alt. According to HELP for the DECK CONCRETE tab on the DECK PROFILE window, it should be the last column, after EFFECTIVE FLANGE WIDTH (LRFD). There is no column there.

FROM:jihnath DATE:2/7/01 10:01:44 AM

Had you uninstalled Version 3 before installing Version 4? Otherwise the window reads the old column widths and "n" had zero column width in Version 3.

FROM:jihnath DATE:2/7/01 10:19:55 AM

My mistake. The column for "n" was not just added with Version 4. However, somehow a width of zero seems to have been stored in the Registry for this column.

**Complete Issue Information**

FROM:gbarnhill DATE:02/07/2001 10:39:21  
The column shows up in 4.0.0. It was evidently "zeroed" out in SP1.

I CHECKED THE LAPTOP WITH 4.0.0 RUNNING. I HAVE UNINSTALLED ALL PREVIOUS VERSIONS FROM IT. IT ONLY HAS 4.0.0 ON IT.

FROM:gbarnhill DATE:02/07/2001 10:41:02  
I just checked a machine that did not have a previous version of VirtisOpis installed. I installed 4.0.0 and then SP1. The "n" column is visible.  
The machine where the column is missing has had all previous versions and beta's installed. I've been using REGISTER.BAT to switch between versions.

FROM:jihnate DATE:2/7/01 11:03:51 AM  
It looks like a column was added after Version 2.1 (a second Eff. Flange Width). So this problem will surface if version 3 or 4 is run without uninstalling version 2.1. This is a known limitation and it's why we always ask users to uninstall the previous version before installing the latest version.  
The only other workaround would be for you to manually edit your Registry.

FROM:gbarnhill DATE:02/07/2001 12:08:44  
I agree that this is a self-inflicted problem caused by not doing what the install instructions require. It shouldn't be a problem for most "production" users. We "BETA" types tend to do things a little out of the mainstream.  
This may be something that could be included as a caution note in the FREQUENTLY ASKED QUESTIONS section.

|                         |
|-------------------------|
| Issue ID: 3100          |
| Subject: Truck Position |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/7/2001 9:03:17 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3101.12248 | Closed        | Output Selection – Analysis Settings |

### Description

FROM:dteal DATE:02/07/2001 16:03:17

In the output options I have selected the Misc. Report for Truck Position.

As far as I can tell, the only place to view the truck position is in the BRASS Output File and not in the Analysis Reports?

FROM:jduray DATE:02/07/2001 22:56:22

Correct.

Issue ID: 3101

Subject: Output Selection – Analysis Settings



### Complete Issue Information

|                  |                        |                      |  |
|------------------|------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center |                      |  |
| Primary Contact: | Ordoobadi, Mehrdad     |                      |  |
| Submitted By:    | Teal, Dean             | 2/7/2001 9:04:10 PM  |  |
| Modified By:     | administrator          | 6/19/2008 4:06:07 PM |  |
| Priority:        | High                   |                      |  |
| Category:        | Bug                    |                      |  |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Q/A    | High     | Education |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3102.12247 | Q/A           | Configuration Browser |

### Description

FROM:dteal DATE:02/07/2001 16:04:11

In the Analysis Settings I have deselected PS Concrete Stress Report and Steel Limit State Summary Report. I am doing a RC structure.

In the Analysis Report under the Report Type pull down I have a selection for PS Limit State Summary. Is this supposed to appear when I didn't ask for it?

FROM:mordoobadi DATE:2/9/01 9:07:32 AM

PS Limit State Summary should be renamed to Concrete Limit State Summary. (We use the same limit state report for both RC and PS members)

Fixed for version 4.1.

FROM:mordoobadi DATE:10/10/2001 11:43:15 AM

4/19/2016 3:15:11 PM

HRS AASHTO

789

## Complete Issue Information

Accepted by Dean Teal

|                                |
|--------------------------------|
| Issue ID: 3102                 |
| Subject: Configuration Browser |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/7/2001 9:07:32 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:02/07/2001 16:07:33

In the configuration browser – what is “Design Event” and “Rating Event”?

Are they referring to the Analysis Settings for a Design review or Rating?

FROM:jduray DATE:02/07/2001 23:01:19

4/19/2016 3:15:12 PM

HRS AASHTO

790

### Complete Issue Information

They control rating and analysis. If you don't have privilege to create a design event you shouldn't be able to do an analysis, etc.

|                                      |
|--------------------------------------|
| Issue ID: 3103                       |
| Subject: Analysis Settings Templates |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/8/2001 1:43:12 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Resolved | High     | Enhancement |
|                 | Closed   |          |             |
| Duray, Jim      | Closed   | High     | Enhancement |

### Contacts

4/19/2016 3:15:12 PM

HRS AASHTO

791

### Complete Issue Information

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3104.12245 | Duplicate     | PS Strand Layout window can't enter decimals for harp distance |

### Description

FROM:dteal DATE:02/08/2001 08:43:13

What Access Privilege allows the user to Create and Save a Template and to Delete a Template in the Analysis Settings?

FROM:jduray DATE:2/9/01 11:12:21 AM

There is no security on the templates.

FROM:dteal DATE:02/12/2001 08:27:53

Don't you think we should have some control over who deletes them?

FROM:jduray DATE:2/12/01 10:05:52 AM

It sounds like you think we do. If it can be controlled by an existing privilege we can just do it. If it requires a new privilege we will have to handle it as an enhancement.

Perhaps it should be included in Design and Rating events. You must have Create privilege for Design or Rating events.

FROM:gbarnhill DATE:02/12/2001 14:07:34

My turn !!!

Is there a way to treat templates like PUBLIC and PRIVATE folders ???

There could be PUBLIC TEMPLATES that are available to everyone with restricted create/delete privileges, but each user could create PRIVATE TEMPLATES that they could change/delete as they want. The users would only see the PUBLIC templates and their own PRIVATE ones.

FROM:dteal DATE:02/13/2001 12:50:02

I like Gales Idea!

FROM:jduray DATE:2/14/01 10:18:34 AM

Sound like a good idea. It requires some investigation to estimate the cost. I suspect it is a fair amount of work and will require TF approval and scheduling. I'm changing the status and category to Suspended/Enhancement.

4/19/2016 3:15:12 PM

HRS AASHTO

792

## Complete Issue Information

FROM:dteal DATE:08/31/2001 09:55:34

Can we revisit this one? I consider this a very large security issue! This is more of a bug than an enhancement.

Our agency has already ran into problems with this issue. A designer created a new template which included 2 special permit trucks. These trucks where to be single lane loaded for both with zero impact on one and 50% of AASHTO on the other. This designer then reused this template that he had created some time later using these rating results in a report that got sent to upper management. Later on we found out that his rating result where wrong. At some point, some other designer (with run analysis privileges) had went in and changed (deselected) the single lane loading box and resaved the template. We need to ensure that this sort of thing doesn't happen again. When a template is saved by somebody, it should not be changeable by somebody other than the person that created it and the system administrator.

Agencies need to be sure this sort of thing doesn't happen again!

FROM:dteal DATE:09/21/2001 10:55:13

The analysis settings template has again come back to haunt us. One of our designers (with run analysis privileges) has deleted most of the templates that had been previously saved. He didn't know he was deleting templates from the entire system. These templates had been set up by our agency for specific purposes. Now they are lost and will have to be recreated with all the advanced settings they originally contained.

Back on 2/12/01 you stated that an access privilege could be set if it could be controlled by an existing privilege. Could this be controlled by the "Libraries" Access Privilege? From my point of view, this would satisfy our immediate problem.

FROM:jduray DATE:9/21/01 2:22:43 PM

FROM:dteal DATE:10/16/2001 15:00:45

FROM:dteal DATE:Friday, October 18, 2002 11:45:16 AM

And it has happened again - Our Kansas rating trucks got deleted by a designer by mistake. He recreated them when he discovered what he had done. This was great, except he missed some important settings for our permit vehicles and the problem wasn't discovered until sometime latter. Houston, we have a problem!

FROM:dteal DATE:Thursday, January 22, 2004 3:51:48 PM

And it has happened again - Our Kansas rating trucks got deleted by a designer by mistake. This is a persistant problem that needs to be addressed!

FROM:dteal DATE:Friday, August 26, 2005 12:06:25 PM

"AND IT HAPPENED AGAIN" <= Notice, capital letters in quotes

This time, a user selected the advanced tab, selected Single Lane Loaded for both the HL-93 vehicle and the Fatigue Truck. Then they saved the change to the template. Now every person that may have used this template (which is our default template for Opis in USC units) got a single lane loaded design review.

4/19/2016 3:15:12 PM

HRS AASHTO

793

## Complete Issue Information

What use are templates if you can't depend on using them, if you can't depend on them having the correct information. They are there to speed up the process – not slow us down.

Now I have to contact all our designers to red flag any designs that my have run the Opis USC design review. Being there is no date stamp on the change – they need to investigate all there USC designs.

FROM:dteal DATE:Tuesday, June 13, 2006 3:19:55 PM  
Tested in 5.5 beta 1 - Thank You  
Accepted

FROM:hlee DATE:7/10/2006 3:04:46 PM  
Changed Status to Resolved.

FROM:dteal DATE:Monday, February 26, 2007 11:53:54 AM  
Accepted in 5.5

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 3104                                                          |
| Subject: PS Strand Layout window can't enter decimals for harp distance |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 2/8/2001 1:39:04 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Ihnat, Joseph   | Duplicate | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:15:12 PM

HRS AASHTO

794

**Complete Issue Information**

**Description**

FROM:kkennelly DATE:2/8/01 8:31:03 AM

Version 4.0.1 PS Strand layout window, P and CGS description type. I can't enter decimal places in the harp distance edit controls. I tried to enter 48.5 ft for the left and right harp distances but all I can enter is "48." If I switch the units from us to si back to us while the window is open I can enter 48.5, say ok but when I reopen the window, the harp distances are blank.

FROM:jihnat DATE:2/8/01 9:34:40 AM

Duplicate of 3077.

|                                   |
|-----------------------------------|
| Issue ID: 3105                    |
| Subject: Truck-Code Error Message |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/8/2001 7:07:53 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:12 PM

HRS AASHTO

795

**Complete Issue Information**

|               |                  |      |             |
|---------------|------------------|------|-------------|
| Duray, Jim    | Not Reproducible | High | Bug - GUI 2 |
| Duray, Jim    | Not Reproducible | High | Bug - GUI 2 |
| Ihnat, Joseph | Closed           | High | Bug         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3106.12243 | Closed        | Version 4.0 Patch 3 |

**Description**

FROM:dteal DATE:02/08/2001 14:07:54

I had saved a new template in the Analysis Settings. The first time I used it I got a error message that stated "Parameter 4 on Truck-Code must be greater than zero".

I spent quit some time trying to figure out how to correct this. Parameter 4 in Truck-Code is a BRASS message. Doesn't mean much to an Opis user. I finally found the source of the problem. Using the Advanced Button I needed to enter a value other than default of zero for the scale factor.

We can correct this confusion in one of two ways. 1) Default the scale factor to 1 instead of zero when creating a new template or 2) Supply a better, non-cripted error message that an Opis user would understand.

FROM:jduray DATE:2/9/01 10:17:08 AM

How did you create a new template? When I do this the scale factor does default to 1

FROM:dteal DATE:02/12/2001 10:05:56

Sporadically Reproducible – My first attempt resulted in a default scale factor of 1. Further digging resulted in a scale factor of zero. I had to add- delete templates. I was able to reproduce it 3 times out of about 20 tries. I also found another sporadic problem in the templates that I will report in another incident.

Issue ID: 3106

Subject: Version 4.0 Patch 3



### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 2/9/2001 3:28:25 PM  |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3107.12242 | Resolved      | Change Bridge Alt name and lose (E)(C) in tree |

### Description

FROM:kkennelly DATE:2/16/01 3:53:23 PM  
abgreport.dll for incident 3125

FROM:kkennelly DATE:3/2/01 9:31:21 AM  
include abgbrdg.dll for incident 3083

FROM:mordoobadi DATE:3/8/01 11:22:34 AM  
Include BridgeWareAdmin.exe in the service pack (incident 3155)

FROM:kkennelly DATE:3/8/01 1:53:33 PM  
include abgstl2 for incident 3152

FROM:jduray DATE:4/11/01 1:47:46 PM  
3080 requires a new BRASS dll from Wyoming.

FROM:jduray DATE:4/11/01 2:16:31 PM  
Target release of this patch is April 30.

4/19/2016 3:15:13 PM

HRS AASHTO

797

**Complete Issue Information**

FROM:jduray DATE:5/17/01 1:39:23 PM

We need to get abxbrass and the brass dll's organized for this sp. We should build this sp next week.

FROM:jduray DATE:6/4/01 8:55:54 AM

Build and release today. Unless we hear otherwise from Brian assume 3186 is not completely resolved and indicate such in the readme description of resolved incidents.

FROM:jduray DATE:6/7/01 10:13:34 AM

Brian indicated 3186 is resolved.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3107                                          |
| Subject: Change Bridge Alt name and lose (E)(C) in tree |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: lhnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 2/9/2001 4:09:36 PM  |
| Modified By: administrator     | 6/19/2008 4:06:07 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:2/9/01 11:07:00 AM

Version 4.0.1. Enter a new bridge. Create a new Bridge Alternative, say ok to close bridge alt window. Name of bridge alt shows up in tree with (E)(C). Reopen Bridge Alt window, change name, click OK. New name in tree but (E)(C) not in tree name. Open Bridge window and the new bridge alt name shows up in alternatives tab with E,C checked.

**Complete Issue Information**

FROM:jihnat DATE:2/15/01 8:13:07 AM  
Member Alternatives also.  
Fixed for Version 4.1 and for Version 4.0.2

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 3108                                                         |
| Subject: Save fails when changing folder properties of a public folder |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 2/9/2001 11:53:43 PM |
| Modified By: administrator          | 6/19/2008 4:06:07 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |

**Contacts**

4/19/2016 3:15:13 PM

HRS AASHTO

799

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3109.12240 | Closed        | Analysis Settings – Templates – Engine Settings |

**Description**

FROM:mordoobadi DATE:2/9/01 6:47:59 PM

If you change properties of a bridge folder and save it you will get an error, which is caused by trying to set owner\_id to zero (not NULL).

The code in question is in the function:

BOOL CDmBridgeGroup::ModifyGroupProperties(long IGroupId, LPCTSTR IpszName, LPCTSTR IpszDescription, LPCTSTR IpszSQLText,

IParentGroupId, BOOL bUseSQLInd, long

BOOL bPrivate, long IOwnerId)

we might have similar cases in other parts of the code.

FROM:mordoobadi DATE:2/13/01 10:57:24 AM  
Fixed.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3109                                           |
| Subject: Analysis Settings – Templates – Engine Settings |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/12/2001 3:07:24 PM |

4/19/2016 3:15:13 PM

HRS AASHTO

800

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:06:07 PM |
| Priority: High             |                      |
| Category: Bug - GUI 2      |                      |

**History**

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | High     | Unknown  |
| Ordoobadi, Mehrdad | Closed | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3110.12239 | Closed        | SQL-based Bridge Folders |

**Description**

FROM:dteal DATE:02/12/2001 10:07:26

I have been switching back and forth between saved templates. In one, the Engine (LRFD) Properties are set to "do not print stage 2 & 3 output". On another they are set to print. When switching back and forth, clearing, opening, switching between Vehicles and Engine tab, etc. Sometimes, (sporadic) the template that should "print stage 2 & 3 output" is listed as "Do Not Print". The Output Tab, as far as I can tell has always been correct for the template being checked.

FROM:mordoobadi DATE:12/11/2002 4:36:31 PM

Fixed for 5.0 Alpha 5.

FROM:dteal DATE:Monday, January 27, 2003 9:26:38 AM

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 3110                    |
| Subject: SQL-based Bridge Folders |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 2/12/2001 3:35:50 PM |
| Modified By: administrator          | 6/19/2008 4:06:07 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mordoobadi DATE:2/12/01 10:31:11 AM  
SQL-based Bridge Folders Properties do not show up correctly in the Folder Properties window.  
This is because of the trailing blanks in the sql\_text field in table abw\_group.

Fixed.

FROM:mordoobadi DATE:2/13/01 10:56:27 AM  
Code changed to handle trailing spaces in the filter.

## Complete Issue Information

Issue ID: 3111

Subject: Profile Schematic for PS box beams - incorrectly shows int diaphragm at start of range

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Kennelly, Krisha 2/12/2001 3:54:13 PM

Modified By: administrator 6/19/2008 4:38:36 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Assigned  | High     | Bug - GUI 2 |
|                 | Duplicate |          |             |
| Ihnat, Joseph   | Duplicate | High     | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:15:14 PM

HRS AASHTO

803

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | AdjBox.bbd          |             |

**Tasks**

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 3113.12236 | Resolved      | In BWS report, Lane Position length doesn't change when span length changes |

**Description**

FROM:kkennelly DATE:2/12/01 10:51:21 AM

Attached bridge, member g2 is ps box. Profile schematic is showing int diaphragm at CL Pier 1 based on this row in Virtis Int Diaphragm window:

| Span | Start Dist | Spacing | Num spaces |
|------|------------|---------|------------|
| 2    | 0          | 29.75   | 1          |

Schematic is displaying this row as an int diaphragm at the very left end of the span 2 beam and one at the middle of span 2. There shouldn't be an int diaphragm at the start distance.

FROM:jduray DATE:4/6/2005 10:51:29 AM

Same as 2922.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 3113                                                                       |
| Subject: In BWS report, Lane Position length doesn't change when span length changes |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kennelly, Krisha      | 2/13/2001 1:36:19 PM |
| Modified By: administrator          | 6/19/2008 4:06:06 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |



## Complete Issue Information

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | slab.bbd            |             |
|      | LRFDReport.XML      |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3114.12235 | Closed        | Truck Train @ Abutment |

### Description

FROM:kkennelly DATE:2/13/01 8:35:05 AM

In BWS report, lane position length doesn't change when span length changes. Validate works ok though.

FROM:mordoobadi DATE:11/7/2001 1:59:13 PM

Distance, Length, and number of lanes removed since it is not present in the GUI.

## Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 3114                  |
| Subject: Truck Train @ Abutment |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/13/2001 5:45:21 PM |
| Modified By: administrator       | 6/19/2008 4:06:06 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Symmetry Comparison.xls |             |
|      | LRFDReport.XML          |             |
|      | slab.bbd                |             |

## Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 3115.12234 | Closed        | Live Load Symmetry |

## Description

FROM:dteal DATE:02/13/2001 12:45:22

I have a design review of a slab bridge using an HL93 Truck. In the Report Tool for LRFD Analysis Output, Moment Summary for Live Load, Span 1, Location 0.00 (at abutment #1), Maximum Negative Moment Controlling Live Load I find that the "Truck Train" is listed as controlling. I don't think a Truck Train is to be used anywhere but to find Max Neg Moment over a pier?

FROM:kkennelly DATE:2/13/01 3:01:34 PM

4/19/2016 3:15:14 PM

HRS AASHTO

806

**Complete Issue Information**

Report Tool in Virtis is just displaying what's in the BRASS LRFD output.

FROM:bgoodrich DATE:02/19/2001 10:42:57

The negative moment over interior supports and reaction at interior supports are computed by BRASS from the truck train loading. All other actions are initialized to zero. BRASS runs through all computations for each truck individually, so there are several places where a zero moment or shear exist but will not control. The end moments are non-zero, so I will have to investigate this further.

FROM:bgoodrich DATE:02/23/2001 19:02:27

Because you have restrained the ends of the spans that are located at the abutments, there is some negative moment at these locations. The truck train is used for negative moments between points of contraflexure, so for each end-span you have two contraflexure locations instead of one. I spoke with Jay Puckett and he agreed that with considering ALL negative moments between points of contraflexure and not just those over an interior pier. I am aware of there not being a corresponding negative moment for the truck train at the right end of the bridge. I have corrected that problem in BRASS-GIRDER(LRFD) Version 1.4.0.1. I am investigating the lack of symmetry in the live load actions as part of another incident.

FROM:dteal DATE:02/26/2001 09:59:36

|                             |
|-----------------------------|
| Issue ID: 3115              |
| Subject: Live Load Symmetry |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/13/2001 7:10:58 PM |
| Modified By: administrator       | 6/19/2008 4:06:06 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:15:15 PM

HRS AASHTO

807

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:02/13/2001 14:10:59

This is a different issue than Incident # 3045 which deals with cross-section symmetry.

Trucks are traveling in both directions on a RC 3 span structure.

When I check the controlling Max Neg and Max Pos Moments for this 3 span structure I find that they are not equal from Span 1 to Span 3 or the Span 2 halves are different. Being the trucks travel in both directions, the max LL Moments should be symmetrical. I found that as much as a 53.6% difference between the Max Neg Moment at the 1/10 pt of span 1 compared to the 9/10 pt of span 3. These two points should be considered identical. I have attached the design file (.bbd) and an excel spread sheet highlighting the comparisons in red.

FROM:bgoodrich DATE:02/23/2001 19:12:33

For a symmetrical structure loaded symmetrically, the actions should be symmetrical. I simplified your 3-span R/C structure to just have one cross section. Then, I changed the supports to pin, roller, roller, pin and analyzed it with BRASS. The dead and live load actions are symmetrical. Next, I changed the supports to fixed, roller, roller, fixed and analyzed it with BRASS. The dead and live load actions are symmetrical. Then, I added rotational springs to the first and last supports and analyzed it with BRASS. The dead load actions are symmetrical, however, the live load actions are not. I even tried adjusting the wheel advancement parameter in the member alternative engine properties. I will have to investigate this issue further.

FROM:bgoodrich DATE:04/27/2001 17:24:21

BRASS-GIRDER(LRFD) Version 1.4.1 was modified to correct the live load symmetry issue. Note that BRASS produces slightly different results at interior supports for the HL-93 Design Truck Train.

FROM:jduray DATE:6/4/01 8:59:22 AM

Dean accepted resolution of this incident.

FROM:bgoodrich DATE:06/13/2001 07:54:39

Closed.

Issue ID: 3116

Subject: Viewing a .XML file saved by the Report Writer

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

2/13/2001 7:14:31 PM

Modified By: administrator

6/19/2008 4:06:06 PM

Priority: High

Category: Unknown

4/19/2016 3:15:15 PM

HRS AASHTO

808

## Complete Issue Information

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3118.12231 | Closed        | test incident |

### Description

FROM:dteal DATE:02/13/2001 14:14:33

I saved the attached .XML file from the report writer. How the heck do I view it?? I used the "Save As" command the excepted the default name that was supplied, (LRFDRreport.XML) When I double click it I get the following message:

The XML page cannot be displayed Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

The system cannot locate the object specified. Error processing resource 'file://C:\Download\LRFDRreport.xml'.

FROM:kkennelly DATE:2/13/01 2:57:23 PM

When you used the Save As command to save the .xml file, did you save it to a directory different from the one in which it was originally created? The Virtis help for the Report Tool window explains that an .xsl file is required for Internet Explorer to know how to display the report and that file must also be copied to the directory where you saved the xml file.

FROM:dteal DATE:02/13/2001 15:40:24

FROM:kkennelly DATE:2/14/01 8:05:00 AM

I've added this item to a list for the Frequently Asked Questions help.

## Complete Issue Information

|                        |
|------------------------|
| Issue ID: 3118         |
| Subject: test incident |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 2/14/2001 4:05:17 PM |
| Modified By: administrator     | 6/19/2008 4:06:06 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Ihnat, Joseph   | Assigned         | High     | Bug - GUI 1 |
|                 | Not Reproducible |          |             |
| Ihnat, Joseph   | Not Reproducible | High     | Bug - GUI 1 |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State    | Summary                                     |
|------------|------------------|---------------------------------------------|
| 3119.12230 | Not Reproducible | Dr Watson – During copying of Entire Struc. |

## Description

FROM:jihnat DATE:2/14/01 11:02:39 AM  
this is a test.

## Complete Issue Information

Issue ID: 3119  
Subject: Dr Watson – During copying of Entire Struc.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 2/15/2001 3:15:34 PM  
Modified By: administrator 6/19/2008 4:06:06 PM  
Priority: High  
Category: Bug - GUI 1

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:02/15/2001 10:15:35  
I have gotten 3 Dr. Watson's while using version 4.0.1. I can not reproduce them at will. I "think" they

4/19/2016 3:15:15 PM

HRS AASHTO

811

**Complete Issue Information**

all happened while I was performing a COPY-PASTE of an entire structure.  
I am using NT 4.0 with SP-6

|                               |
|-------------------------------|
| Issue ID: 3120                |
| Subject: Moments Vary at Pier |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/15/2001 3:16:24 PM |
| Modified By: administrator       | 6/19/2008 4:06:06 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | High     | Bug      |



## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Flange Forces.zip   |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3122.12227 | Closed        | Section Moduli & Stress Different |

### Description

FROM:dteal DATE:02/15/2001 10:16:25

I have a 3 span RC structure. I have entered all X-Sections for each of the three spans to avoid the problems of the x-section symmetry (Incident #3045). When I check the Pos and Neg moments in the Live Load Actions Report at the pier 1 find that the last point in span 1 is different than the first point in span 2. These are the same points. They differ for Axle, Tandem Lane and Fatigue but are correct for the Truck-Train.

I have attached the bbd file and the .XML Report which shows the same thing at pier locations.

FROM:dteal DATE:02/15/2001 10:23:37

The thing at Pier #2.

FROM:bgoodrich DATE:02/23/2001 18:45:24

The live load actions include the distribution factors. Spans 1 and 2 have different distribution factors for moment, which I believe is the source of the difference. I am looking at overall live load symmetry in another incident.

Also, the last cross section (4.000 CL Brg Abut #2) has width of 18000 mm instead of 1800.

FROM:dteal DATE:02/26/2001 10:02:51

I caught the section width input error just after I sent it in. It made no changes for this particular problem.

FROM:bgoodrich DATE:03/22/2001 10:12:34

Issue ID: 3122

Subject: Section Moduli & Stress Different

Folder: /Virtis/Support Center

4/19/2016 3:15:16 PM

HRS AASHTO

813

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/15/2001 8:16:12 PM |
| Modified By: administrator       | 6/19/2008 4:06:06 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | Assigned | High     | Education |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3123.12226 | Assigned      | Determining Reinforcement Input for P/S Bridge |

### Description

FROM:dteal DATE:02/15/2001 15:16:12

In the attached structure, why are the Section Moduli and Stress' different at the end of span 1 and beginning of span 2? Aren't these considered the same point, over the pier?

FROM:bgoodrich DATE:02/23/2001 18:41:38

The sections appear identical (rolled beam, slab, rebar, haunch, etc.) so the section moduli and stresses should be the same. I ran this problem with BRASS-GIRDER(LRFD) Version 1.4.0.1, and I am unable to duplicate the results. The section moduli and stresses are the same between the 110 and 200 POI. The new version may be available in the next service pack.

FROM:dteal DATE:02/26/2001 11:53:25

I will need to know which version or patch to verify this for acceptance.

FROM:jduray DATE:3/2/01 11:27:26 AM

We need to send the patch to Dean for testing prior to release. This requires a new BRASS dll from Wyoming.

FROM:jduray DATE:6/4/01 8:58:17 AM

Dean accepted resolution of this incident.

4/19/2016 3:15:16 PM

HRS AASHTO

814

## Complete Issue Information

FROM: bgoodrich DATE: 06/13/2001 07:55:26  
Closed.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3123                                          |
| Subject: Determining Reinforcement Input for P/S Bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Koenig, David    | 2/16/2001 2:23:16 PM |
| Modified By: administrator     | 6/19/2008 4:06:06 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dkoenig DATE: 02/16/2001 09:23:16

When entering the # of bars in the Reinforcement tab of the Deck Profile for a P/S Girder, which effective flange width should we use (LFD or LRFD)? Is the user expected to change this parameter depending on which analysis is used?

What happens if the LRFD effective flange width changes along the length of the bridge? Currently the AASHTO LRFD manual uses the points of contraflexure to determine the span length to be used in

4/19/2016 3:15:16 PM

HRS AASHTO

815

**Complete Issue Information**

calculating the effective flange width. With shorter spans this value can dramatically decrease the effective flange width in the positive and negative moment regions for shorter span continuous bridges. Maybe AASHTO made a mistake. If they did not, this can make the reinforcement input tedious. Maybe the reinforcement should only be input over the negative moment region to simplify this process since that is the only reinforcement exported by the current LFD Engine.

Are there any future plans that would incorporate laying out the longitudinal reinforcement in 3-D? Maybe this would be located in the Structure Typical Section or as a separate folder for Girder Systems. Then the effective flange width could be calculated or manually entered, and the reinforcement needed for each composite section could be automatically determined. Currently, any changes to the effective flange width calculations will result in manual recount of bars.

Any help or thoughts on these issues are appreciated.

FROM:kkennelly DATE:2/16/01 2:34:33 PM

Use the effective flange width for the type of analysis(LFD/LRFD) you are currently running when inputting the deck rebar. As Virtis/Opis is currently set up, you have to change the deck rebar you input if the effective flange width differs between LFD and LRFD and you are switching from LFD to LRFD.

The LRFD effective flange width can vary due to the pos/neg moment span lengths and also any changes in top flange plate width (steel beams). I would suggest only inputting the rebar in the negative moment region since that is all that is used now. Hopefully, we'll be able to enhance Virtis to let the user enter the rebar without regard to the type of analysis being used (LFD/LRFD).

|                                   |
|-----------------------------------|
| Issue ID: 3124                    |
| Subject: LRFD 1998 Specifications |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/16/2001 3:23:43 PM |
| Modified By: administrator     | 6/19/2008 4:06:06 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Accepted | High     | Bug      |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:16 PM

HRS AASHTO

816

### Complete Issue Information

|               |                                |                         |               |
|---------------|--------------------------------|-------------------------|---------------|
| Dean Teal     | Kansas Dept. of Transportation | teal@ksdot.org          | (785)291-3001 |
| Gale Barnhill | Earth Tech                     | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 65165041000S060.bbd |             |

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 3125.12224 | Accepted      | Report Tool not printing out last girder results if some girders linked |

### Description

FROM:dteal DATE:02/16/2001 10:23:44

With an existing bridge in our database, created in version 2.xx 1994 LRFD was the specification available. Now with version 4 we have upgraded to the 1998 LRFD Specification. So I want to do a design review using the new Spec. I added the 1998 Spec. to my "Factors". (So now I have two Spec's listed under LRFD Factors) How or where do I select which Spec is used? How do I know which spec is being used?

FROM:jduray DATE:2/16/01 2:51:07 PM

FROM:jduray DATE:2/19/01 3:54:48 PM

You select the spec in the member alt window. You can set the default spec in the config browser.

FROM:dteal DATE:02/20/2001 11:35:37

You said I could select the spec in the member alt window. – No I can't! There is no mention of spec in this window. I have a structure, created in Version 3.0 and in the Factors GUI, LRFD 1994 was copied from the library. Now after updating to Version 4.0 I have copied the 1998 LRFD spec to the Factors GUI.

How do I know which one is being used?  
Can I switch between them?

The default spec is set in the config browser – I don't have any selections, just 1998. Should I have selections?

When populating the Factors GUI using Copy from Library, I only have one selection there also, the 1998 Spec. Should 1994 Spec also be present?

FROM:jduray DATE:3/2/01 11:05:41 AM

>>>>>>> Important change ----> Apparently the config browser does not allow agency-defined factors to be the default. I think this should be changed .

4/19/2016 3:15:16 PM

HRS AASHTO

817

**Complete Issue Information**

The engine will use the factors that are specified in the config browser unless you override this in the Analysis tab of the Structure Def window or the Factors tab of the Member Alt window.

FROM:jihnath DATE:3/2/01 2:47:51 PM

Jim - The GUI change to allow this is simple enough, but there's code in CDmLibDefault::Save() that specifically prohibits agency factors from being used as system defaults.

FROM:jduray DATE:3/13/01 4:28:48 PM

Mehrdad - please change CDmLibDefault::Save() to allow this particular agency item to be saved.

FROM:mordoobadi DATE:3/20/01 1:57:04 PM

Save function fixed. Fixed for 4.1.0.

FROM:jihnath DATE:6/6/2001 3:28:12 PM

GUI updated for version 4.1

FROM:dteal DATE:10/09/2001 17:23:57

FROM:jihnath DATE:10/16/2001 1:07:12 PM

Accepted by dteal ("A" in Track field)

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 3125                                                                   |
| Subject: Report Tool not printing out last girder results if some girders linked |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 2/16/2001 6:13:24 PM |
| Modified By: administrator        | 6/19/2008 4:06:06 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Accepted | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3130.12219 | Closed        | test incident |

### Description

FROM:kkennelly DATE:2/16/01 1:11:27 PM

Attached structure has 6 girders, g4 linked to g3, g5 linked to g2. Report tool only lists results for G1,G2 and G3. It doesn't include output for G6.

FROM:kkennelly DATE:2/16/01 3:52:41 PM

Code fixed for patch 3 I guess.

FROM:gbarnhill DATE:05/31/2001 12:24:50

Report Tool now shows results for all non-linked girders.  
OK in Service Pack 3 for version 4

Issue ID: 3130

Subject: test incident

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Ihnat, Joseph

2/21/2001 4:09:33 PM

Modified By: administrator

6/19/2008 4:06:05 PM

Priority: High

Category: Unknown

4/19/2016 3:15:17 PM

HRS AASHTO

819

## Complete Issue Information

---

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | Urgent   | Bug      |
| Goodrich, Brian | Closed | Urgent   | Bug      |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Sections and Ranges.xls |             |
|      | Rating Slab.bbd         |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3131.12218 | Closed        | X-Sections in BRASS Wrong for Slab |

### Description



**Complete Issue Information**

|                                             |
|---------------------------------------------|
| Issue ID: 3131                              |
| Subject: X-Sections in BRASS Wrong for Slab |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/21/2001 8:31:47 PM |
| Modified By: administrator       | 6/19/2008 4:06:05 PM |
| Priority: Urgent                 |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:02/21/2001 15:31:47  
Rating results for a RC slab structure are wrong due to the wrong area of steel being used in some x-sections. (.bbd attached)

I have a RC slab structure. For simplicity I will only discuss the top steel (3 bar pattern).

Input is as follows (see excel spreadsheet for bar pattern sketch)

X-Section 1.070 has 4 #36 bars, they extend from Section 1.070 to Section 1.110.

At Section 1.110 we change to 8 bars, they extend from Section 1.110 to Section 1.120.

At Section 1.120 we change to 12 bars, they extend from Section 1.120 to Section 1.130

Now looking at the BRASS output from a Rating run.

X-Section 1.070 has 4 #36 bars, they extend from Section 1.070 to Section 1.110. OK

From section 1.110 to 1.120 we should have 8 bars present but BRASS only uses 4 bars.

From section 1.120 to 1.130 we should have 12 bars present but BRASS only uses 8 bars.

FROM:jduray DATE:2/27/01 9:45:36 AM

Brian - please investigate. Sounds like the problem could be in the domain, export or brass.

4/19/2016 3:15:17 PM

HRS AASHTO

821

### Complete Issue Information

FROM:bgoodrich DATE:02/28/2001 19:00:11

The structure is not defined symmetrically in Virtis! The cross sections ranges must be defined so that the rebar does not change within a cross section range. See my comments in Incident 3121. This is a duplicate of 3045 and 3121.

FROM:dteal DATE:Monday, February 26, 2007 12:21:38 PM

Schedule based input made this a mute point - Accepted

|                                                |
|------------------------------------------------|
| Issue ID: 3132                                 |
| Subject: BRASS LFD Error – Too Many X-Sections |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/22/2001 5:31:08 PM |
| Modified By: administrator     | 6/19/2008 4:06:05 PM |
| Priority: High                 |                      |
| Category: Enhance BRASS        |                      |

### History

| Primary Contact | Status | Priority | Category      |
|-----------------|--------|----------|---------------|
| Duray, Jim      | Closed | High     | Enhance BRASS |
| Duray, Jim      | Closed | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:15:17 PM

HRS AASHTO

822

### Complete Issue Information

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 3132.12217 | Closed        | BRASS LFD Error – Too Many X-Sections            |
| 3133.12216 | Closed        | How to Enter Sacrificial Wear in RC slab bridges |

### Description

FROM:dteal DATE:02/22/2001 12:31:10

I got the following error (too many RC X-Sections)

Error generating BRASS span commands!

No. of ranges = 16 (Maximum = 15)

Maximum number of web profile ranges (per span) exceeded for BRASS!

The below text is from the On-Line Help within VirtisOpis for BRASS LFD. It states that I can have up to 100 sections???

Enter the number for the unique cross section to be described by the library Standard Designator entered in the next command parameter. Up to 100 unique cross section numbers are allowed.

This Error is for BRASS LFD. BRASS LRFD will handle this amount of sections

FROM:bgoodrich DATE:02/26/2001 13:58:47

Both BRASS programs support 100 unique cross sections. The issue with this particular error message is the number of cross section RANGES. This incident is basically a duplicate of Incident 2938.

FROM:dteal DATE:Monday, April 01, 2002 4:06:16 PM

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 3133                                            |
| Subject: How to Enter Sacrificial Wear in RC slab bridges |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/22/2001 6:33:58 PM |
| Modified By: administrator     | 6/19/2008 4:06:05 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 1 |

4/19/2016 3:15:18 PM

HRS AASHTO

823

### Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
|                 | Suspended |      | Enhancement |
| Goodrich, Brian | Closed    | High | Enhancement |
| Goodrich, Brian | Closed    | High | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3134.12215 | Closed        | Metric Structure – USC output in BRASS LFD |

### Description

FROM:dteal DATE:02/22/2001 13:33:58

For a RC Haunched Slab, all top steel must be dimensioned for the top of the slab and bottom steel from the bottom. In order to get the structural "d" correct, the sacrificial wear must be deducted from the slab thickness used in the Cross Sections and then account for it's weight in the Member Alt Description window under Additional Self Weight. We discussed this in incident #1857 (12/2/99). This above method works fine for Opis (design). But when considering Virtis (rating), in Kansas, and I'm sure there are other states, consider the entire slab thickness when calculating capacity for Rating. So a new problem arose. Structures (RC Slabs) that have been entered in Opis will present the wrong structural thickness in Virtis and result in a lower rating.

FROM:kkennelly DATE:3/8/01 2:53:07 PM

I think we need 2 slab thickness inputs on the rc slab beam xsection window: one actual thickness, one effective thickness.

I searched through the incidents and found the following incidents regarding rc slab beams and their rebar: 1414,1491,1857,1970. I think Rick wanted to use the height attribute we have in the xsection for the actual thickness of the slab (as per incident 1414). Incident 1857 says to use the total deck thickness and eff deck thickness to account for sacrificial wearing surface but that doesn't work for a rc slab beam since it is girderline and there is no other window in which to enter the total deck thickness. The Michigan rating job is also using the total deck thickness (less any loss based on actual inspection reports) in their ratings not the deck thickness they use in new design.

FROM:kkennelly DATE:9/13/2004 8:35:41 AM

Checkboxes for user to indicate if they want eff slab thickness used for rating and design are added to Version 5.2.0.

|                |
|----------------|
| Issue ID: 3134 |
|----------------|

**Complete Issue Information**

|                                                     |
|-----------------------------------------------------|
| Subject: Metric Structure – USC output in BRASS LFD |
|-----------------------------------------------------|

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/22/2001 7:02:42 PM |
| Modified By: administrator       | 6/19/2008 4:06:05 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Bug      |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | slab.bbd            |             |
|      | M210221UD.bbd       |             |

**Tasks**

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3135.12214 | Closed        | Virtis has x-section errors, Opis ran fine, same input file |

**Description**

FROM:dteal DATE:02/22/2001 14:02:42

I have a structure that is totally SI. But when I Rate the structure and view the Analysis Output (BRASS), it is all in USC. This makes reading output very awkward and paves the way for mistakes.

FROM:bgoodrich DATE:02/28/2001 16:24:30

This issue is not a bug but rather a request for an enhancement, hence, I changed the category. There are no plans that I am aware of to make any units conversions from US Customary to Metric in the output for BRASS-GIRDER(ASD/LFD). Virtis allows you to view results (dead load actions, live load

4/19/2016 3:15:18 PM

HRS AASHTO

825

**Complete Issue Information**

actions, etc.) in either system.

FROM:bgoodrich DATE:03/01/2001 14:49:15

Jay Puckett agrees with my comments above. Note that LRFR (the rating spec) will be implemented in BRASS-GIRDER(LRFD) soon. Jay also indicated that you could run BRASS-GIRDER(LRFD) with the rating option, however, this must be done outside of Virtis.

FROM:dteal DATE:03/01/2001 17:03:09

FROM:dteal DATE:08/28/2001 09:27:50

After checking with our Ratings Group - enhancment monies could be better spent, therefore I think we should close this issue.

FROM:dteal DATE:10/16/2001 14:53:34

FROM:dteal DATE:Tuesday, October 26, 2004 11:25:53 AM

FROM:jihnat DATE:10/26/2004 3:11:34 PM

Deleted "Please Close" from Track field and changed Status to Closed.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 3135                                                       |
| Subject: Virtis has x-section errors, Opis ran fine, same input file |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/26/2001 8:44:23 PM |
| Modified By: administrator       | 6/19/2008 4:06:05 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:15:18 PM

HRS AASHTO

826

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3136.12213 | Resolved      | Unusual Results found for a Cont. P/S I Girder |

## Description

FROM:dteal DATE:02/26/2001 15:44:23

I created a RC structure in Opis and completed a design review. I wanted to do a preliminary run in Virtis to check ratings. Opis ran fine – Why would Virtis not like the same input??? Error messages below:

Error No.: 2300

Type : Structural Analysis Error

Structural Analysis Errors (2300) - Analysis point and node point do not coincide  
Structural Analysis Errors (2300) - Analysis point and node point do not coincide  
Structural Analysis Errors (2300) - Analysis point and node point do not coincide  
Structural Analysis Errors (2300) - Analysis point and node point do not coincide  
Structural Analysis Errors (2300) - Analysis point and node point do not coincide

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTO

BridgeWare\VirtisOpis40\Copy\_of\_Std\_RCSH\_15-20-15\15-20-15\_MS18\MS18

\Rating\_Test\BRASS\_LFD\Rating\_Test.ERR

Fatal Error Encountered - Unexpected Termination

Data File: 18\MS18\Rating\_Test\BRASS\_LFD\Rating\_Test.DAT

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.

Node point locations are 1/10 points, all range and cross section change locations,  
and user input node locations,

The POI at 103.9900feet is not at a node point, adjust the POI so that it is.

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.

Node point locations are 1/10 points, all range and cross section change locations,  
and user input node locations,

The POI at 105.9830feet is not at a node point, adjust the POI so that it is.

-----  
4/19/2016 3:15:18 PM

HRS AASHTO

827

## Complete Issue Information

Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 304.0170feet is not at a node point, adjust the POI so that it is.

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 306.0100feet is not at a node point, adjust the POI so that it is.

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 0.0001feet is not at a node point, adjust the POI so that it is.

----- End of Contents of BRASS Error File -----

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 105.9830feet is not at a node point, adjust the POI so that it is.

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 304.0170feet is not at a node point, adjust the POI so that it is.

-----  
Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations,  
and user input node loactions,  
The POI at 306.0100feet is not at a node point, adjust the POI so that it is.



## Complete Issue Information

---

Error No.: 2300

Type : Structural Analysis Error

Location : Data File

1 \*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.001 x span length of a node point location.

Node point locations are 1/10 points, all range and cross section change locations, and user input node locations,

The POI at 0.0001feet is not at a node point, adjust the POI so that it is.

----- End of Contents of BRASS Error File -----

FROM:bgoodrich DATE:02/28/2001 19:01:39

I have performed a preliminary investigation and have forwarded the BRASS data file to Dan Glandt for a detailed review.

FROM:dglandt DATE:03/01/2001 18:00:53

I looked at this data set. The problem is this:

I am only looking at the 104. I imagine the other points that kicked out are the same.

There is a web depth change at 19.6358 feet. The 4/10 point is at  $.4 \times 49.213' = 19.6852'$ . He used the transfer command to put a node point at 19.6358 feet on span 1.

As these points are so close together, the program only generates a node at the 104.00. You can take out the TRANSFER commands without changing the results.

The difference between 19.6358 feet and 19.6852 is .0494 feet. He then asks for a poi at the 103.99. This is 19.63599 feet on span 1.  $19.6852 - 19.63599$  is 0.04921 feet which is exactly .001 times the span length.

The purpose of the error message is to try and get the user to take a realistic look at his data set. We explain this on page 10.1, the ninth paragraph, but it probably doesn't get read. The error message though also explains that nodes are put at 1/10 points. If you change the poi command to ask for the 104, the program runs ok. Or if you ask for a poi at the 103.9, the error won't occur. If you ask for a poi at the 103.99000264, it will run without an error because it meets the criteria.

So I wonder does the user really need to have poi's .59 inches apart.

If this type of data set generation is going to be a problem, maybe we need to look at how we merge nodes that are close together. In this case, maybe we should lose the 104 and get the 103.99 as it is at a change in cross section. Our idea has been that the user would read the error message and change his web range distance to match the 4/10 point. In this case, that would be a little over 1/2" and I can't believe it would affect the results significantly. Either way, the user needs to have some knowledge of the node generation system.

4/19/2016 3:15:19 PM

HRS AASHTO

829

## Complete Issue Information

On the next point, there is a cross section range change at 29.4455 feet into span 1. He asks for a poi at the 105.983. This is 29.4441379 feet into the span. The difference is  $29.4455 - 29.441379 = .004121$  feet which is ok except the 105.983 was merged with the 106.0 which is 29.5278 feet into the span, which is 0.0836621 feet from the requested poi and out of range of the check.

I don't know why OPIS would work unless some of the numbers are very slightly different.

I see that there are some errors in the error message that I need to fix for the next release. I will also work on adding some wording to the message about merging points.

FROM:bgoodrich DATE:03/01/2001 18:01:38

I modified the Virtis/Opis POIs as follows:

- > Removed 5.985 m (Span 1) because it was too close to 4/10 point and 6.000 m already entered.
- > Changed 8.975 m (Span 1) to 9.000 m because it was too close to 6/10 point.
- > Changed 41.025 m (Span 3) to 41.000 m because it was too close to 6/10 point.
- > Removed 44.015 m (Span 3) because it was too close to 6/10 point and 44.000 m already entered.

After making these changes to the POI, I was able to run an analysis with BRASS-LFD. Having to change or remove data is not desirable at all.

Jim - Is there any action we should take in Virtis/Opis or the BRASS engine data, so a point of interest can essentially be ignored by a particular engine, but still exist in Virtis/Opis?

Note that there are already some incidents requesting enhancements to BRASS to address the short element and node point merging issues.

FROM:bgoodrich DATE:08/13/2001 10:23:44

Thomas Carr (SWEC) reported a similar problem. His BBD file (M210221UD.bbd) is attached.

FROM:bgoodrich DATE:09/04/2001 12:20:22

Dan Glandt corrected the BRASS-GIRDER engine (Version 5.8.4 - August 31, 2001 build) to address this issue. Fixed for Version 4.1.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:24:43 PM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:30:52 PM

Closed.

Issue ID: 3136

Subject: Unusual Results found for a Cont. P/S I Girder

Folder: /Virtis/Support Center

4/19/2016 3:15:19 PM

HRS AASHTO

830

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 2/27/2001 5:24:12 PM |
| Modified By: administrator       | 6/19/2008 4:06:05 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3137.12212 | Closed        | 4.0.2 - moments not symmetrical for haunched slab model |

### Description

FROM:dkoenig DATE:02/27/2001 12:24:15

A 3-span P/S girder was entered and analyzed in Virtis 3.0. Three potential problems arose from taking a look at the Brass output.

1. I am not sure that the Strand Layout is creating perfectly symmetric girders. A lump sum loss was entered, and the Vertical shear force,  $V_p$ , was compared at sections along the first girder. In regions where the strands are draped and fully developed, different  $V_p$  values are found on each side of the girder (Longitudinally). Since a Lump Sum was used, the stresses should be the same in the strands. I believe the strands are at different angles in Brass. I agree with the left part of the span, but cannot figure out what is going on in the right part.

Look at POIs @ 4' and 45.5833' for G2 in bbd file.

2. While looking at the above, I found some strange stresses occurring near the continuous support for Span 1. The fpe stress should be fully developed a transfer length away from the support, and constant throughout the rest of the draped length. I found that at the transfer length, the stress in the P/S strand is larger than the constant fpe value found in the rest of the strand (I used  $V_p$  again as a

4/19/2016 3:15:19 PM

HRS AASHTO

831

**Complete Issue Information**

comparison). POIs @ 45.5833' and 47.5' can be analyzed to see this apparent localized increase in stress. This is not found for the left part of the beam (POIs @ 2.0833' and 4').

Again, this does not affect the ratings much, but seems to be unusual. Maybe I do not understand some stress affects that are occurring near the interior supports.

3. The shear capacity found at 39.67' along the span is incorrect. When negative moment is analyzed to determine the shear capacity, many of the values are calculated wrong. Yt is based on positive moment. The fpc and fpe values are completely wrong. The fd and Mmax values are also based on positive moment. When the AASHTO losses are used, this incorrect capacity ends up controlling. I think the program is getting confused.

I also wonder if the program is correlating negative shear with negative moment and positive shear with positive moment. These should be independent.

I have attached the bbd file. The POIs have been created for G2 only. Any comments on these issues are greatly appreciated.

You could run this in 4.0 for comparison purposes.

FROM:kkennelly DATE:3/5/01 2:34:12 PM

1. Export is not creating a symmetrical layout for the strands. This is related to the BRASS LFD Engine PS modeling method selected on the Engine tab for the member alt. BRASS can't use a different span length for the simple span beam and the span length for the beams made continuous. This bridge has Center of simple span bearing picked for the modeling method in the Member Alt Engine tab window. If centerline of final supports is picked instead, the strand layout becomes more symmetrical. Maybe the export should create a symmetrical strand layout even if the user has picked "center of simple span bearing".

FROM:bgoodrich DATE:04/18/2001 17:22:12

Entered for Dan Glandt:

We are working on getting a solution from PCI. I believe they are going to publish a list of questions in the PCI Journal about how to handle shear near supports. Jay and I have decided to wait until we hear something definite from this before we change the program.

FROM:bgoodrich DATE:08/09/2001 13:11:52

Dan Glandt modified BRASS and added new shear options to address this incident. Fixed for version 4.1.

Issue ID: 3137  
Subject: 4.0.2 - moments not symmetrical for haunched slab model

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Barnhill, Gale 2/28/2001 4:19:44 PM  
Modified By: administrator 6/19/2008 4:06:05 PM

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Suspended | High     | Bug - BRASS |
| Goodrich, Brian | Suspended | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3138.12211 | Suspended     | AASHTO LOSS COMPUTATIONS |

### Description

FROM:gbarnhill DATE:02/28/2001 11:19:44

4.0.2 - The attached bbd is a haunched 3-span continuous slab modeled as a one-foot strip. It has slightly odd span lengths. The section ranges are modeled to match bar cut-offs so there are some very short ranges.

The dead load moments at pier one are different on the left side verses the right side of the support. The live load moments have a strange jump at pier one.

I changed the model to even span lengths and only a few section ranges. The moments come out symmetrical.

I suppose it has something to do with section changes, but there are no warnings or error messages in the export or analysis.

FROM:bgoodrich DATE:03/02/2001 18:41:55

Gale – I think your support constraints are the problem. Support 2 is FIXED for the member “one foot strip (English)”.

FROM:gbarnhill DATE:03/05/2001 09:47:56

Thanks Brian. I didn't check that. Looks OK now.

4/19/2016 3:15:19 PM

HRS AASHTO

833

**Complete Issue Information**

FROM:bgoodrich DATE:03/22/2001 10:13:14

|                                   |
|-----------------------------------|
| Issue ID: 3138                    |
| Subject: AASHTO LOSS COMPUTATIONS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/1/2001 4:07:54 PM  |
| Modified By: administrator       | 6/19/2008 4:06:05 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:03/01/2001 11:07:54

AASHTO LOSS COMPUTATIONS as calculated by BRASS-GRIDER(LRFD)

BRASS-GIRDER(LRFD) uses an iterative procedure to compute the relaxation loss at transfer. I believe that this is incorrect. The relaxation loss at transfer is depended on the time of transfer and the jacking stress only. BRASS-GIRDER(LRFD) computes fpj as the following:

$$fpj = (P/S \text{ ratio} \times fpu) - (\text{Elastic Shortening} + \text{Relaxation at Transfer})$$

fpj should be the jacking stress.

**Complete Issue Information**

BRASS-GIRDER(LRFD) Version 1.04.00

Agency : Kansas Department of Transportation

Page: 0

Engineer :

Date: 03/01/2001

Bridge Name: 999905900030541 59 Over White Clay Creek  
8:53 AM

Time:

Input File : ..\_Cu00\K-4\_Prestressed\_Concrete\_Beams\Member\_1

\Wizard\_Alternative\BRASS\_LRFD\Wizard\_Alternave.DAT

Output File: ..\_Cu00\K-4\_Prestressed\_Concrete\_Beams\Member\_1

\Wizard\_Alternative\BRASS\_LRFD\Wizard\_Alternative.OUT

Member: Member 1

Girder member generated using the design wizard

This file can contain the following types of output:

1. Load Balancing Output
2. Loss Computations and Summaries
3. Loss Computations
4. Average and Effective Prestress Computations

**Girder Section Properties:**

Analysis Point No. 3: 205.00

Prestressing Row: 1

| Area, mm <sup>2</sup> | Ix, mm <sup>4</sup> | Distance from Centroid to: (mm) |               |                          | Modular Ratio |
|-----------------------|---------------------|---------------------------------|---------------|--------------------------|---------------|
|                       |                     | Girder                          | Top of Girder | Bottom of Composite Slab |               |
| 417700.               | 97912045568.        | 711.756                         | 658.244       | 0.00                     | 0.00          |

| Strand No. | Prestress Area, mm <sup>2</sup> | Dist. to Centroid, mm | Prestress Force, N | Dist. to Centroid, mm |
|------------|---------------------------------|-----------------------|--------------------|-----------------------|
| 1          | 3200.00                         | 112.500               | 4166400.00         | 112.500               |

Distance from Bottom of Girder to Centroid of Prestress Area = 112.500 mm

Eccentricity of Prestress Force = 545.744 mm

| fcgp<br>MPa | fcdl<br>MPa | fcdl DM<br>mm-N | fcgp + fcdl<br>MPa | fcdp<br>MPa | Adjusted by % DL |      | fcgp<br>MPa | fcdp<br>MPa |
|-------------|-------------|-----------------|--------------------|-------------|------------------|------|-------------|-------------|
|             |             |                 |                    |             | fcdp DM<br>mm-N  | % DL |             |             |
| 20.486      | -4.632      | 0.831E+09       | 15.854             | -4.700      | 0.843E+09        | 0.00 | 15.854      | -4.700      |

PERFORMING AASHTO LOSS COMPUTATIONS - AASHTO 5.9.5 Loss of Prestress

Analysis Point : 205.00

## Complete Issue Information

Construction Stage: 1

AASHTO REFERENCE: 5.9.5.2.3a Elastic Shortening (Pretensioned Members)  
EQUATION NO. : (5.9.5.2.3a-1)

Input Parameters:

$f_{cgp} = 15.854 \text{ MPa}$     $E_p = 197000.000 \text{ MPa}$     $E_{ci} = 26321.373 \text{ MPa}$

Summary:

$ES = (E_p / E_{ci}) f_{cgp} = 118.655 \text{ MPa}$

AASHTO REFERENCE: 5.9.5.4.4b Relaxation (At Transfer)  
EQUATION NO. : (5.9.5.4.4b-2)

Input Parameters:

$t = 0.750 \text{ days}$     $f_{pj} = 1177.672 \text{ MPa}$     $f_{py} = 1674.000 \text{ MPa}$

Summary:

$R1 = \log(24 t) / 40.0 * (f_{pj}/f_{py} - 0.55) f_{pj} = 5.673 \text{ MPa}$

AASHTO REFERENCE: 5.9.5.4.2 Shrinkage  
EQUATION NO. : (5.9.5.4.2-1)

Input Parameters:

$RH = 65.00\%$

Summary:

$SR = 117.0 - 1.030 RH = 50.050 \text{ MPa}$

AASHTO REFERENCE: 5.9.5.4.3 Creep  
EQUATION NO. : (5.9.5.4.3-1)

Input Parameters:

$f_{cgp} = 15.854 \text{ MPa}$     $f_{cdp} = -4.700 \text{ MPa}$

Summary:

$CR = 12.0 f_{cgp} + 7.0 f_{cdp} = 157.343 \text{ MPa}$

AASHTO REFERENCE: 5.9.5.4.4c Relaxation (After Transfer)  
EQUATION NO. : (5.9.5.4.4c-1)

Summary:

$R2 = 138.0 - 0.4 ES - 0.2 (SR + CR)$   
 $= 49.059 \text{ MPa}$

$R2 = 0.3 R2 = 14.718 \text{ MPa}$  (low-relaxation strand)

Notes:

=> Any losses computed as negative were set to zero.

=> The creep loss equation (AASHTO 5.9.5.4.3-1) contains a + sign because  $f_{cdp}$  carries sign.



**Complete Issue Information**

FROM:bgoodrich DATE:03/01/2001 18:13:09  
BRASS-GIRDER(LRFD) follows the procedure outlined in chapter 7, section 7.10.4, pages 623-626 of Design of Highway Bridges by Barker and Puckett.

Dean - Please attach a spreadsheet or hand computations that illustrate your results and how BRASS may be incorrect.

FROM:dteal DATE:03/05/2001 10:59:27  
AASHTO RELAXATION LOSS AT TRANSFER COMPUTATIONS as calculated by BRASS-GIRDER (LRFD)

AASHTO LRFD ARTICLE 5.9.5.4.4b Equation (5.9.5.4.4b-2) includes a term fpj. In the listing of the Notations on page 5-6 fpj is defined as the stress in the prestressing steel at jacking, in other words, jacking stress.

However, BRASS-GIRDER(LRFD) considers fpj to be the stress in the prestressing steel after transfer of the force to the concrete beam. I believe that is incorrect.

Therefore, the relaxation loss at transfer is found directly and does not require an iterative procedure.

FROM:bgoodrich DATE:03/05/2001 12:17:31  
BRASS interprets the fpj variable in AASHTO LRFD 5.9.5.4.4b as defined in that particular article, i.e., the initial stress in the tendon at the end of stressing. Jay's book discusses relaxation losses in Chapter 7, section 7.7.6 (page 465) and makes a point to denote this variable as fpi (initial stress). The specification may need to be revised to clarify this stress.

FROM:bgoodrich DATE:04/16/2001 10:09:47  
We have requested that AASHTO clarify this issue, but have received no response yet.

FROM:bgoodrich DATE:08/29/2001 16:22:58

FROM:bgoodrich DATE:Wednesday, May 28, 2003 9:47:39 AM  
Khalid Obeidat (MN DOT) has similar concerns that need to be addressed.

|                                |
|--------------------------------|
| Issue ID: 3139                 |
| Subject: More P/S Shear Errors |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 3/1/2001 7:37:17 PM  |
| Modified By: administrator       | 6/19/2008 4:06:04 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

4/19/2016 3:15:20 PM

**HRS AASHTO**

837

## Complete Issue Information

### History

| Primary Contact | Status      | Priority | Category |
|-----------------|-------------|----------|----------|
| Duray, Jim      | System Test | High     | Bug      |
| Duray, Jim      | System Test | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3140.12209 | System Test   | Haunch Errors when Copying Girders. |

### Description

FROM:dkoenig DATE:03/01/2001 14:37:18

A created another 3-Span Continuous P/S bridge in Virtis 3.0. I reproduced the shear computation error on incident 3136. This error can be seen in the detailed output of the POI set at 79.9583' for G2.

Another error was found for POI set at 39.05'. It can be seen in the positive shear calculations. Here the factored shear force is found to be about 6 kips when it should be well over a 100 kips. This would increase the shear capacity of the concrete greatly. Also, I noticed that the Mcr value calculated was incorrect. I came up with 505 kips using the values Brass gave. Brass calculated 447 kips.

Let me know if this has already been corrected for 4.0.

The Brass bbd file has been attached.

FROM:kkennelly DATE:3/2/01 8:57:19 AM

Brian, I migrated this bbd file to version 4.0.1 and attached it to this incident.

FROM:bgoodrich DATE:03/02/2001 13:36:54

I forwarded this issue to Dan Glandt.

FROM:bgoodrich DATE:04/18/2001 17:21:01

Entered for Dan Glandt:

We are working on getting a solution from PCI. I believe they are going to publish a list of questions in the PCI Journal about how to handle shear near supports. Jay and I have decided to wait until we hear

4/19/2016 3:15:20 PM

HRS AASHTO

838

**Complete Issue Information**

something definite from this before we change the program.

FROM:bgoodrich DATE:08/09/2001 13:11:52

Dan Glandt modified BRASS and added new shear options to address this incident. Fixed for version 4.1.

|                                              |
|----------------------------------------------|
| Issue ID: 3140                               |
| Subject: Haunch Errors when Copying Girders. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Koenig, David    | 3/1/2001 7:45:34 PM  |
| Modified By: administrator     | 6/19/2008 4:06:04 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:03/01/2001 14:45:35

I can create a girder system bridge (I have only checked P/S) that has an exterior member alternative copied to an interior member. When the haunch height Y1 is changed to 1.0 in the interior girder say from Y1 = 1.5, Y2 = 1.5 for the exterior girder, the Y2 old value is being kept. The Brass output will show the haunch as 1.25 (Average of 1.0 and 1.5), instead of 1.0. If the haunch line is deleted and 1.0 is entered, the correct value is displayed in Brass.

Again, this is for Virtis 3.0.

FROM:bgoodrich DATE:03/02/2001 15:32:08

Jim - I created an exterior member alt with a haunch profile where Y1 and Y2 were both 1.5 inches and

4/19/2016 3:15:20 PM

HRS AASHTO

839

**Complete Issue Information**

Y3 is 0.0 inches. I copied this exterior member alt to an interior member and then opened the PS Haunch Profile window for the new interior member alternative. In this window, only Y1 and Y3 are available for modification, so the Y2 value remains as 1.5 inches. The BRASS export does one of the following with Y1 and Y2:

- If Y1 and Y2 are both entered, the average is used for the haunch depth.
- If Y1 is entered but Y2 is not (i.e., null), then Y1 is used for the haunch depth.

The export does not check for interior or exterior girders. I think the Virtis/Opis copy feature should set Y2 to null when copying an exterior member alternative to an interior member alternative. Otherwise, Virtis/Opis may be inadvertently placing invalid data into the database.

FROM:kkennelly DATE:11/16/2001 2:08:15 PM

Steel member alts have the same issue when copied from exterior mbrs to interior mbrs. Exterior mbrs have a Y2 dimension, but interior mbrs do not.

FROM:kkennelly DATE:12/4/2001 10:44:27 AM

Domain has been changed so that when an exterior mbr alt is copied to an interior mbr alt, the Z3, Z4 and Y2 haunch values are set to null since the gui prohibits their entry. Change made for Version 4.1 but was made after Beta 3 build so still needs tested.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3141                                    |
| Subject: Rating Results Summary - Wrong Locations |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 3/1/2001 7:50:46 PM  |
| Modified By: administrator       | 6/19/2008 4:38:36 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Assigned  | High     | Bug - BRASS |
| Goodrich, Brian  | Suspended |          |             |
| Goodrich, Brian  | Suspended | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 3142.12207 | Resolved      | P/S Load in Charts |

### Description

FROM:dkoenig DATE:03/01/2001 14:50:47

Example: 44.25' – 45' – 44.25' span lengths entered in structure definition.

Simple Span lengths = 43.5417 – 43.5833 – 43.5417

Two 5 in. overhangs, and 7 in. gap between ends of girders.

Total gap between centerline of bearings = 1.417'

POI entered is @ 88' from first support.

Results: POI – located at  $(88-44.25)/45 = 97.22\%$  of Span 2                      OK

Brass – located at  $(88 - 44.25 - 1.417/2) = 43.042'$  of span 2

Brass% =  $43.042/43.5833 = 98.76\%$  of span 2                      OK

Rating Results Summary:

Location =  $(88 - 1.417) = 86.58'$  Incorrect

$(86.58 - 44.25)/45 = 94.07\%$                       Incorrect

Brass bases the percentage on the location between centerline of bearings. The Rating Results Summary calculates a length ignoring the gap between bearings, and then compares this to the full model that includes the gaps. This is inconsistent and incorrect.

Again, I am using Virtis 3.0. Maybe this has been fixed for 4.0.

Incident 3139 has a bbd file where this can be seen readily (G2).

FROM:bgoodrich DATE:03/02/2001 15:36:25

BRASS returns results for the span lengths that were passed to it. BRASS makes no adjustments to the distances for results returned to Virtis. David is correct that the results viewer does not correctly position the BRASS distances on the full model. It appears that the BRASS results are positioned on each span, such that the start of the BRASS span matches the start of the Virtis/Opis span. The bearing offsets should be accounted for when the BRASS P/S modeling method is specified as "Centerline of simple-span bearing."

FROM:jduray DATE:2/4/02 4:36:43 PM

We need to determine if BRASS needs to make the adjustment or Virtis. I don't think the viewer can know anything about a modeling method described in engine data.

**Complete Issue Information**

FROM:bgoodrich DATE:02/06/2002 18:58:02

The BRASS engine cannot make any adjustments because it only knows the length of the spans passed to it via the data file. Virtis is simply displaying results from any engine, so I don't think it should make any adjustments. Maybe the export should access the results and make any necessary modifications.

FROM:jduray DATE:2/14/02 9:12:14 AM

I think the export should add a correction to the poi locations to account for the distance between CL of support. This will make the distances and percentages appear correct in most of the Virtis UI. However, the distances and percentages in the spec check results and the BRASS output will still differ from what the user expects based on the Virtis UI.

The best way to fix this problem is to change BRASS so it is aware of the distance between CL of support and uses it in the output. BRASS would benefit from this change.

We need to discuss this with Jay and perhaps Wyoming.

FROM:jduray DATE:2/25/02 9:01:49 AM

FROM:bgoodrich DATE:Friday, March 29, 2002 10:55:41 AM

I forwarded this issue to Jay Puckett and WYDOT on 2/26/02. I have not yet received a response.

FROM:bgoodrich DATE:Wednesday, June 22, 2005 10:14:59 AM

Ken Teng (RQAW) reported this exact issue.

Jim - Could we add a function to the export process that adjusts the distances associated with results passed to Virtis/Opis in the results object? It would only need to be called for P/S members. The export has access to the offset geometry and the P/S modeling method. I think this would take less time and less chance of breaking something than trying to make any changes to BRASS.

FROM:bgoodrich DATE:Friday, November 11, 2005 1:49:15 PM

Incident 6715 is a duplicate of this issue.

Issue ID: 3142  
Subject: P/S Load in Charts

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Koenig, David 3/1/2001 7:54:49 PM  
Modified By: administrator 6/19/2008 4:06:04 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:15:21 PM

HRS AASHTO

842

### Complete Issue Information

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Goodrich, Brian | Resolved | High     | Bug           |
| Goodrich, Brian | Resolved | High     | Enhance BRASS |
| Goodrich, Brian | Resolved | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 3143.12206 | Resolved      | Shear at Supports |

### Description

FROM:dkoenig DATE:03/01/2001 14:54:50

I noticed something peculiar about the P/S Loads graph. The negative P/S load is off-centered, compared to the simple span dead loads. These graphs should essentially mirror each other. The P/S load goes to zero at the left support, but reaches zero before the right support. Am I correct in my assumption? Has this been fixed for 4.0 (We currently are trying to get the databases updated for 4.0)?

Incident 3139 has a bbd file that will show you what I am talking about.

FROM:bgoodrich DATE:03/02/2001 15:30:46

David - You are correct that the P/S Loads graph shows a moment of zero at a few points near each of the supports. These locations are within the transfer length of the strand. For this example, there should be a negative moment at the points located at 1.62 ft, 41.46 ft, 41.88 ft, and 43.39 ft because the strands at these locations are stressed to something between zero and full stress. I will forward this issue to Dan Glandt for further investigation.

FROM:bgoodrich DATE:04/10/2001 08:30:32

Dan Glandt corrected a problem in BRASS to correctly handle the overhang when there is no debonding. This correction will be available when BRASS-GIRDER version 5.8.3 is released with a Virtis/Opis Service Pack.

## Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 3143             |
| Subject: Shear at Supports |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 3/1/2001 7:58:07 PM  |
| Modified By: administrator       | 6/19/2008 4:06:04 PM |
| Priority: High                   |                      |
| Category: Enhance BRASS          |                      |

## History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Slab2.bbd           |             |

## Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3144.12205 | Closed        | Opis has x-section errors, Virtis ran fine, same input file |

## Description

FROM:dkoenig DATE:03/01/2001 14:58:07

Again, I am using 3.0. I noticed that the loads at the bearings are the loads being used at these points instead of using a distance  $h/2$  away from the face of the support (AASHTO 9.20.1.4). Is 4.0 taking this into account, or are there any plans to use this reduction in loads as an option in the future?

FROM:bgoodrich DATE:04/17/2001 15:50:17

The loads directly at the bearings are being used. There are presently no plans to make any modifications to the BRASS engine.

4/19/2016 3:15:21 PM

HRS AASHTO

844



**Complete Issue Information**

Would you like me to forward this issue to the Wyoming DOT as an enhancement request?

FROM:dkoenig DATE:04/19/2001 08:41:44

I would appreciate it if you would. This is an AASHTO consideration that I would expect is used by more DOTs than just us.

FROM:bgoodrich DATE:04/19/2001 12:12:30

I have submitted this incident to WYDOT for consideration.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 12:24:41 PM

Brian and Jay discussed this issue with WYDOT on 2/19/02. WYDOT indicated that there are no plans to modify BRASS. The user should input their own points of interest at h/2 or whatever the section for critical shear might be.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 3144                                                       |
| Subject: Opis has x-section errors, Virtis ran fine, same input file |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/1/2001 10:01:39 PM |
| Modified By: administrator       | 6/19/2008 4:06:04 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:03/01/2001 17:01:39

I created a RC structure in Virtis and completed a Rating. When I try run the same input file in Opis I

4/19/2016 3:15:21 PM

HRS AASHTO

845

**Complete Issue Information**

get the below error. I checked to be sure that my POI and x-section are at the same point, Virtis thinks so, Opis disagrees. This may be the same problem that I reported in Incident #3135. (.bbd attached)

Error No.: 2300  
Type : Structural Analysis Error  
Location : Data File

\*\* ERROR: Analysis points must be at node point locations. Node point locations are 1/10 points, cross-section change points, hinge locations, special analysis point locations, and web depth change points.  
101.550 is not at a node point. Adjust its position so that it is.

FROM:bgoodrich DATE:03/02/2001 18:32:00  
When BRASS-GIRDER(LRFD) generates its model (nodes and elements), it tries to create a node point for each POI specified. However, if a POI was within the BRASS tolerance (2 inches) from an existing node, BRASS would not add a node point to the model for that POI. BRASS now finds the node point that is closest to the POI and uses the actions, etc. for performing section analysis and specification checks. This feature will be available in the next BRASS-GIRDER(LRFD) release.

FROM:jduray DATE:6/4/01 8:59:37 AM  
Dean accepted resolution of this incident.

FROM:bgoodrich DATE:06/13/2001 07:56:27  
Closed.

Issue ID: 3145  
Subject: Impact – Analysis Settings - Advanced Button

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Teal, Dean 3/2/2001 12:47:18 PM  
Modified By: administrator 6/19/2008 4:06:04 PM  
Priority: Urgent  
Category: Help

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | Urgent   | Help     |

### Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
|                 | Resolved |      |             |
|                 | Accepted |      |             |
| Goodrich, Brian | Closed   | High | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3146.12203 | Closed        | Rating Factor Fail – Rounding & Significant Digits |

### Description

FROM:dteal DATE:03/02/2001 07:47:18

Under the Advanced Button of the Analysis Settings Window I am looking at Impact. The help tells me that to assign an impact factor that is ½ of the impact indicated on the Structure Definition Impact/Dynamic Load Allowance GUI that I would enter 1.50. I assume that if I wanted 0 (zero) percent impact that I would enter zero in the field for the particular truck???

Our permit vehicles are like this. T130 uses 50% and the T170 uses 0%Impact.

Because zero is a common value to be entered here – maybe the help should give us two examples (50% and 0%) so other users don't have the same confusion.

FROM:jduray DATE:3/2/01 10:58:12 AM

FROM:kkennelly DATE:3/2/01 2:11:09 PM

Example for 0% added to help.

Brian, for an HS20 vehicle I entered 0 for the impact on the Vehicle Properties window. The export generated the following command:

TRUCK-IMP -100.00, -100.00

The BRASS LFD output for the truck showed 0 for the reaction impact but for the lane the output showed -17.48% for the reaction impact. The reactions shown for the lane used an impact of (1-.1748) =0.825. (I ran Training Bridge 1). If nothing is entered for the impact on the Vehicle Properties window, the reaction impact is listed as 17.48% for both truck and lane for Training Bridge 1.

FROM:bgoodrich DATE:03/02/2001 16:03:27

The following is a list of how the user should enter values for impact in the Vehicle Properties window:

. Zero impact, enter 1.0

4/19/2016 3:15:21 PM

HRS AASHTO

847

### Complete Issue Information

- 50% impact, enter 1.5
- 100% impact, enter 2.0

The export takes the value entered here and subtracts 1.0. The result is then multiplied by 100 because BRASS requires a percent. In your example, you entered 0.0. Therefore,  $(0.0 - 1.0) * 100 = -100.0$ .

Jim, Gale Barnhill, and I discussed this issue, but I'm not sure for what incident, so there may be more information on why the input is required in this manner.

FROM:dteal DATE:03/05/2001 10:57:26

The values Brian stated the user must enter is making VirtisOpis input very Engine Specific. The user doesn't need to know that BRASS subtracts 1.0 from the entered value, this math should be taken care of in the export. The user should enter impact modifiers with common sense in mind. The Impact Factor is set in the Structure Definition Impact/Dynamic Load Allowance GUI as "Standard AASHTO Impact". Now in the Analysis Settings – Advanced Button we need to modify the impact factor on lets say two of the vehicles in the vehicle summary list. Common thinking would result in the following input:

Zero impact, enter 0

- 1/2 the amount of declared impact, enter 0.5
- All the impact declared, enter 1.0 (or leave blank)
- Double the amount of impact declared, enter 2.0

So for the T130, which wants 50% of the impact we would enter 0.5 and for the T170 we want zero impact and would enter zero. This makes sense to the users.

FROM:kkennelly DATE:3/6/01 2:05:51 PM

Incident 2971 is the incident submitted by Gale. I agree with Dean and Gale that the user should enter 0.5 to reduce the impact by 50%.

Brian, Has this enhancement request been sent to WYDOT and what was their response?

FROM:bgoodrich DATE:03/07/2001 19:41:20

My comments on 03/02/2001 were only to explain what the export is doing. Here's some history: The Vehicle Properties help topic for the versions previous to version 4.0 indicated to enter a value of say 1.3 when the impact was 30%, however, I think the intent of this field in these early versions was an impact factor and not an adjustment to the standard impact. When I first coded the export, I misinterpreted the intent and used the value as a percent adjustment. In Incident 2971, Gale Barnhill pointed out that the export was not using the value as a factor as indicated in the help. This value was always entered as a number greater than 1.0, so this is why BRASS had to remove 1.0 from it. Note that Jim Duray decided to leave the export as-is and change the help.

I too agree that it make sense to enter 1.0 for full impact and 0.0 for no impact. Also, in Incident 2971, Gale makes a good point that this impact override is not stored in the database, so we don't have to worry about existing data. I am in favor of changing the help, so values are input as Dean and Gale request. I can easily change the export to correspond to the new format.

Also, I have submitted the issue to WYDOT where there is no way in BRASS to override the final impact factor for a specific truck. BRASS only allows a percent adjustment on the standard impact.

FROM:kkennelly DATE:3/8/01 1:57:20 PM

4/19/2016 3:15:21 PM

HRS AASHTO

848

**Complete Issue Information**

Jim, should we change the export and the help so that the user can enter 0.5 to reduce the standard impact by 50%? It doesn't look like it's hard for us to change but will it confuse users already used to entering it the old way?

FROM:bgoodrich DATE:Wednesday, September 29, 2004 2:57:32 PM

This issue needs to be addressed as it relates to Incident 5368. We should revise the export and help as Krisha described on 3/8/01. Is there a way to check the Analysis Settings templates that users may have saved, which contain the Advanced (scale factor and impact) settings?

FROM:jduray DATE:9/30/2004 3:00:40 PM

Based on discussion with Dean, Brian Goodrich and Krisha:

Change the export to use the value entered as a multiplier on the impact. For 40% of the user specified impact enter 0.4. The export will multiply the impact by 0.4 and pass to BRASS. Enter 0 for 0 impact (0 \* impact). Leave blank or enter 1.0 for impact as specified in the UI.

Change the Help.

Write a script to convert the values in the db. Need to subtract 1.0 from the non-zero values in the db.

FROM:kkennelly DATE:10/6/2004 1:26:43 PM

Help updated for 5.2 and 6.0.

FROM:bgoodrich DATE:Thursday, October 07, 2004 12:41:55 PM

Export updated for 5.2 and 6.0.

FROM:mordoobadi DATE:10/7/2004 1:23:25 PM

Migration scripts updated for this change.

FROM:mordoobadi DATE:10/28/2004 3:53:19 PM

Accepted by Dean Teal.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3146                                              |
| Subject: Rating Factor Fail – Rounding & Significant Digits |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/2/2001 5:06:43 PM  |
| Modified By: administrator       | 6/19/2008 4:06:04 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:22 PM

HRS AASHTO

849

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 3147.12202 | Resolved      | BWS Report doesn't print out Measure To for Sidewalks and Railings |

### Description

FROM:dteal DATE:03/02/2001 12:06:43

The below Rating Factor Computation lists a Rating factor of 1.00. The Spec Checker lists it as a "Fail". As we can see from the applied load and available resistance that the rating factor was really 0.998 and not 1.00. Being the reported Rating Factor is a rounded value, shouldn't we also take it to 3 decimals. That way the Pass/Fail in the spec checker will always correspond to the numeric rating factor value.

#### PERFORMING RATING FACTOR COMPUTATIONS: Moment

Analysis Point : 101.57  
Construction Stage: 1      Resistance =      745.428  
Live Load No. : 1      Dead Load =      229.601  
Limit State : STRENGTH I Live Load =      517.107  
Units : m-kN      Rating Factor = 1.00

FROM:bgoodrich DATE:03/02/2001 14:14:19

I modified BRASS to out the rating factor to 3 decimal places. However, we could still have a case where the actual rating factor is say 0.99998 and the value reported would be 1.000. Nothing more can really be done about the rounding.

FROM:dteal DATE:03/05/2001 07:35:00

I will need to know which version or patch to verify this for acceptance.

FROM:bgoodrich DATE:04/10/2001 08:42:51

This correction will be available when BRASS-GIRDER(LRFD) version 1.4.1 is released with a Virtis/Opis Service Pack.

FROM:jduray DATE:6/4/01 8:57:34 AM

Dean accepted resolution of this incident.

FROM:bgoodrich DATE:06/13/2001 07:57:19

Closed.

Issue ID: 3147

Subject: BWS Report doesn't print out Measure To for Sidewalks and Railings

**Complete Issue Information**

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center                     |
| Primary Contact: Ordoobadi, Mehrdad                |
| Submitted By: Kennelly, Krisha 3/2/2001 6:09:49 PM |
| Modified By: administrator 6/19/2008 4:06:04 PM    |
| Priority: High                                     |
| Category: Bug                                      |

**History**

| Primary Contact  | Status      | Priority | Category |
|------------------|-------------|----------|----------|
| Kennelly, Krisha | Patch Test  | High     | Bug      |
|                  | System Test |          |          |
|                  | Closed      |          |          |
| Kennelly, Krisha | Closed      | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3148.12201 | Closed        | Library parapet CG doesn't match Bridge parapet CG |

**Description**

FROM:kkennelly DATE:3/2/01 1:07:07 PM

BWS report doesn't print out the words Front or Back under the "Measure To" column for sidewalks and railings.

FROM:mordoobadi DATE:11/7/2001 2:41:17 PM

Fixed.

**Complete Issue Information**

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3148                                              |
| Subject: Library parapet CG doesn't match Bridge parapet CG |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 3/2/2001 6:24:31 PM  |
| Modified By: administrator        | 6/19/2008 4:06:04 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:3/2/01 1:22:55 PM  
Calculated cg of parapet in Library doesn't match the calculated cg of the same parapet in the Bridge.

FROM:kkennelly DATE:10/24/2001 10:29:38 AM  
The Library CG is correct.

FROM:kkennelly DATE:10/24/2001 11:07:42 AM



**Complete Issue Information**

Fixed for Beta 2

FROM:bgoodrich DATE:11/30/2001 11:06:34

The CG of the library and bridge parapets are now the same. Verified in Version 4.1 Beta 3.

FROM:kkennelly DATE:12/3/2001 9:39:18 AM

Accepted and closed based on A in track field.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3150                                     |
| Subject: Printing Analysis Results – Print Preview |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 3/6/2001 5:23:22 PM  |
| Modified By: administrator     | 6/19/2008 4:06:04 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

**Contacts**

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:15:22 PM

**HRS AASHTO**

853

### Complete Issue Information

|           |                                              |                       |               |
|-----------|----------------------------------------------|-----------------------|---------------|
| Jim Duray | Transportation<br>Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |               |
| Dean Teal | Kansas Dept. of<br>Transportation            | teal@ksdot.org        | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3151.12198 | Suspended     | Printer Setup – Landscape |

### Description

FROM:dteal DATE:03/06/2001 12:23:22

When you want to print Analysis Results – Print Preview is the most common action you would take first. There is no button for Printer Setup on this window. So to rotate to landscape you have to exit the print preview and select printer setup. Then exit that window and select print. Printer Setup should be a button on the print preview window.

FROM:jduray DATE:3/8/01 8:30:27 AM

Joe - please chcek into what we have to do to provide this capability.

FROM:jihnat DATE:3/9/01 10:38:28 AM

The print preview toolbar is owned by the undocumented MFC class CPreviewView. Implementing this change would involve overriding that class, creating our own toolbar resource, and handling the toolbar message(s). We would also need to override the OnFilePrintPreview function in order to tell MFC to use our new CPreviewView class.

FROM:jduray DATE:04/06/2001 14:20:51

FROM:dteal DATE:09/21/2001 14:16:42

Seems to me what I am asking for here is functionality like a normal windows GUI. With a windows compatible program I would expect a print preview option for any window I would like to print.

FROM:jihnat DATE:9/21/2001 2:43:15 PM

I quickly checked three Microsoft programs: Excel has a Page Setup button on the Print Preview window, Word and WordPad do not.

FROM:dteal DATE:Friday, September 05, 2003 11:52:44 AM

Word has a "Print Preview" selection.

### Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 3151                     |
| Subject: Printer Setup – Landscape |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 3/6/2001 5:24:33 PM  |
| Modified By: administrator     | 6/19/2008 4:06:04 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                               |
|------------|---------------|---------------------------------------------------------------------------------------|
| 3153.12196 | Suspended     | A field for user to control if fatigue should be considered in the controlling rating |

### Description

FROM:dteal DATE:03/06/2001 12:24:34

Every time I want to print – it is usually (more often than not) a table from the Analysis Results. Every time have to go to the print setup and change it to landscape. There should be a default someplace for printer settings. I have to change it to landscape every time I print from a new bridge or log back in.

FROM:jduray DATE:3/8/01 8:29:28 AM

Joe - let's get this in the next service pack.

FROM:jihnat DATE:3/9/01 8:44:43 AM

Dean, have you considered changing the default for your printer in the Windows Control Panel?

4/19/2016 3:15:23 PM

HRS AASHTO

855

**Complete Issue Information**

FROM:dteal DATE:03/09/2001 10:21:09

I don't want to globally change the printer settings. I only want to change them in VirtisOpis. Is this what your asking?

FROM:jihnata DATE:3/9/01 10:31:56 AM

That was what I was asking. My thought was that a single flag (portrait or landscape) within VirtisOpis might make sense for a user like yourself who prints mainly in landscape. But for a user who prints about equally in both portrait and landscape, a single flag doesn't really help them at all. A more comprehensive change would be to store and use the last orientation for each type of document (Analysis Results, BWS Report, etc.) within VirtisOpis.

FROM:jihnata DATE:3/9/01 4:01:05 PM

MFC has no ready mechanism for doing this.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 3153                                                                                 |
| Subject: A field for user to control if fatigue should be considered in the controlling rating |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 3/7/2001 3:39:41 PM  |
| Modified By: administrator     | 6/19/2008 4:06:04 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:03/07/2001 10:39:41

4/19/2016 3:15:23 PM

HRS AASHTO

856

**Complete Issue Information**

On a permit vehicle which is included in rating vehicle summary list – how would one tell Virtis not to allow fatigue to control the rating. I would assume that in the advanced button for the vehicle properties would have been the place to set this. We already have Single Lane Loaded, Scale Factor and Impact modifiers in this window.

Is there some way to accomplish not letting fatigue control the rating?

FROM:bgoodrich DATE:03/08/2001 15:18:21

Virtis does not provide a field for controlling if fatigue should be considered in the controlling rating. BRASS currently defaults the allowable fatigue stress for every POI to a large number, so it will not control the rating for any truck. If you wish to change a value for a particular POI, you have to fill out the Fatigue tab for the POI. Even if Virtis had this field, BRASS would not be able to control fatigue on a per-truck basis.

Jim - I would think this would be a Virtis issue because it deals with rating in general, i.e., a user wants to ignore the fatigue rating for every engine. Comments?

FROM:jduray DATE:3/12/01 1:22:41 PM

Perhaps we need a checklist of what limit states to rate for?

FROM:bgoodrich DATE:04/09/2001 18:27:57

I agree. Depending on the level of detail, we might need to organize a different checklists for LFD and LRFD (when adopted). For steel, there are fatigue checks for shear connectors, rebar, web shear fatigue, flexural fatigue in flanges, etc. For strength: flexure, shear, bearing, and flexure-shear interaction. For service: flange stresses and crack control.

Jim - I am assigning this issue to you because changes will have to be made to Virtis first.

FROM:dteal DATE:Monday, January 27, 2003 9:23:31 AM

Are you requesting for any information from me??

FROM:jduray DATE:9/5/2003 12:03:30 PM

It looks to me as though we have the info we need for now. We need to prepare a list of possible limit states for rating and estimate the cost for implementing.

FROM:hlee DATE:6/4/2004 3:24:33 PM

Changed subject from "Fatigue – Permit Vehicles" to "A field for user to control if fatigue should be considered in the controlling rating".

Issue ID: 3154  
Subject: Dist Factor Increase – Permit Vehicles

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 3/7/2001 3:45:46 PM  
Modified By: administrator 6/19/2008 4:06:03 PM

### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Closed | High     | Education |
| Duray, Jim      | Closed | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3156.12193 | Closed        | Re-Use of BID Numbers |

### Description

FROM:dteal DATE:03/07/2001 10:45:47

Rating Permit Vehicles in Kansas (T130 & T170) require slab bridges to increase the Distribution of loads by 15%. Am I correct in thinking I can accomplish this by entering a scale factor of 0.85 for these two vehicles?

When we rate these two permit vehicles on girder bridges we limit the Dist. to Single Lane Loaded. This is handled just fine.

FROM:jduray DATE:3/8/01 8:23:11 AM

Brian - can you verify Dean's solution to his first question.

FROM:bgoodrich DATE:03/08/2001 15:00:17

The scale factor is not currently used by BRASS-LFD as indicated in the help. The export generates the TRUCK-WFR command, which contains the LFD distribution factors. We could multiply these DFs by the appropriate scale factor before writing the command. As Jim and I have discussed in the past, the BRASS output will only show the modified distribution factors, which may confuse the user.

FROM:jduray DATE:3/12/01 1:20:45 PM

I think we should modify the export to include the scale factor and note it in the export comments.

FROM:bgoodrich DATE:06/08/2001 14:14:44

4/19/2016 3:15:23 PM

HRS AASHTO

858

**Complete Issue Information**

Jay agrees. I will modify the export accordingly.

FROM:bgoodrich DATE:06/08/2001 14:24:49  
This is a duplicate of Incident 2972.

FROM:dteal DATE:10/03/2001 10:18:38  
In a nut shell - was the answer to my original question "Yes"??

FROM:dteal DATE:10/16/2001 14:55:56

|                                |
|--------------------------------|
| Issue ID: 3156                 |
| Subject: Re-Use of BID Numbers |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 3/8/2001 1:22:44 PM  |
| Modified By: administrator     | 6/19/2008 4:06:03 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:03/08/2001 08:22:44  
I have 17 BID numbers between 1 and 93 that are not being used. One of these numbers are on hold in the deleted bridges folder. The other 16 are currently not in use. When I create a new structure or make a copy, the BID number that is issued should be one of the numbers between 1 and 93 that is not in use but instead it adds the number to the end of the list, like 94.

**Complete Issue Information**

FROM:jduray DATE:3/8/01 8:21:35 AM

This is not reasonable to do or necessary. Why do want to reuse BID numbers.

FROM:dteal DATE:03/08/2001 10:38:09

Bridges that have been deleted - no longer in the database - the BID # (the first column in the Bridge Workspace)

Are you saying that when a bridge has been deleted - the BID # in the Bridge Workspace will never be used again???

FROM:jduray DATE:3/9/01 9:47:25 AM

Yes, the BID is generated by adding incrementing a counter. The next BID is always one greater than the last. The limit is 2,147,483,648.

FROM:dteal DATE:03/09/2001 10:17:52

Issue ID: 3157  
Subject: SHEAR ANALYSIS POLL by Steve Mample

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Duray, Jim 3/9/2001 2:59:24 PM  
Modified By: administrator 6/19/2008 4:06:03 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact   | Status   | Priority | Category    |
|-------------------|----------|----------|-------------|
| Goodrich, Brian   | Assigned | High     | Bug - BRASS |
| Kennelly, Krishna |          |          |             |
| Goodrich, Brian   | Resolved |          |             |

4/19/2016 3:15:24 PM

HRS AASHTO

860



**Complete Issue Information**

|               |          |        |     |
|---------------|----------|--------|-----|
|               | Accepted |        |     |
|               | Closed   |        |     |
| Ihnat, Joseph | Closed   | Urgent | Bug |
| Ihnat, Joseph | Closed   | Urgent | Bug |

**Contacts**

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1311303300S080.bbd  |             |

**Tasks**

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3159.12190 | Closed        | Problem entering deterioration on cover plates |

**Description**

FROM:jduray DATE:3/9/01 9:52:11 AM

E-mail from Steve Mample.

---begin e-mail-----

Hello,

My original concern was with the Load Factor shear analysis of reinforced concrete tee beam and composite reinforced concrete tee beam girders. The BRASS Load Factor shear analysis can result in a shear capacity anywhere from 5 to 10 tons lower compared to the BARS Load Factor shear analysis. I believe this could also occur with a few composite prestressed concrete girders and reinforced concrete box beams.

Idaho's consultant engineer, Mary Walker, has studied this difference between the BRASS and Bars shear analysis results. The apparent reason for the difference is that BRASS uses a more conservative application of the AASHTO standards. BRASS shear uses the AASHTO equation 8-49 to calculate Vc, rather than AASHTO equation 8-48 used by BARS. Also, BRASS uses phi = 0.85, while BARS uses phi = 0.90 in the AASHTO equations 8-46 and 8-47.

Of the 26 States that I sent E-Mail questionnaires to, I received 8 responses by E-mail. Four States did not receive my E-mail questionnaire due to the contact person having quit that Stat's employment. I called and

## Complete Issue Information

talked to a bridge section representative for those four States. Rather than try to summarize the responses, I will just list the responses below. I would like to thank those who sent a reply and who I talked to by phone for their information. This appears to be something we may want to talk about at the meeting in New Mexico. See you there, Steve.

We use both moment and shear to rate all of our steel structures; however, we ignore shear effects for many of our concrete structures such as reinforced concrete slab span bridges. Other bridges, such as those with prestressed concrete girders, are also often rated only considering moment. This is due to BRASS's inability to properly analyze shear in prestress girders. We have not addressed any policy changes concerning this issue.

So far we have not seen shear to be a big problem in our VIRTIS ratings. However, we are just getting starting in populating our database with girder system models and the bridges that we have loaded are not giving us a good picture of the shear issue. We are leaving the check LFD for shear option enabled. When we do encounter a rating where shear controls we will be looking closely at each bridge individually.

We are just getting our server set up to do virtis and have not yet converted over yet. One suggestion though, if you are having trouble under load factor methods, you may want to try ASD methods; at least for reinforced concrete.

We haven't started using VIRTIS in a production mode of load ratings yet. We have load rated probably 2/3 of our structures with VIRTIS though. And I have noticed that there are a few structures that were designed accordingly for shear (for that years AASHTO spec), but the current AASHTO spec causes some poor Shear Ratings on structures. (If I remember off the top of my head, it's typically on Hybrid Steel Girder bridges that were originally designed in the 1970's?). Another thought or question I've had is whether we rate our bridges for Moment Only, Moment and Shear, Moment and Serviceability, or Moment, Shear and Serviceability. Previously we used whatever BARS gave us.

We currently are using BARS and we only use a shear analysis on steel girder bridges. With the move to Virtis, we are planning on adding a shear analysis for prestressed girder bridges and for concrete girder bridges. At this point, we don't really have a problem with shear controlling the rating for bridges. We find that this already happens on some of the older plate girder structures. We anticipate that it will happen on a large portion of our concrete girder bridges. The concrete girder bridges are typically 50 to 75 years old and do not have very much shear reinforcement in them when compared to today's standards. On prestressed structures, we don't anticipate many problems with shear controlling because our design criteria for shear reinforcement in prestressed girders is very conservative.

(Our State) is not actively using VIRTIS as yet and thus we have not addressed your questions.

4/19/2016 3:15:24 PM

HRS AASHTO

862

## Complete Issue Information

Our experience with Virtis is somewhat limited at this point. We have found that for some prestressed girder bridges the rating will drop substantially when shear is considered. We have not identified any particular reason why this occurs. At this point we are planning to use the ratings as given by Virtis/BRASS with shear included. The ramifications or problems for us because of this are uncertain at this time.

We do not load rate reinforced concrete haunch slab and T-beams for shear rating, however sometime we do load rate T-Beams for shear rating due to occurrence of the cracks. We do load rate prestressed Beams And Structural steel for combination of shear and moments. We are planning to load rate all our T-Beams for shear rating and use the lowest value. I would greatly appreciate if you inform me of the result of your survey.

---end of e-mail-----

FROM:bgoodrich DATE:02/04/2002 17:36:26

Dan Glandt has implemented Equation 8-48 in BRASS-GIRDER 5.8.5, which is scheduled for release with Virtis 4.1 Service Pack 1. The phi factor issue must be addressed within Virtis or the BARS import. AASHTO Specification article 8.16.1.2 indicates to use 0.85 for shear, which is the Virtis and BRASS default.

FROM:jduray DATE:2/5/02 9:38:24 AM

Call me to discuss this.

FROM:bgoodrich DATE:02/06/2002 10:40:15

The issue regarding Equation 8-48 is addressed in Incident 2807.

I spoke with Jim Duray and Gale Barnhill yesterday regarding the phi factor issue. Gale agreed to investigate whether or not BARS utilized a phi factor for shear of 0.9. Gale found that BARS uses 0.85 as outlined in the specification. Some documentation supporting Gale's findings must be added to this incident. Overall, there is not a problem with the import, export, or the engines.

FROM:bgoodrich DATE:02/07/2002 11:45:35

I attached BARS documentation from Gale (Bars Shear.pdf).

FROM:jduray DATE:2/25/02 8:58:18 AM

Please add to help.

FROM:kkennelly DATE:2/26/2002 8:15:43 AM

Upon further review, it was decided nothing needed added to the help. Brian, can you mark this as resolved if you think everything has been addressed?

FROM:bgoodrich DATE:Tuesday, February 26, 2002 2:41:18 PM

Resolved.

FROM:gbarnhill DATE:Monday, April 08, 2002 12:33:02 PM

Based on the above documentation, I assume this is resolved. Probably needs to be discussed at the User Group Meeting.

4/19/2016 3:15:24 PM

HRS AASHTO

863

**Complete Issue Information**

FROM: bgoodrich DATE: Friday, June 28, 2002 12:40:19 AM  
Track field marked with "OK by gale - 8 Apr", so I am closing this incident.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3159                                          |
| Subject: Problem entering deterioration on cover plates |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 3/12/2001 6:48:43 PM |
| Modified By: administrator     | 6/19/2008 4:06:03 PM |
| Priority: Urgent               |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: kkennelly DATE: 3/12/01 2:43:50 PM  
Attached bridge is service pack 1. Struc Def 2 SP GIR LINE (SP1 and 2), member Interior Beam (C).  
Try to enter loss on bottom cover plate #2. When try to enter start distance = to start distance of plate  
referenced from Support 2, click ok or apply, get message Loss is not within cover plate range. If start  
distance is referenced from Support 1, can close window but then get error about tapered cover plates  
when try to run BRASS. When all of ranges input to 2 decimal places instead of 3, window and BRASS  
work ok.

FROM: jihnat DATE: 3/14/01 10:11:03 AM  
Fixed for Version 4.1 and Version 4.0 Patch 3.

**Complete Issue Information**

FROM:gbarnhill DATE:05/31/2001 12:02:16  
OK in Service Pack 3 for version 4

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3160                                                   |
| Subject: Tabular Results - Drop down list box for Dead Load Case |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kennelly, Krisha      | 3/12/2001 7:05:11 PM |
| Modified By: administrator          | 6/19/2008 4:06:03 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:15:24 PM

HRS AASHTO

865

### Complete Issue Information

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3160.12189 | Resolved      | Tabular Results - Drop down list box for Dead Load Case |
| 3161.12188 | Closed        | Deleted Bridges Folder Issues                           |

### Description

FROM:kkennelly DATE:3/12/01 3:02:13 PM

PCITrainingBridge6. For PS bridge run with BRASS LRFD, select Stage 3 DL and 2 dead load cases show up in Dead Load Case listbox. When dropdown opened, cannot read entire name of second load case. Note: both load cases have exact same name but second load case has (A..... appended to end of name. Can't read what is appended cause drop down box width is too small.

FROM:mordoobadi DATE:3/20/01 2:42:06 PM

Fixed.

Issue ID: 3161

Subject: Deleted Bridges Folder Issues

Folder: /Virtis/Support Center

Primary Contact: lhnat, Joseph

Submitted By: Ordoobadi, Mehrdad 3/13/2001 7:36:14 PM

Modified By: administrator 6/19/2008 4:06:03 PM

Priority: High

Category: Unknown

4/19/2016 3:15:25 PM

HRS AASHTO

866

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Duplicate | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0540046.bbd         |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3162.12187 | Duplicate     | Bearing Stiffener controls rating (ASD and LFD) |

### Description

FROM:mordoobadi DATE:3/13/01 3:32:21 PM

Folder Properties and New Folder menu items and toolbar keys should be disabled when the currently selected folder is "Deleted Bridges".

FROM:jihnmat DATE:6/7/2001 2:56:40 PM

Fixed for Version 4.1

FROM:dteal DATE:11/01/2001 16:36:18

Accepted

### Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3162                                           |
| Subject: Bearing Stiffener controls rating (ASD and LFD) |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Best, Richard      | 3/14/2001 4:45:35 PM |
| Modified By: administrator       | 6/19/2008 4:38:36 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 1 |
|                 |          |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3164.12185 | Resolved      | Crossing strands in harped layout allowed? |

### Description

FROM:rmbest DATE:03/14/2001 12:45:35

We are finding that the rating on some of our existing inventory bridges are being controlled by the bearing stiffeners. This will be of interest to designers on new bridges but our raters certainly don't want it. Is there a way to exempt stiffeners from the rating? We have been inputting our bridges from scratch as girder system and I hate to start polluting the models by artificially beefing up members. There needs to be a switch to do this. I tried to set the Shear and Live Load End Shear distribution factors to

4/19/2016 3:15:25 PM

HRS AASHTO

868



**Complete Issue Information**

zero but for some reason my rating didn't change.

FROM:jduray DATE:3/22/01 8:33:19 AM

Brian - is there anything we can do to cause BRASS not to rate based on bearing stiffeners?

FROM:bgoodrich DATE:03/27/2001 19:27:23

There is no flag in BRASS-GIRDER to ignore rating the bearing stiffeners. For ASD, you could set the ASD factor for bearing to a high value (see the appropriate tab of the member alternative window). For LFD, you could set the resistance (phi) factor for bearing to a high value in the LFD factors window.

Richard - We will re-open this incident if my comments from above do not satisfy your request.

FROM:rmbest DATE:03/28/2001 15:58:50 - Changing the factors only seems to effect the end bearing (abut). What about bearings at the pier? We would like reopen this incident.

FROM:bgoodrich DATE:03/28/2001 17:15:57

Note that BRASS only supports one distribution factor and it is used for all actions (moment, shear, etc.). The Virtis distribution factor for moment is the one passed on to BRASS, which is why changing the others did not affect your rating.

FROM:bgoodrich DATE:03/28/2001 17:28:36

This is a duplicate of Incident 2513.

I suggest enhancing Virtis to include some check boxes for controlling what limit states are considered in the rating (flexure, shear, bearing, etc.). We are working this type of functionality into BRASS-GIRDER(LRFD) while we are implementing draft LRFR spec. I think every engine would benefit from having these flags, so I do not support adding these items to the engine data.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 3164                                      |
| Subject: Crossing strands in harped layout allowed? |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 3/21/2001 6:26:00 PM |
| Modified By: administrator     | 6/19/2008 4:06:03 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:25 PM

**HRS AASHTO**

869

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 057-0174.bbd        |             |

### Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 3167.12182 | Resolved      | ASD     |

### Description

FROM:bgoodrich DATE:03/21/2001 14:26:01

I was able to cross the strands in a harped strand layout by doing the following:

1. Used P/S tool to compute layout and applied it to the span.
2. Added two strands to the layout at mid-span.
3. Harped the additional two strands.

I did not get any error message indicating that I had crossed the strands. I don't think this is the correct behavior.

FROM:jduray DATE:6/25/01 4:56:21 PM

The Mid-span should check for harped strands below the selected strand and prohibit if a harped strand is found.

Issue ID: 3167

Subject: ASD

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:15:26 PM

HRS AASHTO

870

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Best, Richard | 3/22/2001 9:58:58 PM |
| Modified By: administrator  | 6/19/2008 4:06:03 PM |
| Priority: High              |                      |
| Category: Bug - BRASS       |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | G2Shear.bbd         |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 3168.12181 | Resolved      | BRASS LFD Shear Capacity Calculations |

### Description

FROM:rmbest DATE:03/22/2001 17:58:58

For some reason Virtis is defaulting the wrong rating ASD factors for reinforcement. Our RC slab rating are coming up too low until we manually enter 0.55 and 0.75 the ASD Factors for the rebars. (0.55 and 0.75). Attached is a example.

FROM:jduray DATE:3/27/01 9:37:26 AM

FROM:bgoodrich DATE:04/09/2001 18:44:18

The BRASS defaults are different from what you specified above. The BRASS defaults for rebar are 0.4 (inventory) and 0.6 (operating). These have been the BRASS defaults for years. The only way to get exactly what you want is to manually specify the ASD values. Note that the BRASS defaults for Structural Steel are 0.55 and 0.75, respectively.

FROM:rmbest DATE:04/12/2001 09:44:53 Those defaults for rebars don't agree with the values in the Manual for Condition Evaluation of Bridges except for grade 60 steel. Where can I find a listing of all the default values used in BRASS?

4/19/2016 3:15:26 PM

HRS AASHTO

871

## Complete Issue Information

FROM:rmbest DATE:04/12/2001 09:56:58

|                                                |
|------------------------------------------------|
| Issue ID: 3168                                 |
| Subject: BRASS LFD Shear Capacity Calculations |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 3/23/2001 2:46:48 PM |
| Modified By: administrator       | 6/19/2008 4:06:03 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:3/23/01 10:31:25 AM

Attached bridge, member G2 ran for HS20 rating. Shear controls rating at point 107.998. In the Load level 1, truck #2 (lane) calculations for shear capacity for dead plus neg live load shear = -69.5 kips, the cracking moment calculated as -862.93 kft. Mmax was calculated as 453.69 kft. Equation for Vci using Mcr and Mmax with different signs gives Vci = -99.1 kips so Vci min = 42.6 kips used as Vci. I'm not sure if the values for Mcr and Mmax are correct but I think they should have the same sign in the equation for Vci.

FROM:bgoodrich DATE:04/18/2001 17:16:42

Entered for Dan Glandt:

4/19/2016 3:15:26 PM

HRS AASHTO

872

### Complete Issue Information

We are working on getting a solution from PCI. I believe they are going to publish a list of questions in the PCI Journal about how to handle shear near supports. Jay and I have decided to wait until we hear something definite from this before we change the program.

FROM: bgoodrich DATE: 08/09/2001 13:11:52

Dan Glandt modified BRASS and added new shear options to address this incident. Fixed for version 4.1.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3170                                                     |
| Subject: Travelway not computed correctly for non-standard parapet |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Goodrich, Brian     | 3/23/2001 5:06:51 PM |
| Modified By: administrator        | 6/19/2008 4:06:02 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Rejected | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

4/19/2016 3:15:26 PM

HRS AASHTO

873

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | OK Training.bbd     |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 3173.12176 | On Hold       | Change color of internal and cont. diaphragms |

### Description

FROM:bgoodrich DATE:03/23/2001 13:06:52

Review the parapet definition "OK Parapet" in the attached bridge. I am able to enter negative dimensions to achieve the desired shape. Then I use the Compute button to determine the travelway (see the Structure Typical Section schematic). It appears that Virtis/Opis assumes the bottom of the parapet is the widest dimension, however, in this case the widest dimension is at the top. We either need to check for the widest overall dimension or a request was made to add a new parapet shape to the library.

FROM:bgoodrich DATE:03/26/2001 08:38:35

Additionally, the wearing surface drawn assumes the bottom of the parapet is the widest dimension.

FROM:kkennelly DATE:5/7/01 11:15:55 AM

The wearing surface on the attached bridge appears to be drawn correctly to me.

The Compute button determines the width of the concrete parapet by adding up all of the horizontal dimensions that the user can enter on the appurtenances window. The user can enter any combination of + and - dimensions to model anything they want. I don't think it's worth modifying the Compute button to be really smart about the appurtenance geometry. The user can always override the computed lane positions if they're not correct. The generic appurtenance is the shape the user should use for this parapet. I'm not sure if enough requests have been made to add a user defined coordinate based appurtenance to warrant that as an enhancement.

Issue ID: 3173

Subject: Change color of internal and cont. diaphragms

Folder: /Virtis/Support Center

Primary Contact: lhnat, Joseph

Submitted By: Goodrich, Brian

3/26/2001 12:48:05 PM

Modified By: administrator

6/19/2008 4:06:02 PM

Priority: High

Category: Cosmetic

4/19/2016 3:15:27 PM

HRS AASHTO

874

## Complete Issue Information

---

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3174.12175 | Closed        | Need "emergency" access to a checked out bridge via copy/paste |

### Description

FROM:bgoodrich DATE:03/26/2001 08:48:06  
Entered for Jay Puckett:  
Change color of internal and cont. diaphragms.

## Complete Issue Information

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 3174                                                          |
| Subject: Need "emergency" access to a checked out bridge via copy/paste |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Goodrich, Brian  | 3/26/2001 12:54:23 PM |
| Modified By: administrator     | 6/19/2008 4:06:02 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:bgoodrich DATE:03/26/2001 08:54:24

Entered for Jay Puckett:

We copied and pasted a bridge that was checked out, but the copy retained the checked-out status. This needs to be changed so an engineer can gain "emergency" access to a bridge.

FROM:gbarnhill DATE:03/28/2001 10:11:52

I am able to make a copy of a bridge that is checked out to another user. The copy then becomes checked out to me.

FROM:jduray DATE:3/29/01 8:49:20 AM

It seems like this is proper behavior.

FROM:bgoodrich DATE:05/29/2001 11:29:38

The behavior works fine. We were using the same user name.

4/19/2016 3:15:27 PM

HRS AASHTO

876



## Complete Issue Information

Issue ID: 3176

Subject: Bridge workspace tree labels and window labels do not match everywhere

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Goodrich, Brian

3/26/2001 1:01:54 PM

Modified By: administrator

6/19/2008 4:06:02 PM

Priority: High

Category: Cosmetic

### History

| Primary Contact | Status  | Priority | Category |
|-----------------|---------|----------|----------|
| Ihnat, Joseph   | On Hold | High     | Cosmetic |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3176.12173 | On Hold       | Bridge workspace tree labels and window labels do not match |

4/19/2016 3:15:27 PM

HRS AASHTO

877

**Complete Issue Information**

everywhere

**Description**

FROM:bgoodrich DATE:03/26/2001 09:01:55

Entered for Jay Puckett:

The bridge workspace tree labels and window labels do not match everywhere. Make them the same where possible.

Issue ID: 3177  
Subject: Lack of error message when opening Strand Layout windows

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Goodrich, Brian 3/26/2001 1:04:45 PM  
Modified By: administrator 6/19/2008 4:06:02 PM  
Priority: Urgent  
Category: Requirement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Duplicate | Urgent   | Requirement |
| Duray, Jim      | Duplicate | Urgent   | Requirement |

4/19/2016 3:15:27 PM

HRS AASHTO

878

## Complete Issue Information

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Richard Best  | Illinois DOT     | BESTRM@nt.dot.state.il.us | 217-785-2922 |
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3178.12171 | Discard       | Add Facility Carried to the Bridge Explorer |

### Description

FROM:bgoodrich DATE:03/26/2001 09:04:46

If the Strand Grid tab of a P/S beam is not filled out, the user is unable to open the Strand Layout window. The Strand Layout window simply flashes and is gone. A message needs to be shown to indicate that the Strand Grid information must be filled out.

FROM:kkennelly DATE:11/19/2004 10:34:36 AM  
Duplicate of 3071.

Issue ID: 3178

Subject: Add Facility Carried to the Bridge Explorer

Folder: /Virtis/Support Center

4/19/2016 3:15:28 PM

HRS AASHTO

879

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Best, Richard | 3/28/2001 5:07:17 PM |
| Modified By: administrator  | 6/19/2008 4:06:02 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact    | Status   | Priority | Category                 |
|--------------------|----------|----------|--------------------------|
| Ordoobadi, Mehrdad | On Hold  | High     | Bug<br>Bug - Performance |
|                    | Assigned |          |                          |
|                    | Resolved |          |                          |
|                    | Accepted |          |                          |
|                    | Closed   |          |                          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug - Performance        |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Save Problem.bbd    |             |
|      | Slow Save.bbd       |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3179.12170 | Closed        | Slow Oracle Save Operation |

### Description

FROM:rmbest DATE:03/28/2001 13:07:18

The route number in the Bridge Description window is limited to only 5 characters. This is not enough. The input box is sized for a much larger entry.

**Complete Issue Information**

FROM:jduray DATE:3/29/01 8:52:13 AM  
Mehrdad - please check on why it is limited. I think this is a Pontis field limitation.

FROM:mordoobadi DATE:3/30/01 4:34:56 PM  
Yes, It is Pontis' limitation.

FROM:tthompson DATE:04/06/2001 11:26:43  
More of a limitation on what M Baker chose to use from Pontis. They choose routenum, which is NBI Field 5D and that is only a 5 digit field. Facility carried is more along the line of what Richard is probably hoping for.

FROM:mordoobadi DATE:4/13/01 9:35:23 AM  
Jim, please advise.

FROM:jduray DATE:6/25/01 4:51:09 PM  
We can't change the size of the field we are using since it is dictated to us by Pontis. I am changing this to an enhancement to add Facility Carried.  
Bridgeware Integration

FROM:hlee DATE:4/30/2008 2:24:06 PM  
Discarded by TAG 12/07.

|                                     |
|-------------------------------------|
| Issue ID: 3179                      |
| Subject: Slow Oracle Save Operation |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 3/29/2001 2:35:21 PM |
| Modified By: administrator          | 6/19/2008 4:06:02 PM |
| Priority: High                      |                      |
| Category: Bug - Performance         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 3180.12169 | Duplicate     | Enhancement - P/S strand that extends into the diaphragm |

### Description

FROM:dteal DATE:03/29/2001 10:35:27

When I perform a save operation on a couple of my files it takes 85 seconds or more. On the rest of my files it takes about 15 seconds.

The files in question, at one time had many Member and Member Alternatives defined. When I realized how slow the saving operation got I deleted most of them and created separate bridge files. When I deleted a bunch of the Member and Member Alt's it didn't make any difference in the save time, still 85 + seconds.

I have attached one of files that are giving me a problem.

FROM:jduray DATE:04/04/2001 15:06:29

FROM:mordoobadi DATE:6/18/01 10:27:22 AM

There was a bug in the save operation which caused full table scans to find the next primary key id. It is fixed and save should complete much faster.

This is in virtis/opis 4.0.3

FROM:dteal DATE:08/28/2001 14:29:21

I am currently using version 4.0.4. This is the same file I referenced on back in March of 2001. The save operation takes 65 seconds now instead of 85 seconds. Other like files still only take about 15 seconds. I don't think the fix for version 4.0.3 has made much difference. (.bbd file is attached)

FROM:mordoobadi DATE:9/17/01 11:29:42 AM

Dean resubmitted the incident.

I imported the BBD file save took 15 seconds.

Then I changed one of the cross sections and saved this took 65 seconds.

Then I changed the name of the bridge and saved. It took 51 seconds.

I believe this is because of the bridge being big (comparatively). In big bridges plenty of time is spent in processing GetModificationStatus(...) functions.

We might need to revise GetModificationStatus(...) code to improve save operation.

Status is changed to Assigned.

Jim, please advise, if you want me to investigate more.

FROM:dteal DATE:10/16/2001 14:42:28

Just to clarify something - this bridge is no bigger at 65 sec. save operation than the bridge at 15 second save operation. Re-read the original problem:

4/19/2016 3:15:28 PM

HRS AASHTO

882

### Complete Issue Information

"The files in question, at one time had many Member and Member Alternatives defined. When I realized how slow the saving operation got I deleted most of them and created separate bridge files. When I deleted a bunch of the Member and Member Alt's it didn't make any difference in the save time, still 85 + seconds."

It would appear that something did not get deleted when I tried to downsize the one bridge ID into several bridges.

FROM:dteal DATE:10/16/2001 14:58:41

FROM:jduray DATE:1/29/02 1:44:49 PM  
Yes, investigate more.

FROM:mordoobadi DATE:7/26/2002 9:19:40 AM  
Code changed (All De classes) to mark a big bucket modified as soon as a little bucket is changed. By doing this there is no need to go through all of the little buckets to find out the modification status of a big bucket. By implementing this for a sample test case the speed of save operation improved six times. (i.e. 90 seconds --> 15 seconds).

Fixed in Version 5.0.

FROM:mordoobadi DATE:7/26/2002 9:26:03 AM  
Note that this would also improve the speed of Save operation of analysis results.

FROM:dteal DATE:Friday, September 05, 2003 10:51:36 AM

FROM:mordoobadi DATE:10/28/2004 3:52:36 PM  
Accepted by Dean Teal on 9/5/2003.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 3180                                                    |
| Subject: Enhancement - P/S strand that extends into the diaphragm |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 3/29/2001 2:25:20 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Duplicate | High     | Enhancement |
| Duray, Jim      | Duplicate | High     | Enhancement |

4/19/2016 3:15:28 PM

HRS AASHTO

883

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 804400.bbd          |             |

### Tasks

| Name       | Current State | Summary                                                                           |
|------------|---------------|-----------------------------------------------------------------------------------|
| 3181.12168 | Resolved      | Export doesn't give warning about modifying # rebar for different yield strengths |

### Description

FROM:jduray DATE:3/29/01 10:23:11 AM

Anousone Arounpradith (Missouri DOT) has requested that Virtis/Opis be enhanced to allow users to define P/S strand that extends into the diaphragm region over interior piers to take any positive moment. Currently, Virtis/Opis allows the user to define rebar in the diaphragm region. The engineers at the Oklahoma City training also commented on the lack of this feature. The work-around is to convert the P/S strand to an equivalent area of mild steel and then input it on the existing window.

FROM:jduray DATE:4/12/01 1:06:58 PM

Issue ID: 3181

Subject: Export doesn't give warning about modifying # rebar for different yield strengths

Folder: /Virtis/Support Center

4/19/2016 3:15:29 PM

HRS AASHTO

884



### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 4/4/2001 3:27:47 PM  |
| Modified By: administrator       | 6/19/2008 4:06:02 PM |
| Priority: Medium                 |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Ihnat, Joseph   | Assigned         | High     | Bug - GUI 1 |
|                 |                  |          | Bug - GUI 2 |
|                 | On Hold          |          |             |
|                 | Not Reproducible |          |             |
| Ihnat, Joseph   | Not Reproducible | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                                                      |
|------------|------------------|--------------------------------------------------------------|
| 3182.12167 | Not Reproducible | P/S Beam Details - assigned ps properties are sometimes lost |

### Description

FROM:kkennelly DATE:4/4/01 11:22:34 AM

Submitted for Connie Porter, (225) 927-9321, Forte & Tablada.

When user has 2 yield strengths for rebar in deck, export does not give warning that it modified the number of rebar in deck input by user to an equivalent number so all rebar has same Fy in BRASS. Member G02 in attached bridge. Refer to incident 2899.

FROM:bgoodrich DATE:04/10/2001 10:01:31

I modified the export (BrassCrossSections.cpp) to issue a warning regarding modifying the number of bars based on the ratio of the different yield strengths. This correction should be available in the next 4.0 Service Pack.

4/19/2016 3:15:29 PM

HRS AASHTO

885

## Complete Issue Information

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3182                                                        |
| Subject: P/S Beam Details - assigned ps properties are sometimes lost |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 4/4/2001 7:07:36 PM  |
| Modified By: administrator     | 6/19/2008 4:06:02 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:04/04/2001 15:07:36

FL training - user assigned ps properties to a span and applied, then closed the window. Opened the window again and the ps properties were not populated. User had to create a new ps properties and reassign. It worked the second time. Then he deleted the original ps properties.

FROM:jihnat DATE:8/31/2005 9:13:46 AM

I haven't been able to reproduce this.

4/19/2016 3:15:29 PM

HRS AASHTO

886

## Complete Issue Information

Issue ID: 3183

Subject: BARS Import needs to populate ALL analysis modules

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Goodrich, Brian

4/5/2001 5:58:30 PM

Modified By: administrator

6/19/2008 4:06:02 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Martin, Ed      | Assigned  | High     | Enhancement |
| Lee, Herman     | Suspended |          |             |
|                 | Discard   |          |             |
| Lee, Herman     | Discard   | High     | Enhancement |

### Contacts

4/19/2016 3:15:30 PM

HRS AASHTO

887

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-0861.bbd          |             |

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3184.12165 | Resolved      | Distribution of loads for Deck Girders/T-Beams |

### Description

FROM:bgoodrich DATE:04/05/2001 13:58:31

The BARS import needs to be enhanced to populate ALL possible analysis modules (engines) on the member alternative window regardless of the type of analysis coded in the BARS data file. For prestress beams, this is extremely important because you have to run both LFD and ASD analysis to get the ultimate strength ratings and the serviceability ratings. Users should not have to visit each member alternative to specify these engines. This would also prepare them for LRFR when it is adopted.

FROM:hlee DATE:4/30/2008 2:24:14 PM

Discarded by TAG 12/07.

Issue ID: 3184

Subject: Distribution of loads for Deck Girders/T-Beams

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Koenig, David

4/5/2001 6:34:40 PM

Modified By: administrator

6/19/2008 4:06:01 PM

Priority: High

4/19/2016 3:15:30 PM

HRS AASHTO

888

## Complete Issue Information

Category: Education

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | Urgent   | Bug      |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 3185.12164 | Closed        | Wrong Column Datatype assigned in Oracle Migration scripts 2.1 to 3.0 |

## Description

FROM:dkoenig DATE:04/05/2001 14:34:41

When we rate Deck Girders (cast slab and girder together – T-Beam), we distribute the slab load continuously across the girders, and the barriers and wearing surface evenly across the girders. Virtis/Brass will not allow the barriers/wearing surface to be distributed evenly. Brass allows only stage 1 loads for T-Beams. This means that these loads will be distributed according to the stage 1 DL Distribution defined in Virtis. There is no option for evenly distributing stage 1 loads. What would be the correct way to handle this in Virtis (Girderline)? What are your thoughts on distributing loads for T-Beams?

I have attached the .bbd file.

FROM:bgoodrich DATE:04/09/2001 19:10:02

Virtis/Opis and BRASS do not currently allow specifying different distribution methods for each load case assigned to a particular stage. The only work-around would be to model the structure as a girderline and perform the DL distribution manually.

FROM:jduray DATE:4/11/01 1:37:45 PM

I suggest you try the following workaround:

Use Girder System structure def. Assign a concrete weight of 0 to the parapets so the parapets will not contribute to the DL but will be used to define the travel way in computing the LL distribution factors.

4/19/2016 3:15:30 PM

HRS AASHTO

889

## Complete Issue Information

Compute the parapet and WS weight as member loads based on the distribution method you prefer.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 3185                                                                 |
| Subject: Wrong Column Datatype assigned in Oracle Migration scripts 2.1 to 3.0 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 4/13/2001 1:50:40 PM |
| Modified By: administrator          | 6/19/2008 4:06:01 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:mordoobadi DATE:4/13/01 9:40:56 AM

The migration scripts for migrating from version 2.1 to 3.0 assigned datatype FLOAT instead of INTEGER

to the attributes called GUI\_MBR\_TYPE\_BITMASK in tables ABW\_GIRDER\_SYS\_STRUCT\_DEF and ABW\_GLINE\_STRUCT\_DEF.

We should create a SQL script patch to fix this problem.

The patch should query Oracle data dictionary to see if the datatype is really FLOAT, and if it is FLOAT change the datatype from FLOAT to INTEGER.

Here are the scripts needed to re-create the PKs and FKs for these tables.

```
CREATE UNIQUE INDEX XPKabw_girder_sys_struct_def ON abw_girder_sys_struct_def  
(
```

4/19/2016 3:15:30 PM

HRS AASHTO

890

### Complete Issue Information

```
        bridge_id          ASC,
        struct_def_id      ASC
    );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT XPKabw_girder_sys_struct_def PRIMARY KEY (
        bridge_id, struct_def_id ) );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT R_2875
        FOREIGN KEY (deck_type)
        REFERENCES abw_sys_type );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT R_2679
        FOREIGN KEY (mbr_type)
        REFERENCES abw_sys_type );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT R_2554
        FOREIGN KEY (girder_spacing_display_type)
        REFERENCES abw_sys_type );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT R_2303
        FOREIGN KEY (dl_distribution1_type)
        REFERENCES abw_sys_type );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( CONSTRAINT R_2302
        FOREIGN KEY (dl_distribution2_type)
        REFERENCES abw_sys_type );

ALTER TABLE abw_girder_sys_struct_def
    ADD ( FOREIGN KEY (bridge_id, struct_def_id)
        REFERENCES abw_super_struct_def
        ON DELETE CASCADE );

ALTER TABLE abw_girder_sys_struct_def_fk
    ADD ( CONSTRAINT R_2585
        FOREIGN KEY (bridge_id, struct_def_id)
        REFERENCES abw_girder_sys_struct_def
        ON DELETE CASCADE );

CREATE UNIQUE INDEX XPKabw_gline_struct_def ON abw_gline_struct_def
(
    bridge_id          ASC,
    struct_def_id      ASC
);
```

4/19/2016 3:15:30 PM

HRS AASHTO

891

**Complete Issue Information**

```
ALTER TABLE abw_gline_struct_def
  ADD ( CONSTRAINT XPKabw_gline_struct_def PRIMARY KEY (
    bridge_id, struct_def_id) );
```

```
ALTER TABLE abw_gline_struct_def
  ADD ( CONSTRAINT R_2680
    FOREIGN KEY (mbr_type)
    REFERENCES abw_sys_type );
```

```
ALTER TABLE abw_gline_struct_def
  ADD ( FOREIGN KEY (bridge_id, struct_def_id)
    REFERENCES abw_super_struct_def
    ON DELETE CASCADE );
```

FROM:mordoobadi DATE:10/26/2001 10:29:29 AM  
 Created a PL/SQL script file named FixGUIBitmask41.SQL to fix the problem only if  
 GUI\_MBR\_TYPE\_BITMASK is of type FLOAT.  
 Included in the Virtis/Opis 4.1 Beta 2 Installation.

|                                    |
|------------------------------------|
| Issue ID: 3187                     |
| Subject: Null concrete railing ids |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 4/16/2001 7:26:29 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Assigned  | High     | Bug - GUI 1 |
|                 |           |          | Bug - GUI 2 |
|                 | Duplicate |          |             |
| Ihnat, Joseph   | Duplicate | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 3188.12161 | Closed        | Inverted PS Tee Beam |

**Description**

FROM:kkennelly DATE:4/16/01 3:20:29 PM

Attached bridge submitted on behalf of Travis Fox, ABMB. Somehow his db has some rows in abw\_conc\_railing\_loc that have null for the railing id in "sd for 175 span" and "sd for 75'span". Don't know how those rows got in db, can't reproduce. This causes the BWS report to crash when it tries to print the railing data since GetItem(0) returns a null pointer. Also can't run BRASS cause export tries to get railing with id = 0. I think the Structure Typ Section tabs might need revisited cause they fill up their railing lists with a railing name but an id=0.

FROM:jduray DATE:4/25/01 11:58:14 AM

FROM:kkennelly DATE:2/8/2005 1:12:25 PM  
Duplicate of 4971 which has been fixed in 5.1.1.

|                               |
|-------------------------------|
| Issue ID: 3188                |
| Subject: Inverted PS Tee Beam |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 4/17/2001 1:57:28 PM |
| Modified By: administrator     | 6/19/2008 4:06:01 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## Complete Issue Information

### History

| Primary Contact  | Status | Priority | Category  |
|------------------|--------|----------|-----------|
| Kennelly, Krisha | Closed | Urgent   | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Report Tool.bbd     |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3189.12160 | Closed        | Report Tool – Wrong Moment & Reactions |

### Description

FROM:dteal DATE:04/17/2001 09:57:29

Is an inverted PS Tee beam supported? If yes – do you use the narrow or wide top flange PS Shape and simply use the stem width in place of the top flange? According to our rating section, BRASS handles this (I am taking there word for it).

FROM:jduray DATE:4/23/01 2:29:10 PM

I don't know if this will work. I suspect the Strand Layout and Typical Section Schematic windows will have trouble drawing the shape. If that is the only difficulty we can correct it and away you go.

FROM:dteal DATE:Monday, March 28, 2005 8:21:48 AM

Works as long as you give it a small top flange the same width as the stem.

### Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 3189                                  |
| Subject: Report Tool – Wrong Moment & Reactions |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/17/2001 1:58:58 PM |
| Modified By: administrator        | 6/19/2008 4:06:01 PM |
| Priority: Urgent                  |                      |
| Category: Education               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Goodrich, Brian | Closed | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Bridge23.bbd        |             |

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3190.12159 | Closed        | Export formatting span lengths to different numbers |

### Description

FROM:dteal DATE:04/17/2001 09:58:59

Comparing Tabulated results in the "Analysis Results Window" to the results from the report writer. With the attached .bbd file – do a LRFD design review in Opis and compare the reactions and moments.

LL Fatigue Truck (SI) compares OK

LL HL-93 (SI) No reactions or moment values are the same when comparing Analysis Results with the Report Tool (LRFD Output, Reactions & Moment Summaries)

Where did the values for the Report Tool come from? which is correct – Report Tool or Analysis Results Table?

4/19/2016 3:15:31 PM

HRS AASHTO

895

**Complete Issue Information**

FROM:kkennelly DATE:4/18/01 9:33:37 AM

The values in the Report tool have the design lane load included. The Analysis Results table shows the live load actions individually for each vehicle within the HL93 (axle, tandem, truck train, lane).

FROM:kkennelly DATE:4/19/01 9:09:04 AM

Accepted based on A in track field.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3190                                               |
| Subject: Export formatting span lengths to different numbers |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 4/18/2001 1:21:50 PM |
| Modified By: administrator       | 6/19/2008 4:06:01 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:4/18/01 9:18:24 AM

Submitted on behalf of Travis Fox, ABMB. Attached bridge, Member G12. (Bridge imported from BARS.) Girderline span length entered as 30.40625'. 1 cross section over a range of 30.40625'.

4/19/2016 3:15:32 PM

HRS AASHTO

896

### Complete Issue Information

Export generates the Span A command with span length formatted to 30.4063'. Span C command generated with length = 30.4062'. BRASS won't run, says cross section area = 0 at span 1 point 20.

FROM:bgoodrich DATE:04/18/2001 17:45:23

The range distances are converted to inches or mm and stored by the export for later use. This may have contributed to the rounding problem. I modified the export (BrassStdSpans.cpp, BrassStdSpans.h, and BrassLrfdSpans.cpp), so the distances exported to BRASS span commands are adjusted to get rid of any rounding problems. This logic is similar to that for adjusting distances for BRASS schedule commands. The next service pack should address this issue.

Krishna - I sent the export files to Joe.

FROM:bgoodrich DATE:06/13/2001 08:00:12

Closed.

|                                 |
|---------------------------------|
| Issue ID: 3191                  |
| Subject: Analysis error message |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: fulton, keith        | 4/18/2001 8:37:26 PM |
| Modified By: administrator         | 6/19/2008 4:06:01 PM |
| Priority: High                     |                      |
| Category: Bug                      |                      |

### History

| Primary Contact   | Status           | Priority | Category |
|-------------------|------------------|----------|----------|
| Kennelly, Krishna | Not Reproducible | High     | Bug      |

## Complete Issue Information

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3193.12156 | Assigned      | Support Center Search |

### Description

FROM:kfulton DATE:04/18/2001 16:37:26

I created a girder line analysis for a prestressed girder. I then created a girder system with five girders. I copied the member alternative from the girder line to each girder in the girder system. When I run an analysis on the girder system, all girders will rate except the center girder (Girder #3) which gives the following error message:

Error filling general change point array!

02:39:42 PM - Line 2698 in source file D:\Virtis\GUI\abxbrass\BrassCmd.cpp.

Unable to determine the number of points of interest.

02:39:42 PM - Line 780 in source file D:\Virtis\GUI\abxbrass\BrassStdEngineData.cpp.

Unable to compute span length!

02:39:42 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

02:39:42 PM - Line 612 in source file D:\Virtis\GUI\abxbrass\BrassCmd.cpp.

Error computing span length!

02:39:42 PM - Line 1807 in source file D:\Virtis\GUI\abxbrass\BrassCmd.cpp.

Unable to get both left and right bearing distances!

02:39:42 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error getting bearing distances in CEngineExport!

02:39:42 PM - Line 5540 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

I have also attached the bbd file for the bridge.

FROM:kkennelly DATE:4/19/01 11:33:27 AM

Do you remember what steps you took to create the girder system structure definition? Did anything unusual occur when you entered the skews or girder spacing? The domain doesn't think Mbr 3 is long enough to intersect the support line 2 so you are getting the error about computing the span length.

4/19/2016 3:15:32 PM

HRS AASHTO

898

### Complete Issue Information

The values in the db for the locations of the girders at the first support line do not appear to have the girders starting in a straight line along the first support line.

As a workaround, I went to the Structure Def window, reentered the span length as 21.04, hit OK. Then went to the framing plan window, reentered the skews and girder spacings, hit OK, saved the bridge. Mbr 3 then ran ok. The values in the db then had the correct locations for the girders in a straight line along support 1.

Note to programmer: struc def ref lines for girders do not appear to be in a straight line at support 1. X and Z values for girder ref lines are not identical with opp signs like they should be. FindSpanByDistance() fails when it calls DoReferenceLine:FindIntersection() line 729. t <= DLength1 fails. I don't think it's a tolerance problem in the domain, domain code should stay as is but maybe we need to figure out how the non-symmetrical girders got into the database.

FROM:kfulton DATE:05/02/2001 16:37:36

We did not use the wizard to create the girder system. We did use the diaphragm wizard several times to get the correct layout. The work around fixed the problem.

FROM:kkennelly DATE:5/11/01 2:29:08 PM

I don't think there's anything else we can do with this incident until we are able to reproduce the steps that led to the mbrs not starting in a straight line along the first support line.

|                                |
|--------------------------------|
| Issue ID: 3193                 |
| Subject: Support Center Search |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Shah, Shyam      | 4/20/2001 2:51:10 PM |
| Modified By: administrator     | 6/19/2008 4:06:01 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | Assigned | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:15:32 PM

HRS AASHTO

899

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3195.12154 | Closed        | Printing the BWS report |

### Description

FROM:snshah DATE:04/20/2001 10:51:11

The number of incidents at the support center have reached a level that makes finding information very difficult. Would it be feasible to have a search option available?

FROM:jduray DATE:4/25/01 11:50:13 AM

I will investigate this.

Issue ID: 3195

Subject: Printing the BWS report

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

4/23/2001 1:54:29 PM

Modified By: administrator

6/19/2008 4:06:01 PM

Priority: Urgent

Category: Bug

4/19/2016 3:15:32 PM

HRS AASHTO

900



## Complete Issue Information

---

### History

| Primary Contact  | Status | Priority | Category |
|------------------|--------|----------|----------|
| Kennelly, Krisha | Closed | Urgent   | Bug      |
| Kennelly, Krisha | Closed | Urgent   | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 3196.12153 | Closed        | Acdademic Release 4.0.2 - Limit to Number of Spans Allowed not Working |

### Description

FROM:jduray DATE:4/23/01 9:47:40 AM

-----The following is from an e-mail from Chad Edward Grinsteiner:-----

When printing an entire bridge workspace or structure definition review report, the print status dialog box shows numerous pages being printed. Indeed, after the report is finished, Opis is printing out blank sheets. Opis seems to be caught in an infinite loop and won't stop until the user presses cancel and turns off the printer. It seems to work correctly if the user specifies the range of sheets to be printed.

----- end of e-mail -----

I verified this behavior on 4.0.2.

FROM:jihnate DATE:9/17/2001 3:00:01 PM

This is primarily a Windows 2000 problem: Windows NT uses Rich Edit 1.0 (riched32.dll), while Windows 2000 uses Rich Edit 2.0 (riched20.dll).

Microsoft's own Rich Edit sample program (reitp) exhibits the same behavior.

I added code in the BWS report that checks if we're running on Windows 2000, and if so a new GetTextLength is used.

A (known) side effect of this is that an extra blank page is printed at the end of the BWS report.

I also added Print Preview to the BWS report while I was making this fix (requested in incident 167).

4/19/2016 3:15:32 PM

HRS AASHTO

901

## Complete Issue Information

This should be tested on both Windows NT and Windows 2000.

FROM:dteal DATE:11/01/2001 16:35:38  
OK for Windows 2000

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 3196                                                                  |
| Subject: Acdademic Release 4.0.2 - Limit to Number of Spans Allowed not Working |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/24/2001 4:44:42 PM |
| Modified By: administrator        | 6/19/2008 4:06:01 PM |
| Priority: Urgent                  |                      |
| Category: Bug                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:04/24/2001 12:44:42

Using Sybase – Assumed that the user is limited to 3 spans.

In Wizard, I entered 5 spans (was able to proceed to next screen). Wizard created a Structure Definition with 5 members. I was able to analyze all 5 spans.

Limit to Number of Girderlines Allowed not Working

Using Sybase – Assumed that the user is limited to 10 girderlines.

I entered 11 in the wizard and was able to proceed.

4/19/2016 3:15:33 PM

HRS AASHTO

902

**Complete Issue Information**

FROM:jduray DATE:5/23/01 1:23:16 PM

The number of spans and the number of gorders need to be checked in the wizard.

FROM:kkennelly DATE:5/24/01 1:37:31 PM

Code added for service pack for 4.0.3

FROM:dteal DATE:Wednesday, April 03, 2002 10:05:11 AM

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3197                                                     |
| Subject: Academic Release - Limit to Number of Bridges in Database |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 4/24/2001 4:54:15 PM |
| Modified By: administrator     | 6/19/2008 4:06:01 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Bug      |
| Duray, Jim      | Closed | High     | Bug      |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3198.12151 | Closed        | Academic Release 4.0.2 - MSDE Installation |

**Description**

FROM:dteal DATE:04/24/2001 12:54:15

Using Sybase – I assumed that we could only have 30 bridges in the database. Including the samples the database was delivered with I now have 31 displayed in the Explorer Window.

FROM:jduray DATE:5/23/01 1:23:21 PM

There is no limit on the number of bridges for the academic version. Nor is there supposed to be a limit.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 3198                                      |
| Subject: Academic Release 4.0.2 - MSDE Installation |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 4/24/2001 6:02:09 PM |
| Modified By: administrator          | 6/19/2008 4:06:01 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

## Complete Issue Information

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Unknown  |
| Duray, Jim      | Closed | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3199.12150 | Closed        | Academic Release 4.0.2 – Uninstall |

### Description

FROM:dteal DATE:04/24/2001 14:02:12

Selecting a data source when logging on – what do you select? MSDE is not one of the choices.

FROM:mordoobadi DATE:8/2/01 4:32:42 PM

You should select an MSDE data source (Virtis40\_SQLServer or Virtis40s\_SQLServer).

## Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 3199                              |
| Subject: Academic Release 4.0.2 – Uninstall |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 4/24/2001 6:03:04 PM |
| Modified By: administrator     | 6/19/2008 4:06:01 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Resolved | High     | Unknown  |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Unknown  |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3200.12149 | Closed        | Academic Release 4.0.2 - MSDE Installation Progress |

## Description

FROM:dteal DATE:04/24/2001 14:03:04

Does not remove the Shortcut Icon from the workspace.

I had renamed the shortcut – so I would not confuse it with my “None Academic Release”. Did this hinder the removal of the shortcut icon?

FROM:jihnate DATE:4/25/01 7:58:39 AM

You are correct. The icon could not be removed by the uninstall because it was modified outside of

4/19/2016 3:15:33 PM

HRS AASHTO

906

**Complete Issue Information**

the installation process. (This is how the InstallShield installation software works.)

FROM:dteal DATE:04/26/2001 07:45:11

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3200                                               |
| Subject: Academic Release 4.0.2 - MSDE Installation Progress |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 4/24/2001 6:03:46 PM |
| Modified By: administrator     | 6/19/2008 4:06:01 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:04/24/2001 14:03:46

4/19/2016 3:15:34 PM

HRS AASHTO

907

**Complete Issue Information**

Needs a progress gas gauge so you know it is still running. (it takes a while and there is no screen activity)

FROM:jihnmat DATE:4/25/01 8:02:48 AM

The installation of MSDE gives no feedback to the installation program for there to be a gas gauge.

FROM:jduray DATE:4/25/01 11:34:26 AM

Joe - is this possible or reasonable to do?

FROM:jihnmat DATE:4/25/01 12:26:40 PM

The installation starts the MSDE installation program and then waits for it to finish. There is no way to know how far along the MSDE installation program is progressing.

What we do now is to display a message while the MSDE installation is running: "Installing MSDE now, please wait...". But this does run for a few minutes.

FROM:dteal DATE:04/26/2001 07:45:45

Food for thought - I thought it was locked up and was thinking about ctrl-alt-del and start over. Something - is needed to let the user know it's working.

FROM:jihnmat DATE:4/26/01 8:15:19 AM

I think the best we can do is to warn the user beforehand that the installation of MSDE will take several minutes.

FROM:jihnmat DATE:3/11/2003 8:49:57 AM

Added "This may take a few minutes..." to the message being displayed while MSDE is being displayed.

Done for version 5.0.0 Beta Build 6.

Issue ID: 3201  
Subject: Academic Release 4.0.2 – Installation Readme File

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 4/24/2001 6:04:34 PM  
Modified By: administrator 6/19/2008 4:06:00 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |



**Complete Issue Information**

|               |        |      |     |
|---------------|--------|------|-----|
| Ihnat, Joseph | Closed | High | Bug |
|---------------|--------|------|-----|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | JamesThomas940.bbd  |             |
|      | JamesThomas.bbd     |             |

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3202.12147 | Resolved      | Problem exporting diaphragms locations to BRASS |

**Description**

FROM:dteal DATE:04/24/2001 14:04:34

At the end of the installation user is asked if they want to see the readme file. The readme file it displays is for Version 4.0.0 current release, not 4.0.2 Academic Release.

FROM:jihnmat DATE:5/25/01 8:54:27 AM

The latest version 4.0 ReadMe file will be included with the Academic release. It will include a section that lists the limitations of the Evaluation and Academic releases. There is no ReadMe file specific to the Academic release.

FROM:dteal DATE:Friday, March 29, 2002 10:30:44 AM

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3202                                           |
| Subject: Problem exporting diaphragms locations to BRASS |

### Complete Issue Information

|                  |                        |                      |  |
|------------------|------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center |                      |  |
| Primary Contact: | Goodrich, Brian        |                      |  |
| Submitted By:    | Thomas, James          | 4/25/2001 5:37:49 PM |  |
| Modified By:     | administrator          | 6/19/2008 4:06:00 PM |  |
| Priority:        | High                   |                      |  |
| Category:        | Unknown                |                      |  |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Goodrich, Brian | Closed | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Wallace bridge.bbd        |             |
|      | Incident3203 17080001.zip |             |
|      | serv2_Wallace bridge.bbd  |             |

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3203.12146 | Closed        | Questions re: BRASS LRFD stress calculations |

### Description

FROM:bgoodrich DATE:04/25/2001 13:32:42

Opis is giving some error messages when trying to export diaphragm locations to BRASS. James tried re-entering the data but is still getting the same errors. See the attached BBD file (JamesThomas940.bbd).

FROM:bgoodrich DATE:04/25/2001 13:40:29

I was able to duplicate your problem. I am not exactly sure why you were getting the problem. I believe the diaphragm data was the source of the problem. I copied your structure definition "Steel Plate Girder" and then began making modifications. I changed the units to SI/Metric in the Structure Definition window and re-entered the span lengths. Then, I deleted all the diaphragms in every bay on the Diaphragms tab of the Structure Framing Plan Details window. Next, I entered the diaphragm locations manually for the first bay and clicked the Apply button. Then, I used the "Copy Bay To..." to

4/19/2016 3:15:34 PM

HRS AASHTO

910

### Complete Issue Information

copy the diaphragms from Bay 1 to the other bays. Finally, I launched an analysis and did not receive the bracing error. I suggest that you repeat the process I described above just to make sure I didn't miss something. Please let me know if this does not address the problem.

I have attached a BBD file (JamesThomas.bbd) containing my version of your structure definition (see "Steel Plate Girder (Brian Goodrich)". Reverse the export process by using the File>Import menu item and select my BBD file. When the bridge is imported, it is not saved to the database until you manually save it. Be careful not overwrite your existing bridge with this BBD file.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3203                                        |
| Subject: Questions re: BRASS LRFD stress calculations |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 4/26/2001 1:45:40 PM |
| Modified By: administrator       | 6/19/2008 4:06:00 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:4/26/01 9:44:05 AM  
Submitted on behalf of Mike Hurd, Wallace Engineering:

I have a question concerning the Opis/Virtis software. I am designing a 3 span, composite steel girder bridge in LRFD. The bridge file is attached per our phone conversation today. My question is in regard to the Steel

4/19/2016 3:15:34 PM

HRS AASHTO

911

## Complete Issue Information

Limit State Summary Report.

-How are the actual stresses derived? I tried matching the dead and live load stresses for Strength I and have gotten lower stresses.

For example, for Stage 3, short term composite, Strength I, member 2 stresses at interest point 2-

1) I took the unfactored dead moments and controlling live load moment from the Actions Reports and divided by the steel flange section modulus (composite elastic properties in output file) to get unfactored stresses. The live load moments in the reports are noted as including the distribution factors and impact factor.

2) The appropriate load factors were applied to the stresses (Stage 1 dead loads x 1.25, barrier load x 1.25, wearing surface x 1.5 and live load x 1.75 per Factors - LRFD input) and the stresses summed.

3) The Strength I load modifier (found in the Factors -LRFD input section) was then applied to determine the dead and live load factored stresses. Note: I changed the modifier values on another model run and the stresses did not change. Is the modifier used in determining the actual stresses?

The stresses I calculated were lower than the actual stresses listed in the summary. If you can be of assistance in explaining the how the stresses are determined, it would be appreciated. Let me know if you need any additional information.

FROM:kkennelly DATE:4/26/01 9:49:54 AM

Item 3: In Opis you have to specify that you want to override the default system LRFD factors. This is done on the Structure Definition: Analysis tab. Check the Factor Override LRFD box on that tab and then select the factors that you want used in the LRFD factors list box. When BRASS is run in Opis, a log file containing the BRASS input commands and comments about assumptions is produced. If you do not override the factors on the Structure Definition: Analysis tab, you will see a comment in this log file before the FACTORS-LOAD commands that says "COMMENT Using system default LRFD load factors." If you do override the factors this comment will say something like structure def override factors used.

Serv2\_wallacebridge.bbd file attached is for Version 4 Service Pack 2.

FROM:bgoodrich DATE:04/26/2001 14:31:29

BRASS sums the DC, DW, and LL moments in each stage and factors them accordingly. BRASS considers both maximum and minimum dead load factors and finds the critical maximum and minimum moment at each point. BRASS looks at the sign of the moment to determine which section properties to use (positive or negative). To compute stresses, BRASS divides the moment for each stage by the appropriate section modulus. Finally, BRASS sums the stresses for use in design ratio or rating factor computations.

If you still question the results produced by BRASS, please send me your hand or spreadsheet computations. Also, include the span and point and the vehicle (HL-93 Axle+Lane, HL-93

4/19/2016 3:15:35 PM

HRS AASHTO

912

**Complete Issue Information**

Tandem+Lane, HL-93 Train+Lane).

FROM:bgoodrich DATE:04/27/2001 10:40:06

Michael sent me the attached fax (Incident3203 17080001.zip). BRASS is reporting only the critical flange, in this case the bottom (compression) flange for the 200.0 POI. Mike comps were for the top (tension) flange. Also, Mike's hand comps did not factor the truck train plus lane load by 90%.

FROM:bgoodrich DATE:04/27/2001 10:41:29

Submitted on behalf of Mike Hurd, Wallace Engineering:

I have found the controlling strength 1 stresses to be for the compression flange and not the tension flange as originally assumed. The stresses I calculated match the file output. Thank you for your prompt response to my inquiry.

FROM:bgoodrich DATE:05/17/2001 17:32:38

|                         |
|-------------------------|
| Issue ID: 3205          |
| Subject: Output summary |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 5/1/2001 12:52:36 PM |
| Modified By: administrator     | 6/19/2008 4:06:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | InterceptImportFailure.txt |             |
|      | VI 3205 Std100e.res        |             |
|      | VI 3205 std4-95i.OUT       |             |

**Tasks**

4/19/2016 3:15:35 PM

HRS AASHTO

913

## Complete Issue Information

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3205.12144 | Suspended     | Output summary               |
| 3207.12142 | Closed        | Exceed Max Number of Girders |

## Description

FROM:jduray DATE:5/1/01 8:50:14 AM

I received the following e-mail from Chad Grinsteiner of White Engineering Assoc.

-----begin e-mail -----

Jim, Brian & Jay:

Thank you for your attention into our concerns about reports within Opis. We understand Oklahoma DOT is very interested in using Opis/Virtis as a long term design/rating solution, so we hope our feedback helps you to meet ODOT's needs as well as our own.

In its simplest form, what we would like to see is a SINGLE report to provide documentation, or "snapshot", of the input and results. This would provide the designer a means to communicate with a checker, reviewer, detailer and/or client the information available to and used by the designer. This documentation would be referenced to and relied upon during the design phase much like a contractor uses a signed and sealed set of plans during the construction phase.

This report documentation would contain: information to verify correct input, some basic analysis results (to aid in the design of substructure elements, to help derive independent checks of the engine, to perform checks not done by the engine, and to aid in detailing), and concise design results to indicate the design meets the specifications. This allows the design checker/reviewer to be reassured that the input being checked matches the output, and the detailer to be certain that what is being drawn matches what is intended by the designer.

Ideally, this would all be contained in as minimal of output as possible. This aids in reviewing the design and prevents "information overload" while wading through a sea of numbers for something simple.

Jay, you brought up a good point about how report inconsistency isn't much different in other software, and I largely agree with you. However, most of the programs have somewhat simple reporting features (even when compared to Opis in its current state) where the input is echoed in a simple ASCII output file which is generated every time the program is run. This simplistic model does have a level of unintended "security" in that the input echoed in the output report is "locked" with the results. If someone were to change the input, the new results would not be available until the program is run again. The new output would then also contain an echo of the new input. The new input is always available to compare to a previous

4/19/2016 3:15:35 PM

HRS AASHTO

914

## Complete Issue Information

analysis report's input for changes. Furthermore, having such documentation would be beneficial in verifying input has not been altered when output "suddenly" appears different, such as when an analysis engine has been updated.

As a side note, Integrated Engineering Software's Visual Analysis has a nice feature where the program warns the user whenever an change in input will affect the results. If the user continues with the change, the program purposely "loses" the previous analysis results that were affected. The user is then forced to re-run the analysis and a version number of the analysis is updated and stored along with the date and time when the analysis was performed. It is the responsibility of the user, however, to produce reports which contain both the input and results. Currently, Opis provides no indication that the current bridge workspace matches the current analysis information, inviting human errors related to: "I swore I re-analyzed after I changed that."

Also, I believe Opis/Virtis was developed with the "paperless" office in mind where designers would share the database information, and not reams of paper. I sympathize with that goal and I am not trying to dilute that goal. However, there should be a simple, concise, yet thorough, "master design document" which is easily transferable, either by hardcopy or electronic means. The \*.xml reports currently generated seem to support both mediums. Perhaps enabling the database to store such (smaller) files would be beneficial since storing results to the database is inefficient at this point.

As for the detailed content of this so-called "master design document", what we would like to see probably is not satisfactory for others, which puts software writers like yourself in an undesirable position. Opis has some customizable output levels in the analysis reports, and this philosophy could be extended to an all-inclusive report, which you probably have already decided upon. The end user is then at least partially responsible for the size of the final report (depending upon how much scalability is provided by the software). While this may be asking much at this point, such a function is in line with many of advanced features available in a piece of software like Opis/Virtis.

A listing to help you understand what we look for during typical designs follows. An "R"(equired) indicates we need this info for every design, while an "O"(ptional) shows we occasionally need this info.

Steel Girders:

1. Echo of input (include analysis version, date, time and engine version)(R)
2. Calculated section properties (non-composite, short-term composite, long-term composite)(O)
3. Calculated distribution factors (moment, shear, fatigue, deflection)(O)
4. Calculated loads not input (slab, FWS, railings)(O)
5. Total unfactored DC analysis results at span points (moment, shear,

4/19/2016 3:15:35 PM

HRS AASHTO

915

## Complete Issue Information

deflection)(O)

6. Total unfactored DW analysis results at supports (reaction, rotation)(R)

7. Total unfactored DC analysis results at span points (moment, shear, deflection)(O)

8. Total unfactored DW analysis results at supports (reaction, rotation)(R)

9. Total unfactored HL-93 analysis results at span points (moment, shear, deflection for axle, lane, impact)(R)

10. Total unfactored HL-93 analysis results at supports (reaction, rotation for axle, lane, impact)(R)

Note: Indication of controlling axle effect for HL-93 (i.e. tandem or design truck) is helpful.

11. Total unfactored P(ermit) V(ehicle) analysis results at span points (moment, shear, deflection for axle, lane, impact)(R)

12. Total unfactored PV analysis results at supports (reaction, rotation for axle, lane, impact)(R)

13. Total factored limit state results at section points (O)

14. Constructibility/slenderness status at span points (R)

15. Composite and non-composite flexural capacities at span points (R)

Note: Calculation of % utilization is helpful (i.e. max. factored effect/capacity)

16. Service II limit state status at span points (R)

17. Fatigue limit state status/categorization at span points (R)

18. Maximum web stiffener spacing (or shear capacities) at span points (R)

19. Maximum shear connector spacing (based on strength and fatigue) at span points (R)

Merlin-DASH is a decent example for a design report. DASH has only two levels of output (minimal or detailed), and we find the minimal report meets most of our needs. I've attached an example of the minimal report for your use (std100e.res in ASCII format). Some comments for the minimal report can be listed as follows:

1. Page breaks waste space.
2. Echo of card-based type input is rather dated for today's technology and isn't well-suited for checking. Less passive format is easier to interpret.
3. Explanation of input parameters (necessary for card based input) is helpful, but consumes valuable output space.
4. No section properties available.
5. No reaction output without impact (needed for elastomeric bearing design).
6. Stress output at limit states (other than Service II) is not needed.

Prestressed Concrete Girders:

1. Echo of input (include analysis version, date, time and engine version)(R)
2. Calculated section properties (non-composite, short-term composite, long-term composite) (O)
3. Calculated distribution factors (moment, shear, fatigue, deflection)(O)
4. Calculated loads not input (slab, FWS, railings)(O)



## Complete Issue Information

5. Total unfactored DC analysis results at span points (moment, shear, deflection)(O)
  6. Total unfactored DW analysis results at supports (reaction, rotation)(R)
  7. Total unfactored DC analysis results at span points (moment, shear, deflection)(O)
  8. Total unfactored DW analysis results at supports (reaction, rotation)(R)
  9. Total unfactored HL-93 analysis results at span points (moment, shear, deflection for axle, lane, impact)(R)
  10. Total unfactored HL-93 analysis results at supports (reaction, rotation for axle, lane, impact)(R)
- Note: Indication of controlling axle effect for HL-93 (i.e. tandem or design truck) is helpful.
11. Total unfactored P(ermit) V(ehicle) analysis results at span points (moment, shear, deflection for axle, lane, impact)(R)
  12. Total unfactored PV analysis results at supports (reaction, rotation for axle, lane, impact)(R)
  13. Total factored limit state results at section points (O)
  14. Initial concrete stresses at transfer (R)
  15. Anchorage zone stirrup checks (R)
  16. Debonded strand detailing checks (R)
  17. Final concrete stresses under dead and prestress loads only at span points (R)
  18. Final concrete stresses under 1/2 DL & PS plus live load at span points (R)
  19. Final concrete stresses under dead and live load at Service III limit state at span points (R)
  20. Composite and non-composite flexural at span points (R)
- Note: Calculation of % utilization is helpful (i.e. max. factored effect/capacity)
21. Minimum and maximum reinforcing limits at span points (R)
  22. Cracking moment computations at span points (especially debonded zones) (R)
  23. Maximum beam stirrup spacing (or shear capacities) at span points (R)
  24. Maximum interface stirrup spacing at span points (R)
  25. Summary of prestress losses (R)

PennDOT PSLRFD has a good example for a design report. PSLRFD has scalable levels of output. I've attached an example of a typical report for your use (std4-95i.out in ASCII format). Overall, the PSLRFD output has sufficient information in an easy to find format. The only complaints we have are that the page breaks waste space and some arrangement of output does not make efficient use of the sheet (necessitating more sheets).

Jim, I understand from our phone conversation that Opis/Virtis will begin to have better report capabilities starting with the November 2001 release for input and the 2002 release for analysis and design results. I hope this information will help you. If you should have any questions about these issues or would like some additional feedback for reports, please feel free to write back or call at 405-528-4074.

Thank you for listening,

4/19/2016 3:15:35 PM

HRS AASHTO

917

**Complete Issue Information**

Chad Edward Grinsteiner, P.E.  
Project Engineer  
White Engineering Associates, Inc.

----- end of e-mail -----

|                                       |
|---------------------------------------|
| Issue ID: 3207                        |
| Subject: Exceed Max Number of Girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/1/2001 4:24:15 PM  |
| Modified By: administrator     | 6/19/2008 4:06:00 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Unknown  |
| Duray, Jim      | Closed | High     | Unknown  |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:05/01/2001 12:24:16

Why does the Wizard allow me to enter 50 girders when BRASS can not handle it?

The number of transverse girders exceeds the maximum allowed by BRASS!

No. of Girders = 50 (Maximum = 30)

**Complete Issue Information**

I entered 50 girders in a 2 span rolled beam structure using the Wizard. This is the max number of girders allowed in the pick list. V/O displays the structure properly – but you will not be able to run an analysis, see above message from V/O.

Should the user be allowed to enter more girder lines than the engine can handle?

FROM:dteal DATE:05/01/2001 15:12:19  
Is it stated anywhere what is the max number of girderlines?

FROM:dteal DATE:05/01/2001 15:19:53  
I found the same thing is true about number of spans.

No. of spans = 50 (Maximum = 13)  
The number of spans exceeds the maximum allowed by BRASS!

I put in 50 spans from the pick list, but the max allowed is 13.

It seems to me that the user could waste time entering data that the program will not handle. User should at least be warned if not stopped during the data entry process.

FROM:jduray DATE:5/1/01 4:31:22 PM  
Remember - Virtis/Opis is written such that other engines can be used. Therefore, we cannot restrict Virtis/Opis to what BRASS can do. Most of the BRASS limitations are listed in the BRASS help files.

FROM:dteal DATE:05/02/2001 08:35:54

Issue ID: 3208  
Subject: Analysis Progress Window – Print Selection

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 5/1/2001 4:49:04 PM  
Modified By: administrator 6/19/2008 4:06:00 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Assigned  | High     | Bug - GUI 2 |
|                 | On Hold   |          |             |
|                 | Suspended |          | Enhancement |

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | Suspended | High | Enhancement |
|------------|-----------|------|-------------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3209.12140 | Closed        | Problem with abw_person |

**Description**

FROM:dteal DATE:05/01/2001 12:49:04

Can not use the "Print Selection" option in the Analysis Progress Window. I highlighted the text I wanted and then hit the Print Button. Print Selection was not available.

FROM:mordoobadi DATE:5/1/01 5:04:28 PM

What do you mean by Print Selection?  
There is no Print Selection button on the window.

FROM:dteal DATE:05/02/2001 08:37:03

After you run an Analysis – There is PRINT button at the lower right corner of the Analysis Progress Window.

If you:

1. First highlight some of the text from this window you would like to print
2. Click on the Print button (lower Left)
3. Microsoft Windows will bring up a Print window. In the middle left area there will be 4 radio buttons (Print All, Current Page, Selection and Page #'s)
4. Of these 4 selections, only "Print All" is available. I would like to print only the highlighted (selected) text.

FROM:mordoobadi DATE:8/8/01 1:31:29 PM

Jim, please advise. Please set the priority for this incident.

FROM:jduray DATE:4/12/2005 11:48:38 AM

We should open the Print Dialog to allow the user to select what (All or Selection) and where it should be printed.

|                |
|----------------|
| Issue ID: 3209 |
|----------------|

4/19/2016 3:15:36 PM

HRS AASHTO

920

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Subject: Problem with abw_person    |                      |
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 5/1/2001 9:04:21 PM  |
| Modified By: administrator          | 6/19/2008 4:06:00 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | Accepted | Medium   | Education |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 3210.12139 | Accepted      | Windows 2000 |

### Description

FROM:mordoojadi DATE:5/1/01 4:44:11 PM

Gale Barnhill reported a problem that rises when he added list folders containing bridges with big bridge\_id values (e.g. 31000000).

Symptoms:

- \* After creating the folder Configuration Browser will not open.
- \* If Virtis is shut-down and restarted a message will show-up saying "Access might be limited..."

The problem is because of smallint datatype for person\_id in abw\_person.

We get the error because in the where clause of the view abw\_v\_users\_group we have

```
abw_group_item.item_id=abw_person.person_id
```

which compares an integer with a smallint.

For now the View could be changed as follows as a work-around (in Sybase):

```
abw_group_item.item_id=convert(integer,abw_person.person_id)
```

We need to change the datatype for person\_id from smallint to integer.

4/19/2016 3:15:36 PM

HRS AASHTO

921

**Complete Issue Information**

FROM:jduray DATE:5/17/01 1:08:20 PM  
Make this change for 4.1.

FROM:mordoobadi DATE:8/8/01 11:53:25 AM  
Fixed.

FROM:dteal DATE:11/01/2001 16:40:52  
Accepted

|                       |
|-----------------------|
| Issue ID: 3210        |
| Subject: Windows 2000 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Thompson, Todd   | 5/2/2001 1:39:01 PM  |
| Modified By: administrator     | 6/19/2008 4:06:00 PM |
| Priority: Medium               |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tthompson DATE:05/02/2001 09:39:01  
Is Virtis/Opis 3.x or 4.x compatible with Windows 2000?  
If not, when will we have a product Windows 2000 compatible?

**Complete Issue Information**

Sounds like our state will be migrating to Windows 2000 after July 1 of this year and I'm trying to see what problems or conflicts we may (or may not) have.

FROM:jduray DATE:5/3/01 10:50:01 AM  
Version 4.0 works with 2000.

|                                 |
|---------------------------------|
| Issue ID: 3211                  |
| Subject: Existing and Current ? |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Koenig, David         | 5/3/2001 8:26:17 PM  |
| Modified By: administrator          | 6/19/2008 4:06:00 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

4/19/2016 3:15:36 PM

HRS AASHTO

923

## Complete Issue Information

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 3212.12137 | Resolved      | Stiffener Wizard doesn't add rows to the stiffener ranges (sometimes) |

### Description

FROM:dkoenig DATE:05/03/2001 16:26:18

Recently I have looked into the meaning of checking an alternative existing or current. This is what I have come up with.

Bridge Alternative and Structure Alternative levels

Existing – if checked, this alternative will be rated during an analysis whether the analysis is done inside the Workspace or outside in the Explorer.

Current – Has no purpose at this point?

Member Alternative

Inside the Workspace: The current member is rated (i.e. an Analysis Event will be stored). If the current member is not checked as existing; Tabular Results cannot be viewed for that member, the Charts option is disabled, and the Bridge Output will not overwrite the last accurate rating.

The current member will be displayed in the Structure Typical Section schematic.

Outside the Workspace: The existing member is rated (i.e. an Analysis Event is stored). If the existing member is not checked as the current member, the member will not be listed in the Ratings Results.

Is this how these labels were intended to be used? It would make sense that the current member should be the new member, structure, or bridge that is currently being worked on. These new alternatives should not affect the ratings occurring outside the workspace. Also, it would make sense that the current member should have all the analysis functionality available to it inside the workspace. I expect that the intended use of the current label is not to just view schematics.

I would appreciate any comments you have about this issue. Maybe I am missing something in the big

4/19/2016 3:15:36 PM

HRS AASHTO

924



**Complete Issue Information**

picture.

FROM:jduray DATE:5/4/01 8:23:34 AM

If what you say about the functionality associated with current is true then it has not been coded properly. Current is supposed to be just for schematics. A future feature will be to select which to use for analysis when inside the BWS. For now though, only the schematics should be using Current.

Joe - please check this. Also check that the Help properly defines the use of Existing and Current.

FROM:mordoobadi DATE:10/19/2001 1:31:07 PM

There was a problem in the rating. If there was a member with two different member alternatives one set as existing and the other is set as current, when we analyzed the member the existing member alternative was analyzed, but the rating results object was set inside the current member alternative tree item not the existing. It is now fixed.

FROM:mordoobadi DATE:10/31/2001 3:13:20 PM

Fixed.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 3212                                                                 |
| Subject: Stiffener Wizard doesn't add rows to the stifferen ranges (sometimes) |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Duray, Jim          | 5/9/2001 10:08:38 PM |
| Modified By: administrator        | 6/19/2008 4:06:00 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:jduray DATE:05/09/2001 18:08:39

Alabama training - R. Fulton could not get the stiffener wizard to add rows to the grid. the structure def was created using the SD wizard. Others in the class were able to use the stiffener wizard.

For Robert the wizard would open, he could select the stiffeners to use and then click Apply and the dialog closes but no rows are added.

FROM:jduray DATE:05/10/2001 08:55:29

We found that Robert did not define diaphragm locations. I think the wizard should let the user know that there are no diaphragm and therefore can't add stiffeners.

FROM:kkennelly DATE:7/16/01 3:30:41 PM

Added warning to user if no diaphragms exist. Added to Version 4.1

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 3213                                            |
| Subject: Can not view timber material info in the library |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 5/11/2001 2:17:31 PM |
| Modified By: administrator          | 6/19/2008 4:06:00 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:37 PM

HRS AASHTO

926

**Complete Issue Information**

|                    |          |      |     |
|--------------------|----------|------|-----|
| Ordoobadi, Mehrdad | Resolved | High | Bug |
|--------------------|----------|------|-----|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 3215.12134 | Resolved      | Structure Definition Wizard Improvements - Set the LFD analysis modules |

**Description**

FROM:jduray DATE:5/11/01 10:09:43 AM

Alabama could not view the list of timber materials in the library.

While I was visiting AL DOT for a Virtis workshop I checked their Oracle installation. The message they were getting indicated that the table or view used by DmVLibMatITimberSawnList did not exist. I found that the abw\_v\_lib\_matl\_timber\_sawn public synonym was missing. I created it and that fixed the problem. I checked for other missing synonyms for views and found that public synonym for abw\_v\_lib\_timber\_rect\_beam\_shape was also missing.

If they continue to have similar problems we should have them run the sql script that creates public synonyms.

Mehrdad - please review our scripts and instructions to determine why these two synonyms were missing.

FROM:mordoobadi DATE:5/14/01 9:51:39 AM

The instructions in the readme.txt file tells them to create public synonyms.

The migration scripts [MigrateOracle401.SQL] that we provided for patch 4.0.1 has scripts to create some new public synonyms but it does not have all of them.

I think that they might have used that script.

Issue ID: 3215

Subject: Structure Definition Wizard Improvements - Set the LFD analysis modules

4/19/2016 3:15:37 PM

HRS AASHTO

927

## Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Goodrich, Brian     | 5/17/2001 4:53:15 PM |
| Modified By: administrator        | 6/19/2008 4:06:00 PM |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 3216.12133 | Closed        | Problem with Clear button in Analysis Settings window |

## Description

FROM:bgoodrich DATE:05/17/2001 12:53:16

Consider the following enhancements for the structure definition wizard:

1. When a symmetrical structure is defined, member alternatives should only be created for the left exterior and first interior members. The others should be "linked". Then, if the girders are slightly different, the user only needs break the link and copy a member alt to the new member.

2. Set all analysis modules, not just LRFD. Users that design with LRFD still have to rate the structure with LFD. The user should not have to manually set these for each member alternative window in every structure definition in every bridge in which this was not done.

FROM:jduray DATE:5/17/01 1:27:29 PM

4/19/2016 3:15:37 PM

HRS AASHTO

928

**Complete Issue Information**

There is another enhancement request to add the option for the user to select whether to link or generate members.

FROM:kkennelly DATE:7/2/01 10:25:19 AM  
1 is the same as incident 2481 which has been done for version 4.1

FROM:kkennelly DATE:5/8/2003 3:16:09 PM  
2 done for Version 5.0, Service Pack 1

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 3216                                                 |
| Subject: Problem with Clear button in Analysis Settings window |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Goodrich, Brian       | 5/17/2001 5:01:34 PM |
| Modified By: administrator          | 6/19/2008 4:06:00 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bgoodrich DATE:05/17/2001 13:01:36  
In Analysis Settings window, a user selected the Clear button. This removed all vehicles from the analysis. Then, the user added a vehicle to the Design Loads group, clicked the OK button, and tried to run an analysis. BRASS issued an error that the Scale Factor parameter could not be zero. I repeated the process above but pressed the Advanced button to view the Vehicle Properties window for the added vehicle. After pressing the Clear button, it appears the scale factor is set to zero for all vehicles manually added to the analysis. If a template is opened after pressing the Clear button, there

**Complete Issue Information**

are no problems even if additional vehicles are added.

FROM:mordoobadi DATE:11/7/2001 1:57:24 PM  
Fixed.

FROM:bgoodrich DATE:12/15/2001 11:41:59  
Accepted.

|                                                 |
|-------------------------------------------------|
| Issue ID: 3217                                  |
| Subject: Flexural stress rating factors missing |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Goodrich, Brian       | 5/17/2001 5:04:08 PM |
| Modified By: administrator          | 6/19/2008 4:06:00 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug      |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 3218.12131 | Duplicate     | Filter rating factors displayed in Virtis to actions users want to rate for |

### Description

FROM:bgoodrich DATE:05/17/2001 13:04:11

An engineer at a short course for Vermont Agency of Transportation discovered the following problem. Here are the steps I took to duplicate it. I analyzed a composite steel girder system with 70 ksi steel with Opis. In the Results Graph window, I checked the Moment -> Rating Factor -> "Min. Envelope" checkbox to view the critical rating factors, however, nothing appears in graph. When the >50 ksi steel is used (for a composite girder), the flexural resistance is specified in terms of stress (not moment) as outlined in the LRFD spec. BRASS appears to be writing to the results object correctly, i.e., the appropriate null bitmasks are being used when flexural stresses are reported. I think rating factors computed from flexural stresses should be reported in addition to any rating factors from flexural moments. Also, within the same bridge, a flexural stress resistance may be applicable at one point while a flexural moment resistance is applicable at another.

FROM:gbarnhill DATE:11/02/2001 11:29:18

Will this be resolved for V410 Beta 3 ????

FROM:mordoobadi DATE:11/6/2001 2:57:22 PM

I discussed with Brian on how we want to show the results in the Tree and Graph. We decided that tree should stay as is and results for both Flexural Moment and Flexural Stress Rating Factors be displayed under Moment Rating Factors.

Fixed.

FROM:gbarnhill DATE:12/14/2001 15:12:38

V410 Rel Candidate 1 - Here's a V410 bbd. Opis Spec Check is not finding the most critical RATING FACTORS.

I'm seeing a failing RF at the support, but it's not the most critical. This structure is an unfinished design, so lots of things fail. The graph doesn't pick up all the checks to find the most critical. There are failing RF at other 10th points that don't show up.

FROM:bgoodrich DATE:12/15/2001 15:02:34

I have verified that the flexural stress rating factors are now shown in 4.1 RC1. This incident has been addressed.

4/19/2016 3:15:38 PM

HRS AASHTO

931

### Complete Issue Information

I think Gale's comments are important and should be entered as a new incident. The graph seems to be limited to showing only flexure and shear rating factors (and these are only for the strength limit states). Each rating factors is written to the spec check object, which show up as a fail when less than zero. The graph should be modified, so the rating factors are not tied to an action (moment, shear, etc.). There should be new tree items specifically for Design Ratios and Rating Factors, with the appropriate sub-tree items.

FROM:gbarnhill DATE:12/17/2001 14:10:47

V410 Rel Candidate 1 - I agree with Brian's comments. The original problem is corrected as stated since the graph picks up the moment rating factors. I'll put in a new incident for the modification to pick up all catagories of rating factors.

FROM:mordoobadi DATE:12/17/2001 3:46:27 PM

Accepted by Gale.

New Incident Created 3547.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 3218                                                                       |
| Subject: Filter rating factors displayed in Virtis to actions users want to rate for |

|                                        |                      |
|----------------------------------------|----------------------|
| Folder: /Virtis/Support Center         |                      |
| Primary Contact: Generated, task force |                      |
| Submitted By: Kennelly, Krisha         | 5/17/2001 7:13:29 PM |
| Modified By: administrator             | 6/19/2008 4:38:36 PM |
| Priority: High                         |                      |
| Category: Enhancement                  |                      |

### History

| Primary Contact       | Status    | Priority | Category    |
|-----------------------|-----------|----------|-------------|
| Generated, task force | Duplicate | High     | Enhancement |
| Generated, task force | Duplicate | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:15:38 PM

HRS AASHTO

932



## Complete Issue Information

### Description

FROM:kkennelly DATE:5/17/01 2:51:16 PM

Request from Sylvester Yongho of Stone & Webster to not let serviceability control the rating of a bridge. Several other users have made similar requests to not let the bearing stiffeners control the rating either (they are attached to this incident).

Solution to this would be to let the user filter the Rating Results Summary for the actions that they want to see. For example, they could pick flexure and shear but not choose to see serviceability or bearing stiffeners.

Add a type to the rating results summary table to indicate what action controls. Types would be flexure, shear, serviceability, etc. Types would be added for results currently in database, they would be minimum BRASS shear, minimum BRASS flexure, etc. These types would have to be extracted from the string currently stored that lists the controlling action. We would also need a table to store all of these types.

The rating results summary table now only stores the minimum rating factor. We would need to store the minimum based on each action type.

GUI has to be modified so user can filter on displayed actions. Domain would actually do the filtering of the list.

FROM:kkennelly DATE:5/17/01 3:38:12 PM

FROM:jduray DATE:8/26/2003 11:34:43 AM  
Same as 2513.

FROM:jduray DATE:8/26/2003 11:52:39 AM  
Same as 2513.

|                                      |
|--------------------------------------|
| Issue ID: 3220                       |
| Subject: Inverted Prestressed T Beam |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/18/2001 3:47:16 PM |
| Modified By: administrator     | 6/19/2008 4:05:59 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Bug      |

4/19/2016 3:15:38 PM

HRS AASHTO

933

**Complete Issue Information**

|            |        |      |     |
|------------|--------|------|-----|
| Duray, Jim | Closed | High | Bug |
|------------|--------|------|-----|

**Contacts**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3227.12122 | Resolved      | Switch STRUCTDEFS and BRIDGEALTS on BWS tree |

**Description**

FROM:dteal DATE:05/18/2001 11:47:17

In attempting to do a Inverted Prestressed T beam (18 beams) I get the following error message:

Error generating LFD/ASD deck commands!  
.bbd attached

FROM:dteal DATE:05/18/2001 11:50:34

What is the message referring to?

FROM:bgoodrich DATE:05/18/2001 15:41:40

The additional error messages were written to a GENERAL message object instead of an ERROR message object. I corrected the export (BrassStdDeck.cpp and BrassLrfdDeck.cpp) accordingly. This should be available in Service Pack 3.

The structure attached to this incident contains 18 members, however, BRASS-GIRDER only supports 13. Therefore, a girder system structure definition cannot be used for this structure. Note that a request to increase the number of transverse members has already been logged on Incident 2586.

Also, I tried to run this bridge with BRASS LRFD and received an engine-generated error. The cross section command assumes an I shape for a P/S I beam and requires dimensions accordingly. Virtis/Opis nor BRASS LRFD directly support an inverted T, so users may have to move a portion of the web to the top flange dimensions when the shape is defined. BRASS may not analyze shapes that do not conform to those directly supported by Virtis/Opis.

FROM:jduray DATE:5/21/01 12:46:01 PM

I'm marking this as resolved since the "bug" part is fixed for 4.0.3. The rest is informational.

FROM:bha DATE:05/24/2001 13:17:14

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3227                                        |
| Subject: Switch STRUCTDEFS and BRIDGEALTS on BWS tree |

4/19/2016 3:15:39 PM

HRS AASHTO

934

**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Duray, Jim          | 6/6/2001 6:24:12 PM  |
| Modified By: administrator        | 6/19/2008 4:05:59 PM |
| Priority: High                    |                      |
| Category: Change Request          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3228.12121 | Closed        | Version 4.0 Patch 4 |

**Description**

FROM:jihnmat DATE:6/6/2001 2:21:02 PM  
Jim requested (due to user requests) that the positions of STRUCTDEFS and BRIDGEALTS be switched on BWS tree.

FROM:jihnmat DATE:6/6/2001 2:45:58 PM  
GUI has been updated.  
Krisha, documentation will need to be updated.

FROM:kkennelly DATE:10/30/2001 10:30:02 AM  
We show the tree a couple places in Help and User's Manual. They have been revised. All the documentation for training will need updated for 4.1 anyway.

## Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 3228               |
| Subject: Version 4.0 Patch 4 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 6/7/2001 2:14:51 PM  |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

Testing Instructions:

FROM:kkennelly DATE:6/7/01 10:32:59 AM

For Incident 3222: test if domain correctly generates parabolic web depth for cross sections sent to export. Test for cases where adjacent web range is linearly varying web depth.

4/19/2016 3:15:39 PM

HRS AASHTO

936

## Complete Issue Information

FROM:kkennelly DATE:6/8/01 11:25:57 AM

For incident 3229: test if cross sections generated by domain for export to BRASS properly include 0's and nulls.

FROM:kkennelly DATE:6/11/01 1:02:42 PM

For incident 3239: Test steel cross section cover plates and schedule cover plates. Relative position changed. Validation added to check for duplicate relative positions. Schedule based validation checks for duplicate rel positions over the same range.

FROM:kkennelly DATE:6/12/01 1:14:31 PM

For incident 3231: test if struc def wizard sets humidity for structure defs.

### Build Instructions:

FROM:kkennelly DATE:6/11/01 1:02:42 PM

Incidents 3222 & 3239: abobrdg.dll

Incident 3239: abgstl.dll and abgstl3.dll, VirtisOpis.hlp

FROM:kkennelly DATE:6/12/01 1:14:31 PM

Incident 3231: abgbrdg.dll

### Delivery Instructions:

### Other:

FROM:mordoobadi DATE:6/20/01 4:06:10 PM

For 3251.

### Testing instructions:

create member alternatives with names larger than 32 characters. Save, Close, Open, change member alternative and save.

### Build instructions:

build abbbrdg.dll.

FROM:jduray DATE:7/16/01 3:04:53 PM

Testing is finished...ok to release.

Issue ID: 3229

Subject: SP 3 Zero slab dimensions not being recognized for export to BRASS

Folder: /Virtis/Support Center

4/19/2016 3:15:39 PM

HRS AASHTO

937

### Complete Issue Information

|                                    |                      |
|------------------------------------|----------------------|
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Best, Richard        | 6/7/2001 2:37:59 PM  |
| Modified By: administrator         | 6/19/2008 4:05:59 PM |
| Priority: High                     |                      |
| Category: Bug                      |                      |

### History

| Primary Contact   | Status | Priority | Category |
|-------------------|--------|----------|----------|
| Kennelly, Krishna | Closed | High     | Bug      |
| Kennelly, Krishna | Closed | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS Humidity.bbd     |             |

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3231.12118 | Closed        | Default Average Humidity |

### Description

FROM:kkennelly DATE:6/7/01 10:35:57 AM  
Submitted on behalf of Richard Best, Illinois DOT:

I loaded Service Release 3 on our test machine. The load went fine, however I noticed that some of our bridges that previously ran under 4.0.2 will no longer run under 4.0.3. Attached is an example. It will run under 4.0.2 and not under 4.0.3. Also attached is the error message. Please let me know what you find.

<<007-0025.bbd>>

<<Err\_Message.gif>>

Richard M. Best, PE  
Computer Design Group Engineer

Illinois Department of Transportation

4/19/2016 3:15:39 PM

HRS AASHTO

938

**Complete Issue Information**

Bureau of Bridges & Structures  
2300 South Dirksen Parkway  
Springfield, Illinois 62764  
Phone:(217) 785-2922

FROM:kkennelly DATE:6/8/01 11:25:06 AM  
Domain section generation didn't properly check for nulls. Code fixed for 4.0.4. Still needs fixed in 4.1.

FROM:jduray DATE:7/6/01 2:11:11 PM  
E-mail from R. Best indicates this incident is resolved.  
"The problem previously reported (structure 007-0025) is fixed in SR4."

FROM:kkennelly DATE:9/25/01 3:01:11 PM  
still need to fix 4.1

FROM:kkennelly DATE:9/26/01 1:25:54 PM  
Domain fixed for 4.1 beta build 1.

FROM:bgoodrich DATE:10/18/2001 10:46:22  
I tested both cross section and schedule input for the slab widths. I entered zeros for slab dimensions and the export ran successfully. I left the slab dimensions blank and the export produced the error message shown in Err\_Message.gif, which is appropriate.

FROM:jihnmat DATE:10/18/2001 11:16:01 AM  
Accepted by Brian Goodrich via email.

FROM:dteal DATE:11/01/2001 16:40:29  
Accepted

|                                   |
|-----------------------------------|
| Issue ID: 3231                    |
| Subject: Default Average Humidity |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 6/7/2001 7:32:09 PM  |
| Modified By: administrator        | 6/19/2008 4:05:59 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | slab.bbd            |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3232.12117 | Closed        | Standard 1998 LRFD Library |

### Description

FROM:dteal DATE:06/07/2001 15:32:10

I have the Default Average Humidity set at 65% in the System Defaults Bridge Workspace Tab. But in the attached .bbd file the average humidity is blank in the Girder System Structure Definition, Definition tab. The default value is not populating the field.

FROM:kkennelly DATE:6/8/01 9:42:45 AM

This structure appears to have been generated using the wizard. Looks like wizard not setting the default humidity.

FROM:kkennelly DATE:6/12/01 1:13:51 PM

Code fixed for 4.0.4 and 4.1.

Issue ID: 3232

Subject: Standard 1998 LRFD Library



**Complete Issue Information**

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Teal, Dean 6/7/2001 7:34:05 PM    |
| Modified By: administrator 6/19/2008 4:05:59 PM |
| Priority: High                                  |
| Category: Bug - Export 1                        |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Accepted | High     | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3233.12116 | Closed        | BRASS Default being overridden by Opis Input |

**Description**

FROM:dteal DATE:06/07/2001 15:34:05

In the Standard 1998 LRFD Library of Factors provided when installed I think we have a error. On the Fatigue-I line we have gamma = zero entered for all the columns that are not vehicular. AASHTO table 3.4.1-1 in the spec book has a dash (-) in the columns, not zeros. When it comes to calculating the fatigue stress range, according to 5.5.3.2 the f(min) should include DL. Looking at BRASS Maximum and Minimum Moment output for load 5 – Fatigue in Critical Moments and Concurrent Actions, being the gamma is zero, the Dead Load Action is then zero.

The gamma of 0.75 is being used for the Live Load correctly. But I believe it should be combined with the Dead Load moment.

FROM:dteal DATE:06/07/2001 17:06:51

## Complete Issue Information

After further investigation, we have found that if we edit the table and enter a value of 1 for the DC & DW (both Min and Max), ran the analysis, and found that BRASS still uses zero and not the 1 that was just entered.

FROM:bgoodrich DATE:06/13/2001 08:12:04

Please attach the BBD file with the DC & DW load factors set to 1.0. I suspect the LRFD factors are not being applied to the structure definition or the member alternative.

FROM:dteal DATE:08/29/2001 12:03:30

.bbd file attached

FROM:bgoodrich DATE:09/04/2001 15:25:34

I imported the slab file you attached. You have defined the LRFD factors for the bridge, but they have not been assigned to the structure definition or the member alternative. This is the reason you were always getting zeros for the dead load factors in earlier versions. Now, the export ignores the dead load factors specified for the dead loads (DC and DW) for the Fatigue limit state and exports 1.0 for these factors. I am running Version 4.0 with Service Pack 4, and the dead loads (factored by 1.0) are included in the fatigue computations. Note that the Critical Moments and Concurrent Actions report in BRASS only factors the live load actions by 0.75 (or whatever LL factor you enter). BRASS later multiplies the resulting factored live load action by 2.0 to address the various fatigue-related articles in the spec.

FROM:dteal DATE:09/06/2001 08:30:22

Now I can see that BRASS and Opis both have a problem here. It starts with the interpretation of AASHTO Table 3.4.1-1. Opis interprets the dash (-) for DW and DC fatigue-I as Zero. This is not a correct interpretation. The dash (-) in AASHTO's table is saying the value for this factor varies. Zero may be correct for steel structures. But in RC the value has to be calculated and the factor must be 1.00. If a factor of zero is used for RC you will get zero dead load actions for fatigue.

I created a copy of the standard LRFD factor table in the agency library and set the DC and DW factors (gamma) to 1.000 in this copy. I used the newly created factor table (copy from library) and analyzed my RC structure. BRASS still used gamma = zero for DC & DW unless you check the Factor Override. I shouldn't have to select factor override when I'm using the only table entered under the Factors in the workspace. This is an easy one to miss!

An obvious assumption the user will make here is: The Agency will create an Agency Factor table for the designers to use for RC. In the background, while being exported, the gamma factor of 1.00 for DW & DC will get changed to zero. The user is going to miss this one! The user is only going to look at the factor override if doing something special that required tweaking of the table for a special design, not for a RC plain design.

FROM:dteal DATE:09/06/2001 13:13:25

I also believe that the usage of gamma=zero for the Shrinkage and Creep is also wrong. They also need a value of 1.00 for RC.

Please read 5.5.3.2 for the description of  $\gamma_{min}$ . This states that you must combine the dead load. BRASS is reporting zero here due to  $\gamma = 0$

4/19/2016 3:15:40 PM

HRS AASHTO

942

## Complete Issue Information

FROM:dteal DATE:10/16/2001 14:57:55

FROM:bgoodrich DATE:Friday, April 05, 2002 12:02:35 PM

Jim - I think the export should be modified to set the TU, SE, and PS load factors to 1.0 for the Fatigue limit state only. This is consistent with Incident 3224, where the DC and DW load factors were set to 1.0 for the Fatigue limit state.

The other issue pertains to having to set the LRFD factors override. Note that the default LRFD factors set in the Configuration Browser can be from the Agency folder. Other than that, I don't have any suggestions here.

FROM:bgoodrich DATE:Friday, November 01, 2002 10:37:44 AM

I modified the export to set the TU, SE, and PS load factors to 1.0 for the Fatigue limit state only. Fixed for Version 5.0.

FROM:bgoodrich DATE:Friday, November 01, 2002 10:43:38 AM

Jim - Do you see anything else that needs addressed here?

FROM:dteal DATE:Friday, September 05, 2003 2:24:52 PM

I checked this in version 5.1 and it's OK

FROM:dteal DATE:Friday, September 05, 2003 3:50:24 PM

Ignor what I said above - it's still broke. Works for steel - does not work for RC.

FROM:dteal DATE:Tuesday, September 09, 2003 12:22:51 PM

So if TU, SE and PS load factors are modified in the export, how is the user going to know this? Here is an example of how that will be a problem.

The user sees that Fatigue DC and DW are zero in the provided standard factors. So he changes them to 1.0 and selects the factor over ride in the member alt or structure definition window. Now TU and SE got changed back to zero. Is that correct or does BRASS over ride the over ride?

FROM:kkennelly DATE:4/11/2005 3:11:00 PM

1. Dean's 9/6/2001 comments: Since a bridge can contain many superstructure definitions we don't want to assume the user wants to use the Bridge LRFD factors for all superstructure definitions. The Bridge LRFD factors are intended to be a special set of factors, like you want to use different factors for a main span but the approach spans can use the standard agency factors. We should maintain having the user override the LRFD factors on the superstruct def and member alt windows.

2. Since the DC,etc. factors are not equal to zero only for some certain spec articles, we should still provide the default factors as zero in Opis. I think its up to each engine to decide what factor to use when examining different articles.

3. We need to determine if BRASS LRFD is using the shrinkage and creep factors of 1.0 for r/c. Dean said on 9/5/2003 it does not.

4. Not sure I understand Dean's comments on 9/9/2003. The engine related help tells user about this and the log file created by the analysis also contains warning messages that the factors were set to 1

4/19/2016 3:15:40 PM

HRS AASHTO

943

**Complete Issue Information**

for the fatigue limit state.

FROM:kkennelly DATE:4/11/2005 3:28:21 PM

FROM:bgoodrich DATE:Monday, March 06, 2006 12:22:29 PM  
BRASS LRFD does not perform a shrinkage or creep analysis for an R/C analysis, so the corresponding load factors are not used.

FROM:kkennelly DATE:11/21/2006 10:55:11 AM  
I don't think there is anything else to do for this incident. It all boils down to some of the AASHTO load factors depend on the spec article that is being evaluated. It is not practical to specify these load factors in Opis for the limit state, spec article and material type (rc or steel, etc.). If the load factor varies based on the spec article, each engine just has to report the load factor they are using and warn the user if it varies from what they have specified in the Opis load factor table. I think that is currently occurring for BRASS.

Email from Brian Goodrich, 11/21/06:  
I agree with Krisha's comments. Will you add these comments to the incident and mark it as resolved?

FROM:dteal DATE:Monday, February 26, 2007 12:31:21 PM  
Accepted

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3233                                        |
| Subject: BRASS Default being overridden by Opis Input |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 6/7/2001 7:35:08 PM  |
| Modified By: administrator       | 6/19/2008 4:05:59 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 3234.12115 | Closed        | Cross Section Cover Plates tab works different than other windows |

### Description

FROM:dteal DATE:06/07/2001 15:35:09

This may be related to Incident #2754, or it may be something new that popped up after or during some work on #2754.

First Case:

Analysis Settings, Advanced Button

I changed the Fatigue Truck to 1 lane with a scale factor code of 0.833. I think everything works ok here for the Distribution Factors if the engineer knows he needs to use the advanced settings window.

Second Case:

Leave the Advanced settings window unchanged, with a scale factor or 1. At the bottom of the BRASS output page for Max Actions and Displacements for Live Load No. 5 (Fatigue). BRASS has printed a message stating that the value for the Distribution Factor will default to 0.833 for the Scale Factor on the TRUCK-CODE command. When I check the BRASS input file I find the scale factor is still 1 and did not default to 0.833.

Is Opis over riding BRASS here and changing it's intention to default the scale factor to 0.833?

FROM:bgoodrich DATE:06/08/2001 12:34:44

The BRASS default of 0.833 is only used if the Scale Factor parameter on the TRUCK-CODE command is left blank. This parameter is never left blank when the command is generated by the export.

In Service Pack 3, the scale factor exported to BRASS will be the product of the the scale factor you specify using the Analysis Settings, Advanced Button and 0.833.

FROM:dteal DATE:06/11/2001 09:53:32

We are using Service Pack 3

FROM:dteal DATE:06/11/2001 09:54:53

After further investigation I believe that BRASS is not performing the proper check for Fatigue. AASHTO 5.5.3.1 paragraph 5 states that we need to make a check using an unfactored load. Being BRASS has been defaulting this factor with a zero instead of a factor of one – it leads me to think that this check is not being performed correctly.

FROM:bgoodrich DATE:06/13/2001 08:15:14

Please indicate if the scale factor issue has been resolved. I believe your comments on the 6/11/2001 pertain to a different issue than was originally initiated by this incident. The fatigue dead load factors issue seems to be the same as Incident 3232.

FROM:dteal DATE:09/06/2001 08:39:00

You are correct, this issue has been resolved. Leaving Incident 3232 needing attention.

4/19/2016 3:15:40 PM

HRS AASHTO

945

**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:34:09 PM  
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:34:50 PM  
Closed.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 3234                                                             |
| Subject: Cross Section Cover Plates tab works different than other windows |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kennelly, Krisha      | 6/7/2001 7:48:56 PM  |
| Modified By: administrator          | 6/19/2008 4:05:59 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Accepted | High     | Bug      |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:6/7/01 3:43:07 PM  
If you open the Cross Section window for a steel rolled beam, enter a cover plate, OK to close window, reopen window and delete the width or thickness, OK to close window, reopen window the previous numbers will still be in the grid with no warning to the user. Other windows don't operate like this. We should either change the data dictionary so these values can be null or issue warning to user in this

**Complete Issue Information**

window that they have to enter a value.

In abw\_stl\_xsection\_cover\_plate, the width and thickness are not allowed to be null in the data dictionary. All other dimensions for steel beams, such as cross section flange width, thickness,etc. and schedule dimensions are allowed to be null.

FROM:jduray DATE:8/30/01 9:33:56 AM  
I think we should change the data dictionary.

FROM:kkennelly DATE:9/26/01 8:54:36 AM  
In Version 4.0.4, the xsection cover plates were not allowed to have null width or thickness. So the FillCrossSectionData() code in DoGirderMbrAlt has code in it to prevent generating a cross section cover plate if the user input schedule based data has a null width or thickness. In anticipation of the data dictionary being changed to allow nulls for Version 4.1, that code is not in the domain for 4.1. If the data dictionary is not changed for version 4.1, we'll have to add that code to DoGirderMbrAlt for 4.1.

FROM:mordoobadi DATE:10/02/2001 12:13:30  
ERwin model, database and data dictionary updated.

FROM:jduray DATE:10/03/01 3:33:29 PM

FROM:bgoodrich DATE:10/18/2001 11:03:17  
The cover plate grids in the steel cross section window now allow dimensions to be null. I entered values in the window, closed the window, reopened it, deleted one of the dimensions, and closed the window again. Then, I opened the window again and the dimensions remained null.

FROM:jihnath DATE:10/18/2001 11:14:53 AM  
Accepted by Brian Goodrich via email.

FROM:mordoobadi DATE:10/31/2001 2:56:29 PM

FROM:dteal DATE:11/01/2001 16:40:10  
Accepted

Issue ID: 3235  
Subject: Help Text for PS Deck Profile

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 6/7/2001 8:53:30 PM  
Modified By: administrator 6/19/2008 4:05:58 PM  
Priority: High  
Category: Unknown

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | slab_test.bbd       |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3236.12113 | Closed        | RC Slab Schematic doesn't call out fractional bars |

### Description

FROM:dteal DATE:06/07/2001 16:53:30

The Help for PS, Deck Profile, Deck Concrete Tab lists definitions for both Structural Thickness and Total Thickness. The Deck Concrete Tab only provides an input area for Structural Thickness. Should Total Thickness be one of the definitions here?

The user may get confused here, are we looking for section properties here or slab dead load?

FROM:kkennelly DATE:6/8/01 9:03:30 AM

I'm guessing your structure is girder system since the Total Thickness column is not available on the Deck Concrete tab. The help for Total Thickness says that field is available only for girder line.

FROM:kkennelly DATE:6/8/01 1:10:27 PM

Accepted based on A in track field and closed.



## Complete Issue Information

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3236                                              |
| Subject: RC Slab Schematic doesn't call out fractional bars |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Best, Richard    | 6/8/2001 1:37:17 PM  |
| Modified By: administrator     | 6/19/2008 4:05:58 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |
| Ihnat, Joseph   | Closed | High     | Bug      |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | View Schematics.bbd |             |

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3237.12112 | Closed        | Schematics – Profile View of PS Girder |

## Description

FROM:rmbest DATE:06/08/2001 09:37:17 For RC Slabs, fractional numbers of reinforcement bars are permitted in the input. This is converted into the correct area of steel for BRASS. However, the Member Section Schematic incorrectly shows only the integer number of bars.

FROM:jihnate DATE:6/19/2001 1:23:06 PM

The schematic rounds the number of bars to the nearest integer (except when the number of bars is between 0 and 0.5, then it rounds up to 1). This is working as designed; fractional bars cannot be represented in the schematic.

4/19/2016 3:15:41 PM

HRS AASHTO

949

**Complete Issue Information**

FROM:rmbest DATE:06/20/2001 09:05:25 A wrong answer is worse than no answer at all. Perhaps the display should show the total area of steel instead of the number of bars.

FROM:jduray DATE:6/25/01 4:38:39 PM  
I think we should show a whole bar if there is a fractional bar (as it does now) and the dimension should show the correct value (fractional if necessary).

FROM:jduray DATE:6/25/01 4:45:17 PM

FROM:jduray DATE:4/6/2005 11:10:49 AM

FROM:jduray DATE:4/12/2005 11:58:43 AM  
Make the text callout correct...draw the rounded up number of bars.

FROM:jihnat DATE:7/29/2005 10:42:25 AM  
Fixed for 5.4.0

|                                                 |
|-------------------------------------------------|
| Issue ID: 3237                                  |
| Subject: Schematics – Profile View of PS Girder |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 6/8/2001 4:27:18 PM  |
| Modified By: administrator     | 6/19/2008 4:05:58 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:dteal DATE:06/08/2001 12:27:19

For the attached .bbd file, please highlight the Wizard Alternative for Member 1. Then select View Schematic from the tool bar. (I used SI if it makes any difference?)

1. Look at the dimensioning for Horz. Shear Reinf. Spacing. The first 150 is shown above the line and mirrored below the line.

2. Three Horz. Shear bars are displayed. One at the left end and one each 150 mm from the end of the beam. I believe it should be showing one at 150 mm from the beam end and 30 more at 300 mm spacings ending at 150 mm from the right end.

FROM:jihnate DATE:6/12/2001 10:12:50 AM

Item 1: This was a bug and has been fixed for Service Pack 4.

Item 2: This is working as originally designed, but will be considered as an enhancement at a future date.

FROM:jduray DATE:6/19/01 10:58:06 AM

Item 2 is moved to 3250 as an enhancement.

FROM:dteal DATE:07/13/2001 12:05:11

Issue ID: 3238  
Subject: View Schematics Overlapping Text

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 6/8/2001 4:37:42 PM  
Modified By: administrator 6/19/2008 4:05:58 PM  
Priority: High  
Category: Enhancement

**History**

4/19/2016 3:15:41 PM

HRS AASHTO

951

### Complete Issue Information

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | Suspended | High     | Enhancement |
| Kennelly, Krisha | Accepted  | High     | Bug         |

### Contacts

| Name          | Company                        | Email 1                                                              | Phone 1       |
|---------------|--------------------------------|----------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech                     | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a> | (402)363-9515 |
| Dean Teal     | Kansas Dept. of Transportation | <a href="mailto:teal@ksdot.org">teal@ksdot.org</a>                   | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3239.12110 | Accepted      | Cover Plate changes |

### Description

FROM:dteal DATE:06/08/2001 12:37:43

For the attached .bbd file, please highlight the Wizard Alternative for Member 1. Then select View Schematic from the tool bar. (I used SI if it makes any difference?)

Look at the Text for Dimensioning the Vert. Shear Reinf. Spacing. The text writes over itself making it unreadable. We know that when stirrups are being entered they will most likely be entered with some variable spacing. You need to come up with a way for the designer to see the ranges (text) they entered.

### Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 3239               |
| Subject: Cover Plate changes |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 6/8/2001 5:17:59 PM  |
| Modified By: administrator        | 6/19/2008 4:05:58 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 1 |
|                 |          |          | Bug - GUI 2 |
|                 | Open     |          |             |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Duray, Jim      | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | T-Beam.jpg          |             |
|      | Strand Location.bbd |             |

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3241.12108 | Closed        | Crossed Strand |

### Description

4/19/2016 3:15:42 PM

HRS AASHTO

953

**Complete Issue Information**

FROM:kkennelly DATE:6/8/01 1:11:54 PM

Cross section based with cover plates currently not storing relative positions correctly if user deletes and adds cover plate rows to grids. As discussed with Jim on 6/8, make following changes for Service Pack 4:

Cross Section window Cover Plate tabs:

Change col heading from "Plate" to "Relative Position".

Make relative position editable by user instead of current row heading.

Validation to check for cover plates with same relative position numbers.

Change help.

Profile Cover Plate tabs:

Change col heading from "Plate Number" to "Relative Position".

Validation to check if cover plates with same relative position are over the same range.

Change help.

FROM:kkennelly DATE:6/11/01 1:00:58 PM

Fixed for Version 4.0.4 and 4.1. Also changed heading font for col headings we originally said were optional. Weld headings were italic blue, now standard black.

FROM:jduray DATE:7/5/01 10:10:58 AM

Need to change Help - Deterioration Profile: Top or Bottom Cover Plate topic. Cover Plate text should say cover plate relative position instead of cover plate number.

FROM:gbarnhill DATE:07/06/2001 12:20:35

4.0.4 - OK with July 5 dll's.

Grid works in cross section input.

Column heading "Relative Position" for cross section deterioration.

Leave colum heading "Cover Plate" for schedule-rolled beam deterioration.

NEED TO FIX HELP SCREENS IN LATER RELEASE.

OK in Service Pack 4 for version 4

FROM:dteal DATE:07/13/2001 12:08:27

FROM:kkennelly DATE:7/16/01 9:51:42 AM

Help for Deterioration windows corrected for Service Pack 4.

Issue ID: 3241  
Subject: Crossed Strand

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 6/11/2001 1:55:53 PM  
Modified By: administrator 6/19/2008 4:05:58 PM  
Priority: High

## Complete Issue Information

Category: Bug - GUI 2

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Bug      |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3243.12106 | Closed        | Crack Control n Value |

## Description

FROM:dteal DATE:06/11/2001 09:55:54

Using attached file, Strand Location.bbd and attached jpeg picture.

In the strand layout for Girder 1, at mid span I have three rows of strands (row 1, row 2 & row 3 starting at the bottom). I want to harp these strands to the following locations. Row 3 to Row 7, Row 2 to Row 5 and then Row 1 to Row 3. I get am prevented form doing the Row 1 to Row 3. The error message generated by Opis "Strands below the selected strand are harped. Removing the harp would result in crossed strands which is not permitted!". This is not a crossed strand, it would be considered a proper harping location, see attached jpeg.

FROM:jduray DATE:6/12/01 10:11:31 AM

The window assumes that when the user clicks on the strand in row 3 (to be harped from row 1) that he/she wants to remove the harping on that strand (it is harped from 3 to 7) and since row 2 is harped to row 5 the window determines that the strands must cross. We need to ask the user if he/she wants to harp to that location (to row 3 from row 1) and indicate that he/she cannot remove the harp without first removing the harp of the strands above that row.

FROM:jduray DATE:8/23/02 9:50:28 AM

When the grey strand in row three is clicked (after rows 3 and 2 have been harped to rows 7 and 5 respectively) we need to know if the user is incorrectly trying to unharp that strand or trying to harp the strand in row 1 to that row.

4/19/2016 3:15:42 PM

HRS AASHTO

955

**Complete Issue Information**

I discussed with Dean and his feeling is that strands should only be unharped by clicking the red strand (indicating the harped-to position). Modify to work as Dean suggests. Then, when the user clicks the row 3 position we will harp row to that position.

FROM:dteal DATE:Wednesday, March 29, 2006 8:26:15 AM  
Accepted 5.4 beta 7

|                                |
|--------------------------------|
| Issue ID: 3243                 |
| Subject: Crack Control n Value |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 6/11/2001 2:48:28 PM |
| Modified By: administrator       | 6/19/2008 4:05:58 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:06/11/2001 10:48:28  
May have been the result of working on Incident #1858

The n value for the top is being rounded and n value for the bottom is actual. Shouldn't they be the same?

FROM:jduray DATE:6/12/01 10:38:32 AM  
He must be referring to the export.

4/19/2016 3:15:42 PM

HRS AASHTO

956



**Complete Issue Information**

FROM:bgoodrich DATE:06/13/2001 09:28:23

Incident 1858 pertains to R/C, so I assume this one does too. I opened RCTrainingBridge1 with Opis and set the modular ratios of the T-beam to blanks. Then, I exported the bridge and the BRASS commands were:

CONC-MATERIALS 0.150, 4.000, 60.00, 60.00,&  
7.958, 3644.149, 0.480, , , , 0.000600  
CONC-MATERIAL-FLANGE 4.000, 8.000, 3644.149, 0.480, 130.00

The modular ratio is 8.000 for the TOP FLANGE and 7.958 for the OTHER PARTS. For this example, there is only rebar in the bottom of the beam, so a corresponding modular ratio was computed by the export. For the top flange, there is no rebar, so a modular ratio cannot be computed. Therefore, the BRASS default of 8.0 is exported, which may appear at first glance to be 7.958 rounded up, however, it is NOT. If at all possible, the export computes the modular ratio. If you have not defined the modulus of elasticity for the concrete or rebar materials, the export will instruct you to specify the data completely.

If this does not address your concern, you will need to attach a BBD file and resubmit this incident.

FROM:dteal DATE:08/28/2001 14:56:28

FROM:bgoodrich DATE:11/01/2001 12:20:27  
Closed.

Issue ID: 3244  
Subject: Warn users when a value is changed that affects computed values

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 6/12/2001 8:44:27 PM  
Modified By: administrator 6/19/2008 4:38:36 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

4/19/2016 3:15:43 PM

HRS AASHTO

957

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N002771.bbd         |             |

**Tasks**

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3245.12104 | Resolved      | Shear Capacity for RC Slab |

**Description**

FROM:jduray DATE:8/26/2003 11:53:03 AM

FROM:jduray DATE:12/12/2007 8:42:39 AM

We need to define the scope for this.

Issue ID: 3245

Subject: Shear Capacity for RC Slab

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Koenig, David

6/14/2001 1:01:36 PM

4/19/2016 3:15:43 PM

HRS AASHTO

958

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:58 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | Closed | Urgent   | Bug - BRASS |
| Duray, Jim      | Closed | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Error Message.jpg<br>run-time error.bbd |             |

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3246.12103 | Closed        | Run Time Error |

### Description

FROM:dkoenig DATE:06/14/2001 09:01:36

I do not understand if this is an error or not. Please explain the following.

For concrete slab bridges without steel shear reinforcement (I did not check slabs with steel shear reinforcement),  $V_c$  is calculated. This value is then divided by 2, and multiplied by 0.85 (phi factor) to get the ultimate shear capacity.

Why is this value divided by 2. Is this an error. The following is pasted from a typical slab bridge output.

```
{..PERFORMING AASHTO SPECIFICATION CHECKS - 8.16.6 Concrete Shear  
CONSTRUCTION STAGE: 1  
ANALYSIS POINT : 300.00
```

Input Parameters:

4/19/2016 3:15:43 PM

HRS AASHTO

959

### Complete Issue Information

bw = 320.000 (in)      d = 13.837 (in)  
Av = 0.000 (in^2)      s = 0.000 (in)  
f'c = 4000. (psi)      fy = 40000. (psi)

Stirrup Angle = 0.00 (rad)  
% of Concrete to be used in Vertical Shear = 100.00 (%)  
Lightweight Concrete Factor = 1.00  
Phi(shear) = 0.85

#### Calculated Values:

Vc = 560.09 (kips)      [AASHTO (8-49)]  
Vs = 0.00 (kips)      [AASHTO (8-53)]

#### Ultimate Shear Capacity :

Phi \* Vn = 238.04 (kips)      [AASHTO (8-46)]....

I use the entire width of the bridge for the section. This gives the large Vc value. A smaller width would result in the same type of calculation explained above.

I attached a .bbd file in case you would like to look at the Brass output.

FROM:bgoodrich DATE:07/07/2001 13:35:50

Dan Glandt will be addressing this issue. As a work-around, you might try doubling the phi factor or the %Concrete for shear value.

From Dan Glandt:

I think the shear capacity is divided by 2 because of 8.19.1 which says that shear reinforcement must be provided when the factored shear force exceeds one half the shear strength provided by the concrete. It appears that we used to print an error or warning message that stirrups are required, and then that was changed to allow the program to go ahead and do a rating based on 1/2 the phiVc value.

There may be some question about whether or not this should apply to slab bridges. It says in all flexural members, except slabs and footings.

From Jay Puckett:

For a slab, one does not need to consider shear in the rating. If it is considered, I do not think that the additional factor of two is justified. Regarding girders, the additional FS of 2, this usually addresses where the stirrups are curtailed in the middle (low shear) area of the beam (design). Regarding how this should be used in rating, I think that it is open for beams and could be interpreted either way. I do not think that LRFR has the factor two.

FROM:bgoodrich DATE:08/01/2001 11:02:12

Dan Glandt added a new option to the analysis sequence parameter on the ANALYSIS command. A "21" indicates an R/C slab. Note that a "2" still indicates R/C in general. When the 21 code is detected, BRASS will not divide the shear capacity by 2.0. I modified the export (BrassStdAnalysisCmd.cpp) to generate the analysis sequence parameter as 21 for R/C SLAB member alternatives. If the user wishes to adjust the shear capacity further, they can always specify the "% Shear" field on the point of interest.

I did not modify the analysis sequence options in the engine properties at this time. Should we modify the engine properties to allow the 21 code? This would require changes to AboBrass and AbxBrass2

4/19/2016 3:15:43 PM

HRS AASHTO

960

### Complete Issue Information

and additional changes to AbxBrass. This seems unnecessary because Virtis knows if the girder is a slab. Additionally, the 21 code is only used to set a flag within BRASS so it knows whether or not to divide the shear capacity by 2.0. Everything else is the same.

|                         |
|-------------------------|
| Issue ID: 3246          |
| Subject: Run Time Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/18/2001 6:14:05 PM |
| Modified By: administrator     | 6/19/2008 4:05:58 PM |
| Priority: Urgent               |                      |
| Category: Bug - BRASS          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:06/18/2001 14:14:05

In running a design review of member 2 I get a very reproducible run-time error followed by a Dr Watson for VirtisOpis. Attached is the error message and the .bbd file. I did not get any indication as to what the problem is??

FROM:jihnat DATE:6/19/2001 7:32:58 AM

Version 4.0.2 works OK but 4.0.3 crashes.

FROM:bgoodrich DATE:06/21/2001 16:22:05

I have corrected the problem which is causing the crash. The source code I modified has not changed since December 2000, so the problem has existed for a while. In previous versions, the fillet/taper command was not exported, which may be why this problem never showed up in any Opis testing.

FROM:bgoodrich DATE:06/22/2001 15:05:42

4/19/2016 3:15:43 PM

HRS AASHTO

961

### Complete Issue Information

I ran the BRASS data file from Version 4.0.3 with previous versions of BRASS-GIRDER(LRFD) and received the same run-time error.

For the "Double Tee" P/S I-beam shape entered for this bridge, there is a bottom fillet/taper with a 1" height, however, the bottom flange has the same width as the web thickness. This is most likely an input error. A shape like this has never been tested, which is why this run-time error has never been reported. I think we should address this issue for the next major release.

Jim - I do think that the P/S beam shape window should catch this invalid shape error, i.e., do not allow a particular fillet/taper if the corresponding flange width is less than or equal to the web thickness.

FROM:jduray DATE:6/25/01 2:58:55 PM

Mark for Patch Test and add a new incident for the validation within the shape windows. [new incident is 3274]

FROM:dteal DATE:06/27/2001 12:16:31

This was not an input error. I am entering a double tee beam. The bottom flange width will be equal to the stem width. Being I wanted to avoid "zeros" in my input I entered 1 mm bottom flange thickness. I needed to do this to get the GUI of the beam shape to work.

FROM:bgoodrich DATE:06/28/2001 14:56:08

The bottom flange thickness was entered as 50 mm, which is fine. The fillet/taper dimension was entered as 1 mm, which cannot be when the bottom flange and web are the same width. If this value is set to zero, BRASS runs successfully.

FROM:jduray DATE:6/29/01 9:53:48 AM

FROM:dteal DATE:07/13/2001 12:02:01

I left the fillet/taper value at 1 mm and it still ran successfully

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 3248                                                       |
| Subject: Bridge Explorer doesn't refresh after Bridge ID is changed. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Lee, Herman      | 6/18/2001 8:38:25 PM |
| Modified By: administrator     | 6/19/2008 4:05:58 PM |
| Priority: Medium               |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:15:44 PM

HRS AASHTO

962

### Complete Issue Information

|               |             |        |             |
|---------------|-------------|--------|-------------|
| Duray, Jim    | Suspended   | Medium | Enhancement |
| Duray, Jim    | Suspended   | Medium | Enhancement |
| Duray, Jim    | Development | High   | Enhancement |
| Ihnat, Joseph | Suspended   |        |             |
|               | Discard     |        |             |
| Ihnat, Joseph | Discard     | High   | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3250.12099 | Discard       | Schematics - Profile View of PS Girder |

### Description

FROM:hlee DATE:6/18/2001 4:21:04 PM

Bridge Explorer doesn't refresh after Bridge ID in BWS is changed and clicked OK and saved.

FROM:jduray DATE:6/19/01 10:45:56 AM

I think this is acceptable behavior. Refreshing the Bridge Explorer can be time consuming if the info is retrieved from the database (as it should be). The BE could contain a list of thousands of bridges and the user probably would not want to wait for them to be re-queried every time a bridge is saved.

We could update the BE without retrieving from the db but that would require messages to update BE from the BWS.

Issue ID: 3250

Subject: Schematics - Profile View of PS Girder

4/19/2016 3:15:44 PM

HRS AASHTO

963

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 6/19/2001 3:02:10 PM |
| Modified By: administrator     | 6/19/2008 4:05:58 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | High     | Bug      |

## Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3251.12098 | Closed        | Problem in CDbAbwSpngMbrDefSet class |

## Description

FROM:jduray DATE:6/19/01 10:58:06 AM

This incident is generated from VI 3227 from Dean:

For the attached .bbd file, please highlight the Wizard Alternative for Member 1. Then select View Schematic from the tool bar. (I used SI if it makes any difference?)

Three Horz. Shear bars are displayed. One at the left end and one each 150 mm from the end of the beam. I believe it should be showing one at 150 mm from the beam end and 30 more at 300 mm spacings ending at 150 mm from the right end.

FROM:dteal DATE:09/05/2001 10:15:17

This was not generated from VI 3227 it was from VI 3237.

4/19/2016 3:15:44 PM

HRS AASHTO

964



**Complete Issue Information**

FROM:jduray DATE:7/19/2003 8:14:16 AM

Joe - please verify the behavior Dean describes is not intended. If we are dimension the first and last bar in the range such that it is obvious we are describing a range at a spacing I think that is sufficient.

FROM:hlee DATE:4/30/2008 2:24:24 PM

Discarded by TAG 12/07.

|                                               |
|-----------------------------------------------|
| Issue ID: 3251                                |
| Subject: Problem in CDbAbwSpngMbrDefSet class |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 6/20/2001 8:02:20 PM |
| Modified By: administrator          | 6/19/2008 4:05:58 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:6/20/01 3:48:49 PM

The length specified in RFX\_Text() function for column "name" is 32 but it is supposed to be 64.  
symptom:

Bridge workspace does not open when member alternative names with lengths greater than 32 exist.

An error is issued by the data management class that says "Error moving to the next record in

**Complete Issue Information**

database record set."

Also "Data truncated."

It is fixed. Affected project: abbbdrg.

FROM:mordoobadi DATE:6/20/01 4:02:40 PM  
this should be included in 4.0.4.

FROM:gbarnhill DATE:07/06/2001 12:43:18  
4.0.4 - OK to create MEMBER ALTERNATIVE NAMES up to 64 characters.  
OK in service pack 4 for version 4

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3253                                         |
| Subject: Additional P/S Shape window validation needed |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 6/25/2001 7:07:51 PM |
| Modified By: administrator     | 6/19/2008 4:05:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:45 PM

HRS AASHTO

966

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3256.12093 | Q/A           | Load Case Description - Time |

### Description

FROM:jduray DATE:6/25/01 3:04:15 PM

The P/S beam shape window should catch invalid shape errors such as: do not allow a particular fillet/taper if the corresponding flange width is less than or equal to the web thickness.

FROM:jduray DATE:12/12/2007 8:48:15 AM

There may be situations where dimensions entered by the user may appear to be invalid but are necessary so the user can "trick" the program (probably not good to be trying to trick the program).

Issue ID: 3256

Subject: Load Case Description - Time

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Koenig, David

6/27/2001 6:27:45 PM

4/19/2016 3:15:45 PM

HRS AASHTO

967

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:57 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Bug      |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SpanBProblem.dat    |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3257.12092 | Closed        | Problem importing BRASS SPAN-B command |

### Description

FROM:dkoenig DATE:06/27/2001 14:27:46

When creating a load case for a P/S bridge, the Time\* field is optional. What exactly is this field used for?

I presume it has to do with losses. Does this affect the AASHTO losses? Is this a consideration needed for LRFD?

I am trying to determine if we need to fill out this field, or if we can leave it blank.

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 3257                                  |
| Subject: Problem importing BRASS SPAN-B command |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: fulton, keith      | 6/29/2001 5:50:59 PM |
| Modified By: administrator       | 6/19/2008 4:05:57 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:06/29/2001 13:51:00

Entered for Keith Fulton:

When parameter 2 on the SPAN-B command is left blank and there are no other parameters, the BRASS import gives an error message. It is acceptable for parameter 2 to be left blank if it is equal to the span length.

FROM:bgoodrich DATE:07/07/2001 12:23:32

I modified the export (BrassImportData.cpp) to allow parameters 2, 4, and 6 to be blank.

FROM:kkennelly DATE:10/18/2001 1:09:22 PM

Tested ok in Beta 1.

4/19/2016 3:15:45 PM

HRS AASHTO

969

**Complete Issue Information**

FROM:bgoodrich DATE:10/22/2001 11:34:23  
Closed.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3258                                     |
| Subject: Extra Load from Deck Profile for Starters |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 6/29/2001 8:24:38 PM |
| Modified By: administrator       | 6/19/2008 4:05:57 PM |
| Priority: Urgent                 |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | Urgent   | Bug      |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

A06017.bbd

## Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3262.12087 | Resolved      | P/S profile schematic - show CGS |

## Description

FROM:dkoenig DATE:06/29/2001 16:24:38

While checking for the correct way to input non-composite steel bridges, I ran into some problems. I cannot say I understand it all, but what I found is detailed below.

Non-Composite bridges should not contain a deck profile. Entering a deck profile will create composite action in the regions of positive flexure.

Steel Simple Span Bridge:

For a simple span bridge, no load is being added by the haunch profile. This is true whether a deck profile exists or not. Otherwise, the loadings seem to be correct.

Example of a Steel Continuous Span Bridge:

I analyzed a two span bridge at the 1.4 location. A deck profile with 0 section values (thickness and width), and a haunch profile with 0 mm thickness (above the flange) is entered for G2. I analyze the bridge. The following dead loads are created.

|            |         |         |        |
|------------|---------|---------|--------|
| Girder Wt. | SDL s-1 | SDL s-2 |        |
| 275.1      | 1050.5  | 467.1   | k. ft. |

Now I add haunch thickness of 1000 mm.

|            |         |         |        |
|------------|---------|---------|--------|
| Girder Wt. | SDL s-1 | SDL s-2 |        |
| 275.1      | 1050.5  | 467.1   | k. ft. |

Now I add the deck profile (220 mm thickness and 2580 mm width)

|            |         |         |        |
|------------|---------|---------|--------|
| Girder Wt. | SDL s-1 | SDL s-2 |        |
| 275.1      | 1050.5  | 647.2   | k. ft. |

Now I change the haunch thickness to 0 mm.

|            |         |         |        |
|------------|---------|---------|--------|
| Girder Wt. | SDL s-1 | SDL s-2 |        |
| 275.1      | 1050.5  | 564.9   | k. ft. |

The SDL s-2 load that should be comprised of the barrier and wearing surface load only, is being increased when a deck profile is added. It is also, being increased additionally if the haunch is increased when there is a deck profile defined.

Now if I were to increment the thickness (say from 220 to 0) the extra load added to the SDL s-2 will change (seemingly parabolic) from 647.2 or 564.9 to 467.1 depending on which haunch is used. This

4/19/2016 3:15:46 PM

HRS AASHTO

971

## Complete Issue Information

initial value, 647.2 – 564.9, is dependant on the size of the haunch.

Another twist to this is that the increase in load is a percentage increase. In other words, given a haunch value and a thickness value, the total SDL s-2 load will be increased by a certain percentage. The larger the thickness or haunch the larger the increase. I can reduce either the WS or the barrier load and the percentage increase will be the same.

### Problems:

Correct me if I am wrong, but no extra load should be added because a deck profile is created. In addition, any haunch load added should be added to the stage 1 load.

For girder system bridges, the haunch profile should automatically calculate the load and add it to the stage 1 load. This is not being done correctly for simple or continuous spans in somewhat completely different ways.

In summary, I think these two windows and the loads they produce should be reviewed. I think there may be more problems than what I have mentioned above. I noticed differences between going in and changing the parameters for the girder and copying the girder and changing the parameters. In the above example, I constantly changed the girder that already had been created.

I am attaching the bridge I worked on in its original form. I suggest changing the properties for G2 similar to what I mentioned above. I want to make sure that this is a Virtis Export issue and not a problem with our database set up.

FROM:dkoenig DATE:06/29/2001 16:28:09

FROM:bgoodrich DATE:07/06/2001 16:17:10

For schedule-based input for steel, the load due to the haunch profile is NOT being computed. Therefore, none of the moments reported in the initial description of this problem contain a contribution from the haunch. The continuous span example is most likely due to different section properties being used for Stage 2 which draw moment to them. You would not see these differences in a simple span.

The following discussion references the four sets of moments above.

1. No deck and no haunch
2. No deck and 1000mm haunch
3. 220mmx2580mm deck and 1000mm haunch
4. 220mmx2580mm deck and no haunch

For sets 1 and 2, the structure is completely non-composite. However, for sets 3 and 4, the structure is composite everywhere except over the interior support. Therefore, the composite system will use a larger area and moment of inertia in the structural analysis. There is also a difference between set 3 and 4 because set 3 has a large slab offset from the girder because of the 1000mm haunch depth.

I did notice some problems with your haunch data. For some of the interior girders, there are some hidden haunch dimensions (Y2) that contains values. This generally occurred in previous version when you copy a member alternative from an exterior member to an interior member. To remove this dimension, copy your member alternative back to an exterior member, open the haunch window, and delete the dimensions from the Y2 column. Then, copy the member alternative back to the appropriate interior member and delete the original and the exterior copy. You may have to adjust the Existing/Current checkboxes on the member window to delete the member alternatives.

4/19/2016 3:15:46 PM

HRS AASHTO

972



**Complete Issue Information**

I modified the export (BrassCrossSections.cpp) to compute the haunch load for schedule-based steel member alternatives.

FROM:dkoenig DATE:07/09/2001 08:58:50

Thanks for the input. I forgot about the haunch data issue that I originally reported. Also, I was originally under the impression that the deck profile would only add composite properties if the composite regions were specifically designated in the shear connectors tab. I see now that Brass is not using this data.

FROM:dkoenig DATE:07/09/2001 09:40:43

I have a question. Will it be possible to input the haunch data for non-composite bridges. It would make sense if this load was computed automatically. The dead load tables (manually or automatically calculated) would make the user believe that the haunch load is always calculated automatically.

|                                           |
|-------------------------------------------|
| Issue ID: 3262                            |
| Subject: P/S profile schematic - show CGS |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 7/6/2001 2:33:47 PM  |
| Modified By: administrator     | 6/19/2008 4:05:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Enhancement |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:15:46 PM

HRS AASHTO

973

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:7/6/01 10:30:54 AM  
Add the CGS for the strands to the P/S beam profile schematic.

This enhancement is scheduled for 4.1 or 4.2.

FROM:jduray DATE:7/19/2003 8:23:25 AM  
The debonding information was added instead of the CGS.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 3263                                                                     |
| Subject: Report Tool enhancements - analysis results and Bridge Explorer reporting |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/6/2001 2:51:55 PM  |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Complete Issue Information**

|                    |                         |      |             |
|--------------------|-------------------------|------|-------------|
| Duray, Jim         | Development<br>Resolved | High | Enhancement |
| Ordoobadi, Mehrdad | Suspended               | High | Enhancement |
| Ordoobadi, Mehrdad | Suspended               | High | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 3264.12085 | Suspended     | Add user validation indicator to bridge and perhaps structure defs and member alts |

**Description**

FROM:jduray DATE:7/6/01 10:50:03 AM

Add reporting of analysis results and the Bridge Explorer to the report tool.

This is scheduled for 5.0.

FROM:jduray DATE:5/21/02 10:51:17 AM

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 3264                                                                              |
| Subject: Add user validation indicator to bridge and perhaps structure defs and member alts |

**Complete Issue Information**

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 7/6/2001 3:56:30 PM  |
| Modified By: administrator          | 6/19/2008 4:05:57 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Duplicate | High     | Enhancement |
| Duray, Jim      | Duplicate | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 3265.12084 | Duplicate     | Warn users when a value is changed that affects computed values |

**Description**

FROM:jduray DATE:7/6/01 11:45:03 AM

We need a way for a user to indicate that a bridge has been checked and the description in the BridgeWare db is correct. Need security on this and configuration for Bridge Explorer to handle bridges that are not validated:

If any bridge in a list of bridges is not valid:

BE could refuse to rate any bridge

BE could skip non-valid bridges

BE could rate all and report with an indicator those which are not valid

## Complete Issue Information

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 3265                                                           |
| Subject: Warn users when a value is changed that affects computed values |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/6/2001 5:47:49 PM  |
| Modified By: administrator     | 6/19/2008 4:05:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:8/26/2003 11:52:11 AM  
Same as 3244.

## Complete Issue Information

Issue ID: 3266

Subject: Add Typical to the bitmap on the Parapet tab on Typical section window

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

7/6/2001 5:51:31 PM

Modified By: administrator

6/19/2008 4:05:57 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |
| Duray, Jim      | Discard | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:47 PM

HRS AASHTO

978

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 3267.12082 | Suspended     | Add the ability to copy strand patterns between spans. |

### Description

FROM:hlee DATE:4/30/2008 2:24:33 PM  
Discarded by TAG 12/07.

Issue ID: 3267

Subject: Add the ability to copy strand patterns between spans.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

7/6/2001 5:55:32 PM

Modified By: hlee

6/30/2012 1:42:54 PM

4/19/2016 3:15:48 PM

HRS AASHTO

979

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3268.12081 | Suspended     | Add warnings to Virtis if spec-checks fail |

**Description**

FROM: Herman Lee DATE: 6/30/2012 9:41:38 AM Eastern Daylight Time  
Implemented for 6.4 release.



## Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Issue ID: 3268                                      |
| Subject: Add warnings to Virtis if spec-checks fail |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/6/2001 5:58:31 PM  |
| Modified By: administrator     | 6/19/2008 4:05:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:7/6/01 1:55:47 PM

We need to pass info back from the engine to indicate if the rating results are "conditional" or if the engine detects a situation while performing the rating that is not reflected in the rating factor.

## Complete Issue Information

Issue ID: 3269

Subject: Expand copy capability to allow copy of individual tree items such as stiffener ranges and strand patterns.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim 7/6/2001 5:59:03 PM

Modified By: administrator 6/19/2008 4:05:57 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Enhancement |
|                 | Resolved |          |             |
|                 | Assigned |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Enhancement |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

4/19/2016 3:15:48 PM

HRS AASHTO

982

### Complete Issue Information

|           |                                |                |               |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|--------------------------------|----------------|---------------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 3270.12079 | Suspended     | Change the schematic toolbar button to display a list of possible schematics |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:49:57 PM  
Also see 498 & 1230

FROM:dteal DATE:Tuesday, April 08, 2003 3:46:22 PM  
The Member Alt Items, it would be nice to copy the Row and Column data without having to copy the entire Member Alt. Such as the LRFD LL Dist Factors for Cross Section Based, Splice and Hinge Locations, Girder and Deck Profile and Stiffener Ranges.

FROM:gbarnhill DATE:Thursday, June 19, 2003 5:45:55 PM  
I don't understand what was added to 5.0.1 for this.  
I can right click on STIFFENER RANGES and I get a COPY option, but i don't get an option to PASTE anywhere.

FROM:jihnat DATE:6/20/2003 7:56:41 AM  
Looks like a bug in the Copy/Paste. Try dragging to another Stiffener Ranges then dropping.

FROM:jihnat DATE:6/20/2003 8:53:01 AM  
Fixed.

FROM:gbarnhill DATE:Friday, June 20, 2003 3:21:47 PM  
I can get the COPY/PASTE to function for:  
Steel - HINGE LOC, SPLICE LOC, DECK PROFILE, STIFFENER RANGES

In PS Conc - DECK PROFILE -- I get a copy function, but no paste.

In both steel & conc - LIVE LOAD DIST -- I get a paste function, but nothing happens.

I get no COPY/PASTE function for Steel - GIRDER PROF, HAUNCH PROF, LAT SUPPORT, DETERIORATION PROF

4/19/2016 3:15:48 PM

HRS AASHTO

983

**Complete Issue Information**

or for Concrete - BEAM DETAILS, HAUNCH PROF, SHEAR REINF RANGES

FROM:jihnata DATE:6/20/2003 4:12:56 PM

This has only been implemented for: Hinge, Splice, Deck Profile, Stiffener Ranges, Live Load Distribution.

FROM:jduray DATE:7/19/2003 10:09:13 AM

Will be released in 5.0.1 and 5.1.

FROM:dteal DATE:Tuesday, December 06, 2005 3:18:18 PM

FROM:jihnata DATE:12/8/2005 7:17:17 AM

Track field Accepted.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 3270                                                                        |
| Subject: Change the schematic toolbar button to display a list of possible schematics |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/6/2001 6:02:39 PM  |
| Modified By: administrator     | 6/19/2008 4:05:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:15:49 PM

HRS AASHTO

984

## Complete Issue Information

Issue ID: 3271

Subject: Framing plan schematic - don't dimension if spacing is < 1.0' draw them at some assumed spacing.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

7/6/2001 6:03:13 PM

Modified By: administrator

6/19/2008 4:05:57 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |
| Duray, Jim      | Discard | High     | Enhancement |

4/19/2016 3:15:49 PM

HRS AASHTO

985

## Complete Issue Information

---

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3273.12077 | Suspended     | Need to add hinges for R/C members |

### Description

FROM:hlee DATE:4/30/2008 2:24:55 PM  
Discarded by TAG 12/07.

Issue ID: 3273

Subject: Need to add hinges for R/C members

Folder: /Virtis/Support Center

4/19/2016 3:15:49 PM

HRS AASHTO

986

**Complete Issue Information**

|                             |                     |
|-----------------------------|---------------------|
| Primary Contact: Duray, Jim |                     |
| Submitted By: Duray, Jim    | 7/6/2001 8:12:04 PM |
| Modified By: hlee           | 4/8/2010 2:12:40 PM |
| Priority: High              |                     |
| Category: Enhancement       |                     |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3274.12076 | Suspended     | Need validation for P/S beam shapes windows |

**Description**

FROM:jduray DATE:7/6/01 4:10:57 PM  
This was requested by Seung-yeol Lee of Arizona DOT.

FROM:kkennelly DATE:10/12/2004 12:13:15 PM  
Also requested by Li Zhang at Caltrans via email on 10/12/2004

FROM: Herman Lee DATE: 4/8/2010 10:09:57 AM Eastern Daylight Time  
Duplicate of Incident 8988.

## Complete Issue Information

|                                                      |
|------------------------------------------------------|
| Issue ID: 3274                                       |
| Subject: Need validation for P/S beam shapes windows |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 7/6/2001 8:31:59 PM  |
| Modified By: administrator     | 6/19/2008 4:05:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:07/06/2001 16:32:01

This issue was discovered as part of Incident 3246. A user tried entering a "Double Tee" P/S I-beam shape by using the lower part of the web as bottom flange. Therefore, the web and "bottom flange" have the same width. Additionally, the user specified a fillet/taper height of 1mm, which cannot exist because the fillet/taper will have no width. Some validation should be performed in the P/S Beam Shapes windows when the user enters invalid dimensions.



## Complete Issue Information

Issue ID: 3275

Subject: Allow an Administrator to modify records in the standard library

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

7/13/2001 6:22:14 PM

Modified By: administrator

6/19/2008 4:05:56 PM

Priority: High

Category: Enhancement

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Suspended | High     | Enhancement |
|                  | Closed    |          |             |
| Kennelly, Krisha | Closed    | High     | Enhancement |

### Contacts

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:15:50 PM

HRS AASHTO

989

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3277.12073 | Suspended     | Domain Validation Enhancements |

## Description

FROM:dteal DATE:07/13/2001 14:22:14

In the Library – Steel Shapes – Angle for example 3x3x0.3125 the k value is blank. The AISC table has a provided value. Why doesn't our library provide a value for k. The user has to go find a AISC book and look it up.

FROM:jduray DATE:7/16/01 9:08:27 AM

We will check on this but I think the electronic form that we got from AISC does not include this value.

FROM:kkennelly DATE:7/16/01 12:57:46 PM

The electronic file that we got from AISC does not include the k value.

FROM:dteal DATE:07/16/2001 16:34:19

So - does that mean we are not going to provide it? The user will have to look up the steel section in the AISC manual anyway?

FROM:kkennelly DATE:7/25/01 2:25:15 PM

I'm sure we do not currently have any budget for someone to data entry all of the k values for the rolled shapes and then someone else to check all of this hand input. Do you want us to add this incident to our enhancement list for the Task Force to approve? (Do you use this k value for anything?)

FROM:dteal DATE:08/28/2001 13:35:27

The only place I know the k value is used is in splice plate design. It's a geometry thing to be sure the bolt holes and splice plate have adequate clearance.

An example of where it is displayed in the standard shapes library: HP 8x36 displays a vertical k value but the k1 value is blank. L 102x76x15.9 leaves the k value field blank.

Some have it some don't, do we need it? Not unless we are going to use it for splice plate design. I am not asking for this to be added to a future enhancement list unless we are going to be adding a splice plate design module that considers clearances. One consideration is – the user, when copying from the library expects all the data fields to already be populated.

I think the bigger issue here is the Standard Library security. If the software administrator had the ability to edit the "Standard Library" then this would not be an issue at all. This would solve several problems (inconveniences) that we as an agency have run into with standard library content.

4/19/2016 3:15:50 PM

HRS AASHTO

990

**Complete Issue Information**

FROM:dteal DATE:08/28/2001 14:04:34

Just so I don't run out of possible scenarios, the k value isn't being used for any structural calculations by BRASS but if another engine is to be used - would that engine require the missing value?

FROM:jduray DATE:10/30/01 9:23:25 AM

I am changing this to an enhancement request. The request is to allow an administrator to modify standard library items. There are some options here such as adding another "super library administrator" for each library category.

FROM:dteal DATE:Wednesday, January 15, 2003 2:35:30 PM

Please close this Incident

|                                         |
|-----------------------------------------|
| Issue ID: 3277                          |
| Subject: Domain Validation Enhancements |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/16/2001 7:13:06 PM |
| Modified By: administrator     | 6/19/2008 4:05:56 PM |
| Priority: Medium               |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | Medium   | Enhancement |
| Duray, Jim      | Suspended | Medium   | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:7/16/01 3:11:50 PM

4/19/2016 3:15:50 PM

HRS AASHTO

991

### Complete Issue Information

Need to validate bearing stiffeners - bearing area - see incident 3252.

|                               |
|-------------------------------|
| Issue ID: 3279                |
| Subject: Haunch Profile usage |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Koenig, David      | 7/20/2001 12:58:41 PM |
| Modified By: administrator       | 6/19/2008 4:05:56 PM  |
| Priority: High                   |                       |
| Category: Unknown                |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

4/19/2016 3:15:50 PM

HRS AASHTO

992

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 3280.12070 | Closed        | Deck Profile and Contraflexure Procedure |

### Description

FROM:dkoenig DATE:07/20/2001 08:58:41

I have a question. Will it be possible to describe the haunch in the haunch profile for non-composite bridges. I am not sure if this window is meant for composite action only or both composite and non-composite. It would make sense if this load was computed automatically. The dead load tables in the Help menus would make the user believe that the haunch load is always calculated automatically for girder system - schedule based input.

This question is asked in incident 3258, but I know this incident has already been marked as "resolved".

FROM:dkoenig DATE:07/20/2001 09:07:07

By the way, the combo box used to sort the incidents is scrunched. I am not able to sort the incidents. I did not know if you people were aware of this or not.

FROM:dkoenig DATE:07/20/2001 15:28:58

It looks like the pull down menu is back to normal.

FROM:bgoodrich DATE:08/03/2001 11:52:37

If a bridge contains a haunch, it should be entered into Virtis/Opis regardless of if the bridge is composite or not. Note that there must also be a deck defined above the haunch because the unit weight of the deck is used to compute the load due to the haunch. For non-composite bridges, no shear connectors or composite regions would be specified. In the end, you get the dead loads, but no composite action. The deck and haunch loads are automatically computed for a schedule-based girder line or girder system.

FROM:dkoenig DATE:08/06/2001 09:02:36

So do you recommend for non-composite steel bridges, to enter the slab for the entire length of the bridge with no structural thickness or effective flange width. I just want to make sure that Virtis does

4/19/2016 3:15:50 PM

HRS AASHTO

993

**Complete Issue Information**

not get confused by this.

FROM:mhurd DATE:02/15/2002 09:22:17

|                                                   |
|---------------------------------------------------|
| Issue ID: 3280                                    |
| Subject: Deck Profile and Contraflexure Procedure |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 7/24/2001 4:07:26 PM |
| Modified By: administrator       | 6/19/2008 4:05:56 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Unknown  |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:07/24/2001 12:07:26

I am trying to determine the correct method for entering the deck concrete tab of the deck profile window and the contraflexure percentages for steel bridges.

Recently, I became aware that the shear connectors tab is not being used by Brass. I now have questions about the intended use of these windows and there importance to Brass.

4/19/2016 3:15:51 PM

HRS AASHTO

994

## Complete Issue Information

Question 1: Is it the intention that the deck concrete be defined for the entire length for steel structures. In other words, should we instead only define the deck concrete in the areas where shear connectors allow composite action?

Question 2: Are the contraflexure points entered to create the regions of positive and negative moment analysis using the deck concrete tab to ensure composite or non-composite action, or to set up the regions of composite and non-composite section analysis using a deck concrete defined for the entire length of the structure? I am not considering the rebar in negative moment regions.

I guess what I need to know is how to correctly input a continuous steel bridge where the shear connectors do not exactly match the contraflexure points. I was originally under the illusion that a user defines the deck concrete for the entire length of the bridge, enters composite regions where there are sufficient shear connectors in the shear connectors tab, and enters the contraflexure points at the actual contraflexure points of the bridge (not at the intended regions of composite and non-composite action).

I know this has been discussed before, but I would like to be clear on the intended use of these fields and how Brass will actually use them.

FROM:bgoodrich DATE:08/03/2001 11:54:45

For any steel structure, you should enter complete information for the slab, reinforcement, and shear connectors (or composite regions). The ultimate goal of Virtis/Opis is to store the true description of a bridge rather than the engineering model. As you point out, the help does indicate that the Shear Connectors tab is not used for BRASS LFD. However, the export process does use this information to determine how to generate the appropriate BRASS commands. Additionally, the dead load contraflexure percents are used to help determine how to generate the appropriate cross sections. This is necessary because BRASS only supports a composite slab OR rebar within the same cross section but not both.

Here a brief description of how the cross sections are generated from the export. Change points are determined from cross section changes, composite region changes, contraflexure points, etc. Then, the process determines if each range (between sets of change points) is 1) in a positive or negative bending region based on the dead load contraflexure locations and 2) in a composite region based on the shear connector (composite) ranges. If the range is composite and in positive bending, the BRASS cross section will consist of the steel beam and the slab. If the range is composite and in negative bending, the BRASS cross section will consist of the steel beam and the rebar (if entered). If the range is in a non-composite region, the BRASS cross section will consist of only the steel beam.

A direct response to your questions follows:

Question 1: Deck concrete should be defined everywhere. Then, you get your dead loads automatically for schedule-based input and the export will handle the abstraction to the engineering model.

Question 2: The contraflexure points are used to establish regions of positive and negative bending. They are NOT used to establish composite action. Currently, the export will add the rebar to the cross sections in composite negative bending regions. There is not an option to indicate if the user wants to consider the rebar in this region. If this is important, then request an enhancement.

Krishna - I suggest we modify the following help topics in the BRASSLFDENGINE.HLP file to help clarify

4/19/2016 3:15:51 PM

HRS AASHTO

995

## Complete Issue Information

what the BRASS export is doing.

---

### Deck Profile: Deck Concrete (BRASS LFD)

BRASS LFD does not allow the use of a concrete deck slab and deck reinforcement at the same location along the length of the girder. The slab will be exported when this region is within or overlaps a composite positive bending region defined by the engine property contraflexure locations. The deck reinforcement will be exported when this region is within or overlaps a composite negative bending region.

(Keep "Effective Width (LRFD)" and "n" sections the same.)

---

### Deck Profile: Reinforcement (BRASS LFD)

BRASS LFD does not allow the use of deck reinforcement and a concrete deck slab at the same location along the length of the girder. The deck reinforcement will be exported when this region is within or overlaps a composite negative bending region defined by the engine property contraflexure locations. The slab will be exported when this region is within or overlaps a composite positive bending region.

---

### Deck Profile: Shear Connectors (BRASS LFD)

BRASS LFD does not directly use any of the data entered on this tab. However, the export uses this data to generate the BRASS cross sections as described on the Reinforcement (BRASS LFD) topic.

---

### Cross Sections: Slab (BRASS LFD)

BRASS LFD does not allow the use of a concrete deck slab and deck reinforcement at the same location along the length of the girder. The slab will be exported when this region is within or overlaps a composite positive bending region defined by the engine property contraflexure locations. The deck reinforcement will be exported when this region is within or overlaps a composite negative bending region.

(Keep "Effective slab width (LRFD)" and "Materials" sections the same.)

---

### Cross Section Ranges: Shear Connectors (BRASS LFD)

BRASS LFD does not directly use any of the data entered on this tab. However, the export uses this data to generate the BRASS cross sections as described on the Cross Sections: Slab (BRASS LFD) topic.

FROM:dkoenig DATE:08/06/2001 10:08:46

What has been explained above is what I first assumed about the program, but can someone explain this. I get composite action for a bridge when nothing is entered on the shear connectors tab.

FROM:kkennelly DATE:8/6/01 2:13:41 PM

Brian, can you answer his question and assign back to me for the help?

FROM:bgoodrich DATE:08/20/2001 12:31:15

4/19/2016 3:15:51 PM

HRS AASHTO

996



**Complete Issue Information**

There was a bug in the export that always output the deck if it was entered, i.e., there was no way to control if the structure was non-composite or composite. The work-around is to remove the deck, haunch, rebar, and shear connectors where you want the structure to be non-composite. You may need to add in the deck/haunch dead load as a member load depending on the structure definition. I have modified the export for version 4.0 and 4.1 to address the composite issue.

FROM:kkennelly DATE:9/14/01 7:59:50 AM  
Engine help files emailed to Brian on 9/13 for above revisions.

FROM:bgoodrich DATE:09/17/2001 16:41:36  
I updated the engine help files per this incident and e-mailed them back to Krishna. The help will only be updated for version 4.1.

FROM:gbarnhill DATE:10/15/2001 09:44:40  
OK in V410 Beta 1

FROM:bgoodrich DATE:10/22/2001 11:35:53  
Closed.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 3281                                                                      |
| Subject: Non-standard gage - auto compute distribution factor - 2000 User Group Mtg |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/30/2001 8:37:02 PM |
| Modified By: administrator     | 6/19/2008 4:05:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Open     | High     | Enhancement |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3282.12068 | Suspended     | Need a dialog for controlling the event history |

### Description

FROM:jduray DATE:9/5/01 11:35:18 AM

The purpose of the enhancement is to provide the capability to Virtis to analyze and load rate bridges based on permit vehicles with vehicle axle spacing greater than the standard design and rating vehicles. This requires modifications to BRASS the Virtis GUI. The effects of skew is not included.

Several approaches were discussed with the TF and the following is the one being considered by the TF for version 4.2.

Add a window for describing distribution factors for different gages for each member alt. When the analysis is performed the engine should use the df corresponding to the vehicle gage. Computing these df is the responsibility of the user.

This item was in the top five as voted on by the User Group at the July 2000 meeting.

FROM:kkennelly DATE:6/19/2006 9:41:55 AM

Will be in Version 5.5

FROM:hlee DATE:7/10/2006 3:08:56 PM

Changed Status to Resolved.

Issue ID: 3282

Subject: Need a dialog for controlling the event history

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Jensen, Paul

7/31/2001 5:55:17 PM

Modified By: administrator

6/19/2008 4:05:56 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:15:51 PM

HRS AASHTO

998

**Complete Issue Information**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | Suspended   | High     | Enhancement |
| Duray, Jim      | Development | High     | Enhancement |
|                 | Accepted    |          |             |
| Duray, Jim      | Accepted    | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 3283.12067 | Accepted      | Need to handle timber decks on steel beams and concrete decks on timber beams |

**Description**

FROM:jduray DATE:7/31/01 1:32:26 PM

This was requested by Paul Jensen. The event table can grow in size without restriction. Paul would like to see a configuration setting that controls the number of modification events preserved in the table. The other events are controlled by the user (rating and analysis events). The modification events are chained (recursive). We need a dialog that allows the user (administrator) to specify how long or how many (or both) modification events to keep in the chain for an item.

We also need a purge process to purge modification events older than some date and/or keep only the most recent n events.

**Complete Issue Information**

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 3283                                                                         |
| Subject: Need to handle timber decks on steel beams and concrete decks on timber beams |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Best, Richard    | 7/31/2001 6:21:35 PM |
| Modified By: administrator     | 6/19/2008 4:05:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3284.12066 | Suspended     | Simplify the BWS tree by hiding alternatives |

**Description**

FROM:jduray DATE:5/10/02 12:49:45 PM  
This enhancement is in development and will be released in the next release.

FROM:jduray DATE:7/19/2003 9:28:56 AM  
Released in 5.0.

## Complete Issue Information

Issue ID: 3284  
Subject: Simplify the BWS tree by hiding alternatives

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 8/1/2001 2:05:20 PM  
Modified By: administrator 6/19/2008 4:05:56 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

4/19/2016 3:15:52 PM

HRS AASHTO

1001

## Complete Issue Information

Issue ID: 3285

Subject: Add support for MSDE and SQL Server

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

8/1/2001 2:10:35 PM

Modified By: administrator

6/19/2008 4:05:56 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | Closed | High     | Enhancement |

4/19/2016 3:15:52 PM

HRS AASHTO

1002

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 3286.12064 | Closed        | Add timber to the BARS import utility |

### Description

Issue ID: 3286

Subject: Add timber to the BARS import utility

Folder: /Virtis/Support Center

4/19/2016 3:15:52 PM

HRS AASHTO

1003

**Complete Issue Information**

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Duray, Jim    | 8/1/2001 3:09:17 PM  |
| Modified By: administrator  | 6/19/2008 4:05:56 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

**History**

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |
| Duray, Jim      | Discard | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3287.12063 | Discard       | Provide hard copy manual |

**Description**



## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 3287                    |
| Subject: Provide hard copy manual |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 8/1/2001 3:10:39 PM  |
| Modified By: administrator     | 6/19/2008 4:05:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:4/30/2008 2:25:02 PM  
Discarded by TAG 12/07.

## Complete Issue Information

Issue ID: 3288

Subject: Add feature to generate shear and moment influence lines

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

8/1/2001 3:11:50 PM

Modified By: administrator

6/19/2008 4:05:56 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |
| Duray, Jim      | Discard | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:15:52 PM

HRS AASHTO

1006

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 3289.12061 | Resolved      | Allow automatic elastic analysis of P/S along w/ LFD and report the minimum rating |

**Description**

FROM:hlee DATE:4/30/2008 2:25:09 PM  
Discarded by TAG 12/07.

Issue ID: 3289

Subject: Allow automatic elastic analysis of P/S along w/ LFD and report the minimum rating

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

8/1/2001 3:13:28 PM

Modified By: administrator

6/19/2008 4:05:56 PM

Priority: High

4/19/2016 3:15:53 PM

HRS AASHTO

1007

**Complete Issue Information**

Category: Enhance BRASS

**History**

| Primary Contact | Status                 | Priority | Category    |
|-----------------|------------------------|----------|-------------|
| Duray, Jim      | Suspended<br>Duplicate | High     | Enhancement |

**Contacts**

| Name      | Company                           | Email 1        | Phone 1       |
|-----------|-----------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of<br>Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3291.12059 | Suspended     | Add support for Post-tensioned box girders |

**Description**

**Complete Issue Information**

Issue ID: 3291  
Subject: Add support for Post-tensioned box girders

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 8/1/2001 3:18:15 PM  
Modified By: hlee 1/21/2013 9:22:59 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, December 12, 2007 9:18:19 AM  
Can PT Concrete Slabs be included?

FROM: Herman Lee DATE: 1/21/2013 4:21:06 PM Eastern Standard Time  
Duplicate of Incident 8990.

## Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 3295                       |
| Subject: Provide Camber calculations |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 8/2/2001 3:15:45 PM  |
| Modified By: administrator     | 6/19/2008 4:05:55 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Resolved | High     | Enhancement |
| Duray, Jim      | Resolved | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:15:53 PM

HRS AASHTO

1010

**Complete Issue Information**

|            |          |                             |
|------------|----------|-----------------------------|
| 3295.12055 | Resolved | Provide Camber calculations |
|------------|----------|-----------------------------|

**Description**

FROM:kkennelly DATE:6/14/2005 1:11:27 PM

Analysis Settings engine data has been added to produce camber reports for BRASS LRFD.

|                                            |
|--------------------------------------------|
| Issue ID: 3296                             |
| Subject: Add Read/Write roles to Sybase db |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 8/2/2001 3:20:07 PM  |
| Modified By: administrator     | 6/19/2008 4:05:55 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |

4/19/2016 3:15:54 PM

HRS AASHTO

1011

**Complete Issue Information**

|            |         |      |             |
|------------|---------|------|-------------|
| Duray, Jim | Discard | High | Enhancement |
|------------|---------|------|-------------|

**Contacts**

| Name    | Company                                | Email 1                 | Phone 1      |
|---------|----------------------------------------|-------------------------|--------------|
| Binh Ha | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us | 617-973-7561 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-15-18.bbd         |             |

**Tasks**

| Name       | Current State    | Summary                                   |
|------------|------------------|-------------------------------------------|
| 3299.12051 | Not Reproducible | Problem: Live Load DF - LFD rating method |

**Description**

FROM:hlee DATE:4/30/2008 2:25:17 PM  
Discarded by TAG 12/07.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3299                                     |
| Subject: Problem: Live Load DF - LFD rating method |



**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ha, Binh            | 8/2/2001 5:21:50 PM  |
| Modified By: administrator        | 6/19/2008 4:05:55 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

**History**

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | Suspended | High     | Enhancement |
|                    | Assigned  |          |             |
| Ordoobadi, Mehrdad | Resolved  |          |             |
|                    | Closed    |          |             |
| Ordoobadi, Mehrdad | Closed    | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3300.12050 | Closed        | Deleting Users |

**Description**

FROM:bha DATE:08/02/2001 13:21:51

When we use the ASD rating method to analyze and then changing to the LFD rating method for analyzing. The problem is the engine does not get the defined distribution factors for Live Load.

But when we get out the Virtis program and reopen, then use the LFD rating method first and analyzing, the problem disappears. After that if we want to change to the ASD rating method, things go smoothly.

Please fix that problem in the next Service Pack.

4/19/2016 3:15:54 PM

HRS AASHTO

1013

## Complete Issue Information

FROM:kkennelly DATE:8/6/01 8:23:25 AM

I am unable to reproduce this incident. Please export the bridge that is having this problem to a \*.bbd file and attach that bbd file to this incident. You can export a bridge by opening the BWS for that bridge and selecting File/Import from the command menu.

FROM:bha DATE:08/07/2001 11:34:35

Enclosed is my file (you can use whichever file, they will produce the same problem). Once again, I would like to modify the problem more specific:

\* First, we open an existing file (or create a new file) and use either LFD or ASD methods for analysis, then we change to other method (LFD or ASD)and remove the vehicles and add other vehicles (If we change to other method and keep the same vehicles, we have no problem). After that we analyze, the engine will not get the live load distribution factor.

FROM:kkennelly DATE:4/29/2002 11:46:22 AM

I tried this bridge again in 4.0.4 and am not able to reproduce this problem. I also tried it in 4.1.1 and cannot reproduce the problem.

|                         |
|-------------------------|
| Issue ID: 3300          |
| Subject: Deleting Users |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 8/8/2001 5:30:53 PM  |
| Modified By: administrator          | 6/19/2008 4:05:55 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:15:54 PM

HRS AASHTO

1014

**Complete Issue Information**

**Description**

FROM:mordoobadi DATE:8/8/01 1:05:52 PM

Right now there are no restrictions on deleting a user.  
I think deleting a user should be limited by the following rules.

- 1 - A user should not be allowed to delete him/herself.
- 2 - Do not allow deletion of a user if he/she has a bridge checked-out, or owns a private bridge group.
- 3 - I'm not sure if we should restrict the deletion of a user if he/she has any events.

We wouldn't know who made a change if we set the entered\_by field in the abw\_event table to NULL.

FROM:jduray DATE:8/10/01 8:25:24 AM

I think we should add these restrictions and perhaps there are others. However, right now the only way to disallow a user from using the system is to delete him/her. I think we need to add an attribute to the person table to indicate active and inactive persons.

FROM:jduray DATE:2/4/03 12:21:14 PM

Mehrdad - has this been done?

FROM:mordoobadi DATE:2/4/2003 3:22:29 PM

Active Indicator is added in version 5.0.  
But we still need to enforce the rules listed above.

FROM:mordoobadi DATE:2/19/2003 4:10:27 PM

The following is implemented:

Rules for deleting users:

- (1) A user cannot be deleted if he/she has events.
- (2) If a user owns private folders, those folders should be deleted before attempting to delete the user.
- (3) If a user has authorizations to check-out bridges, those authorizations should be revoked before attempting to delete the user.
- (4) A user is not allowed to delete himself/herself.
- (5) User Deletion Process
  - 5-a) Is user trying to delete himself/herself? If YES: Issue Error.
  - 5-b) Does user have any corresponding events? If YES: Issue Error. Recommend deactivating the user.
  - 5-c) Does user own private folders? If YES: Delete the folders.
  - 5-d) Is User authorized to check-out any bridges? If YES: Revoke authorizations
  - 5-e) Delete the user.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 3304                                                                  |
| Subject: The program should compute effective flange width (Girder system only) |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 8/10/2001 12:29:57 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM  |

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 3305.12045 | Suspended     | Enhance the schematics for data-entry |

**Description**

FROM:jduray DATE:8/10/01 8:28:29 AM  
 This request came from TN workshop Aug 8-9, 2001.

FROM:kkennelly DATE:10/25/2001 10:24:30 AM  
 Duplicate of 1878, 1522

FROM:kkennelly DATE:1/4/2002 3:12:09 PM  
 FROM:kkennelly DATE:1/4/2002 3:35:46 PM  
 1878 has been resolved.

## Complete Issue Information

|                                                |
|------------------------------------------------|
| Issue ID: 3305                                 |
| Subject: Enhance the schematics for data-entry |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 8/10/2001 12:32:23 PM |
| Modified By: administrator     | 6/19/2008 4:05:55 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:8/10/01 8:30:31 AM  
This request came from TN workshop Aug 8-9, 2001.

## Complete Issue Information

Issue ID: 3306

Subject: The number of display decimal places should match the input

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

8/10/2001 12:34:14 PM

Modified By: administrator

6/19/2008 4:05:55 PM

Priority: Medium

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | Medium   | Enhancement |
| Duray, Jim      | Suspended | Medium   | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:15:55 PM

HRS AASHTO

1018

### Complete Issue Information

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3306.12044 | Suspended     | The number of display decimal places should match the input |
| 3322.12028 | Closed        | Application Error - RC Bridges - BWS Report                 |

### Description

FROM:jduray DATE:8/10/01 8:32:37 AM

This request came from TN workshop Aug 8-9, 2001.

The number of display decimal places (when the control does not have focus) should match the number displayed when the control has focus.

Issue ID: 3322

Subject: Application Error - RC Bridges - BWS Report

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Koenig, David

8/15/2001 4:13:36 PM

Modified By: administrator

6/19/2008 4:05:54 PM

Priority: Urgent

Category: Unknown

### History

4/19/2016 3:15:56 PM

HRS AASHTO

1019

### Complete Issue Information

| Primary Contact  | Status           | Priority | Category |
|------------------|------------------|----------|----------|
| Kennelly, Krisha | Closed           | Urgent   | Unknown  |
| Goodrich, Brian  | Assigned         | High     | Bug      |
|                  | Not Reproducible |          |          |
| Goodrich, Brian  | Not Reproducible | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-15-18(1).bbd      |             |

### Tasks

| Name       | Current State    | Summary                                                                             |
|------------|------------------|-------------------------------------------------------------------------------------|
| 3324.12026 | Not Reproducible | Problem: Live load DF - If we use ASD and LFD methods for analysis at the same time |

### Description

FROM:dkoenig DATE:08/15/2001 12:13:36

When opening the BWS Report for any of the deck girders (T-beams), Virtis crashes. I had the same problem for a continuous RC Slab bridge. All of the simple span RC slab bridges worked fine. The Application error is shown below.

{The instruction at "0x6a9b7c1a" referenced memory at "0x033b4000". The memory could not be "read".}

Click "OK". Next message says;

{The instruction at "0x5f4012a1" referenced memory at "0x00000004". The memory could not be "read".}

What is the problem? A couple of .bbd files are attached below.

FROM:kkennelly DATE:8/28/01 11:35:10 AM  
Unable to reproduce. Email sent to David 8/28/01 asking for more info.

FROM:dkoenig DATE:08/28/2001 16:44:12

4/19/2016 3:15:56 PM

HRS AASHTO

1020



## Complete Issue Information

For P366 - Implemented the BWS Report in the following ways to get the error. Highlight Bridge Name, Structure Definition #2, Member Alternative for G2 and G3 under Str. Def. #2. Most of these were done after analyzing the entire bridge (I do not think that matters, though). I am using 4.0 with patch 4. I have ran the other patches in order. No errors are found when validating.

FROM:kkennelly DATE:8/30/01 10:26:32 AM

I am still unable to reproduce this. Are you able to reproduce it now? If so, are you using a Sybase db? If you are, can you send us a copy of the db? I'm thinking maybe your db is missing some data that is somehow being set by either the export or import function. That may be why I can't reproduce it with the file you exported. You can transfer the copy of your db to our ftp server by doing the following:

From Internet Explorer, enter the following in the Address bar: <ftp://hrsdept:jetta@ftp.mbakercorp.com>  
You will then see 2 folders. Double click the Incoming folder, then double click the Virtis folder. You can then use the Copy or Drag function to copy the db from a Windows Explorer window to the FTP folder window.

Call if you have any problems copying the db (412)269-7914.

FROM:dkoenig DATE:08/30/2001 12:39:58

Our databases our setup using Oracle. If you need to run some queries or something on our database, please let me know and I will find out who you need to contact to have a query run.

FROM:kkennelly DATE:8/30/01 2:39:40 PM

There isn't too much we can do with the Oracle db. Can you try to export one of these bridges again and then reimport that bridge back into the Bridge Explorer and save it with a new name. Then try to create the BWS report on the new bridge and see if it still crashes.

FROM:dkoenig DATE:08/31/2001 10:51:59

I exported and imported this bridge (p0366) for all of our databases and I was still finding this problem. I looked in to the problem a little further and found that the error is somewhat random. If I select a structure definition, for example, I will not always get the error. The members act in the same way. I always get the error at the top level, probably because it has to go through all the data.

I am a little confused as to what you mean when you say "There isn't too much we can do with the Oracle db". Are you saying writing a script will not help for an error that seems this random.

FROM:jduray DATE:9/10/01 11:50:10 AM

What Krisha means is that if this were occurring in Sybase we would ask you to send us the Sybase db file. We can't do that with Oracle.

Just so I understand what you did...you exported a bridge and imported it back into the same (Oracle) database. Both the imported bridge and the original crash Virtis during creation of a BWS report. Is this correct?

Krisha - if this is correct then we should import his bbd file into our Oracle database and should see the same behavior.

FROM:dkoenig DATE:09/11/2001 08:59:04

That is correct. In addition to importing this bridge back into the same database, I imported it into a

4/19/2016 3:15:56 PM

HRS AASHTO

1021



## Complete Issue Information

The SpoolFile.lst is for the VIRTIS problem that I FTP over yesterday evening.

Thanx  
Bobie

"Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> on 10/18/2001 10:58:07 AM

To: Dennis L Winkie/SC/MODOT@MODOT  
cc: John W Baucom/SC/MODOT@MODOT, Bobette E Hoover/SC/MODOT@MODOT, ISBT-DBMS, Aaron C Kemna/SC/MODOT@MODOT, Michael D Larimore/SC/MODOT@MODOT, "Jim Duray" <JDURAY@mbakercorp.com>

Subject: Re: Problems with Virtis app

Dennis,

In my testing:

Database was running on Windows 2000 OS.  
Client Machine has Windows 2000 OS.  
Oracle version 8.1.7

What OS's are you using? Oracle Version?

I still think there is something wrong in table privileges. Could you do me a favor and run the following SQL scripts against your Oracle database, and send

4/19/2016 3:15:56 PM

HRS AASHTO

1023

## Complete Issue Information

me the spool file by e-mail?

```
set linesize 200;
set pagesize 3000;
set echo on;
set define off;
prompt off;
```

```
spool C:\SpoolFile.lst;
```

```
SELECT * FROM DBA_TAB_PRIVS WHERE OWNER = 'VIRTISADM' ORDER BY GRANTEE,
PRIVILEGE, TABLE_NAME;
```

```
SELECT OWNER, SYNONYM_NAME, TABLE_OWNER, TABLE_NAME from dba_synonyms where
TABLE_OWNER = 'VIRTISADM';
```

```
SELECT * FROM DBA_ROLE_PRIVS WHERE UPPER(GRANTEE) IN (SELECT UPPER(username)
FROM VIRTISADM.abw_person);
```

```
spool off;
```

Regards,  
Mehrdad

>>> <winkid1@mail.modot.state.mo.us> 10/17/01 01:24PM >>>

Mehrdad,

I just had Aaron try it again (he's the user in that last email I sent to you) and he got the same error. Any other things we can try?

What kind of environment are you running in, and what is the client computer you are using as well?

Thanks,  
Dennis

"Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> on 10/16/2001 04:06:51 PM

4/19/2016 3:15:56 PM

HRS AASHTO

1024

## Complete Issue Information

To: Dennis L Winkie/SC/MODOT@MODOT

cc: John W Baucom/SC/MODOT@MODOT, Bobette E Hoover/SC/MODOT@MODOT, ISBT-DBMS, Aaron C Kemna/SC/MODOT@MODOT, Michael D Larimore/SC/MODOT@MODOT, "Jim Duray" <JDURAY@mbakercorp.com>

Subject: Re: Problems with Virtis app

Dennis,

I got the dump file off of our FTP server and imported it into our database in VIRTISADM schema.

I noticed you are still using VIRTIS\_USER\_READ\_ONLY\_ROLE, VIRTIS\_USER\_READ\_WRITE\_ROLE. I don't think you should have those roles on your database. So please drop those roles because you have another set of roles with different names [VIRTIS\_SELECT and VIRTIS\_UPDATE].

Then make sure that Virtis/Opis users are granted the following roles:

|               |                                                     |
|---------------|-----------------------------------------------------|
| CONNECT       | DEFAULT                                             |
| VIRTIS_SELECT | DEFAULT with ADMIN option                           |
| VIRTIS_UPDATE | Should not be DEFAULT, should not have ADMIN option |

In order to do this for the user VIRTIS you can run the following scripts:

```
REVOKE "VIRTIS_SELECT" FROM "VIRTIS";
REVOKE "VIRTIS_UPDATE" FROM "VIRTIS";
ALTER USER "VIRTIS" DEFAULT ROLE NONE;
GRANT "VIRTIS_SELECT" TO "VIRTIS";
GRANT "VIRTIS_UPDATE" TO "VIRTIS";
ALTER USER "VIRTIS" DEFAULT ROLE CONNECT, VIRTIS_SELECT;
```

I got your database working on our system. I did not create the VIRTIS\_USER\_READ\_ONLY\_ROLE and VIRTIS\_USER\_READ\_WRITE\_ROLE roles.

4/19/2016 3:15:56 PM

HRS AASHTO

1025

## Complete Issue Information

I did not get any errors or crashes when creating the BWS report for bridge "P-366" or any other bridge with BID > 30.

Please let me know how it goes.  
Thanks,  
Mehrdad

>>> <winkid1@mail.modot.state.mo.us> 10/16/01 03:01PM >>>

Mehrdad,

I have finished ftp'ing the export file as specified. Let me know if you need anymore help from us. The table owner we use is VIRTISADM. I am attaching some DDL that may help you in your task. I changed the passwords on the users and the role to be easier.

The users also have two sets of roles, the ones we have set up (VIRTIS\_SELECT and VIRTIS\_UPDATE) and we just slapped on the ones that we used for testing that are provided by the DDL that comes with VIRTIS. We do not have any grants in the export file to those roles (READ\_ONLY, and READ\_WRITE) since we created them only for the purpose of them showing up attached to the users (for this export...we had dropped virtis\_select and virtis\_update and only had the roles provided when we did our testing as specified below). You have the scripts for the grants to these roles if you need them.

(See attached file: virt\_tablespace.ddl)(See attached file: virt\_users.ddl)(See attached file: virtis\_select.ddl)(See attached file: virtis\_update.ddl)

If you see something I missed or need anything else, let me know.

Have fun!  
Dennis

"Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> on 10/16/2001 12:52:11 PM

## Complete Issue Information

To: Dennis L Winkie/SC/MODOT@MODOT

cc: John W Baucom/SC/MODOT@MODOT, Bobette E Hoover/SC/MODOT@MODOT, ISBT-DBMS, Aaron C Kemna/SC/MODOT@MODOT, Michael D Larimore/SC/MODOT@MODOT, "Jim Duray" <JDURAY@mbakercorp.com>

Subject: Re: Problems with Virtis app

Dennis,

I updated the corresponding incident (#3322) with a summary of the e-mails I sent and received about this problem.

I think the only way we might be able to reproduce your problem is to have an exact copy of your Oracle database.

So I suggest that you export your database schema to a dump file and put the dump file on our FTP server.

Please send me an e-mail when You are finished.

Here is the FTP address:

ftp://hrsdept:jetta@ftp.mbakercorp.com

Please put the dump file in the folder Incoming/MODOT.

Thanks.

Mehrdad

>>> <winkid1@mail.modot.state.mo.us> 10/16/01 11:45AM >>>

Mehrdad,

We have finished our testing following the steps below. We still received the same error. I believe at this point all signs point to an application error, and not a database error. Let me know if you need anything further from us.

Thanks (and good luck).

Dennis

4/19/2016 3:15:57 PM

HRS AASHTO

1027

## Complete Issue Information

"Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> on 10/11/2001 10:13:56 AM

To: Dennis L Winkie/SC/MODOT@MODOT  
cc: Aaron C Kemna/SC/MODOT@MODOT, "Jim Duray"  
<JDURAY@mbakercorp.com>  
Subject: Re: Problems with Virtis app

Dennis,

I suggest you to do the following.

- (1) start SQL plus and set-up the spool file.  
spool C:\VirtisSpoolFile.LST;  
set echo on;  
set define off;  
prompt off;
- (2) drop all public synonyms. Use DropPublicSynonyms40.SQL SQL script file.
- (3) drop the roles.
- (4) create public synonyms. Use PublicSynonym40.SQL SQL script file.
- (5) create the roles. Use CreateVirtisReadOnlyRole40.SQL and CreateVirtisReadWriteRole40.SQL files.
- (6) grant roles to users  
GRANT "VIRTIS\_USER\_READ\_ONLY\_ROLE" TO "VIRTISUSER" WITH ADMIN OPTION;  
GRANT "VIRTIS\_USER\_READ\_WRITE\_ROLE" TO "VIRTISUSER";  
ALTER USER "VIRTISUSER" DEFAULT ROLE CONNECT, VIRTIS\_USER\_READ\_ONLY\_ROLE;
- (7) stop the spooling.  
spool off;

4/19/2016 3:15:57 PM

HRS AASHTO

1028



## Complete Issue Information

(8) make sure you did not get any errors by looking at the spool file.  
(9) run the BridgeWareAdmin Utility to set the role names and read/write role password.

The SQL script files mentioned here can be found on your Virtis/Opis 4.0 Installation CD.

The roles should be granted to all users including the owner of Virtis/Opis schema owner. Because Virtis/Opis Application will not work if a user is not granted the read-write role.

If doing this does not fix the problem I might need to ask you to send me a dump file (EXPORT) for your Virtis/Opis database schema.

Regards,  
Mehrddad

>>> <winkid1@mail.modot.state.mo.us> 10/11/01 10:53AM >>>

Mehrddad,

Aaron and I logged on as the owner of the Virtis tables, and we encountered the same error.

At this point I'm thinking the problem is within the application. I think there is still a small chance the problem could exist on the database, which is why I'm giving you configuration information.

We are running Oracle 8.1.6.3 on AIX version 4.3.3. Other than issues with the database version, the only potential area I see that could still be a problem is within the roles (as in which are default and which have admin option). Can you tell me if I'm correct here? Virtis (which logs on to the app as administrator) needs both the read and write role as default with admin option. The owner of the tables also has both of these roles with admin option, but not as default roles. The typical user should have the read role as default (no admin) and the write role as non-default (no admin).

Is that correct? Theoretically the owner of the tables doesn't need the roles to access the tables since they are his tables, but maybe the application is looking for something and not finding it. There could be another avenue of error that I think is a highly unlikely one, but sometimes you never know where the hardcoded values might lay. We are using the names VIRTIS\_SELECT for the read only role, and VIRTIS\_UPDATE for the read\_write role. Again, I fail to see how that would matter since the application should not care what the roles are called, just as long as the user has access to the table.

Let me know if there's anything else that I can do on the database side, or if you also feel that it is an application issue at this point.

4/19/2016 3:15:57 PM

HRS AASHTO

1029

## Complete Issue Information

Thanks,  
Dennis

"Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> on 10/10/2001 12:44:13 PM

To: Aaron C Kemna/SC/MODOT@MODOT, Dennis L  
Winkie/SC/MODOT@MODOT

cc: "Jim Duray" <JDURAY@mbakercorp.com>

Subject: Re: Problems with Virtis app

Dennis and Aaron,

Here is the information about the abw\_lib\_rebar table.

VIRTIS\_USER\_READ\_ONLY\_ROLE role should have select privilege on abw\_lib\_rebar table.

VIRTIS\_USER\_READ\_WRITE\_ROLE role should have select, update, insert, delete privileges on abw\_lib\_rebar.

You should have a public synonym for abw\_lib\_rebar.

It might be helpfull if you login to SQL plus as a user other than the owner of database tables, and execute the following SQL script:

```
select * from abw_lib_rebar;
```

4/19/2016 3:15:57 PM

HRS AASHTO

1030

## Complete Issue Information

to see if you can access the table.

One more thing to check is to log-in to Virtis/Opis as the owner of Virtis/Opis database tables and do the test. If Virtis does not crash it means that there is something wrong in the user set-up (roles or synonyms). Please let me know if it makes any difference.

Regards,  
Mehrdad

>>> <winkid1@mail.modot.state.mo.us> 10/10/01 09:49AM >>>

Mehrdad,

I don't know how much Bobie and Aaron/David have filled you in on, but there is a problem with the Virtis application in which going to a certain type of bridge causes an error. I asked Aaron Kemna to log on and replicate the error. While he was doing this, I was capturing explain plans. This seems to be the last cursor he has open before he gets kicked out of the application:

```
SELECT
rebar_id,name,descr,library_type,si_or_us_type,weight_per_length,nominal_diameter,xsection_area,
perimeter,checksum FROM abw_lib_rebar WHERE library_type = 22901 OR
library_type = 22902 ORDER BY name
```

I am guessing the error either happens when the data from this table is trying to be interpreted or in the transition to this point. If you could maybe find out how you have abw\_lib\_rebar set up as far as constraints and grants go, then I'll compare that to what we have and see if ours is correct.

In case you need to see 'a trail' so maybe you guys can replicate the error, the following cursors are what I captured before the error struck (in order).

```
SELECT
table_name,attribute_name,attribute_type,data_type,null_allowed_ind,valid_ind_chars,
string_length,stored_unit_id,si_unit_id,us_unit_id,min_real_value,min_int_value,max_real_value,
max_int_value,default_si_value,default_us_value,default_int_value,default_type,type_category_id,
si_mask,us_mask,numeric_precision,numeric_scale,internal_use_1,internal_use_2,descr,
attribute_domain_name FROM abw_sys_data_dictionary
```

```
SELECT
bridge_id,brkey,group_id,group_item_id,event_id,item_id,district,county,facility,location,agency_code,
bridge_name,featint,routenum,nhs_ind,virtis_ind,opis_ind,kmpost,owner,custodian,adminarea,length,
yearbuilt,
deleted_ind FROM abw_v_sql_bridge_group WHERE (deleted_ind<>'T' or deleted_ind
```

4/19/2016 3:15:57 PM

HRS AASHTO

1031



## Complete Issue Information

### Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary     |
|------------|---------------|-------------|
| 3327.12023 | Resolved      | User Manual |

### Description

FROM:bha DATE:08/21/2001 12:06:01

Repeat incident 3299

Enclosed is my file (you can use whichever file, they will produce the same problem). Once again, I would like to modify the problem more specific:

\* First, we open an existing file (or create a new file) and use either LFD or ASD methods for analysis, then we change to other method (LFD or ASD)and remove the vehicles and add other vehicles (If we change to other method and keep the same vehicles, we have no problem). After that we analyze, the engine will not get the live load distribution factor.

FROM:bha DATE:08/21/2001 12:27:00

FROM:jduray DATE:Thursday, February 21, 2002 2:31:57 PM

FROM:bgoodrich DATE:Friday, February 22, 2002 3:43:56 PM

I am unable to duplicate the problem in Virtis 4.0.4 and Virtis 4.1. I imported the attached file as well as made one of my own.

Issue ID: 3327

Subject: User Manual

4/19/2016 3:15:58 PM

HRS AASHTO

1033

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Waheed, Amjad    | 8/27/2001 3:35:46 AM |
| Modified By: administrator     | 6/19/2008 4:05:54 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 3337.12013 | Closed        | Consistently Lock up VirtisOpis using New Folder |

## Description

FROM:awaheed DATE:08/26/2001 23:35:46

Jim,

I am looking for User Manual version 4.0. I could not find on the website. Where is the link?

FROM:jduray DATE:8/28/01 4:31:27 PM

Joe - please add the 4.0 user manual to the web site.

FROM:jihnat DATE:8/29/2001 8:09:52 AM

Done.

4/19/2016 3:15:58 PM

HRS AASHTO

1034

## Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 3337                                            |
| Subject: Consistently Lock up VirtisOpis using New Folder |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 8/29/2001 5:03:28 PM |
| Modified By: administrator          | 6/19/2008 4:05:53 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:08/29/2001 13:03:31

I have reproduced this a half dozen times now.

In the explorer, highlight All Bridges, Select New Folder from the tool bar, Select Location List Tab or Attribute Text Tab and then select or toggle back and forth on Private/Public. Will lock up VirtisOpis and will have to use the task manager to end the task. Version 4.0.4, NT 4.0 SP6a, Oracle 8.1

I was also able to lock up my Win2000 machine which is running Sybase 5.5 and VirtisOpis 4.0.4.

4/19/2016 3:15:58 PM

HRS AASHTO

1035

**Complete Issue Information**

FROM:dteal DATE:08/29/2001 22:04:37  
I also locked up my pc at home running Version 4.0.2 on NT 4.0 SP5 with sybase 5.5

FROM:mordoobadi DATE:8/30/01 10:37:06 AM  
Verified the crash in debug mode.

FROM:mordoobadi DATE:8/30/01 10:59:41 AM  
I have seen this problem in the same window before except with the Save Option radio buttons.  
It had something to do with the Tab Order of radio buttons.

Tab order improved, Group indicators added to fix the problem.

FROM:mordoobadi DATE:10/10/2001 11:44:09 AM  
Accepted by Dean Teal.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 3340<br>Subject: Add old shapes with dimensions to the db |
|---------------------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 8/30/2001 1:41:59 PM |
| Modified By: administrator     | 6/19/2008 4:05:53 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | Development | High     | Enhancement |
|                 | Accepted    |          |             |
| Duray, Jim      | Accepted    | High     | Enhancement |

**Contacts**

4/19/2016 3:15:59 PM

HRS AASHTO

1036



**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | RebarDepthInterpolation.doc |             |
|      | cover.bbd                   |             |

**Tasks**

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 3347.12003 | Suspended     | Rebar depth within linear web profile is not interpolated |

**Description**

FROM:jduray DATE:8/30/01 9:39:13 AM

We have an access db from Texas that contains partial descriptions (sufficient for our use) of old shapes. Included in the data are the dates for the start and end of rolling. We should put the start date in our current date column and add a new column for the end date.

FROM:jduray DATE:5/23/02 11:55:08 AM

Will be included in 5.0 release.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3347                                                     |
| Subject: Rebar depth within linear web profile is not interpolated |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Goodrich, Brian    | 8/30/2001 10:27:05 PM |
| Modified By: administrator       | 6/19/2008 4:05:52 PM  |

4/19/2016 3:15:59 PM

**HRS AASHTO**

1037

## Complete Issue Information

Priority: Urgent  
Category: Bug - BRASS

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Help     |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Help     |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3352.11998 | Closed        | Engine Help – Stages (BRASS LRFD) |

## Description

FROM:bgoodrich DATE:08/30/2001 18:27:06  
Entered for Seung Yeol Lee (Arizona Department of Transportation):  
See RebarDepthInterpolation.doc.

FROM:bgoodrich DATE:08/30/2001 18:31:59

Seung Yeol has defined the structure correctly as far as I am concerned. The interpolation problem resides with the BRASS engines. Dan Glandt informed me that BRASS has never interpolated the rebar distance. BRASS is taking the rebar in the cross section at the left of the range and using for all points within the range except for the right end of the range, which has the correct rebar distances. The BRASS output shows that the bottom steel is 2" from the bottom of the section at the 1.8 and 1.9 points but 6" at the 2.0. Additionally, the bottom steel is 6" from the bottom of the section at the 3.1 and 3.2 points but 2" at the 3.0. As a work-around, Dan suggested creating cross sections and ranges that coincide with the POI that are failing. This will force BRASS to use the desired rebar distance.

FROM:bgoodrich DATE:09/04/2001 15:28:35

Dean Teal (KDOT) experienced this same problem with slab structures and came up with the same work-around on his own. I will request that the BRASS engines be modified to interpolate the rebar distances.

4/19/2016 3:15:59 PM

HRS AASHTO

1038

**Complete Issue Information**

FROM:bgoodrich DATE:09/19/2001 13:17:07  
This issue may be addressed for the 2002 release of BRASS.

FROM:bgoodrich DATE:Tuesday, February 26, 2002 2:43:57 PM  
WYDOT is currently deciding if this issue will be addressed.

FROM:bgoodrich DATE:Saturday, January 25, 2003 6:20:17 PM  
WYDOT has placed this issue on the BRASS enhancement list.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:22:50 AM  
Status set to Suspended.

|                                            |
|--------------------------------------------|
| Issue ID: 3352                             |
| Subject: Engine Help – Stages (BRASS LRFD) |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/5/2001 2:39:21 PM  |
| Modified By: administrator       | 6/19/2008 4:05:52 PM |
| Priority: High                   |                      |
| Category: Help                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:09/05/2001 10:39:22  
In the Prestressed Concrete under the second sub-bullet of the second bullet for Composite it states:  
“In the first stage, the structure is modeled as simple span non-composite so BRASS places a hinge at each support and stage one loads such as girder and diaphragm weight are applied.”  
I believe that it should also include the wet slab weight in stage 1 in this help message. BRASS includes this weight, it's the Help that doesn't.

**Complete Issue Information**

FROM:bgoodrich DATE:09/17/2001 16:47:28

I added the term deck weight to the help to be consistent with other bullets in the BRASS help. Fixed for version 4.1.

FROM:dteal DATE:10/04/2001 08:32:19

FROM:bgoodrich DATE:10/22/2001 11:32:23

Closed.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3354                                    |
| Subject: Lower ratings when slab rebar considered |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 9/5/2001 7:00:55 PM  |
| Modified By: administrator       | 6/19/2008 4:05:52 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:15:59 PM

HRS AASHTO

1040

**Complete Issue Information**

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3355.11995 | Resolved      | Empty Deleted Bridges Folder |

**Description**

FROM:kkennelly DATE:9/5/01 2:58:54 PM  
Submitted for Ming Teng, RQAW via email:

Dear Ms. Kennelly,

I got a question for the girder line question. Do I need to input reinforcement at the negative moment areas fro the girder line. If so, I suppose that the rating will be up. However, it is down a lot (from 1.3 down to 0.7). I check and check this whole morning but still cannot figure out why? Do I miss something?

Attached is the file that contained two issues, one is w/o reinforcement and another one is w/ reinforcement.

Thanks in advance! Have a nice day!

Sincerely,

Ming (Ken) Teng  
RQAW Corporation  
4755 Kingsway Drive, Suit 400  
Indianapolis, IN 46205-1547  
(317)255-6060 ext.260  
FAX (317) 255-8354

FROM:mteng DATE:09/05/2001 15:46:28

FROM:bgoodrich DATE:09/10/2001 14:17:04

Entered for Dan Glandt:

Ratings for composite steel and concrete bridges may be low for sections for negative moment when the section has rebar. i.e. composite for negative moment. The bug has been fixed in the beta version for the next release (5.8.4).

FROM:bgoodrich DATE:09/10/2001 14:17:04

I will forward the new DLL to Baker when I get it from Dan. Fixed for version 4.1.

4/19/2016 3:16:00 PM

HRS AASHTO

1041

## Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 3355                        |
| Subject: Empty Deleted Bridges Folder |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ha, Binh              | 9/6/2001 3:39:05 PM  |
| Modified By: administrator          | 6/19/2008 4:05:52 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status   | Priority | Category         |
|-----------------|----------|----------|------------------|
| Duray, Jim      | Assigned | Urgent   | Bug - Database 2 |
|                 | Closed   |          |                  |
| Duray, Jim      | Closed   | Urgent   | Bug - Database 2 |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3356.11994 | Closed        | Parameters – Disappeared and Can't Save |

## Description

FROM:bha DATE:09/06/2001 11:39:05

We can delete the bridges from any folder, but we can not empty Deleted Bridges folder from the database. The message is as follow:

Unable to delete bridge!

09:13:27 AM - Line 2795 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

4/19/2016 3:16:00 PM

HRS AASHTO

1042

## Complete Issue Information

Delete process failed while deleting CDmBridge (SaveOrder object 43).  
09:13:26 AM - Line 381 in source file D:\Virtis\data management\abmbche\DmBridgeCache.cpp.

Error deleting record from database record set.  
09:13:26 AM - Line 711 in source file D:\Virtis\data management\abmbrdg\DmBridge.cpp.  
State:S1000,Native:4031,Origin:[Oracle][ODBC][Ora] State:S1000,Native:4031,Origin:[Oracle][ODBC][Ora]

ORA-04031: unable to allocate 2192 bytes of shared memory ("shared pool","ABW\_RATING\_RESULTS\_SUMMARY","KQLS heap","KQLS MEM BLOCK")  
ORA-04031: unable to allocate 2192 bytes of shared memory ("shared pool","ABW\_RATING\_RESULTS\_SUMMARY","KQLS heap","KQLS MEM BLOCK")

FROM:bha DATE:09/06/2001 15:22:18

FROM:mordoobadi DATE:9/17/01 10:20:34 AM  
This is an Oracle Error. It happens because your Oracle shared pool is too small.

One work-around could be to delete all of the rating results for the bridge before deleting the bridge.

If this didn't work you should ask your database administrator to increase the size of Oracle shared pool.

Here is what I found in Oracle Help:

ORA-04031 unable to allocate string bytes of shared memory ("string","string","string","string")

Cause: More shared memory is needed than was allocated in the shared pool.

Action: If the shared pool is out of memory, either use the DBMS\_SHARED\_POOL package to pin large packages, reduce your use of shared memory, or increase the amount of available shared memory by increasing the value of the initialization parameters SHARED\_POOL\_RESERVED\_SIZE and SHARED\_POOL\_SIZE. If the large pool is out of memory, increase the initialization parameter LARGE\_POOL\_SIZE.

FROM:mordoobadi DATE:10/15/2001 11:09:15 AM  
Shared pool size changed from 15 MB to 30 MB. Still unable to empty Deleted Bridges Folder.  
Suggested to delete rating results before deleting the bridge.

FROM:mordoobadi DATE:10/15/2001 11:13:44 AM  
Additional Information: OPEN\_CURSORS = 200

FROM:mordoobadi DATE:11/5/2001 2:20:19 PM  
I asked them to make the shared pool larger (64 MB), I did not hear from them since then.

Issue ID: 3356

4/19/2016 3:16:00 PM

HRS AASHTO

1043

**Complete Issue Information**

|                                                  |
|--------------------------------------------------|
| Subject: Parameters – Disappeared and Can't Save |
|--------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 9/6/2001 5:10:48 PM  |
| Modified By: administrator     | 6/19/2008 4:05:52 PM |
| Priority: Urgent               |                      |
| Category: Bug - Database 2     |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Resubmit | High     | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 | Open     |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | Sustained Modular Ratio<br>Factor.jpg |             |

**Tasks**

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3360.11990 | Closed        | Equation Variable Wrong, 5.7.3.4 |

**Description**

FROM:dteal DATE:09/06/2001 13:10:49

I came across a problem in the Parameters in the Config. Browser. It showed up in the

4/19/2016 3:16:00 PM

HRS AASHTO

1044



**Complete Issue Information**

Owner/Maintainer pulldown. If an ID begins with a zero, it can not be saved in the Bridge Description window under the "Description (cont'd)" tab for either the Owner or the Maintainer. I had used the following ID's

-2, -1, 00, 01, 02, 03, ... 09, 10, 11, etc.

the -2, -1, 10, 11, etc are savable, the 00, 01, 02, etc is not savable due to the zero at the beginning, I think.

I selected a Owner and a Maintainer from the customized pulldown list. I hit OK, and immediately reopened the window. The two fields are now blank. I can not find a way to save any data to thee two fields when the ID begins with a zero.

Now to make matters worse – either it has been this way from the get-go or during one of the version upgrades or service pack upgrades this problem has removed all data from these two fields in the existing bridges in our database (if the ID began with a zero).

I have other Parameters with ID beginning with zeros and they work fine.

FROM:mordoobadi DATE:9/17/01 10:51:06 AM

This is because of type mismatch in pontis tables: paramtrs and bridge for the fields owner and custodian.

owner and custodian fields have NUMERIC(2) in bridge but VARCHAR(8) datatype in paramtrs table.

I verified that the structure of Pontis 3.1 database tables bridge and paramtrs match the structure of Virtis/Opis 4.0 database tables pontis\_bridge and pontis\_paramtrs.

In Pontis 4.0 this problem is partially addressed.

Partially because now we have VARCHAR(2) in bridge and VARCHAR(8) in paramtrs table.

Jim, please advise.

FROM:dteal DATE:02/15/2002 12:25:40

In version 4.1 it appears to work correctly.

Issue ID: 3360  
Subject: Equation Variable Wrong, 5.7.3.4

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 9/10/2001 4:25:03 PM  
Modified By: administrator 6/19/2008 4:05:52 PM  
Priority: High  
Category: Bug - BRASS

**History**

4/19/2016 3:16:01 PM

HRS AASHTO

1045

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | Sustained Modular Ratio Factor.jpg |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3361.11989 | Closed        | Cracked Moment of Inertia |

## Description

FROM:dteal DATE:09/10/2001 12:25:03

Working on RC structure

5.7.3.4 Control of Cracking by Dist. of Reinforcement

See attached jpeg file – the equation suggests using “ds”, this is incorrect, it should be “dc”. In this case the ds and dc values are the same so we get the correct result by default.

FROM:bgoodrich DATE:09/19/2001 13:13:49

BRASS computes the area (A) value using:

$$A = 2 * ds * b / \text{No. Bars}$$

The area is to have the same centroid as the rebar group. Because the ds term is the distance from the extreme tension fiber to the centroid of the group, then twice ds represents the height of the concrete area. The dc term cannot be used because it is the distance from the extreme tension fiber to the centroid of the most tensile row.

FROM:dteal DATE:09/20/2001 14:07:50

In the following excerpt from BRASS, how can the ds term be greater than 50 mm + ½ bar diameter? I think AASHTO recommends this limit.

PERFORMING AASHTO SPECIFICATION CHECKS - 5.7.3.4 Control of Cracking by Distribution of Reinforcement

Point of Interest : 200.00

Determining fsa for NEGATIVE Flexure:

4/19/2016 3:16:01 PM

HRS AASHTO

1046

## Complete Issue Information

### Input Parameters:

ds = 100.000 mm      No. Bars = 12.000  
b = 1800.000 mm      Z (top) = 23000.000 N/mm  
dc = 67.900 mm      fy = 420.000 MPa

### Calculated Values:

A = 2 \* ds \* b / No. Bars = 30000.000 mm<sup>2</sup>  
Limit = 0.6fy = 252.000 MPa  
f<sub>sa</sub> = Z / (dc \* A)<sup>(1/3)</sup> = 181.439 MPa [AASHTO (5.7.3.4-1)]

### Limiting Tensile Stress:

f<sub>sa</sub> = MIN(f<sub>sa</sub>, Limit) = 181.439 MPa

FROM:dteal DATE:10/16/2001 14:59:39

FROM:bgoodrich DATE:10/22/2001 11:37:08

There is an example in Design of Highway Bridges (Jay's book) that illustrates the crack control comp of 5.7.3.4-1. See Example 7.10.3, Section I.5 on pages 580-581. Note the y<sub>s</sub> term in Figure E7.3-16 is what BRASS denotes as ds (the distance to the centroid of all rows of rebar). BRASS does limit the cover to a maximum of 2" (50mm) when applicable. It appears from the output that there are multiple rows of reinforcement in the top of the slab/beam. If not, I will need your bridge to investigate further.

FROM:dteal DATE:11/02/2001 14:49:50

Resubmit – The example you referenced is a tee-beam with multiple layers of rebar in the stem. The y<sub>s</sub> term referred to is to the centroid of these multiple layers.

We are referring to a single layer (row) of rebar. (Jays book pg 552 - #2).

AASHTO is very clear here – 5.7.3.4

dc – depth of concrete measured from extreme tension fiber to center of bar closest thereto; for calculation purposes, the thickness of clear cover used to compute dc shall not be taken to be greater than 2.0 in.

From the commentary – Equation 1, the actual clear cover should be used where the clear cover is 2.0 in or less. Where the clear cover exceeds 2.0 in, a value of 2.0 in should be used for calculation purposes related to equation 1. Additional cover may be regarded as added protection.

FROM:dteal DATE:Friday, March 29, 2002 8:31:00 AM

FROM:bgoodrich DATE:Thursday, April 04, 2002 1:44:44 PM

After reviewing the source code, I have found that BRASS uses the ds directly and does not adjust it when the cover exceeds 2". I will get this fixed as soon as possible.

FROM:bgoodrich DATE:Thursday, May 23, 2002 10:47:54 AM

BRASS-GIRDER(LRFD) 1.5.2 contains the correction to the "ds" term where the cover no longer

4/19/2016 3:16:01 PM

HRS AASHTO

1047

**Complete Issue Information**

exceeds the AASHTO limit of 2". This version should be released after Opis 4.2.

FROM: bgoodrich DATE: Tuesday, January 28, 2003 3:30:05 PM  
Track field marked as accepted. Incident closed.

|                                    |
|------------------------------------|
| Issue ID: 3361                     |
| Subject: Cracked Moment of Inertia |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 9/10/2001 4:36:59 PM |
| Modified By: administrator        | 6/19/2008 4:05:51 PM |
| Priority: High                    |                      |
| Category: Bug - BRASS             |                      |

**History**

| Primary Contact  | Status     | Priority | Category    |
|------------------|------------|----------|-------------|
| Duray, Jim       | Assigned   | High     | Bug - BRASS |
| Kennelly, Krisha | Patch Test |          |             |
|                  | Resolved   |          |             |
|                  | Closed     |          |             |
| Kennelly, Krisha | Closed     | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: dteal DATE: 09/10/2001 12:37:00  
RC Structure  
See Attached jpeg

4/19/2016 3:16:01 PM

HRS AASHTO

1048

## Complete Issue Information

The sustained modular ratio factor,  $m$ , is used for permanent loads. For Service I the live load moment is the largest portion of the total moment. It would be more accurate to have Section Properties for Dead Load using  $m$  and another for Live Load not using  $m$ .

FROM: bgoodrich DATE: 09/20/2001 17:24:19

If the dead load moments are small relative to the live load moments, try using a sustained modular ratio factor of 1.0 instead of 2.0, which removes the creep effect from the section properties. I analyzed an R/C bridge each way ( $m=1$  and  $m=2$ ) and found that the cracked moment of inertia increases by less than 2%. This increase only slightly affected the tensile rebar stress (by  $< 1\%$ ), which is what must be checked according to the spec. The compressive rebar stress was nearly cut in half; however, compression stress is not applicable.

FROM: jduray DATE: 9/24/01 8:30:25 AM

Please review this incident.

FROM: kkennelly DATE: 9/27/01 3:26:49 PM

In reviewing this incident I noticed that the export is not using the sustained modular ratio factor that the user can enter on the Structure Typical Section: Deck Cont'd tab. So BRASS LRFD always uses the default of 2. The BRASS LRFD engine help indicates this value is used.

I guess Dean is technically correct about using the different section properties for dead load and live load. I don't know if other software does that or to what extent it has on the stress computations.

FROM: bgoodrich DATE: 09/27/2001 16:07:32

For R/C, the deck is part of the top flange, so I guess the value entered on the Structure Typical Section: Deck Cont'd tab could be used for the entire beam.

I requested that the  $m$  value be moved to the member alternative level because the member alternatives could be steel or concrete, which get a different value (3.0 for steel and 2.0 for concrete). This implementation is already done for a girder line in the GUI.

FROM: bgoodrich DATE: 02/06/2002 18:40:27

I have modified the export to generate the concrete materials command with the appropriate sustained modular ratio factor ( $m$ ). Then, users can set the  $m$  factor to any value ( $m=1.0$  should address Dean's concerns). This correction is ready for Version 4.1 Service Pack 1. This issue is more of an export issue than anything. BRASS simply analyzes R/C structures in one stage, which is why different cracked moments of inertia for dead and live loads are not computed.

I still think the  $m$  value should be moved from the girder system structure definition to the member alternative because the value may be different between steel and concrete structures.

Jim - Please set the status to Patch Test if the location of the factor will be addressed in another incident.

FROM: jduray DATE: 2/25/02 8:51:53 AM

Krishna - please review and let me know if we should move the value to the member alt. If we should we should open another incident as an enhancement and change the status on this one to Patch Test.

FROM: kkennelly DATE: 2/26/2002 9:40:27 AM

I agree we should move the  $m$  value to the mbr alt level (even though I hate to make such a change!). Added as incident 3621.

4/19/2016 3:16:01 PM

HRS AASHTO

1049

**Complete Issue Information**

FROM:bgoodrich DATE:Friday, April 07, 2006 3:00:35 PM  
Discussed status with Jim and marked as resolved.

FROM:dteal DATE:Wednesday, April 19, 2006 3:02:07 PM  
Accepted 5.4 beta 8

|                                          |
|------------------------------------------|
| Issue ID: 3362                           |
| Subject: Determination of Section Moduli |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/10/2001 4:40:31 PM |
| Modified By: administrator       | 6/19/2008 4:05:51 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Accepted | High     | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Section Moduli and Crack<br>Control.jpg |             |

**Tasks**

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 3362.11988 | Closed        | Determination of Section Moduli |

**Description**

4/19/2016 3:16:01 PM

HRS AASHTO

1050

**Complete Issue Information**

FROM:dteal DATE:09/10/2001 12:40:31

See Attached jpeg  
RC Structure

This is wrong. The section modulus is calculated for a cracked cross section. For positive moment the concrete fibers in the bottom of the slab are in the tension zone. The concrete in the tension zone of a cracked cross section is neglected. Therefore this section modulus is NOT valid.

FROM:bgoodrich DATE:09/19/2001 13:11:02

I removed the section modulus for the concrete in tension for a cracked cross section. I also modified BRASS to use the gross section properties when determining the tensile stress in the concrete in the crack control checks. Fixed for version 4.1.

FROM:dteal DATE:10/04/2001 08:29:03

Accepted

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:35:17 PM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:35:29 PM

Closed.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 3363                                             |
| Subject: Wrong Variables – Determination of Section Moduli |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/10/2001 4:42:33 PM |
| Modified By: administrator       | 6/19/2008 4:05:51 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Accepted | High     | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Complete Issue Information

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | Stress in Compression Reinforcing.jpg |             |

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3364.11986 | Closed        | BRASS Differs in Strain Compatibility Values |

### Description

FROM:dteal DATE:09/10/2001 12:42:35

See Attached jpeg

RC Structure

mu should be mg

m-kn should be mm-kn

FROM:bgoodrich DATE:09/19/2001 13:09:14

I removed the exponent on the moment and left the units as m-kN. The Mu notation is used to indicate the factored moment. Fixed for version 4.1.

FROM:dteal DATE:11/01/2001 12:12:33

Accepted

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:35:53 PM

Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:36:08 PM

Closed.

Issue ID: 3364

Subject: BRASS Differs in Strain Compatibility Values

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

9/10/2001 4:45:09 PM

Modified By: administrator

6/19/2008 4:05:51 PM

Priority: High

Category: Bug - BRASS



## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Accepted | High     | Unknown  |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 3368.11982 | Closed        | Add "None" to Superstructure Def combobox in Structure Alt window |

### Description

FROM:dteal DATE:09/10/2001 12:45:12

See Attached jpeg

RC Structure

How is the stress in R5 computed?

BRASS has a value that is less than that calculated for strain compatibility. This difference is approx. 6%. I have spot checked a few other POI's and the BRASS value is consistently ~6% less than my hand calculations. I believe that BRASS is reducing the stress in the compression reinforcing steel in an attempt to account for the fact the area of the concrete compression block has not been reduced by the area of the compression reinforcing. Therefore a portion of the force in the compression reinforcing has been removed as it is included in the concrete force. After making some additional runs using different values of  $f'c$  I have determined that the % reduction is equal to the following;

$$\% \text{ Reduction} = (0.85 * f'c) / f_y = (0.85 * 30 \text{ Mpa}) / 420 \text{ Mpa} = 6.071\%$$

I believe the BRASS procedure is wrong. I would do the following;

$$\text{Reduction} = 0.85 * f'c = 0.85 * 30 \text{ Mpa} = 25.500 \text{ Mpa}$$

This value is a unit value not a %.

FROM:bgoodrich DATE:09/19/2001 13:07:07

BRASS calculates a fraction that is applied to  $0.85 f'c$  for the displaced concrete area when the steel is in compression. Traditionally the entire amount is used; however, the BRASS method avoids a discontinuity. The ratio is 1.0 when the steel and has yielded and is proportioned to 0.0 when the steel has no strain. This relationship is not codified in the specification and is performed on the basis of judgement.

4/19/2016 3:16:02 PM

HRS AASHTO

1053

**Complete Issue Information**

I have added the following note to the output:

The stress in the mild compression steel includes an adjustment for the displaced concrete. fs = (es \* Es) + (0.85 f'c ABS(es / ey))

FROM:dteal DATE:10/04/2001 08:30:53  
Accepted

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:36:33 PM  
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:36:43 PM  
Closed.

Issue ID: 3368  
Subject: Add "None" to Superstructure Def combobox in Structure Alt window

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Duray, Jim 9/14/2001 1:44:34 PM  
Modified By: administrator 6/19/2008 4:05:51 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:9/14/2001 9:38:43 AM  
Jim requested that a selection of "None" be added to the Superstructure Definition combobox in the

4/19/2016 3:16:02 PM

HRS AASHTO

1054

**Complete Issue Information**

Structure Alt window.

I've updated the Structure Alt window.

Krishna, perhaps the Help should mention this. Also, in the Help for this window, "Structure definition" should be changed to "Superstructure definition"

FROM:kkennelly DATE:9/18/01 8:37:09 AM  
help updated for version 4.1, alpha build 2

FROM:jihnat DATE:10/16/2001 1:04:09 PM  
Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:37:40  
Accepted

Issue ID: 3369  
Subject: View Schematics - Cover Plates on Plate Girder Cross-section not shown

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Thompson, Todd 9/17/2001 5:56:57 PM  
Modified By: administrator 6/19/2008 4:05:51 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |

4/19/2016 3:16:02 PM

HRS AASHTO

1055

**Complete Issue Information**

|               |          |      |         |
|---------------|----------|------|---------|
|               | On Hold  |      |         |
| Ihnat, Joseph | Resolved |      |         |
| Duray, Jim    | Resolved | High | Unknown |

**Contacts**

| Name      | Company | Email 1             | Phone 1 |
|-----------|---------|---------------------|---------|
| Tom Vasta |         | unknown@unknown.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 3382.11968 | Resolved      | client connection to database |

**Description**

FROM:tthompson DATE:09/17/2001 13:56:58

Not sure if this is a bug or a system shortcoming, but I had never noticed before that cover plates on plater girder bridges were not displayed or labeled on the View Schematic.

4.0.4 is the version I'm running.

FROM:kkennelly DATE:1/23/2002 9:46:23 AM

FROM:jduray DATE:4/12/2005 12:07:07 PM

This applies to cross section definitions.

FROM:jihnmat DATE:8/10/2005 10:19:08 AM

Done for 5.4.0

|                                        |
|----------------------------------------|
| Issue ID: 3382                         |
| Subject: client connection to database |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:16:03 PM

HRS AASHTO

1056

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Vasta, Tom    | 9/20/2001 3:01:58 PM |
| Modified By: administrator  | 6/19/2008 4:05:50 PM |
| Priority: High              |                      |
| Category: Unknown           |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
| Ihnat, Joseph   | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Rail Scale.bbd      |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3387.11963 | Closed        | Rail Scale – View Schematic |

### Description

FROM:tvasta DATE:09/20/2001 11:01:58

The database is up, running, and I connect to it. BUT, when I set the client, NET8 config. works but when I get " unable to connect to data source". I believe it's the (page 8 of User's Manual) Username/password - data source piece.

FROM:mordoobadi DATE:9/20/01 3:59:18 PM

The problem seems to be partially created database.

You need to re-create the database. Follow the instructions in the readme.txt file on your installation CD.

4/19/2016 3:16:03 PM

HRS AASHTO

1057

## Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 3387                       |
| Subject: Rail Scale – View Schematic |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 9/26/2001 12:30:01 PM |
| Modified By: administrator     | 6/19/2008 4:05:50 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:09/26/2001 08:30:01

I have a 32" barrier rail and a 72" pedestrian rail. When you look at the schematic view of the typical section – the Ped. rail is about 4 times larger than the barrier rail. It should be just over 2 times larger. Something is amiss with the scaling.

.bbd is attached

FROM:jduray DATE:4/12/2005 12:20:29 PM

Fix the scale problem.

4/19/2016 3:16:03 PM

HRS AASHTO

1058

**Complete Issue Information**

FROM:jihnmat DATE:7/29/2005 12:55:57 PM

The height on the railing definition window is the Effective Wind Height. The Help states that this height does not include the gaps between the horizontal rails. The schematic multiplies this height by two in order to give some representation as to what the actual height of the railing might be. Whether or not it should do this is really the question.

FROM:jihnmat DATE:8/10/2005 2:29:46 PM

Changed schematic to no longer multiply the height by two. Fixed for 5.4.0

FROM:dteal DATE:Tuesday, December 06, 2005 3:17:18 PM

FROM:jihnmat DATE:12/8/2005 7:17:00 AM

Track field Accepted.

|                           |
|---------------------------|
| Issue ID: 3389            |
| Subject: Name: Field Size |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 9/26/2001 3:29:31 PM |
| Modified By: administrator     | 6/19/2008 4:05:50 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Accepted | High     | Unknown  |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

|           |                                   |                |               |
|-----------|-----------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of<br>Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|-----------------------------------|----------------|---------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3391.11959 | Closed        | Skews that differ from Abut to Pier |

**Description**

FROM:dteal DATE:09/26/2001 11:29:32

In the Bridge Description Tab, the Name: field will only allow 24 characters but the field appears to be much wider. Is this correct?

FROM:jihnna DATE:10/3/2001 1:20:35 PM

This is correct in version 4.0. But in Version 4.1, the name field is increased to 50 characters (for Pontis integration).

|                                              |
|----------------------------------------------|
| Issue ID: 3391                               |
| Subject: Skews that differ from Abut to Pier |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 9/28/2001 4:03:08 PM |
| Modified By: administrator        | 6/19/2008 4:05:50 PM |
| Priority: High                    |                      |

4/19/2016 3:16:03 PM

HRS AASHTO

1060



## Complete Issue Information

Category: Education

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | On Hold  | High     | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Todd Thompson  | South Dakota DOT | todd.thompson@state.sd.us           | 605-773-3285 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Mbr_Alt_1.zip       |             |

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3394.11956 | Resolved      | Incorrect BRASS output - LFD |

## Description

FROM:dteal DATE:09/28/2001 12:03:08

When a structure that has an abutment with one skew and a pier with a different skew angle (girder system). How can the span length be entered to model the bridge correctly? Each girder line will have a different length. We only enter the span length once, in the Girder system structure definition window. When you get to the Girder Profile window, Opus will give an error (span length and girder length will not match).

With this problem existing, why are we able to enter differing skew angles?

The On-Line Help for VirtisOpus doesn't give the user a heads up on differing skew angles. The engine help only makes reference to splayed girders.

FROM:kkennelly DATE:10/1/01 8:59:35 AM

The structure definition window has the following title above the span length table: Enter span lengths along the reference line. The help for this window describes how the member lengths are adjusted as needed when skew angles are entered. The span length you enter in the structure definition window is the span length of the structure definition reference line. If the structure definition reference line is moved around in the Structure Typical Section window and you have differing skews or splayed girders, the member lengths are adjusted accordingly. If you open the Member window, you can see

4/19/2016 3:16:04 PM

HRS AASHTO

1061

### Complete Issue Information

the table of span lengths for that girder which may be different than what was entered in the structure definition window.

FROM:dteal DATE:10/03/2001 08:21:58  
Thank You

FROM:kkennelly DATE:10/3/01 4:28:26 PM  
Accepted and closed based on a in track field.

|                                       |
|---------------------------------------|
| Issue ID: 3394                        |
| Subject: Incorrect BRASS output - LFD |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Thompson, Todd     | 10/1/2001 6:38:17 PM |
| Modified By: administrator       | 6/19/2008 4:05:50 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:tthompson DATE:10/01/2001 14:38:18

Appears that one of the BRASS output moment/shear summary tables is incorrect.

The Total Unfactored DL and LL actions summary table appears to neglect all the Stage 1 and 2 DL actions

Span Point 4.059 (Moments) as reported in BRASS-LFD

4/19/2016 3:16:04 PM

HRS AASHTO

1062

**Complete Issue Information**

Sum of Stage 1 -7548.0  
Sum of Stage 2 -3279.9  
Stage 3 LL (Truck 2 = HS 20 Lane) -6043.3

Total Unfactored Moment for DL and LL actions = -6043.3

The total factored moments is correct.

I'll attach the BRASS output generated using Virtis 4.0.4 with LF Analysis.

FROM:ttompson DATE:10/01/2001 14:49:04  
I checked using BRASS ASD and this summary is correct. I have been unable to attach the output file. Keeps timing out. But will keep trying.

FROM:bgoodrich DATE:10/02/2001 15:12:08  
I forwarded this issue to Dan Glandt for investigation.

FROM:bgoodrich DATE:10/05/2001 14:39:52  
WYDOT assigned this issue to Problem Log #308.

FROM:bgoodrich DATE:10/22/2001 13:02:01  
This issue will not be addressed for Virtis 4.1. Dan Glandt should have this addressed for Virtis 4.2. On hold until then.

FROM:bgoodrich DATE:Wednesday, March 06, 2002 4:21:31 PM  
Dan Glandt corrected the output report in question. Fixed in BRASS-GIRDER 5.8.5, which should be released with Virtis 4.1 Service Pack 1.

Issue ID: 3401  
Subject: SQL 7.0.3 Database Script Instructions

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 10/3/2001 12:40:07 PM  
Modified By: administrator 6/19/2008 4:05:49 PM  
Priority: High  
Category: Help

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Help     |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Help     |

4/19/2016 3:16:04 PM

HRS AASHTO

1063

## Complete Issue Information

---

### Contacts

| Name          | Company                        | Email 1                   | Phone 1       |
|---------------|--------------------------------|---------------------------|---------------|
| Dean Teal     | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| Todd Thompson | South Dakota DOT               | todd.thompson@state.sd.us | 605-773-3285  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3402.11948 | Closed        | SQL 7.0.3 Install error Windows 2000 |

### Description

FROM:dteal DATE:10/03/2001 08:40:07

After updating my SQL Anywhere from version 5.0 to SQL Anywhere Studio 7.0.3 I found that the instructions provided (Sybase ReadMe.txt) to update the database does not apply to the newer SQL release. The instructions follow the old version only, referring to what you see on the screen and what input the user needs to apply.

Future updates requiring database scripts to be run will have to be addressed.

FROM:kkennelly DATE:10/24/2001 9:35:56 AM  
ReadMe.txt updated for Beta 2

Issue ID: 3402

Subject: SQL 7.0.3 Install error Windows 2000

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

4/19/2016 3:16:04 PM

HRS AASHTO

1064

### Complete Issue Information

|                            |                       |
|----------------------------|-----------------------|
| Submitted By: Teal, Dean   | 10/3/2001 12:40:50 PM |
| Modified By: administrator | 6/19/2008 4:05:49 PM  |
| Priority: High             |                       |
| Category: Bug              |                       |

### History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Ordoobadi, Mehrdad | Assigned  | High     | Enhancement |
|                    | Suspended |          |             |
| Ordoobadi, Mehrdad | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3411.11939 | Suspended     | Ped. Rail Base |

### Description

FROM:dteal DATE:10/03/2001 08:40:51

I installed SQL Anywhere Studio 7.0.3 on 2 pc's. the NT installation went fine. On Windows 2000 I get an error message at boot up, but it seems to run fine, except you always get the error message – therefore something is amiss. This is the message: "SQL Server Installation is either corrupt or has been tampered with (unknown package id). Please rerun Setup." I reran setup, I reinstalled and again reran setup, but to no avail. I had our IT people look it over, no help. This is a standalone pc I use for testing only.

FROM:jduray DATE:10/5/01 9:50:27 AM

Mehrdad - Do we have 7.0.3? If we do please install on our Windows 2000 test PC and let Dean know if it works ok.

FROM:tthompson DATE:10/10/2001 14:44:20

I running Win 2000 on my laptop. I've installed ASA 7 and upgraded to 7.0.3 Build 2046. I'm running

4/19/2016 3:16:04 PM

HRS AASHTO

1065

**Complete Issue Information**

Pontis 4.0 and VirtisOpis 4.0.4. I've suffered no problems or weird error messages. (I believe it was the 7.0.x maintenance upgrade to 7.0.3 upgrade that I installed)

FROM:dteal DATE:10/19/2001 09:57:45

I didn't perform an upgrade, I deleted (removed) version 5.5 and installed a fresh version.

FROM:mordoobadi DATE:10/19/2001 10:56:14 AM

Dean, we do not have an 7.0.3 installation CD to try it on a windows 2000 machine. But I just noticed something in this incident. It seems like the error message is not related to SQL Anywhere Studio, the message refers to "SQL Server". Did you install SQL Server or MSDE? (MSDE comes with Virtis/Opis if you choose to install it)

FROM:dteal DATE:10/22/2001 08:54:11

The installation was applied on my Win200 pc and my NT 4.0 pc. I have no problems with the NT installation. As far as I know I selected all the same installation options. The installation cd doesn't ask anything about "server" it only states "SQL Anywhere Studio 7 will be installed", when installing 7.0.3 (not upgrading).

FROM:mordoobadi DATE:10/23/2001 11:14:23 AM

The error is not related to Sybase SQL Anywhere it is for another product called MSDE or (Microsoft SQL Server).

FROM:dteal DATE:10/25/2001 15:04:58

Now that I know to look for MS SQL:

Solution – It appears that the Win2000 pc I use for testing was upgraded from a NT 4.0. Somewhere along the line Microsoft installed MS SQL 7. I was on the pc but not being used. When I installed Sybase SQL 7.03, Bill Gates in his infinite wisdom thought we should be automatically using his software so MS SQL got in the way so we wouldn't forget about him. Anyway, we changed MS SQL in the services from automatic to manual and removed it from the startup. I no longer have any problems. Keep in mind, this only happened on my win2000 pc and not my NT pc.

|                         |
|-------------------------|
| Issue ID: 3411          |
| Subject: Ped. Rail Base |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Ordoobadi, Mehrdad |                        |
| Submitted By: Teal, Dean            | 10/10/2001 12:32:26 PM |
| Modified By: administrator          | 6/19/2008 4:05:49 PM   |
| Priority: High                      |                        |
| Category: Enhancement               |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 3423.11927 | Resolved      | Flared Girders |

### Description

FROM:dteal DATE:10/10/2001 08:32:26

It has become apparent that we need more options in the GUI to define the pedestrian rail correctly. The concrete base is the problem. We can define it's width but not it's height. The load can be handled just fine under "Railing Load". What the users are asking for is to get the GUI to represent the correct image for the rail base height.

FROM:jduray DATE:10/11/01 12:49:48 PM

Mehrdad - I need an estimate for doing this...db through domain, GUI, LRFD and LFD/ASD export and help.

FROM:mordoobadi DATE:10/12/2001 4:56:16 PM

16 hours for bridge and library:

- Database

- Domain, De, De, Dm Classes

- Data Dictionary

- GUI - Properties windows and Schematics.

Issue ID: 3423

Subject: Flared Girders

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Best, Richard    | 10/12/2001 1:18:03 PM |
| Modified By: administrator     | 6/19/2008 4:38:35 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category               |
|-----------------|-----------|----------|------------------------|
| Duray, Jim      | New       | High     | Unknown<br>Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement            |

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3425.11925 | Suspended     | Wire Mesh Reinforcement |

### Description

FROM:rmbest DATE:10/12/2001 09:18:07

Enhancement request - Provide support in girder system model for flared bridge decks that have one or more non-parallel girder lines.

FROM:kkennelly DATE:6/19/2006 11:37:15 AM

Resolved for 5.5



## Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 3425                   |
| Subject: Wire Mesh Reinforcement |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Best, Richard    | 10/12/2001 1:24:30 PM |
| Modified By: administrator     | 6/19/2008 4:05:48 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:rmbest DATE:10/12/2001 09:24:30

Enhancement request - Provide an option for wire mesh used as shear reinforcement in prestressed deck (box) beams with circular voids.

## Complete Issue Information

Issue ID: 3435

Subject: Consistency in reporting digits past the decimal

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Goodrich, Brian

10/15/2001 2:18:43 PM

Modified By: administrator

6/19/2008 4:05:47 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact  | Status          | Priority | Category    |
|------------------|-----------------|----------|-------------|
| Duray, Jim       | New             | High     | Cosmetic    |
| Kennelly, Krisha | Assigned        |          |             |
|                  | Suspended       |          |             |
|                  | On Hold         |          | Bug - GUI 2 |
|                  | Rejected by TAG |          |             |

4/19/2016 3:16:05 PM

HRS AASHTO

1070

**Complete Issue Information**

|                  |                 |      |             |
|------------------|-----------------|------|-------------|
| Kennelly, Krisha | Rejected by TAG | High | Bug - GUI 2 |
|------------------|-----------------|------|-------------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3449.11901 | Closed        | Composite, Partial Composite & Non-Composite |

**Description**

FROM:bgoodrich DATE:10/15/2001 10:18:44

Make the number of digits past decimal the same in the Flexure Analysis Summary and Shear Analysis Summary reports. The Resistance and LL columns have 3 while DL column has 2. I didn't see any problems with the other reports.

FROM:kkennelly DATE:10/16/01 1:16:25 PM

The report tool uses the edit mask stored in the data dictionary to display these values. I'm hesitant to change the edit mask in the data dictionary cause there may be other places in the results where we need more digits displayed.

FROM:kkennelly DATE:10/22/2001 1:45:35 PM

Suspended since the report has appeared this way since 4.0 and no one else has requested a change.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3449                                        |
| Subject: Composite, Partial Composite & Non-Composite |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/16/2001 8:27:48 PM |
| Modified By: administrator        | 6/19/2008 4:05:47 PM  |

4/19/2016 3:16:06 PM

HRS AASHTO

1071

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: N/A  |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

### Contacts

| Name         | Company            | Email 1                       | Phone 1        |
|--------------|--------------------|-------------------------------|----------------|
| John Carney  | Purcell Associates | jcarney@purcellassociates.com | 617-288-0900   |
| David Koenig | Missouri DOT       | david.koenig@modot.mo.gov     | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3450.11900 | Resolved      | Status of Incident 3211 |

### Description

FROM:dteal DATE:10/16/2001 16:27:48  
Release 4.0.4

Entering data for a steel structure in the Wizard. In the second GUI we are required to declare whether the structure is Composite Throughout or Partial Composite in the positive moment regions. How do you enter "Non-Composite" throughout. It is my understanding that BRASS will never analyze a non-composite structure because the required card will never get changed from a 4 (composite) to a 3 (non-composite). Here in Kansas, all our steel structures built prior to 1980 are non-composite. Is the Partial Composite option assuming that we have flange embedment over the piers? Kansas does not/has not ever done that.

FROM:kkennelly DATE:10/19/2001 8:28:09 AM

We didn't put a non-composite option in the Wizard since the Wizard was originally intended for new LRFD design and a decision was made that new designs are typically not non-composite. The partial composite assumes that shear connectors and an effective deck flange width > 0" are only present in the positive moment regions, it does not make any assumptions regarding the flange embedment. About your BRASS question, are talking about LFD or LRFD? In BRASS LFD you can run a non-composite structure by not including an XSECT-C command to describe the structural deck for the cross sections. I'm not sure about the the 4 and 3 on the Steel-Girder-Control card. In BRASS LRFD

4/19/2016 3:16:06 PM

HRS AASHTO

1072

**Complete Issue Information**

you can run a non-composite section by not including a Composite-Slab command. You can achieve both of these in Virtis/Opis by not entering data for the structural slab thickness or effective flange width for the slab.

FROM:dteal DATE:11/02/2001 10:34:40  
Accepted

|                                  |
|----------------------------------|
| Issue ID: 3450                   |
| Subject: Status of Incident 3211 |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Koenig, David    | 10/17/2001 3:25:21 PM |
| Modified By: administrator     | 6/19/2008 4:05:46 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:10/17/2001 11:25:21

I would like to know if incident 3211 has been looked into. This refers to the use of the "existing and current" check boxes. There are problems that exist as explained in incident 3211.

In addition, I was wondering about the intent of the current check box. The help explains that the current alternative will be chosen for non-batch analysis situations. I am wondering how this relates to say the bridge alternative. If a bridge is selected at the the bridge level and analyzed, what should occur if one bridge alternative is selected as existing and one is selcted as current. Should the current be selected since only one bridge alternative will be ran, or will the existing be ran since multiple members exist on the structure. I

4/19/2016 3:16:06 PM

HRS AASHTO

1073

**Complete Issue Information**

already know that the existing will run. I guess I am looking for a clarification of the current check boxes purpose at certain levels.

FROM:jduray DATE:10/18/01 4:13:44 PM

"Current" is only used at the present time for the schematics. Future releases may use it for additional purposes.

FROM:dkoenig DATE:10/19/2001 09:05:18

Where are you at on incident 3211?

|                                        |
|----------------------------------------|
| Issue ID: 3452                         |
| Subject: Bridge Rating Results - Empty |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Thompson, Todd        | 10/18/2001 7:09:24 PM |
| Modified By: administrator          | 6/19/2008 4:05:46 PM  |
| Priority: High                      |                       |
| Category: Bug - GUI 1               |                       |

**History**

| Primary Contact    | Status             | Priority | Category           |
|--------------------|--------------------|----------|--------------------|
| Duray, Jim         | New                | High     | Unknown            |
| Ordoobadi, Mehrdad | Assigned           |          | Bug<br>Bug - GUI 1 |
|                    | Information Needed |          |                    |
|                    | Closed             |          |                    |
| Ordoobadi, Mehrdad | Closed             | High     | Bug - GUI 1        |

**Contacts**

4/19/2016 3:16:06 PM

HRS AASHTO

1074

### Complete Issue Information

| Name            | Company          | Email 1                   | Phone 1      |
|-----------------|------------------|---------------------------|--------------|
| Todd Thompson   | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |
| George Colgrove |                  | gcolgrove@mbakercorp.com  |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 3453.11897 | Resolved      | Enabling Check In/Out feature |

### Description

FROM:tthompson DATE:10/18/2001 15:09:24

When I rate a bridge (or group of bridges) on the desktop and then view the bridge rating results, the window Bridge Rating Results is empty. It doesn't list the structure or anything but the headings. The rating results are stored in the database, and can be viewed if you open up the structure, but you can't see the bridge rating results from the desktop.

This is only happening on my new laptop machine. The database is a copy from our server and all the settings are the same as near as I can tell. LF analysis was the option taken.

Pentium III, 1.x MHZ 256 MB Ram, Windows 2000 Professional, Sysbase SQL Anywhere 7.0.3.2046  
I also have Pontis 4.0 installed on this laptop.

I've noticed no other "oddities" to date. Not sure if this is a Win2000 problem or a Sybase 7.x problem or ?????

FROM:mordoobadi DATE:11/2/2001 10:04:12 AM  
Todd, please verify that it works OK in the latest beta release.

FROM:mordoobadi DATE:2/21/2006 3:05:12 PM  
I haven't heard from Todd regarding this incident for 4.5 years. I close this incident.

|                                        |
|----------------------------------------|
| Issue ID: 3453                         |
| Subject: Enabling Check In/Out feature |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Colgrove, George | 10/19/2001 1:06:15 PM |
| Modified By: administrator     | 6/19/2008 4:05:46 PM  |
| Priority: High                 |                       |

4/19/2016 3:16:06 PM

HRS AASHTO

1075

## Complete Issue Information

Category: Education

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Duray, Jim      | Closed   | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 3458.11892 | Closed        | Private Bridge Folders when connecting to an Oracle database |

## Description

FROM:gcolgrove DATE:10/19/2001 09:06:15

I cannot gain access to the check In/Out feature of V/O. We would like to assign projects to squads, but I cannot gain access to any dialog that will allow for that. All Check In/Out menu commands are greyed out. I have all rights assigned to the Admin. user for check IN/OUT capabilities. I have checked in as the admin roll. Am I missing something?

Using V/O 4.04, and Oracle 8.0.5, ODBC Driver 3.0, ODBC 3.51  
Database version 4.0.2.3003

FROM:mordoobadi DATE:10/19/2001 2:18:53 PM

You need to run the BridgeWareAdmin.exe utility program to enable check-in/out. You can find a copy of BridgeWareAdmin.exe file on your Virtis/Opis Installation CD. It is located in "BRIDGEWare Database" folder. With Virtis/Opis Service pack 3 we provided an update for the utility program. In order to get the latest version of the utility program. download service pack 3. Then extract the contents of the downloaded file to a temporary folder. Find a file named BridgeWareAdmin.exe. Copy the file into your Virtis/Opis installation folder.

Run the BridgeWareAdmin.exe program by double-clicking on it in the windows explorer. Login as the owner of database tables. Check the checkbox "Enable check-in/check-out". Hit OK.

4/19/2016 3:16:07 PM

HRS AASHTO

1076



## Complete Issue Information

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3458                                                        |
| Subject: Private Bridge Folders when connecting to an Oracle database |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Duray, Jim      |                       |
| Submitted By: Ordoobadi, Mehrdad | 10/24/2001 4:57:09 PM |
| Modified By: administrator       | 6/19/2008 4:05:46 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mordoobadi DATE:10/24/2001 12:54:12 PM

The icon for private bridge folders is incorrect when accessing an Oracle database.

FROM:jduray DATE:10/29/01 5:15:00 PM

The problem was not related to Oracle or any particular database. It occurred depending on the order of creation of private folders.

Fixed for 4.1 Beta 3.

## Complete Issue Information

Issue ID: 3466  
Subject: Revisiting Incident 2943

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Koenig, David 10/26/2001 6:24:04 PM  
Modified By: administrator 6/19/2008 4:05:46 PM  
Priority: Urgent  
Category: Bug

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Unknown  |
| Ihnat, Joseph      | Assigned           |          | Bug      |
|                    | Information Needed |          |          |
| Ordoobadi, Mehrdad | Assigned           | Urgent   |          |
|                    | Resolved           |          |          |
| Ordoobadi, Mehrdad | Resolved           | Urgent   | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

4/19/2016 3:16:07 PM

HRS AASHTO

1078

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | testdrt.bbd         |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 3470.11880 | Closed        | Unable to save data - but can analyze |

### Description

FROM:dkoenig DATE:10/26/2001 14:24:04

Incident 2943 covers the issue of deleting extra materials from bridges. For bridges made after 4.0 was released and installed, the issue is resolved. For bridges created prior to this, the extra materials can still not be deleted. I wrote this incident to inform people in case this was not understood. As far as we (MoDOT) are concerned. All of these bridges will be deleted and re-entered at a later date. I was wanting to give people a heads up in case this would affect their situations. I do not know what priority this would take to resolve this issue, or if it can be resolved.

I attached a bbd file of an older bridge that has an extra concrete material defined, but no references are made to the B1 material.

FROM:jduray DATE:10/30/01 11:17:52 AM

You should open each of the slab cross section windows and click ok. Then save the bws. This should clear the problem. If you have a lot of these we could probably write a script of a little program to correct this.

Let me know.

FROM:dkoenig DATE:10/31/2001 09:11:16

I applied the appropriate material windows (Structure Typical Section, Default Materials, and Deck Profile) and saved the bridge. The deleting problem still occurred. These older bridges are all steel bridges.

FROM:jihnat DATE:11/6/2001 1:51:24 PM

This problem has been traced to setting all Default Materials when a new Member Alternative is created. And because any specific type of Member Alternative does not show all of the Default Materials, this problem is not fixable through the GUI.

I've changed the code (in Version 4.1 Beta Build 3) to only set the appropriate Default Materials for each type of Member Alternative. This will prevent the problem when new Member Alternatives are created.

Mehrdad is going to fix the problem for existing bridges in the migration scripts.

FROM:mordoobadi DATE:11/6/2001 3:03:17 PM

Migration Scripts need to be updated with the SQL scripts I have already created for this purpose. (FixDefaultMaterials.SQL in source safe)

4/19/2016 3:16:07 PM

HRS AASHTO

1079

**Complete Issue Information**

FROM:mordoobadi DATE:12/12/2001 9:21:28 AM  
 Migration scripts updated (Oracle, MSDE, Sybase)

|                                                |
|------------------------------------------------|
| Issue ID: 3470                                 |
| Subject: Unable to save data - but can analyze |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Ordoobadi, Mehrdad             |
| Submitted By: Teal, Dean 10/31/2001 2:20:06 PM  |
| Modified By: administrator 6/19/2008 4:05:45 PM |
| Priority: Urgent                                |
| Category: Bug                                   |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Urgent   | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug      |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:10/31/2001 10:20:06

We have a designer doing a steel structure, girder system with 2 Alt's per girder line. The most likely error is "data input". The error message is so encrypted that I haven't been able to put my finger on the

4/19/2016 3:16:07 PM

HRS AASHTO

1080

## Complete Issue Information

problem. Could you help me out? What really stinks is that it's the end of the day and he can't save his bridge and has to log off losing his afternoons work.

We are able to analyze each member without any errors – but unable to save.

File attached.

### Error Message:

Unable to save Bridge data!  
Line 768 in source file  
D:\virtis\gui\abgbrdg\uibwsdoc.cpp

Saving New and Modified objects failed while processing  
Cdmstructdefrefline (saveorder object 96)  
Line 355 in source file d:\virtis\datamanagement\abmbche\dmbridgecache.cpp

Unable to edit and update recordset  
Line 848 in source file

No rows were affected by the update or delete operation

I exported the file, and tried to import it – got the following error message.

The last object successfully processed was cdmwelddef  
23 of 80 objects successfully processed before the error  
Unknown exception occurred while importing data!

One very important lesson here – An error message should be encrypted – the user should be able to read it and get some direction from it as to what's wrong.

FROM:mordoobadi DATE:11/1/2001 10:50:44 AM  
Unable to save bridge, not the results.

FROM:mordoobadi DATE:11/1/2001 2:23:21 PM  
Import problem:  
The problem is in the ImportData() function of CDmStIComponent object.  
De objects are imported from the BBD file one by one. In case we have a deleted object, when we start processing the next object, we reuse the old De object (that we created for the deleted object) without checking to see if subtypes match. This causes an Exception.

Fixed the CDmStIComponent object. Code Generation Template needs to be fixed. Also all top level sub-type Dm objects need to be regenerated.

After I fixed the Dm I was able to import and save the bridge.

It's impossible to figure out what went wrong when you were trying to save, giving the fact that the bbd file saves OK. (after the fix)

Here is the list of things to do:

4/19/2016 3:16:07 PM

HRS AASHTO

1081

**Complete Issue Information**

Fix the template for code generation  
Regenerate the affected Dm's.

FROM:mordoobadi DATE:11/2/2001 9:45:51 AM  
Template Fixed. Dm Code regenerated.

BBD import problem Fixed for 4.1 Beta 3.

FROM:mordoobadi DATE:11/5/2001 9:14:12 AM  
Jim, should we fix this in 4.0 also?

FROM:mordoobadi DATE:11/5/2001 10:57:01 AM  
The save problem seems to have something to do with the number of significant digits stored for double precision values in Oracle. See Incident 2823.

FROM:mordoobadi DATE:11/5/2001 2:08:09 PM

|                                                 |
|-------------------------------------------------|
| Issue ID: 3473                                  |
| Subject: New Install – Previous Version Message |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 11/1/2001 2:37:59 PM |
| Modified By: administrator     | 6/19/2008 4:05:45 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | On Hold  |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

**Contacts**

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3484.11866 | Closed        | Backward Compatibility for Import Files |

## Description

FROM:dteal DATE:11/01/2001 10:37:59

This goes back to earlier versions also.

I am installing 4.1 beta 2. I used the control panel remove program option. Then went to the program files directory and removed any directories related to virtis. Then I ran a program called "Regclean" and then restarted my pc. At this time all things related to virtis should be gone. When I run the beta 2 install I get a message stating that I have an earlier version of virtis on this pc and I should remove it first.

FROM:dteal DATE:Monday, February 26, 2007 11:51:25 AM

Still getting this message - grrrrrrrr

FROM:jihnat DATE:5/24/2007 7:38:35 AM

This is addressed in 5.6.0 release.

FROM:xli DATE:6/15/2007 9:01:35 AM

Tested resolved with 5.6 Beta3.

FROM:dteal DATE:Wednesday, June 20, 2007 9:38:55 AM

Still returns the message that it shouldn't:

I uninstalled

Virtis Opus 5.6 beta 2

Virtis Opus 5.5 production release version

Ran a Regscrubber to clean up the registry

Ran Disk Keeper to defrag my local drive

Then I ran the exe to install 5.6 Beta 3

I still get the message about previous versions of this software has been detected --- ect.

I do have a version of Opus Sub installed , would that make a difference, I wouldn't think so??

FROM:jihnat DATE:6/20/2007 9:55:45 AM

Yes, having OpusSub installed will trigger this message.

Virtis, Opus and Opus Sub use many of the same DLLs, which is one of the reasons this message was originally implemented.

4/19/2016 3:16:08 PM

HRS AASHTO

1083

**Complete Issue Information**

FROM:dteal DATE:Wednesday, June 20, 2007 10:06:12 AM  
Accepted in 5.6 Beta 3

|                                                  |
|--------------------------------------------------|
| Issue ID: 3484                                   |
| Subject: Backward Compatibility for Import Files |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 11/5/2001 7:10:01 PM |
| Modified By: administrator     | 6/19/2008 4:05:45 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Resolved  |          | Education   |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |
|                 | Closed    |          |             |
| Duray, Jim      | Closed    | High     | Enhancement |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:11/05/2001 14:10:03

4/19/2016 3:16:08 PM

HRS AASHTO

1084



## Complete Issue Information

We need a process to import a .bbd file that was created by a non-agency entity (consultant) that is using an older version of VirtisOpis than the we (State) are using. As things are now we both have to be using the same version, I think?

Is there a migration script to update a .bbd file?

For beta testing purposes, I would like to import several bridges that I have in our oracle production database and run them against the current beta version to validate results. Is there any way I can do this?

FROM:jduray DATE:11/7/01 9:19:07 AM

The import/export is not designed or intended to work between versions and it is not reasonable to modify it to do so. If this is a requirement then it will have to be done differently. We implemented it during the initial development for a very specific purpose and then adapted it for import/export.

You must migrate the db to the proper version and then use the import/export.

FROM:dteal DATE:11/07/2001 11:53:22

When receiving a bbd file from a consultant - we have no control over his version, I don't think? We also don't have his database, all we will get is the file for us to import. Without the database to migrate - are you saying that we are hosed?

FROM:jduray DATE:4/1/02 1:47:09 PM

We have as an enhancement for release next winter (Feb 2003) a task to improve the export/import so we can handle different versions.

A reasonable workaround until then is to coordinate databases.

I think you should tell the consultant what version you want from them and let them do the conversion. It's not a big deal to do once you know how and are setup to do it.

For example:

You tell the consultant you want version 4.1.1 and consultant has been working on 4.0.4...

The consultant applies the migration scripts to their db to migrate to 4.1.0 and then to 4.1.1 (including running the utilities that come with 4.1.1).

The consultant exports the bridges and sends them to you.

You import them as you normally would.

NY DOT tells their consultants which version to use. I think MA and LA are too.

FROM:dteal DATE:Monday, February 26, 2007 11:49:58 AM

This was taken care of in Version conversion - Accepted, Please Close

Issue ID: 3485

Subject: Need "Copy from Library" button on the Vehicle window.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

4/19/2016 3:16:08 PM

HRS AASHTO

1085

### Complete Issue Information

|                               |                      |
|-------------------------------|----------------------|
| Submitted By: Goodrich, Brian | 11/6/2001 2:16:26 PM |
| Modified By: administrator    | 6/19/2008 4:38:35 PM |
| Priority: High                |                      |
| Category: Enhancement         |                      |

### History

| Primary Contact  | Status             | Priority | Category       |
|------------------|--------------------|----------|----------------|
| Kennelly, Krisha | Assigned           | Urgent   | Bug            |
|                  | Information Needed |          |                |
|                  | Resolved           |          | Bug - Export 1 |
| Kennelly, Krisha | Resolved           | Urgent   | Bug - Export 1 |

### Contacts

| Name             | Company | Email 1             | Phone 1 |
|------------------|---------|---------------------|---------|
| George Christian |         | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 3491.11859 | Resolved      | Analysis results appear to not include the weight of the concrete deck haunch |

### Description

FROM:hlee DATE:11/6/2001 8:56:37 AM  
This incident is extracted from Incident 3439.

The Vehicle window (initiated from the Manage Temporary Vehicles window) should have a "Copy from Library" button. This would help get a vehicle back into the "New" section if it is accidentally saved to the library.

FROM:jduray DATE:6/17/02 10:04:14 AM  
I don't understand this request. If the vehicle is in the library then it is not temporary and should not appear in the "New" section?

FROM:hlee DATE:4/30/2008 2:26:29 PM  
Discarded by TAG 12/07.

4/19/2016 3:16:08 PM

HRS AASHTO

1086

## Complete Issue Information

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 3491                                                                         |
| Subject: Analysis results appear to not include the weight of the concrete deck haunch |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Christian, George   | 11/7/2001 1:42:46 PM |
| Modified By: administrator        | 6/19/2008 4:05:44 PM |
| Priority: Urgent                  |                      |
| Category: Bug - Export 1          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:gchristian DATE:11/7/01 8:41:10 AM

I ran a steel girder bridge the analysis results do not include the weight of the concrete deck haunch. The graphic schematic shows the haunch as correctly input. Brian McCaffrey thinks that this was reported by someone previously but could not readily find it on the incident report log. The haunch in my example was input with the GUI as imbedded flange, exterior girder, haunch measured top of web and c.l. of girder.

FROM:kkennelly DATE:11/7/2001 9:03:10 AM

Can you attach the bbd file for the bridge with this problem to this incident? I will try to reproduce the

4/19/2016 3:16:08 PM

HRS AASHTO

1087

**Complete Issue Information**

problem but it's easier if you give me a bridge that has this problem.

FROM:kkennelly DATE:11/8/2001 9:20:00 AM

Incident 3258 concerns a problem where the BRASS export was not computing the haunch dead load for a schedule based steel beam. Brian Goodrich indicated that was fixed. Can you attach the bbd file for your bridge so I can test that it has been corrected for Version 4.1?

FROM:gchristian DATE:01/29/2002 10:54:11

The file that I sent re. incident No. 3532 (AlcoaRd.bdd)had this problem.

FROM:gchristian DATE:01/29/2002 14:11:57

The problem seems to be resolved now that I was able to run the bridge on Ver. 4.1. I also checked another bridge with same problem, and it is OK on ver. 4.1.

|                                    |
|------------------------------------|
| Issue ID: 3501                     |
| Subject: Virtis/Opis recovery file |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 11/9/2001 8:13:36 PM |
| Modified By: administrator     | 6/19/2008 4:05:44 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Ihnat, Joseph   | Assigned    | High     | Enhancement |
|                 | System Test |          |             |
| Ihnat, Joseph   | System Test | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 3511.11839 | Suspended     | 4.1 Beta 2: BWS Report Tool - Restructure window similar to Windows Explorer |

### Description

FROM:jduray DATE:11/9/01 3:12:35 PM  
Update the recovery file when the BWS is safed.

FROM:jihnath DATE:11/14/2001 9:47:22 AM  
Done for version 4.1.0 Beta Build 1.

Issue ID: 3511

Subject: 4.1 Beta 2: BWS Report Tool - Restructure window similar to Windows Explorer

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Goodrich, Brian

11/12/2001 5:29:09 PM

Modified By: administrator

6/19/2008 4:05:43 PM

Priority: High

4/19/2016 3:16:09 PM

HRS AASHTO

1089

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Open     |          |          |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | pin510523.bbd       |             |

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3522.11828 | Resolved      | P/S beam material in 4.04 |

### Description

FROM:bgoodrich DATE:11/12/2001 12:29:11

The more I use the BWS Report Tool window, the more I think it should be restructured like a Windows Explorer, i.e., a folder tree on the left and the list of attributes on the right. I find it cumbersome to scroll up or down through several attribute names just to get to another folder. If the user turns on attributes within a folder, the folder could be yellow. If none have been turned on, the folder could be red.

FROM:jduray DATE:11/21/2001 08:13:24

This sounds like a major change. Since it doesn't involve the report definition we can address in a future release if necessary. I suspect the users will have other suggestions for improving the tool. We should wait for the users to use the tool and submit comments.

**Complete Issue Information**

Issue ID: 3522  
Subject: P/S beam material in 4.04

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: McCaffrey, Brian 11/19/2001 2:08:39 PM  
Modified By: administrator 6/19/2008 4:05:42 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bmccaffrey DATE:11/19/2001 09:08:39

See attached .bbd file: If not attached I'll send it to Jim Duray.

When a concrete material is assigned and selected in the 'beam details' window it is not saved. Check beam # 7 and try to enter PS 45 MPA as the concrete material.

FROM:kkennelly DATE:11/19/2001 1:54:42 PM

The following workaround will fix your problem. Open the Concrete material window for your "PS 45 MPA" concrete. The name "PS 45 MPA" that shows up in this window has a blank space at the end of the name "PS 45 MPA ". Backspace to remove the extra space at the end of the name, click OK to save. Now when you go to the Beam Details you will be able to save the PS 45 MPA as the girder material. I'm marking this as resolved to let you know the workaround is available and you can keep working. Then I'll reopen this incident to figure out if we can find a better resolution.

4/19/2016 3:16:09 PM

HRS AASHTO

1091

**Complete Issue Information**

FROM:kkennelly DATE:11/19/2001 2:12:20 PM  
Email sent to Brian explaining the workaround.

Issue ID: 3524  
Subject: Find Feature greyed out - Bridge Explorer

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Thompson, Todd 11/20/2001 8:21:35 PM  
Modified By: administrator 6/19/2008 4:05:42 PM  
Priority: Urgent  
Category: Bug

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned | Urgent   | Bug      |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug      |

**Contacts**

| Name          | Company            | Email 1                   | Phone 1      |
|---------------|--------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT   | todd.thompson@state.sd.us | 605-773-3285 |
| Jim Duray     | Michael Baker Jr., | jduray@mbakercorp.com     |              |

4/19/2016 3:16:09 PM

**HRS AASHTO**

1092



## Complete Issue Information

Inc.

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | InterceptImportFailure.txt |             |
|      | InterceptImportFailure.txt |             |
|      | InterceptImportFailure.txt |             |
|      | InterceptImportFailure.txt |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3531.11819 | Resolved      | Metric Converted PS Beams |

## Description

FROM:tthompson DATE:11/20/2001 15:21:35

VirtisOpis 4.0.4

For all users except Administrators and Managers, the Find Feature opens up but all is greyed out. This wasn't the case before, but once we went to 4.0.4 this phenomena started. Is there a privilege or something that I can't find that needs revising or is this a bug?

To the best of my memory, I have left all the priviliges set as originally sent out. I have only added users to the different groups.

FROM:jduray DATE:11/21/2001 08:08:12

FROM:mordoobadi DATE:12/3/2001 9:12:07 AM  
It seems like it happens only when the folder is a private folder.

FROM:mordoobadi DATE:12/3/2001 10:20:37 AM  
Fixed.

FROM:mordoobadi DATE:2/9/2007 4:45:53 PM  
Accepted by Todd Thompson 11/7/2006.

Issue ID: 3531

Subject: Metric Converted PS Beams

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Punkay, Stephen

12/3/2001 4:01:17 PM

4/19/2016 3:16:10 PM

HRS AASHTO

1093

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:42 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

**History**

| Primary Contact | Status   | Priority | Category                      |
|-----------------|----------|----------|-------------------------------|
| Ihnat, Joseph   | Assigned | High     | Unknown<br>Bug<br>Bug - GUI 2 |
|                 | On Hold  |          |                               |
|                 | Resolved |          |                               |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2                   |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 3536.11814 | Resolved      | Unacceptable behavior with Cover Plate tabs of Deterioration Profile window |

**Description**

FROM:kkennelly DATE:12/3/2001 10:58:16 AM  
Entered on behalf of Stephen Punkay via email:

Jim,

I'm sorry to be forwarding my questions directly to you; however, I have been kicked out of the Visual Intercept website when reporting incidences the past three or four times.

I have attached a \*.bbd file containing a prestressed girder system modeled in metric. The first (21 m) span is a Type III girder. Its inventory rating is 1.539, and its (phi)\*(Mn) is believable at 3954 ft-kips. The second and third spans are Type IV girders. Their inventory ratings were reported as 110.000 and 0.000, in the analysis results window and Brass output, respectively. The Brass output reports the (phi)\*(Mn) for the third

4/19/2016 3:16:10 PM

HRS AASHTO

1094

## Complete Issue Information

span as 0.197349 E+10. This value seems quite high.

What baffles me is that the first span appears to run fine, but the second and third blow up. I copied the first and modified the copy to create the second and third. I even tried changing the girder to a Type III thinking that the problem was the Type IV girder modeled.

Jim, have you encountered or heard of any similar problems modeling a Type IV girder in metric? Or any problems in general with the conversion from metric to english?

Please have someone review and run the attached \*.bbd file to see if there is a glaring error that I haven't observed.

Thank you for your help!  
Stephen Punkay

Stephen C. Punkay, P.E.  
Project Engineer  
9107 Interline Ave., Baton Rouge, LA 70809  
Office 225.927.9321 Fax 225.927.9326

FROM:kkennelly DATE:12/3/2001 11:10:54 AM  
Stephen,

I looked at structure definition "26.25 m Type IV" member G2. The Deck Concrete window has a Standard Effective Flange Width of 2 mm. If you make that a larger width, BRASS will give you more reasonable results. Structure Definition 31.5 m Type IV also has the same issue. Did you intend to enter 2 mm as the width or is that an input error?

Brian,  
Running the attached structure definition "26.25 m Type IV" member G2 with a Std Eff Flange Width of 2 mm gives some funny output in the BRASS LFD file. The controlling limit state is listed as "PRESTRESS GIRDER( AMR2 ! )" in the output file. In the Virtis Analysis Results window, the controlling limit state shows up as "".

FROM:kkennelly DATE:12/5/2001 11:50:04 AM  
Email received from user 12/3/01 4:51pm:

Krishna,

Thank you for pointing out the obvious! I had intended to enter a Standard Effective Flange Width of 2.0 m, not 2.0 mm. Adjusting the Standard Effective Flange Width to 2000.0 mm, resulted in a believable rating. The issue has been resolved.

Thanks again for your prompt assistance.  
Stephen

FROM:bgoodrich DATE:12/07/2001 16:38:18

4/19/2016 3:16:10 PM

HRS AASHTO

1095

**Complete Issue Information**

I have forwarded the garbled limit state description to Dan Glandt for investigation. This will not be addressed in time for the 4.1 release. On hold until next release (or possibly next patch).

FROM:bgoodrich DATE:12/18/2001 11:26:18

Dan has addressed the garbled limit state description problem in BRASS-GIRDER 5.8.5, which will be used in the Virtis 4.2 release.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 3536                                                                       |
| Subject: Unacceptable behavior with Cover Plate tabs of Deterioration Profile window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 12/6/2001 1:22:49 PM |
| Modified By: administrator     | 6/19/2008 4:05:42 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnmat DATE:12/6/2001 8:21:44 AM

Received from Brian:

On the Bottom Cover Plate tab of the Deterioration Profile window, the Cross Section column allows the selection of all cross sections instead of only those utilized in the Cross Section Ranges window. The user should not be able to specify deterioration for a section that does not exist along the span. Additionally, the list of cross sections should exclude any cross sections that do not contain the applicable cover plate. The behavior of the Top Cover Plate tab is the same.

FROM:jduray DATE:4/12/2005 1:24:22 PM

fixed based on testing with superstructure tag. Apply button calls validation that prevents you from applying deterioration to cover plate over range where cover plate doesn't exist.

4/19/2016 3:16:10 PM

HRS AASHTO

1096

## Complete Issue Information

Issue ID: 3537

Subject: <TAB> key not hooked up in Library Explorer

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Ihnat, Joseph

12/12/2001 4:11:50 PM

Modified By: administrator

6/19/2008 4:05:42 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Enhancement |
| Ihnat, Joseph   | Assigned   |          | Bug         |
|                 | Patch Test |          | Bug - GUI 2 |
|                 | Accepted   |          |             |
|                 | Closed     |          |             |

4/19/2016 3:16:10 PM

HRS AASHTO

1097

### Complete Issue Information

|               |             |      |             |
|---------------|-------------|------|-------------|
| Ihnat, Joseph | Closed      | High | Bug - GUI 2 |
| Duray, Jim    | New         | High | Bug         |
| Ihnat, Joseph | Assigned    |      |             |
|               | System Test |      |             |
|               | Patch Test  |      |             |
|               | Accepted    |      | Bug - GUI 2 |
|               | Closed      |      |             |
| Ihnat, Joseph | Closed      | High | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3538.11812 | Closed        | Inconsistency in Library Explorer |

### Description

FROM:jihnata DATE:12/12/2001 11:08:50 AM

In the Library Explorer, the <TAB> key cannot be used to go from the tree to the grid (and back) like it does in the Bridge Explorer.

FROM:jduray DATE:4/4/02 2:47:57 PM

Accepted by Gale (informed via email).

|                                            |
|--------------------------------------------|
| Issue ID: 3538                             |
| Subject: Inconsistency in Library Explorer |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Ihnat, Joseph |

4/19/2016 3:16:11 PM

HRS AASHTO

1098

**Complete Issue Information**

|                            |                       |
|----------------------------|-----------------------|
| Submitted By: Lee, Herman  | 12/12/2001 6:48:22 PM |
| Modified By: administrator | 6/19/2008 4:05:42 PM  |
| Priority: High             |                       |
| Category: Bug - GUI 2      |                       |

**History**

| Primary Contact    | Status     | Priority | Category    |
|--------------------|------------|----------|-------------|
| Duray, Jim         | New        | High     | Enhancement |
| Kennelly, Krisha   | Assigned   |          |             |
| Duray, Jim         |            |          |             |
| Ordoobadi, Mehrdad |            |          |             |
| Kennelly, Krisha   | Patch Test |          |             |
|                    | Accepted   |          |             |
| Kennelly, Krisha   | Accepted   | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3548.11802 | Accepted      | Search for vehicles when saving results |

**Description**

FROM:hlee DATE:12/12/2001 1:18:58 PM

1. On the "Truck" tab of the "Library - Vehicle" window, switching units doesn't change units in the column headers for new item.
2. On the "ASD - Slip Critical" and "LFD - Slip Critical" tabs of the "Library - Connections - Bolt" window, units radio buttons are not functioning for new item.
3. On the "Strand Grid" tab of the "Library - PS Shape" window, input for "No of Strands" should limit to numbers only.

4/19/2016 3:16:11 PM

HRS AASHTO

1099

**Complete Issue Information**

4. On the "Analysis Results" (Tabular Report) window, the units in the "LFD Critical Loads" and "Rating Results Summary" reports should enclose in round brackets.

FROM:jduray DATE:12/16/2001 23:12:01  
Fix for 4.2

FROM:jihnata DATE:1/11/2002 10:40:34 AM  
All of the above turned out to be fairly minor fixes, so I repinned the code in Virtis 4.1 Maintenance for Service Pack 1.

FROM:hlee DATE:3/27/2002 11:00:45 AM  
Patch Test on #2:  
Units on the "ASD - Slip Critical" and "LFD - Slip Critical" tabs are missing for both new and existing items.

FROM:jihnata DATE:3/27/2002 2:43:07 PM  
Fixed for 4.1 SP1.

FROM:jduray DATE:4/4/02 2:48:20 PM  
Accepted by Gale (informed via email).

|                                                  |
|--------------------------------------------------|
| Issue ID: 3548                                   |
| Subject: Search for vehicles when saving results |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Kennelly, Krisha    | 12/18/2001 4:35:16 PM |
| Modified By: administrator        | 6/19/2008 4:05:41 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                                   |
|------------|---------------|-------------------------------------------------------------------------------------------|
| 3549.11801 | Accepted      | V410 Rel Cand 1 - Export to BRASS needs to identify composite top flange supported ranges |

### Description

FROM:kkennelly DATE:12/18/2001 11:27:54 AM

Changes should be made so the following will work:

Do a routing, save vehicles and results. Open Virtis later, do a routing with the same vehicles. The vehicles are already saved to the library so when the Analysis Event for the routing checks if the routing vehicles are new vehicles before saving the routing results, the library should be searched looking for the vehicle. (the search should occur when the user wants to save results, not when the routing is opened.)

If a vehicle with the same name is already in the library, a check should be made if the library vehicle has the same axles, lane, etc. loading as the routing vehicle. If an exact match is found, then the library vehicle id should be used when the routing results are saved.

If the names match but the axles, etc. don't, the name of the routing vehicle should be changed by adding some suffix to it and then the vehicle with the new name is saved and so are the results. Gui should query the domain to tell the user that the vehicle name was changed when the results were saved to the db.

FROM:jduray DATE:1/4/02 1:10:41 PM

Charge to MnDOT task.

FROM:kkennelly DATE:1/7/2002 9:52:28 AM

I don't think I'm the person to change this code, I don't understand what DoAnalysisEvent is doing when it checks to see if any current results are from a new vehicle. I think maybe Mehrdad should change this code.

FROM:jduray DATE:1/29/02 12:55:13 PM

FROM:mordoobadi DATE:2/4/2002 3:05:32 PM

Krishna, I added a function to the IDoAnalysisEvent. The function is called FindSimilarVehicle. The function returns an LPDISPATCH of a vehicle and it takes an LPDISPATCH of a vehicle as argument.

The function finds a vehicle that exists in memory (it could be a new or an existing vehicle) and has the same properties as the vehicle passed as argument.

Here is how you can use it in the routing interface.

- (1) Create the new vehicle using CreateInstance, Do NOT use IDoAnalysisEventPtr::CreateNewVehicle.
- (2) Call FindSimilarVehicle and Pass an LPDISPATCH of the Vehicle you created in previous step.
- (3) If FindSimilarVehicle returns a vehicle (NOT NULL) use that vehicle.
- (4) If FindSimilarVehicle returns NULL, Call IDoAnalysisEventPtr::CreateNewVehicle and then the IDoLibVehiclePtr::Copy to copy vehicle properties and use that new vehicle.

When you name the vehicle you have to make sure that the name is not already in use.

4/19/2016 3:16:11 PM

HRS AASHTO

1101

**Complete Issue Information**

FROM:kkennelly DATE:2/21/2002 3:52:42 PM  
 Code updated for 4.2 and 4.1 Service Pack 1

FROM:jduray DATE:4/4/02 2:48:47 PM  
 Accepted by Gale (informed via email).

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 3549                                                                                     |
| Subject: V410 Rel Cand 1 - Export to BRASS needs to identify composite top flange supported ranges |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Barnhill, Gale      | 12/20/2001 7:03:23 PM |
| Modified By: administrator        | 6/19/2008 4:05:41 PM  |
| Priority: High                    |                       |
| Category: Help                    |                       |

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          | Bug      |
|                  | Information Needed |          |          |
|                  | Resolved           |          | Help     |
|                  | Accepted           |          |          |
|                  | Patch Test         |          |          |
| Kennelly, Krisha | Accepted           | High     | Help     |

**Contacts**

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | constl.bbd          |             |

**Tasks**

4/19/2016 3:16:11 PM

HRS AASHTO

1102

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:gbarnhill DATE:12/20/2001 14:03:23

I created a composite steel structure by setting a COMPOSITE range in the deck profile SHEAR CONNECTOR tab. When the structure is exported to BRASS and analyzed LFD the unbraced length of the top flange at various points is defined by the cross frame location data. I would like BRASS-GIRDER to consider the top flange laterally supported (i.e., Lb=0) over those regions we specified as composite.

I've attached a bbd from V410 Rel Candidate 1.

DISCUSSION PROVIDED BY BRIAN AND DAN GLANDT:

BRASS-GIRDER does not automatically consider the top flange laterally supported when the structure is composite. Therefore, the export must be modified to generate the necessary commands to make this happen. I would need to superimpose the shear connector and lateral support schedules and generate the LAT-SUPPORT-SCHEDULE commands. Dan said that once he added these commands, the unbraced lengths were correct.

FROM:gbarnhill DATE:12/20/2001 14:30:35

ADDITIONAL INFO - Since I exported the file, I went back and added a range of LATERAL SUPPORT. The results are now what I expect for an LFD rating.

The HELP for the SHEAR CONNECTOR tab indicates that composite action can be defined by the COMPOSITE connector ID. My assumption is therefore that I have defined lateral support. If that's what we intend, then the export needs to check that data to create the LATERAL SUPPORT command for BRASS.

If we intend to use the LATERAL SUPPORT dialog to be the only place to define that data, then the HELP needs to be modified and the BARS import process will need to be adjusted.

FROM:jduray DATE:1/4/02 1:09:08 PM

Krishna - please investigate.

FROM:kkennelly DATE:1/4/2002 1:49:40 PM

I don't think we should change the export to consider the top flange laterally supported when the user enters a composite range in Virtis. Some users may not want shear connectors and composite regions to dictate lateral support conditions. (I think we would have heard other comments by now if users wanted this.)

The Help for Virtis does not imply that entering Shear Connectors and composite regions has any affect on what regions are laterally supported. I can add a sentence that explicitly says composite regions do NOT indicate laterally support regions if you want.

The BARS import is currently creating the laterally supported regions from the data on Card16 which is the Lateral Support card for BARS so I don't think the import needs adjusted. Gale, do you have lateral support ranges created by the BARS import for a bridge where Card16 does not say the top flange is laterally supported?

4/19/2016 3:16:11 PM

HRS AASHTO

1103

**Complete Issue Information**

FROM:gbarnhill DATE:01/04/2002 17:53:19  
BARS data which is only ASD coded relies on CT14 for composite action definition. CT16 does define LFD support ranges.  
I think it would help make it clear that for an input bridge, lateral support is not defined by composite ranges and that the lateral support ranges must be used for that definition.  
Is it true then that the composite definition for the slab is only to define where composite section properties are to be used ???

FROM:kkennelly DATE:1/7/2002 8:10:57 AM  
Yes, defining composite regions of the slab only defines where composite section properties are to be used. (BRASS LFD also uses the Points of Contraflexure in conjunction with the shear connectors tab to determine if composite section properties should be used.) I added the following to the Help to clarify composite regions on the Shear Connector tab do not imply the regions are also laterally supported:

The shear connector data entered on this tab does not imply that the top flange is laterally supported. For a girder system, the Lateral Support window must be used to define regions where the top flange is laterally supported. For a girder line, the Bracing Ranges: Lateral Support tab must be used to define regions where the top flange is laterally supported.

FROM:gbarnhill DATE:01/07/2002 12:59:04  
OK with HELP additions.

FROM:gbarnhill DATE:Friday, March 29, 2002 12:38:43 PM

Help for DECK PROFILE:SHEAR CONNECTORS is OK.

Don't we need the same statement in CROSS SECTION RANGES:SHEAR CONNECTORS ???

FROM:kkennelly DATE:4/1/2002 9:56:08 AM  
Statement added to Cross Section Ranges: Shear Connectors help.

FROM:jduray DATE:4/4/02 2:49:24 PM  
Accepted by Gale (informed via email).

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3550<br>Subject: Prestress Design Tool Distribution Factors |
|-----------------------------------------------------------------------|

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Kennelly, Krisha    | 12/26/2001 3:08:43 PM |
| Modified By: administrator        | 6/19/2008 4:05:41 PM  |
| Priority: High                    |                       |

4/19/2016 3:16:12 PM

**HRS AASHTO**

1104

**Complete Issue Information**

Category: Enhancement

**History**

| Primary Contact  | Status     | Priority | Category    |
|------------------|------------|----------|-------------|
| Duray, Jim       | New        | High     | Bug         |
| Kennelly, Krisha | Assigned   |          |             |
|                  | Resolved   |          |             |
|                  | Patch Test |          | Bug - GUI 2 |
| Kennelly, Krisha | Accepted   | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name                       | Resource Identifier | Description |
|----------------------------|---------------------|-------------|
| InterceptImportFailure.txt |                     |             |

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3551.11799 | Accepted      | Framing Plan Schematic error |

**Description**

FROM:kkennelly DATE:12/26/2001 10:05:28 AM

Request for PS Design Tool to use lever rule and actual  $Kg/12Lts^3$  value when computing LRFD distribution factors for user. Second part of email entered as separate incident.

Submitted on behalf of Jeff Smith via email 12/19/01:

Jim,

I haven't had much time to work with the latest beta version, Release Candidate 1, but I did have a chance to look at Incident 3329. This is an incident I had sent in to Krisha. It appears that this particular incident can be considered as accepted. However, I have some concerns about the prestress design tool underestimating the number of strands, particularly when either the lever rule or rigid body give a significantly higher distributiou factor compared to the formulas and using a value of 1 for  $Kg/12Lts^3$ .

&lt;&lt;Incident 3551&gt;&gt;

I also encountered an interesting schematic while entering a 120 ft simple span with 4 Type VI girders at 9.5 ft spacing with a 4.75 ft overhang. Attached is a screen shot of the resulting framing plan. This

4/19/2016 3:16:12 PM

HRS AASHTO

1105

**Complete Issue Information**

was corrected after completing the cross section input. In case you're wondering, I was running under Windows 2000.

Jeff Smith  
Structural Design Engineer  
jeff.smith@fhwa.dot.gov  
Ph. (404) 562-3905  
Fax (404) 562-3700

FROM:kkennelly DATE:12/26/2001 10:10:02 AM

|                                       |
|---------------------------------------|
| Issue ID: 3551                        |
| Subject: Framing Plan Schematic error |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Kennelly, Krisha    | 12/26/2001 3:09:32 PM |
| Modified By: administrator        | 6/19/2008 4:05:41 PM  |
| Priority: High                    |                       |
| Category: Bug - GUI 2             |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:12/26/2001 10:10:41 AM  
Framing Plan Schematic shows unusual results if viewed before entering structure typical section data. First part of email entered as separate incident.  
Submitted on behalf of Jeff Smith via email 12/19/01:

Jim,  
<<Incident 3550 >>

4/19/2016 3:16:12 PM

HRS AASHTO

1106

**Complete Issue Information**

I haven't had much time to work with the latest beta version, Release Candidate 1, but I did have a chance to look at Incident 3329. This is an incident I had sent in to Krisha. It appears that this particular incident can be considered as accepted. However, I have some concerns about the prestress design tool underestimating the number of strands, particularly when either the lever rule or rigid body give a significantly higher distributioun factor compared to the formulas and using a value of 1 for  $Kg/12Lts^3$ .

>>

I also encountered an interesting schematic while entering a 120 ft simple span with 4 Type VI girders at 9.5 ft spacing with a 4.75 ft overhang. Attached is a screen shot of the resulting framing plan. This was corrected after completing the cross section input. In case you're wondering, I was running under Windows 2000.

Jeff Smith  
Structural Design Engineer  
jeff.smith@fhwa.dot.gov  
Ph. (404) 562-3905  
Fax (404) 562-3700

FROM:kkennelly DATE:12/26/2001 10:11:58 AM  
Since 4.1 is ready for release this fix will be in the first service pack for 4.1.

Notes for programmer:  
I am able to reproduce this. Seems to happen when ever span length ranges from 120' to 124'. In SchematicFrmPlnView.cpp, InitSupportLines() calls CSchematicGeometry::Distance() to get the end offset of the last support line. Distance() subtracts pt2.x - pt1.x which is 120-120 and should be = 0 but the result contains some garbage values way out at the end so it is 1.4e-14. PositionPhysicalObjects() then checks dpt2a.y < dpt2b.y which gives a true since dpt2b.y contains 1.4e-14 instead of zero. This forces the y value of the end of girder to be positive instead of the negative it should be. Code changed to use SysComparisonFunctions::IsLessThan() which uses some tolerances so 1.4e-14 set to zero, schematic drawn ok.  
Code needs checked into SourceSafe.

FROM:kkennelly DATE:1/4/2002 1:29:07 PM  
Code has been checked into SourceSafe for Version 4.2 and Version 4.1 Service Pack 1.

Issue ID: 3552  
Subject: 4.1 Release - Delete Span deletes too many supports

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 12/28/2001 4:32:08 PM  
Modified By: administrator 6/19/2008 4:05:41 PM  
Priority: Urgent  
Category: Bug - Domain 1

## Complete Issue Information

### History

| Primary Contact  | Status     | Priority | Category         |
|------------------|------------|----------|------------------|
| Duray, Jim       | New        | High     | Unknown          |
| Kennelly, Krisha | Assigned   |          | Bug              |
|                  | Patch Test |          |                  |
|                  | Closed     |          |                  |
| Kennelly, Krisha | Closed     | High     | Bug - Database 2 |
|                  |            |          | Bug - Database 2 |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                               |
|------------|---------------|-------------------------------------------------------------------------------------------------------|
| 3553.11797 | Closed        | 4.1.0 Release - PopulateSpanInfo utility does not work on Sysbase5.5 DB with checkin/checkout enabled |

### Description

FROM:kkennelly DATE:12/28/2001 11:26:59 AM

In 4.1 Release version, create new girder system superstructure definition with 2 spans. Ok to close window. Reopen window, change number spans to 1, hit OK. Open the Supports window for one of the members and it will only show 1 support with no type set. Click OK in the Supports window and Virtis will crash.

FROM:kkennelly DATE:1/2/2002 9:27:45 AM

DoSupportLineSet->Delete() needs modified. Code needs checked into SourceSafe.

FROM:kkennelly DATE:1/2/2002 9:29:01 AM

FROM:kkennelly DATE:1/4/2002 1:45:43 PM

Code modified and checked into SourceSafe for both Version 4.2 and Version 4.1 Service Pack 1.

FROM:jduray DATE:4/4/02 2:49:59 PM

Accepted by Gale (informed via email).

---

4/19/2016 3:16:12 PM

HRS AASHTO

1108



**Complete Issue Information**

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 3553                                                                                                 |
| Subject: 4.1.0 Release - PopulateSpanInfo utility does not work on Sysbase5.5 DB with checkin/checkout enabled |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Barnhill, Gale      | 1/2/2002 8:39:22 PM  |
| Modified By: administrator        | 6/19/2008 4:05:41 PM |
| Priority: High                    |                      |
| Category: Bug - Database 2        |                      |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | Urgent   | Unknown  |
|                 | Duplicate |          |          |
|                 | Closed    |          |          |
| Duray, Jim      | Closed    | Urgent   | Unknown  |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | NT-2000.bbd         |             |

**Tasks**

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3554.11796 | Closed        | Works on NT & not 2000 |

**Description**

FROM:gbarnhill DATE:01/02/2002 15:39:23  
V4.1.0 Release - Sybase 5.5 DB

With checkin/checkout enabled, the bridges MUST be checked out to BRIDGEWARE for the PopulateSpanInfo utility to work.

4/19/2016 3:16:12 PM

HRS AASHTO

1109

**Complete Issue Information**

If the bridges are not checked out at all or are checked out to another user, then a COM ERROR appears and the utility stops when the first such bridge is encountered.

I get the same results with any version of the DB from one migrated up from V2.0 to the Virtis41.db on the release CD.

FROM:hlee DATE:1/4/2002 10:47:28 AM  
PopulateSpanInfo utility has been revised to run regardless checkin/checkout is enabled or not. Need to be redistributed.

FROM:jduray DATE:1/4/02 1:07:04 PM  
Send new utility to Gale for testing. When working correctly post it on our web site.

FROM:kkennelly DATE:1/7/2002 9:17:29 AM  
New utility emailed to Gale for testing.

FROM:gbarnhill DATE:01/07/2002 12:50:35  
Tested the utility from Krisha. It works for a database with checkin/checkout enabled.

|                                 |
|---------------------------------|
| Issue ID: 3554                  |
| Subject: Works on NT & not 2000 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/3/2002 7:23:28 PM  |
| Modified By: administrator     | 6/19/2008 4:05:41 PM |
| Priority: Urgent               |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:dteal DATE:01/03/2002 14:23:29  
The attached bbd file works on Win NT4.0 but does not work on Windows 2000.

Have not loaded version 4.1 yet. Running on Version 4.0.4

Get the following error message from Opis (design review):

Error generating LRFD factors commands!  
Line 148 in source file  
D:\virtis\GUI\abxbrass\BrassLrfdFactors.cpp

Error generating LRFD factors commands!  
Line 642 in source file  
D:\virtis\GUI\abxbrass\BrassLrfdFactors.cpp

Unknown exception in the BRASS LRFD analysis Module.  
Line 641 in source file  
D:\virtis\GUI\abxbrass\BrassLrfdFactors.cpp

FROM:jihnata DATE:1/3/2002 3:11:10 PM  
This was traced to an uninitialized member variable in DoLibLrfdFactor.cpp that only affected Release builds on certain PCs. It has been fixed in version 4.1.0.  
Duplicate of 1050 and 3482.

FROM:dteal DATE:Friday, March 29, 2002 10:19:21 AM

Issue ID: 3555  
Subject: Add attribute to abw\_person

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krishna  
Submitted By: Ordoobadi, Mehrdad 1/3/2002 10:21:52 PM  
Modified By: administrator 6/19/2008 4:05:41 PM  
Priority: High  
Category: Enhancement

**History**

4/19/2016 3:16:13 PM

HRS AASHTO

1111

### Complete Issue Information

| Primary Contact    | Status     | Priority | Category    |
|--------------------|------------|----------|-------------|
| Ordoobadi, Mehrdad | New        | Urgent   | Unknown     |
| Ihnat, Joseph      | Assigned   | High     | Bug         |
|                    | Resolved   |          |             |
|                    | Patch Test |          | Bug - GUI 2 |
|                    | Accepted   |          |             |
|                    | Closed     |          |             |
| Ihnat, Joseph      | Closed     | High     | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3556.11794 | Closed        | Delete key deletes grid heading text |

### Description

FROM:mordoobadi DATE:1/3/2002 5:18:41 PM

Add attribute active\_ind to abw\_person table. It would indicate whether a person is active (log-in allowed) or inactive (log-in prohibited).

Do this for version 4.2.

FROM:mordoobadi DATE:2/1/2002 10:16:16 AM

ERwin updated, database updated.

FROM:jduray DATE:5/21/02 9:37:10 AM

Next we need to utilize the attribute during the login process.

Revise Db, De, Dm, Do.

Implement in CSystemSecurity

FROM:jduray DATE:5/23/02 4:12:35 PM

Schedule for release in 5.0.

FROM:mordoobadi DATE:12/10/2002 4:37:52 PM

4/19/2016 3:16:13 PM

HRS AASHTO

1112

## Complete Issue Information

Fixed.

FROM:mordoobadi DATE:12/11/2002 9:30:56 AM

Krisha, could you update the help for this.

The following has changed.

In configuration browser, User window, a check-box is added that indicates whether the user is active or not.

If a user is marked inactive the tree shows the user icon as greyed out.

If a user is marked inactive he/she would not be able to login.

FROM:kkennelly DATE:12/11/2002 2:41:14 PM

Help fixed for Version 5.0 alpha 5

|                                               |
|-----------------------------------------------|
| Issue ID: 3556                                |
| Subject: Delete key deletes grid heading text |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 1/4/2002 5:50:17 PM  |
| Modified By: administrator     | 6/19/2008 4:05:41 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jihnat DATE:1/4/2002 12:47:11 PM

Herman noticed that if the current cell is in the grid heading, pressing the Delete key will delete that cell's text, until the window is closed then reopened.

FROM:jduray DATE:4/4/02 2:50:16 PM

4/19/2016 3:16:13 PM

HRS AASHTO

1113

**Complete Issue Information**

Accepted by Gale (informed via email).

|                              |
|------------------------------|
| Issue ID: 3557               |
| Subject: Version 4.1 Patch 1 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 1/4/2002 5:59:24 PM  |
| Modified By: administrator     | 6/19/2008 4:38:35 PM |
| Priority: Urgent               |                      |
| Category: Internal             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Open   | High     | Internal |
|                 | Closed | Urgent   |          |

4/19/2016 3:16:13 PM

HRS AASHTO

1114

**Complete Issue Information**

|            |        |        |          |
|------------|--------|--------|----------|
| Duray, Jim | Closed | Urgent | Internal |
|------------|--------|--------|----------|

**Contacts**

| Name           | Company                   | Email 1              | Phone 1      |
|----------------|---------------------------|----------------------|--------------|
| Gregory Frantz | University of Connecticut | frantz@enr.uconn.edu | 860-486-2468 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 3558.11792 | Resolved      | academic version |

**Description**

FROM:jduray DATE:3/26/02 11:52:18 AM

Joe - Add a warning to the beginning of the installation to inform the user that database scripts are required and give them the option to abort before installing anything.

Are we going to use the html version of the readme.

Several incidents in the readme need a brief description.

The readme should refer the user to the brass release notes.

The instructions for the utilities should be pdf instead of doc.

The utilities display the TM trademark symbol. They should not display this symbol since they are not trademarked.

When the utility is finished the Start button should be disabled.

The AddShearConnRanges utility shows the edit control without explanation of what it is for. I think we should remove it from the release build or provide a command line parameter to enable it so we can use it during testing.

FROM:jihnat DATE:3/27/2002 3:27:02 PM

Fixed.

FROM:jduray DATE:3/28/02 3:22:53 PM

|                           |
|---------------------------|
| Issue ID: 3558            |
| Subject: academic version |

4/19/2016 3:16:14 PM

HRS AASHTO

1115

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Frantz, Gregory  | 1/7/2002 6:20:59 PM  |
| Modified By: administrator     | 6/19/2008 4:05:40 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status     | Priority | Category          |
|-----------------|------------|----------|-------------------|
| Duray, Jim      | Assigned   | High     | Bug               |
|                 | Patch Test |          | Bug - Performance |
|                 | Accepted   |          |                   |
| Duray, Jim      | Accepted   | High     | Bug - Performance |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3559.11791 | Accepted      | Report Tool is slow to add or remove groups... |

### Description

FROM:gfrantz DATE:01/07/2002 13:20:59

This is probably not an "incident" or problem with the program, but just some questions about the program.

1. We have the academic version of Opis and Virtis.  
The Program Limitations say the academic version is limited to  
-maximum number of spans = 3  
-maximum number of girders per structure = 10.

A bridge has 2 spans, and the superstructure consists of 6 girders in each span. What is the number of girders for this structure? Is it 6 or 12? Will the academic version handle this bridge?

2. A suggestion: It might be helpful if the Tutorials had a Date listed with each Tutorial so it is easier for

4/19/2016 3:16:14 PM

HRS AASHTO

1116



**Complete Issue Information**

the User to see if the "new" or "updated" tutorial is a more recent update that what he may already have downloaded.

FROM:jduray DATE:1/8/02 9:11:40 AM

Your example has 6 girders and the academic version should handle it.

Note to the developer:

Joe - Do the second suggestion on our web page.

FROM:jihnna DATE:3/13/2002 1:19:53 PM

Web page has been updated and the updated tutorials are available.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3559                                          |
| Subject: Report Tool is slow to add or remove groups... |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 1/8/2002 2:20:59 PM  |
| Modified By: administrator     | 6/19/2008 4:05:40 PM |
| Priority: High                 |                      |
| Category: Bug - Performance    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:1/8/02 9:16:41 AM

If there are a lot (thousands) of attributes and groups the tree updates are very slow and produce undesirable window updates (my screen goes white for a few seconds).

The problem is with the saving and restoring of the tree item status. The status is used to restore each

4/19/2016 3:16:14 PM

HRS AASHTO

1117

**Complete Issue Information**

tree item to the proper expanded/collapsed state. Iterating the large tree is very slow. The problem is with the iteration function GetNextItem.

FROM:jduray DATE:1/10/02 11:26:07 AM  
Revised the GetNextItem. Ready for patch testing.

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 3560                                                                               |
| Subject: Rating results within the Bridge Explorer are slow to update in a migrated database |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Barnhill, Gale        | 1/8/2002 2:26:51 PM  |
| Modified By: administrator          | 6/19/2008 4:05:40 PM |
| Priority: High                      |                      |
| Category: Bug - Performance         |                      |

**History**

| Primary Contact    | Status     | Priority | Category          |
|--------------------|------------|----------|-------------------|
| Ordoobadi, Mehrdad | Assigned   | High     | Bug               |
|                    | Patch Test |          | Bug - Performance |

4/19/2016 3:16:14 PM

HRS AASHTO

1118

### Complete Issue Information

|            |          |        |         |
|------------|----------|--------|---------|
|            | Accepted |        |         |
|            | Closed   |        |         |
| Duray, Jim | New      | Urgent | Unknown |
|            | Closed   |        | N/A     |
| Duray, Jim | Closed   | Urgent | N/A     |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3561.11789 | Closed        | Space Bar works like Backspace Key |

### Description

FROM:jduray DATE:1/8/02 9:22:57 AM

Submitted for Gale Barnhill

Performing a rating from the Bridge Explorer in a migrated db (from 4.0) produces rating results that are very slow to update even though the results are only in memory. Doing the same rating using a 4.1.0 db updates results instantly. Gale used the 3rd PS example. He has given us his migrated db.

FROM:mordoobadi DATE:1/9/2002 9:32:02 AM

Gale's database contains 1666 bridges.

I tried bridge with (bridge\_id = 1721). It took 30 seconds after bridge explorer rating for the "Bridge Rating Results" to show up.

I imported the same bridge into another database that contains a significantly smaller number of bridges (12). The "Bridge Rating Results" window appeared instantly.

FROM:mordoobadi DATE:1/9/2002 2:21:07 PM

Resolved.

FROM:mordoobadi DATE:1/9/2002 2:25:36 PM

Affected DLL abgdtop.

FROM:gbarnhill DATE:Friday, March 29, 2002 1:37:28 PM

OK in 4.1.1 patch

4/19/2016 3:16:14 PM

HRS AASHTO

1119

## Complete Issue Information

FROM:mordoobadi DATE:8/22/2003 1:35:07 PM  
Accpeted by Gale Barnhill on 3/29/2002.

|                                             |
|---------------------------------------------|
| Issue ID: 3561                              |
| Subject: Space Bar works like Backspace Key |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/9/2002 8:00:09 PM  |
| Modified By: administrator     | 6/19/2008 4:05:40 PM |
| Priority: Urgent               |                      |
| Category: N/A                  |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:01/09/2002 15:00:10

I am entering a new bridge. (same for an existing) In the Bridge Description I want to enter text with a space between the words. Whenever I press the space bar it forces the cursor to the left and deletes like a backspace key. This is true for all fields (BridgeID, NBI, Name, Description, etc.)

My test pc is running release version 4.1.0 under Windows 2000. I had our IT people look to see if somebody had changed my key mapping – they reported no problems with the pc.

FROM:dteal DATE:01/09/2002 16:18:02

Hold the phone - I just discovered that MSWord does the same thing. I sure hope somebody isn't playing a joke! I'll get back to you.

4/19/2016 3:16:14 PM

HRS AASHTO

1120

**Complete Issue Information**

FROM:dteal DATE:01/09/2002 16:41:42  
Mark this closed - My test PC caught a bug, the flu I think - All is well now.

Issue ID: 3564  
Subject: Member Alt Schematic not showing last diaphragm due to tolerance issues

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Kennelly, Krisha 1/10/2002 6:20:49 PM  
Modified By: administrator 6/19/2008 4:05:40 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Duray, Jim      | Assigned | High     | Bug<br>Bug - GUI 2 |
|                 | On Hold  |          |                    |
|                 | Resolved |          |                    |
| Ihnat, Joseph   |          |          |                    |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2        |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:16:15 PM

HRS AASHTO

1121

**Complete Issue Information**

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | InterceptImportFailure.txt |             |
|      | InterceptImportFailure.txt |             |

**Tasks**

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 3565.11785 | Closed        | Problem generating cross sections for parabolic varying webs |

**Description**

FROM:kkennelly DATE:1/10/2002 1:13:51 PM  
Submitted on behalf of Ken Teng, RQAW via email 1/10/02:

Attached bridge, member B3. Last diaphragm shows up on framing plan but not member alt profile schematic.

Appears to be a tolerance issue. The web shape has an end distance = 2027.999976 in the schematic (matches what user entered in the Girder Profile window). Schematic tries to put a cross frame at 2028 but it thinks the web ends at 2027.999976 so cross frame not drawn.

Maybe we should use the user entered tolerances in the schematic when it tries to figure out if object is on or off the beam.

FROM:jihnata DATE:7/12/2005 3:30:00 PM  
For future testing, I've attached a 5.3.1 version of the BBD file.  
Fixed for version 5.4.0 (added user entered tolerances)

FROM:jihnata DATE:7/13/2005 7:31:22 AM  
P.S.: In addition to the code change, I had to change the System Default inch tolerance from 0.00001 to 0.0001

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3565                                                        |
| Subject: Problem generating cross sections for parabolic varying webs |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 1/10/2002 9:07:34 PM |
| Modified By: administrator       | 6/19/2008 4:05:40 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |



**Complete Issue Information**

That code has been fixed in version 4.2 and 4.1 service pack 1.

But there is still a problem in the export. There is a girder flange change at 94.4167' in span 2 and a poc at 94.4467 in span 2. When the Span-Web-General command is created, it sees these two points are within a tolerance and skips over 94.4167'. But then the web depths of adjacent ranges aren't equal.

# 465 SPAN-WEB-GENERAL 2, 69.9891, 3, 94.4167, 73.4391  
# 465 SPAN-WEB-GENERAL 2, 73.4516, 3, 106.2500, 80.4174

FROM:bgoodrich DATE:01/16/2002 11:11:41

I modified the contraflexure percentage to 75.533333, so it coincides with a change point. Then, BRASS ran up to a point. The web depths for all spans appear to be incorrect. Spans 2 and 3 list negative values, which are not correct. Next, span 1 lists positive values, but I'm not sure they are correct because the web depth does not always increase from the left to the right. The web depth increases for a while, then decreases at a change point, and starts increasing again. This occurs at several change points, which almost looks like BRASS is generating a bunch of parabolas next to each other instead of one parabola that extends over several change points. I compared the span commands from the BRASS-GIRDER and BRASS-GIRDER(LRFD) data files and only see one difference. The BRASS export from Virtis adds a change point for the contraflexure locations, which are at:

Span 1: 78.000000%  
Span 2: 24.466667% and 75.533333%  
Span 3: 22.000000%

I have forwarded the web depth issue to Dan Glandt for further investigation.

FROM:bgoodrich DATE:02/01/2002 15:11:15

Dan Glandt has addressed this issue in BRASS-GIRDER 5.8.5, which should be available with the first patch for Virtis 4.1.

FROM:kkennelly DATE:4/8/2002 11:47:17 AM

Tested under SP1 and works ok.

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:29:09 PM

Closed.

Issue ID: 3567  
Subject: Problem in decreasing number of girders.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 1/11/2002 4:50:08 PM  
Modified By: administrator 6/19/2008 4:05:40 PM  
Priority: Urgent  
Category: Bug - GUI 1



## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Goodrich, Brian    | Resolved |          |          |
| Goodrich, Brian    | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 3568.11782 | Resolved      | Results Summary in Virtis shows "LFD" method when ASD was actually run |

### Description

FROM:hlee DATE:1/11/2002 11:25:34 AM

When the number of girders of a girder system structure definition is decreased, Virtis will crash after user clicked OK or Apply.

The crash is caused by using the wrong view pointer.

Resolved.

FROM:jduray DATE:4/4/02 2:51:29 PM

Accepted by Gale (informed via email).

**Complete Issue Information**

Issue ID: 3568  
Subject: Results Summary in Virtis shows "LFD" method when ASD was actually run

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 1/14/2002 2:48:11 PM  
Modified By: administrator 6/19/2008 4:05:40 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact    | Status     | Priority | Category       |
|--------------------|------------|----------|----------------|
| Ordoobadi, Mehrdad | New        | Urgent   | Bug            |
|                    | Patch Test |          |                |
|                    | Accepted   |          | Bug - Domain 2 |
|                    | Closed     |          |                |
| Ordoobadi, Mehrdad | Closed     | Urgent   | Bug - Domain 2 |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3570.11780 | Closed        | Saving of LRFD Design-Review Results |

**Description**

FROM:kkennelly DATE:1/14/2002 9:45:44 AM  
Submitted on behalf of Jason Mahoney, Bayside Engineers via phone call.

**Complete Issue Information**

<<

Run an ASD rating of a prestressed concrete bridge. Open View Analysis Results window in Virtis. Design method type shown is "LFD" instead of ASD.

>>

FROM:kkennelly DATE:1/14/2002 9:48:37 AM

I ran a steel mbr alt by ASD and the Results window shows ASD. I also ran this in 4.0.4 for a ps concrete beam and it used to say ASD in version 4.0.4. I looked at the DoMemberRatingSummaryPtr in UiMemberResultsReportVw::BuildRatingResultsSummaryGrid() and it is returning LFD as the design method type.

FROM:mordoobadi DATE:1/15/2002 8:50:08 AM

Brian, I think BRASS sets the design method type in the rating results summary object. Could you please take a look.

FROM:bgoodrich DATE:01/15/2002 12:36:17

There is no longer an ASD rating for prestress structures in the Manual for Condition Evaluation of Bridges. Note Section 6.6.2.5, which indicates to use Section 6.6.3. If the ASD rating method is specified in Virtis, the export will generate the BRASS data file with settings for performing an LFD rating. Additionally, BRASS was modified to perform LFD ratings only for prestress. I added a warning message to the export to indicate what the export has done.

|                                               |
|-----------------------------------------------|
| Issue ID: 3570                                |
| Subject: Saving of LRFD Design-Review Results |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 1/17/2002 6:48:57 PM |
| Modified By: administrator          | 6/19/2008 4:05:40 PM |
| Priority: Urgent                    |                      |
| Category: Bug - Domain 2            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:16:16 PM

HRS AASHTO

1127

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:1/17/2002 1:44:08 PM  
LRFD Design-Review analysis results of Girder System structure definitions cannot be saved completely.  
Only the results for the first member alternative will be saved.

FROM:mordoobadi DATE:1/17/2002 1:49:03 PM  
Fixed.

FROM:mordoobadi DATE:1/17/2002 2:02:03 PM  
Affected projects: abmrslt, aborstl.

FROM:dteal DATE:Monday, April 08, 2002 2:20:50 PM  
Works OK

|                                         |
|-----------------------------------------|
| Issue ID: 3572                          |
| Subject: Analysis Events Summary Window |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 1/17/2002 9:11:34 PM |
| Modified By: administrator          | 6/19/2008 4:05:40 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 1               |                      |

## Complete Issue Information

### History

| Primary Contact | Status     | Priority | Category           |
|-----------------|------------|----------|--------------------|
| Lee, Herman     | Patch Test | High     | Bug<br>Bug - GUI 2 |
|                 | Accepted   |          |                    |
|                 | Closed     |          |                    |
| Lee, Herman     | Closed     | High     | Bug - GUI 2        |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3573.11777 | Closed        | Memory leaks in UiAnalysisEventVehiclesDlg.cpp. |

### Description

FROM:mordoobadi DATE:1/17/2002 3:55:16 PM

If a bridge with a name longer than 24 characters is selected in the bridge explorer and then "Analysis Events Summary" window is opened

Symptoms: No results are reported in the window. "Unable to open recordset" along with "Data truncated" error when a bridge is opened later on.

Cause: The length specified for the "name" attribute in function CDbAbwVBridgeAnalysisEventsSet::DoFieldExchange(CFieldExchange\* pFX) is not correct (24).

Solution: It should be changed to 50 (see below). Also update the corresponding data dictionary item.  
RFX\_Text(pFX, \_T("name"), m\_sName, 50 );

FROM:mordoobadi DATE:1/17/2002 4:20:44 PM  
Code checked in 4.2 version.

Jim please let me know if you want this fixed in a 4.1 Service Pack. Note that this needs a database patch.

FROM:jduray DATE:1/22/02 1:49:03 PM

Yes, I think this needs to be fixed unless it has always been this way and no one has complained. If it has been this way then let's fix it for 4.2 or the next service pack that requires a db change.

4/19/2016 3:16:16 PM

HRS AASHTO

1129

### Complete Issue Information

FROM:mordoobadi DATE:1/24/2002 1:00:48 PM

This has always been this way and nobody complained about it.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3573                                           |
| Subject: Memory leaks in UiAnalysisEventVehiclesDlg.cpp. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 1/17/2002 9:34:53 PM |
| Modified By: administrator     | 6/19/2008 4:05:40 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:1/17/2002 4:20:43 PM

1. Open the Analysis Settings window from the Bridge Explorer.
2. Open a rating template.
3. Close the Analysis Settings window.
4. Memory leaks in UiAnalysisEventVehiclesDlg.cpp.

Added UpdateEventVehicleList in the OnOpenTemplate function.  
Resolved.

FROM:jduray DATE:4/4/02 3:03:00 PM

Confirmed.

4/19/2016 3:16:16 PM

HRS AASHTO

1130

## Complete Issue Information

Issue ID: 3574

Subject: Version 4.1 gives different PS Shear rating factors than Version 4.0.4

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krisha

1/21/2002 8:19:08 PM

Modified By: administrator

6/19/2008 4:05:39 PM

Priority: Urgent

Category: Bug - Export 1

### History

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | High     | Unknown        |
| Goodrich, Brian | Assigned   | Urgent   | Bug - Export 1 |
|                 | Patch Test |          |                |
|                 | Resolved   |          |                |
| Goodrich, Brian | Resolved   | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

4/19/2016 3:16:17 PM

HRS AASHTO

1131

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 3575.11775 | Closed        | Problem with the latest Oracle ODBC driver |

### Description

FROM:kkennelly DATE:1/21/2002 3:17:51 PM  
Submitted on behalf of Richard Best, via email:

Hello Jim,  
I have been re-rating in Virtis 4.1 bridges of various types and comparing with the results we have recorded for version 4.0.4. As I already mentioned, we have a big problem with our composite steel models but I also discovered that every rating I tried on prestressed I-beams came up with numbers that were off by enough to warrant that they too be reconsidered. In looking through the New Features document I don't see any fixes mentioned that would account for our Prestress results changing. Also, I am now seeing a limit state for "Concrete Tension" on some of the prestressed results that used to be governed by "Ultimate Moment Capacity". Can you identify the changes in the program that might account for our number changing.

Richard M. Best, PE  
Computer Design Group Engineer

Illinois Department of Transportation  
Bureau of Bridges & Structures  
2300 South Dirksen Parkway  
Springfield, Illinois 62764  
Phone:(217) 785-2922

FROM:kkennelly DATE:1/21/2002 3:19:51 PM  
Email sent back to Richard:  
Hi Richard,

Jim asked me to look into the problems you are having with your prestressed bridges. There were some significant changes made to the BRASS LFD program such as the allowable stress serviceability checks are now made for an LFD rating as per Section 6.6.3.3 of AASHTO Manual for Condition Evaluation of Bridges. Another change in BRASS LFD was how the shear capacity is computed near an interior support for simple span I beams made continuous for live load. Either of these changes may be affecting the results you are getting.

Can you export a couple of the bridges that are experiencing different rating factors and email their \*.bbd files to me so we can determine if the changes made to BRASS are causing your problem or if

4/19/2016 3:16:17 PM

HRS AASHTO

1132



**Complete Issue Information**

there is a problem in Virtis?

You can export a bridge by opening the Bridge Workspace in Virtis for that bridge and then selecting "File/Export" from the command menu. A dialog will open asking for a name for the file to be saved. You can then attach the \*.bbd file to an email to me.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
Coraopolis, PA 15108  
(412) 269-7914

FROM:kkennelly DATE:1/21/2002 3:22:08 PM

I think the change from "Ultimate Moment Capacity" to "Concrete Tension" is based on BRASS LFD now doing the serviceability checks.

This incident is for the difference in PS Shear Capacity calcs in BRASS from Virtis version 4.0.4 and version 4.1.

In Virtis Version 4.0.4, BRASS LFD computed the shear capacity of PS beams near interior supports using the current AASHTO spec.

In Virtis Version 4.1, BRASS LFD computes the shear capacity of PS beams near interior supports using the 1979 or RC specs since the export generates a command to use the BRASS default.

Jim wants the export to set the PS Beam Shear command to use what was in previous versions of BRASS in Service Pack 1 for Version 4.1.

An enhancement will be added to let the user select what calculation option they want on the Engine tab.

FROM:bgoodrich DATE:02/01/2002 15:29:57

I updated the export to generate the PS-BEAM-SHEAR command with the Vci,Vcw method specified. Fixed for Service Pack 1 for Version 4.1. The engine properties will require an update for Version 4.2.

FROM:dteal DATE:Monday, April 08, 2002 9:56:19 AM

I can not find the Calculation option on the Engine Tab for LFD that this referred to.

FROM:jduray DATE:4/8/02 10:59:59 AM

Providing the use an option for selecting the method is an enhancement for a future release.

Issue ID: 3575  
Subject: Problem with the latest Oracle ODBC driver

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Ordoobadi, Mehrdad 1/24/2002 2:00:29 PM  
Modified By: administrator 6/19/2008 4:05:39 PM  
Priority: High  
Category: Bug

## Complete Issue Information

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Goodrich, Brian | Assigned   | High     | Unknown     |
|                 | Patch Test |          | Bug - BRASS |
|                 | Resolved   |          |             |
| Goodrich, Brian | Resolved   | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0200052_404.bbd     |             |
|      | 0320082_404.bbd     |             |
|      | 0320082_410.bbd     |             |
|      | 0200052_410.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 3576.11774 | Resolved      | Different PS Shear ratings between version 4.0.4 and 4.1.0 |

### Description

FROM:mordoobadi DATE:1/24/2002 8:42:04 AM

Paul Jenson reported a problem with the BridgeWareAdmin program. The program issues a warning that reads:

You are not owner of Virtis/Opis tables.  
You are not allowed to make any changes.

The latest Oracle ODBC driver that comes with Oracle9i and is also available for download on Oracle web site has caused this problem.

There is a piece of code that verifies that the user is the owner of Virtis/Opis database tables. It does not work (with the new ODBC driver) the way it used to work.

Paul uses Oracle 8.1.7 and he downloaded the latest ODBC driver from Oracle web-site.

One work-around is to use Microsoft ODBC driver for Oracle.

4/19/2016 3:16:17 PM

HRS AASHTO

1134

**Complete Issue Information**

FROM:jduray DATE:1/29/02 12:35:13 PM  
Is there something we need to change in the utility?

FROM:mordoobadi DATE:2/1/2002 10:09:48 AM  
I need to investigate this. Probably we need to use Oracle data dictionary tables rather than using the ODBC function SQLTables().

FROM:mordoobadi DATE:6/19/2002 5:02:25 PM  
With the latest versions of Oracle ODBC driver the SQLTables functions expects upper-case table name (ABW\_SYS\_DATABASE) and username.  
Fixed for 4.2 Acceptance Build.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 3576                                                      |
| Subject: Different PS Shear ratings between version 4.0.4 and 4.1.0 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 1/25/2002 4:43:43 PM |
| Modified By: administrator       | 6/19/2008 4:05:39 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:1/25/2002 11:37:42 AM  
This incident is closely related to 3574. That incident deals mostly with the new PS Beam Shear command in BRASS LFD. This incident is for structures whose PS shear ratings changed between Virtis versions but does not appear related to the PS BEAM SHEAR command. For these bridges, it looks like BRASS is using the same equations as 4.0.4 did but the results of those equations are different between 4.0.4 and 4.1. This incident is to verify that something internal was changed in

4/19/2016 3:16:17 PM

HRS AASHTO

1135



**Complete Issue Information**

in ratings between Virtis 4.0.4 and Virtis 4.1.0?

I found similar behavior in the other bridge, 032-0082.

Thanks.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
Coraopolis, PA 15108  
(412) 269-7914

FROM:bgoodrich DATE:02/01/2002 15:15:08  
Dan Glandt found an error in BRASS-GIRDER 5.8.4. Dan corrected the problem in BRASS-GIRDER 5.8.5, which now agrees with 5.8.3 for the shear he is referencing. BRASS-GIRDER 5.8.5 should be available in the first patch for Virtis 4.1.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 3579                                                  |
| Subject: Can't run BRASS LFD for parabolically haunched rc slab |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 2/4/2002 2:55:33 PM  |
| Modified By: administrator       | 6/19/2008 4:05:39 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Goodrich, Brian | Assigned   | Urgent   | Bug - BRASS |
|                 | Patch Test |          |             |
| Goodrich, Brian | Patch Test | Urgent   | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RC4Example.bbd      |             |

4/19/2016 3:16:17 PM

HRS AASHTO

1137

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                                 |
|------------|---------------|-----------------------------------------------------------------------------------------|
| 3580.11770 | Accepted      | LL Distribution Factor calcs for PS Adj box beams needs updated for AASHTO 1999 interim |

### Description

FROM:kkennelly DATE:2/4/2002 9:51:19 AM

The attached bbd file is for Virtis 4.1. This bridge is the RC4 Training Example for Virtis. 2 span rc slab parabollically haunched, BRASS gives error about cross section area = 0 in Span 2, Point 4.

FROM:bgoodrich DATE:02/04/2002 12:13:42

Dan Glandt and I already corrected this bug in the BRASS-GIRDER Version 5.8.5 engine, which should go out with Service Pack 1 for Virtis 4.1. I imported the BBD file and BRASS successfully analyzed the bridge. However, the critical rating factors were 99.0. Once I checked the option to ignore LFD shear on the member alternative window, the critical rating factors were determined as expected.

FROM:bgoodrich DATE:02/04/2002 12:24:50

I have submitted the rating factor issue as Incident 3581.

Issue ID: 3580

Subject: LL Distribution Factor calcs for PS Adj box beams needs updated for AASHTO 1999 interim

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha 2/4/2002 3:07:01 PM

Modified By: administrator 6/19/2008 4:05:39 PM

Priority: Urgent

Category: Change Request

### History

| Primary Contact | Status | Priority | Category       |
|-----------------|--------|----------|----------------|
| Duray, Jim      | New    | High     | Change Request |

4/19/2016 3:16:18 PM

HRS AASHTO

1138

### Complete Issue Information

|                  |            |        |             |
|------------------|------------|--------|-------------|
| Kennelly, Krisha | Assigned   | Urgent |             |
|                  | Patch Test |        |             |
| Duray, Jim       | New        | High   | Bug - BRASS |
| Goodrich, Brian  | Assigned   |        |             |
|                  | Resolved   | Urgent |             |
|                  | Accepted   |        |             |
|                  | Closed     |        |             |
| Goodrich, Brian  | Closed     | Urgent | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RC4Example.bbd      |             |

### Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 3581.11769 | Closed        | BRASS-GIRDER not determining critical rating factor correctly for R/C slab |

### Description

FROM:kkennelly DATE:2/4/2002 10:03:48 AM

The 1999 AASHTO interim for Std Spec 3.23.4.3 contains some revisions to the calcs for adjacent ps box beam distribution factors. Source code in Virtis LL distribution factor "Compute from Typical Section" needs modified to match these changes.

FROM:kkennelly DATE:2/5/2002 9:28:56 AM

Code updated for 4.1 Service Pack 1 and Version 4.2.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 3581                                                                      |
| Subject: BRASS-GIRDER not determining critical rating factor correctly for R/C slab |





**Complete Issue Information**

FROM:dteal DATE:Monday, April 08, 2002 2:15:49 PM  
Checked on 4.1.1 Beta, OK

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:24:48 PM  
Closed.

Issue ID: 3582  
Subject: Routing feature in Virtis should only report the rating results summary

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 2/5/2002 5:38:56 PM  
Modified By: administrator 6/19/2008 4:05:39 PM  
Priority: High  
Category: Change Request

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:2/5/2002 12:36:47 PM  
When doing a rating from the Routing window in Virtis, the dead load actions, stresses, etc. are filled in by the analysis event. The Routing analysis event should only populate the rating results summary, not the additional output.

FROM:kkennelly DATE:2/21/2002 3:53:33 PM

**Complete Issue Information**

Code updated for 4.2 and Version 4.1 Service Pack 1

FROM:jduray DATE:4/10/02 9:55:41 AM  
OK in 4.1.1 patch

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3593                                                        |
| Subject: BRASS LFD Parabolic Haunch Reinforced Concrete Shear Ratings |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 2/6/2002 3:54:31 PM  |
| Modified By: administrator       | 6/19/2008 4:05:38 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Goodrich, Brian | Assigned   | Urgent   | Bug - BRASS |
|                 | Open       |          |             |
|                 | Patch Test |          |             |
| Goodrich, Brian | Patch Test | Urgent   | Bug - BRASS |

4/19/2016 3:16:19 PM

HRS AASHTO

1142

## Complete Issue Information

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Shawn Test.bbd      |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3594.11756 | Closed        | No PS Strand Layout Window |

### Description

FROM:kkennelly DATE:2/6/2002 10:37:16 AM

Submitted on behalf of Robert Fulton via email and phone call:

Attached BBD file ran ok in 4.0.4 but Version 4.1.0 is giving zero ratings for shear calcs.

For member G2, I added a point of interest at Span 1 58', right since that is where the controlling rating of zero given. Examination of BRASS output at that point shows following for shear rating factor calculations:

$d = -129.952$  inches (This value certainly shouldn't be zero, and max depth of the t beam is 73.4375")

$V_u = -379.41$  kips

$V_{DL} = 38.28$  kips

$V_{LL} = 52.88$  kips

Difference in signs for  $V_u$  and actual  $V$  forces causes a negative rating factor so rating factor reported as zero.

The BRASS section properties printed at the beginning of the BRASS output show web depth jumping to negative values in Span 2 and Span 3 but the web depth reported for the support is shown as 67.19" so I don't know where the calculations are getting -129.952".

This may be related to incident 3579 but in that incident BRASS wouldn't even run so I'm not sure if the fix for that fixes this problem.

Also, Robert says when "Ignore LFD shear" is picked, the resulting moment rating factors given in Version 4.1.0 are less than those given by 4.0.4. Were there any changes made in BRASS that would cause different moment ratings between 4.1.0 and 4.0.4?

4/19/2016 3:16:19 PM

HRS AASHTO

1143

**Complete Issue Information**

FROM:bgoodrich DATE:02/11/2002 10:44:05

The issue with the incorrect web depths has already been addressed. The shear results appear to be addressed by this correction. I have forwarded this incident to Dan Glandt for further investigation and verification.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 2:10:47 PM

There were no changes between 4.0.4 and 4.1.0 that would cause different moment ratings. Based on my tests with previous versions of BRASS, this issue appears to have been caused by the incorrect web depths computed by BRASS. Fixed in BRASS-GIRDER 5.8.5, which should be released with Virtis 4.1 Service Pack 1.

|                                     |
|-------------------------------------|
| Issue ID: 3594                      |
| Subject: No PS Strand Layout Window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/6/2002 4:17:50 PM  |
| Modified By: administrator     | 6/19/2008 4:05:38 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status    | Priority | Category           |
|-----------------|-----------|----------|--------------------|
| Duray, Jim      | New       | Urgent   | Unknown            |
|                 | Assigned  | High     | Bug<br>Bug - GUI 2 |
|                 | Duplicate |          |                    |
|                 | Closed    |          |                    |
| Duray, Jim      | Closed    | High     | Bug - GUI 2        |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:dteal DATE:02/06/2002 11:17:50

On the attached .bbd file there is a PS span structure. Strand layout on the member alternative for any of the 3 spans in girder line 1 or 2 there is a problem. When I try to open the window for Span 1, the window border flashes on the screen and then disappears. I am unable to bring up a Strand Layout Window.

I exported this to a bbd and imported it hoping that the process would clean it up, no help. I copied the structure definition to a new bridge, no change. No error messages given – can you take a look at it.

Still running version 4.0.4 on Oracle.

FROM:bgoodrich DATE:02/06/2002 11:44:21

Dean - The beam shape you have assigned to your spans is missing its strand grid. Add the strand grid tab of the prestress shape. This has happened to me before. I checked version 4.1 also and there is still no warning to the user.

FROM:dteal DATE:02/06/2002 12:06:53

Yes - that was the problem, Thanks

This incident should then address the need for an error message when the strand grid has been left blank.

FROM:kkennelly DATE:11/19/2004 10:35:00 AM

Duplicate of 3071

FROM:dteal DATE:Monday, February 26, 2007 12:10:39 PM

Accepted

Issue ID: 3595  
Subject: Pier compactness and equations 10-129b and 10-129c

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Goodrich, Brian 2/6/2002 5:58:42 PM  
Modified By: administrator 6/19/2008 4:05:38 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | High     | Bug - BRASS |

### Complete Issue Information

|                    |          |        |           |
|--------------------|----------|--------|-----------|
| Goodrich, Brian    | Assigned |        |           |
|                    | Resolved |        |           |
| Duray, Jim         | New      | High   | Unknown   |
| Ordoobadi, Mehrdad | Assigned | Medium | Education |
|                    | Resolved |        |           |
| Ordoobadi, Mehrdad | Resolved | Medium | Education |

### Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3596.11754 | Resolved      | Importing ACCESS database into Oracle 8 |

### Description

FROM:bgoodrich DATE:02/06/2002 12:58:43  
E-mail from Ed Lutgen (Asst. Rating Engineer, 651-747-2124):

Anyways I have a few questions regarding Virtis you might be able to answer. On a continuous steel bridge that was designed as a compact section what is the correct way of inputting that into Virtis? When we run it, Brass calculates a plastic moment capacity but says the user overrides that and uses the elastic properties. When we check the box that says it is compact at the piers under the engine properties, then brass correctly calculates the moment capacity using Mp. My question is if you check the box will it always use Mp even if the compact checks fail? If it doesn't then the box is counterintuitive. I would think you would always want to use Mp if you could. I think the standard configuration should always be to use Mp if allowed by code and have a box to check to allow only elastic properties. Another comment with the with this box is that it says compact at pier. Well my critical point was at the +M location and it appears that I need to check this.

Brian then replied with:

The compactness and moment capacity is a confusing issue with the BRASS-GIRDER engine. In earlier versions, the capacity was limited to the yield moment. AASHTO equations 10-129b and 10-129c were implemented only a few years ago. The "pier compactness" options were added so the user could specify if these equations were to be used for COMPOSITE sections. The BRASS engine requires the user to specify this information, i.e., there are no defaults. Within Virtis, we have attempted set defaults in a conservative manner, which is why the "pier compactness" options are NOT checked. When these boxes are checked, BRASS will use AASHTO equations 10-129b and 10-129c as appropriate for composite sections. From my initial testing, it appears that these equations will be used

4/19/2016 3:16:19 PM

HRS AASHTO

1146

**Complete Issue Information**

even when the section is non-compact. The programmer assigned to this BRASS engine is on vacation, so I will follow up with him when he gets back. The specification indicates that equations 10-129b and 10-129c are only applicable for "compact composite sections ... with compact noncomposite or composite negative-moment pier sections." These boxes should be used to indicate pier compactness only.

FROM:bgoodrich DATE:Thursday, March 07, 2002 11:06:32 AM  
E-mail from Dan Glandt (3/7/02):

We found an error in the logic that did allow the plastic moment capacity to be used even if the section did not meet the criteria for compactness. This has been corrected and will be in the next release.

The default can not be changed without significant modification to the program which has not been felt warranted. The main problem is that the compactness checks over the piers would have to be done first for the critical loading conditions in the positive moment region. The option the way it is at this time does allow the user to take advantage of the plastic moment capacity.

FROM:bgoodrich DATE:Thursday, March 07, 2002 11:07:16 AM  
Fixed in BRASS-GIRDER 5.8.5, which should be released with Virtis 4.1 Service Pack 1.

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:18:01 PM  
Closed.

|                                                  |
|--------------------------------------------------|
| Issue ID: 3596                                   |
| Subject: Importing ACCESS database into Oracle 8 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Colgrove, George      | 2/7/2002 6:56:40 PM  |
| Modified By: administrator          | 6/19/2008 4:05:38 PM |
| Priority: Medium                    |                      |
| Category: Education                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3597.11753 | Resubmit      | Icon Generation in Patch Upgrades |

### Description

FROM:gcolgrove DATE:02/07/2002 13:56:40

We want to enter our bridge Project Management System data directly into the Oracle database. We can save a lot of time entering this data in by hand. This information essentially populates the Bridge information found in the two initial screens of V-O. The fields are listed as follows. I think it is self explanatory, but if you need more info, please let me know. What I need to do is to get the fields I should attach these to in the Oracle database.

FROM:gcolgrove DATE:02/07/2002 14:01:44

NHS 0  
STRNUMBER 101101002111011  
YEARBUILT 1993  
DESCRIPT [ BENSON TH3 8906 ]  
TOWNNAME BENSON  
FACILITY C3025  
FEATCROSS HUBBARDTON RIVER  
STRLENGTH 57  
ROUTENAME C3025  
MILEPOINT 000000  
ADT 75  
ADTT 2  
DISTRICT 3  
COUNTYCODE 11  
OWNER 3  
MAINTRESP 3  
FUNCCLASS 9

FROM:gcolgrove DATE:02/07/2002 14:02:21

FROM:mordoobadi DATE:4/2/2002 2:33:38 PM  
Finished.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3597<br>Subject: Icon Generation in Patch Upgrades |
|--------------------------------------------------------------|

|                                                                  |
|------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph |
|------------------------------------------------------------------|

4/19/2016 3:16:20 PM

HRS AASHTO

1148



**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 2/8/2002 4:28:12 PM  |
| Modified By: administrator | 6/19/2008 4:05:38 PM |
| Priority: Low              |                      |
| Category: Bug              |                      |

**History**

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Unknown     |
|                 | Assigned        |          | Bug         |
|                 | On Hold         |          | Bug - GUI 2 |
|                 | Rejected by TAG |          |             |
| Duray, Jim      | Rejected by TAG | High     | Bug - GUI 2 |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State   | Summary                           |
|------------|-----------------|-----------------------------------|
| 3598.11752 | Rejected by TAG | Report Tool and the AMPERSAND (&) |

**Description**

FROM:dteal DATE:02/08/2002 11:28:19

When installing patches 1 – 4 for Version 4.0, the existing icon doesn't get overwritten. By the time I'm done installing 4.0, 4.0.1, 4.0.2, 4.0.3 and 4.0.4 I will have 4 icons on the desktop. This occurs when installing on Windows 2000. I have not checked it on NT.

FROM:jduray DATE:2/12/02 8:57:07 AM

I have notices the same behavior. Can we do anything about this? Can the upgrade remove the previous icons?

FROM:jihnata DATE:2/12/2002 9:17:37 AM

I've never seen this behavior. We're already doing a "Replace" of the desktop icons. I don't know what would cause this unless the previous icon had been manually altered.

4/19/2016 3:16:20 PM

HRS AASHTO

1149

## Complete Issue Information

I'll reexamine this when the next service pack is created.

FROM:jihnata DATE:3/11/2002 10:10:46 AM

Beginning with version 4.1.0, we're only showing "4.1" on the desktop icon (i.e. we don't write the patch level). So this won't be an issue with future service packs.

FROM:dteal DATE:Monday, April 01, 2002 8:25:39 AM

Bad Idea – How does one tell what version is on the PC????? The desktop now only displays 4.1, the properties only states 4.1, nothing in the directory gives me the true version, an relying on the date is not a good idea. We fixed the icon problem – what at what expense. Now the administrator will have to launch the program and do a “help – about” to find the version. I haven't checked to see if that works?

FROM:jihnata DATE:4/1/2002 9:22:28 AM

You don't even need to login; you only have to launch the app and look at the splash screen. (Help/About will work also, though.) How often does a user absolutely need this information anyway? Of the 28 icons currently on my desktop, only one (Adobe Acrobat) displays any version info at all, let alone the patch level.

FROM:dteal DATE:Wednesday, April 03, 2002 10:19:01 AM

From an administrator standpoint, when I have go trouble shoot at a user desk. The first thing I would look for is, are you use the current version? One glance at the icon would tell me. Now I will have to launch the program and wait for the splash screen. We just took one step backwards.

FROM:jduray DATE:4/9/02 10:36:19 AM

I suggest you just look at the file properties for the virtis.exe using Windows Explorer.

FROM:dteal DATE:Tuesday, April 09, 2002 12:30:05 PM

So now we have to open the explorer, properties and version tab. Now we have many steps to find out the same thing that used to be right on the desk top. I realize that not all icons display the version number, but not all programs are updating version with service packs 4 times a year.

Issue ID: 3598

Subject: Report Tool and the AMPERSAND (&)

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

2/8/2002 5:54:05 PM

Modified By: administrator

6/19/2008 4:05:38 PM

Priority: High

Category: Bug - GUI 2

## History

4/19/2016 3:16:20 PM

HRS AASHTO

1150

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sugarcreek1.bbd     |             |

## Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 3599.11751 | Patch Test    | Difference in PS Initial Stress at Transfer between Design Tool and BRASS LRFD |

## Description

FROM:dteal DATE:02/08/2002 12:54:06

An error is created and the Report Tool will not generate a report, only a crypted error message when the "&" sign is used in the Structure Definition name.

Example:

US-36 over Big Blue River & UPRR

This will generate the following error:

The XML page cannot be displayed Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

Whitespace is not allowed at this location. Error processing resource 'file:///C:/Program Files/AASHTO BridgeWare/VirtisOpis40/Reports/LRFDRpt.XML'. Line 18, Position 36

```
<STRUC_DEF_NAME>US-36 over River & Railroad</STRUC_DEF_NAME>  
-----^
```

If I remove the "&" sign the report will be generated and display like below:

Structure Definition Name: US-36 over River and Railroad

The HELP file doesn't reference any special characters we can not use. It should. So the help for Structure Definition Name should state that "No ampersand's are allowed.

FROM:jduray DATE:4/12/2005 1:39:13 PM

Check on Oracle.

FROM:jduray DATE:4/13/2005 3:17:55 PM

4/19/2016 3:16:20 PM

HRS AASHTO

1151

**Complete Issue Information**

Paul

This is just a problem if the & is in the report definition name. Replace the & with something (and, ^, etc) when we get the name and generate the url.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 3599                                                                          |
| Subject: Difference in PS Initial Stress at Transfer between Design Tool and BRASS LRFD |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 2/8/2002 8:11:14 PM  |
| Modified By: administrator       | 6/19/2008 4:05:38 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Goodrich, Brian | Assigned   | High     | Unknown     |
|                 | Open       |          | Bug - BRASS |
| Goodrich, Brian | Patch Test |          |             |
|                 | Patch Test | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:2/8/2002 3:06:33 PM  
Submitted on behalf of Mike Hurd via email:  
2/07/02 10:44 am  
Krisha,

I have another question regarding the 3 span, prestressed concrete bridge

4/19/2016 3:16:20 PM

HRS AASHTO

1152



## Complete Issue Information

A user has sent me the attached bridge and is questioning the differences in the initial stresses at transfer between the Prestress Design Tool and the BRASS LRFD output. These stresses should be very similar since initial stresses at transfer are due to the simple span beam which is the same in the Design Tool and BRASS.

User is looking at Girder G1. (I had to delete his haunch for some reason to get BRASS to run). When I run BRASS LRFD for G1 and look at the axial forces in the beam due to the initial prestress loads, the pattern of loads looks unusual. The axial force is positive at the beam end and not a very large negative value in between the beam ends. I think this axial force is behind the difference in the stresses.

I used the prestress design tool in Opis and looked at the Transfer Point in Span 1, 8.4 m which corresponds to poi 104.0 in BRASS output.

At this point, at release the Design Tool has a stress at the top of beam = 0.942 MPa. The corresponding stress output by BRASS is 7.63 MPa.

I compared the initial losses computed by the Design Tool with the initial losses presented by BRASS and they match very closely. Design Tool  $F_{pes} = 98.7$  MPa and  $F_{pr1} = 12.4$  for a total initial loss of 111.1 MPa = 7.97%. The BRASS output has  $F_{pes} = 99.89$  MPa and 8.82 MPa for a total initial loss of 108.7 MPa so I think they agree.

I attached the BRASS output at point 104 for the initial stress calcs. The numbers agree with the Design Tool except for the axial force in the beam. The jacking force is 2790 kN in both Design Tool and BRASS. The axial force the Design Tool uses in the calc for the stress is -2567.6 kN (=  $2790(100-7.97)/100$ ). BRASS uses -109.17 kN for the axial force in the calc and that causes the difference in the stresses.

Design Tool stress =  $-2567.6\text{kN}/0.3668\text{ m}^2 - ((-2567.6\text{kN})(0.487\text{m}) + 443.3\text{ kNm})/0.1017\text{ m}^3$ .

BRASS stress =  $-109.17\text{kN}/0.3668\text{ m}^2 - (-806.49\text{kNm})/(-0.1017\text{ m}^3)$

Can you please take a look at this bridge and let me know how the -109.71 kN is computed by BRASS?

Thanks,  
Krisha

FROM: bgoodrich DATE: 02/11/2002 10:31:17

I have successfully duplicated the issue and am working on a solution. This issue was addressed and tested at one time for the 1.5.0 release as is documented in the associated release notes. However, subsequent code modifications must have affected the results.

FROM: bgoodrich DATE: Thursday, February 28, 2002 1:41:49 PM

I have corrected this issue in the BRASS-GIRDER(LRFD) 1.5.1 engine, which will be released with Opis 4.1 Service Pack 1.

Issue ID: 3600

Subject: Stress in Strand Not Zero

Folder: /Virtis/Support Center

4/19/2016 3:16:21 PM

HRS AASHTO

1154

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/11/2002 7:33:29 PM |
| Modified By: administrator       | 6/19/2008 4:05:38 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Ordoobadi, Mehrdad | New      | Urgent   | Bug - Database 2 |
|                    | Assigned |          |                  |
|                    | Resolved |          |                  |
|                    | Accepted |          |                  |
|                    | Closed   |          |                  |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug - Database 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 3606.11745 | Closed        | Table name conflict with PONTIS |

### Description

FROM:dteal DATE:02/11/2002 14:33:30

Submitted for Mike Ingalls:

In the attached bbd file we have a PS bridge. At POI 206.00 BRASS computed a negative number for the stress in the strand. Therefore BRASS set the strand stress to zero. I believe the strand stress should be a large positive number (due to jacking minus losses) summed with a small negative number (due to the negative flexure), netting a large positive number and not a negative number that results in zero.

FROM:bgoodrich DATE:02/13/2002 13:33:02

I tested the BRASS file with BRASS-GIRDER(LRFD) 1.5.0, which was released with Opis 4.1. The BRASS concrete flexural resistance tool is unable to determine the correct neutral axis, which yields incorrect values for fps, Mr, etc. The neutral axis cannot be found for negative flexure due to the configuration of the prestress and the amount of rebar located in the slab. BRASS considers all rows

4/19/2016 3:16:21 PM

HRS AASHTO

1155

**Complete Issue Information**

of rebar and prestress in determining the flexural resistance. In the new version of BRASS, I have added warnings and made sure the flexural resistance is set to zero when the neutral axis cannot be found.

Dean and Mike: Are you able to determine a flexural resistance for negative flexure at the 206 point? What procedures, assumptions, etc. did you make if performing this computation by hand?

FROM:bgoodrich DATE:Friday, February 22, 2002 5:56:46 PM  
Incident 3615 pertains to this same issue and was marked as a duplicate.

FROM:dteal DATE:Tuesday, February 26, 2002 8:23:40 AM  
See attached hand calcs. These calcs are simplified. Only one row of deck steel, etc...

Also...for the beta 1 factor...since these calcs are for an odd shaped compression flange, I found the \*area\* of concrete needed to satisfy equilibrium. The beta 1 factor applies more to a rectangular beam...i.e

$$c*(beta1) = a$$

However, since I used an \*area\* required of the concrete to find the N.A. location, I do not think the (beta1) factor applies directly. I essentially found the "a", but dividing "a" by (beta1) would extend the elastic N.A. too far up the web...so I left it alone. This is something the program designers may need to look at, or essentially an individual could...similar to the calcs I used...just include the (beta1) factor in the equation to find the area of concrete required to satisfy equilibrium...then the problem would be what to multiply by to find Whitney's stress block...either way...the program designers can certainly work this out.

FROM:bgoodrich DATE:Thursday, February 28, 2002 1:43:49 PM  
I have corrected the flexural resistance computation to utilize a strain method outlined in Collins and Mitchell (1991) but only when the strands are within the compression zone. This method is similar to the KDOT hand comps except a shaping function is applied in determining fps. When the strands are in the tension zone, the AASHTO LRFD equations are utilized. This issue is addressed in the BRASS-GIRDER(LRFD) 1.5.1 engine, which will be released with Opis 4.1 Service Pack 1.

FROM:bgoodrich DATE:Friday, April 12, 2002 10:44:53 AM  
Closed.

Issue ID: 3606  
Subject: Table name conflict with PONTIS

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Ordoobadi, Mehrdad 2/15/2002 8:01:03 PM  
Modified By: administrator 6/19/2008 4:05:38 PM  
Priority: Urgent



## Complete Issue Information

Category: Bug - Database 2

## History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
|                 | Information Needed |          | Enhancement |
|                 | Suspended          |          |             |
| Duray, Jim      | Suspended          | High     | Enhancement |

## Contacts

| Name                                     | Company                        | Email 1                        | Phone 1       |
|------------------------------------------|--------------------------------|--------------------------------|---------------|
| Dean Teal                                | Kansas Dept. of Transportation | teal@ksdot.org                 | (785)291-3001 |
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT                      | Shanon.Murgoitio@itd.idaho.gov | 208-334-8547  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3608.11743 | Suspended     | Sorting/Finding/Filtering Structure Types with File Properties |

## Description

FROM:mordoobadi DATE:2/15/2002 2:45:37 PM

Due to conflict of table names between VIRTIS/OPIS and PONTIS when using an Oracle database that contains both VIRTIS/OPIS and PONTIS databases on a single instance the following tables need to be renamed.

```
bridge TO pontis_bridge
paramtrs TO pontis_paramtrs
roadway TO pontis_roadway
```

This will be included in 4.1 Service Pack 1.  
Create scripts. (for sybase, oracle, MSDE)  
Fix code.

FROM:mordoobadi DATE:2/15/2002 3:13:27 PM

Note: Project ABIGNRL is changed. BARS and BRASS import projects need to be rebuilt.

FROM:mordoobadi DATE:3/12/2002 12:47:29 PM

4/19/2016 3:16:21 PM

HRS AASHTO

1157

**Complete Issue Information**

Code is fixed. We need migration scripts.

FROM:mordoobadi DATE:3/18/2002 1:42:27 PM  
Migration scripts created and tested.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 3608                                                          |
| Subject: Sorting/Finding/Filtering Structure Types with File Properties |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/20/2002 3:02:01 PM |
| Modified By: administrator     | 6/19/2008 4:05:38 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, February 20, 2002 10:02:15 AM  
As our bridge database grows it is evident that we need more ways to search and group our structures. When initially entering a bridge into the database, if the user doesn't add a code of some sort to the "Bridge Name" it is tough to locate bridges of certain types.

In the Superstructure Definition GUI we already have Member Alt. Types (Steel, P/S, R/C, Timber) selected. We need to sort/filter using them.

FROM:dteal DATE:Wednesday, February 20, 2002 10:10:15 AM  
This was not 4.1 Beta - it is Release 4.1

**Complete Issue Information**

FROM:jduray DATE:2/20/02 1:39:55 PM

Do you have any thoughts on how we should accomplish this? How would you like to handle bridges consisting of multiple structures of differing member alt types? Categorizing bridges based on the types of member alternatives is rather complicated (but possible). We would have to look at the bridge alts marked as "Existing", the structure alts marked as "Existing", the structure def assigned to the structure alt and the member alts marked as "Existing".

FROM:smample DATE:Wednesday, February 20, 2002 1:51:42 PM

It would also be helpful to include the "Bridge Completely Defined" information in the Bridge Explorer window.

FROM:dteal DATE:Tuesday, February 26, 2002 12:09:48 PM

I thought the Report Tool may lend itself to helping out here but I think expanding the file properties filtering is a better answer.

I can see the complications coming from differing member alternatives. Here is an example of why expanding the filtering/searching capabilities is needed. I need to find a bridge from a 5,000 bridge database that I could use as a template for starting a 3 span welded plate girder of current design practices (built in the last 5 years). A bridge just like the one I need to design may already be in the database, I just need a tool to find it.

You wanted thoughts on how to accomplish this – Does it matter if this 3 span welded plate structure is one of the member alternatives. No – we should be able to find all instances no matter where they live.

Issue ID: 3610  
Subject: PS Girder with no deck made continuous over pier with mild steel in beam

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 2/20/2002 4:04:44 PM  
Modified By: administrator 6/19/2008 4:05:37 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

4/19/2016 3:16:21 PM

HRS AASHTO

1159

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Failed Spec Check.bbd |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3612.11739 | Closed        | P/S Structure OK with 4.0.4 and NG with 4.1 |

### Description

FROM:kkennelly DATE:2/20/2002 11:05:36 AM

Submitted on behalf of Francisca Karyadi, Edwards and Kelcey.

Attached jpeg shows detail of ps concrete girder with no deck made continuous over pier for LL with mild steel in the beam. User wants that mild steel used to develop continuity over the pier. Virtis and BRASS don't currently handle this.

Notes to developers: Current PS Shape templates mockups do not have a way to enter the mild steel in the beam. Do our mockups need revised?

FROM:hlee DATE:4/30/2008 2:27:07 PM

Discarded by TAG 12/07.

Issue ID: 3612

Subject: P/S Structure OK with 4.0.4 and NG with 4.1

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

2/20/2002 5:02:25 PM

Modified By: administrator

6/19/2008 4:05:37 PM

4/19/2016 3:16:22 PM

HRS AASHTO

1160

### Complete Issue Information

|                       |
|-----------------------|
| Priority: Urgent      |
| Category: Bug - BRASS |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Urgent   | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
|                 | Closed    |          |             |
| Goodrich, Brian | Closed    | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MLL Elk.bbd         |             |
|      | LaRoche.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 3613.11738 | Closed        | Another PS Structure that worked in 4.0 and not in 4.1 |

### Description

FROM:dteal DATE:Wednesday, February 20, 2002 12:02:26 PM

See the attached .bbd

I ran this P/S structure using 4.0.4 (Structure Definition – 5 Girders at 2.50m, Member 2) and it passed all checks in the Spec. checker. Now when I ran the same girder in version 4.1 it has numerous Fails in the Spec. Checker.

Why?

FROM:bgoodrich DATE:Wednesday, February 20, 2002 6:55:24 PM

This issue may be the same as Incident 3600.

FROM:dteal DATE:Wednesday, February 27, 2002 9:35:27 AM

The error that I can identify is associated with 5.7.3.3.1 Max. Reinforcement. My girder is about 1140 mm tall (with out the slab) and "c" (distance for the extreme compression fiber to the neutral axis)is

4/19/2016 3:16:22 PM

HRS AASHTO

1161

## Complete Issue Information

2713 mm.

FROM:bgoodrich DATE:Thursday, February 28, 2002 2:00:45 PM

Because BRASS could not compute the correct flexural resistance, the neutral axis was basically invalid, which threw off the maximum reinforcement check and maybe others. By addressing Incident 3600, this issue was corrected. I tested the bridge with BRASS-GIRDER(LRFD) 1.5.1 and did not receive and failed spec checks.

Fixed in BRASS-GIRDER(LRFD) 1.5.1, which will be released with Opis 4.1 Service Pack 1.

FROM:dteal DATE:Monday, April 01, 2002 11:26:09 AM

I ran this bridge in 4.1.1 and received Failed spec Checks. I did not have any "fails" when running 4.0.4. I see no change.

FROM:dteal DATE:Monday, April 01, 2002 12:13:22 PM

4.1.0 had 6 fails for 5.7.3.3.1 and 4 fails for 5.8.3.5  
4.1.1 had 4 fails for 5.7.3.3.1 and 0 fails for 5.8.3.5

FROM:dteal DATE:Wednesday, April 03, 2002 9:22:54 AM

Note: Version 4.0.4 had no fails.

FROM:bgoodrich DATE:Tuesday, April 09, 2002 11:27:30 AM

The failed spec checks of AASHTO 5.7.3.3.1 occur in the non-composite. This check is more appropriately checked in the composite stage. Therefore, in a future release, this check will be set to "Not Satisfied" instead of "Fail" for the non-composite stage of a multi-stage structure. Users may choose to ignore these checks until the change is made.

FROM:dteal DATE:Tuesday, April 09, 2002 12:27:46 PM

After investigating both stage 1 and stage 3, I found the following differences between 4.1.0 and 4.1.1 beta,

Stage 1: 4.1.0 had 8 fails and 4.1.1 beta had 4 fails  
Stage 3: 4.1.0 had 40 fails and 4.1.1 beta had 72 fails (a bunch more)

I don't think that 4.0.4 had any fails in either stage 1 or stage 3. If you want me to verify this I can, I would have to reload 4.0 with all 4 service packs and then re-enter the bridge from scratch.

FROM:bgoodrich DATE:Thursday, April 11, 2002 11:07:43 AM

I have investigated the differences in failed spec checks among the versions and found the following.

Number of Fails (vehicles included HL-93 and fatigue)

Stage 1

4.0.4 0  
4.1.0 20 (4 are max rebar, 16 are longitudinal rebar)  
4.1.1 4 (4 are max rebar)

Stage 2

4.0.4 32 (all are RF)

4/19/2016 3:16:22 PM

HRS AASHTO

1162

**Complete Issue Information**

4.1.0 80 (8 are max rebar, 72 are DR&RF)

4.1.1 72 (72 are DR&RF)

The maximum reinforcement checks are showing up now because strands in the compression zone are handled differently. The resulting fps and dp values cause this difference. In 4.1.0, the iterative algorithm for the flexural resistance did not converge for this structure, so the flexural resistance, fps, and dp are simply wrong. See this comp in the intermediate output for the 201 POI. Additionally, the terms used to check the longitudinal rebar in 4.1.0 were not correct due to the iteration problem above, which is why these checks went away in 4.1.1.

Because this structure is not available in a 4.0.4 BBD file, I used the development environment to get some results using the 4.1.1 GUI and the BRASS engine for 4.0.4. I received 32 fails pertaining to rating factor computations. The 4.1.0 and 4.1.1 results give fails for both design ratio and rating factor computations. The design ratio results were not produced in 4.0.4, which is why the number doubled for 4.1.0 and 4.1.1.

It appears that the 4.1.1 version is producing the best results.

FROM:dteal DATE:Thursday, April 11, 2002 11:21:33 AM

FROM:bgoodrich DATE:Friday, April 12, 2002 10:45:26 AM  
Closed.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 3613                                                  |
| Subject: Another PS Structure that worked in 4.0 and not in 4.1 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/20/2002 6:03:38 PM |
| Modified By: administrator       | 6/19/2008 4:05:37 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:16:22 PM

HRS AASHTO

1163

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3614.11737 | Resolved      | Export using slab as steel cover plate |

### Description

FROM:dteal DATE:Wednesday, February 20, 2002 1:03:38 PM

I just came across another PS structure that was designed in an earlier version. It now fails. See attached LaRoche.bbd

FROM:bgoodrich DATE:Wednesday, February 20, 2002 6:56:27 PM

This issue may be the same as Incident 3600.

FROM:dteal DATE:Wednesday, February 27, 2002 9:38:53 AM

The error that I can identify is associated with 5.7.3.3.1 Max. Reinforcement. My girder is about 1140 mm tall (with out the slab) and "c" (distance for the extreme compression fiber to the neutral axis)is 2713 mm.

FROM:bgoodrich DATE:Thursday, February 28, 2002 2:02:47 PM

This is a duplicate of Incident 3612. I tested the bridge with BRASS-GIRDER(LRFD) 1.5.1 and did not receive and fails.

FROM:dteal DATE:Monday, April 29, 2002 12:24:35 PM

This bridge is still getting errors. There where no errors in 4.0. Can you provide some reasoning why my stage 3 now has errors??

FROM:dteal DATE:Friday, September 05, 2003 2:09:10 PM

FROM:dteal DATE:Friday, September 05, 2003 2:09:10 PM

FROM:dteal DATE:Friday, September 05, 2003 2:09:10 PM

We designed this bridge using version 4.0, no errors or design ratio's failures where reported. Now in version 5.0.1 we get 3 Design Ratio Comps that are less than 1. All three are at the 210 pt. One is crack control and the other 2 are flexure.

Why at the 210 pt only and not the 210 and the 290 point?

Why when we have designed and checked a structure using one version and now with a newer version we get failures – what changed?

See attached bbd.

FROM:dteal DATE:Friday, September 05, 2003 2:40:57 PM

Never mind - works fine - close this incident

4/19/2016 3:16:22 PM

HRS AASHTO

1164



## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 3614                                  |
| Subject: Export using slab as steel cover plate |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 2/20/2002 7:10:46 PM |
| Modified By: administrator       | 6/19/2008 4:05:37 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Jim Katzer.bbd                      |             |
|      | K-6393-01 Virtus_opis<br>errors.doc |             |

## Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3615.11736 | Duplicate     | PS Stress Block Calc's May Not Be Correct |

## Description

FROM:kkennelly DATE:2/20/2002 2:10:55 PM

Attached bridge is from version 4.1, member "test member", member alt "steel plate". Run BRASS

4/19/2016 3:16:22 PM

HRS AASHTO

1165

**Complete Issue Information**

LFD using load sequence on mbr alt engine tab "1 stage - noncomposite steel bridge". Based on the load sequence, the analysis should be for a non-composite steel girder. But the export generates an Xsect-C command containing the slab dimensions for the positive moment region and then BRASS uses these slab dimensions as if they are a very large steel cover plate. The export should not create the XsectC command using slab dimensions if the user picked load sequence as non-composite. Also, a warning is given in the BRASS output that there may be a problem but no warning is given in the export log file.

FROM: bgoodrich DATE: Friday, February 22, 2002 3:36:25 PM

I modified the export so the load sequence engine property takes precedence over composite ranges. These modifications were in the source code I submitted on 2/21/02.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3615                                     |
| Subject: PS Stress Block Calc's May Not Be Correct |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/20/2002 7:24:43 PM |
| Modified By: administrator       | 6/19/2008 4:05:37 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dteal DATE: Wednesday, February 20, 2002 2:24:44 PM  
For Jim Katzer:

4/19/2016 3:16:23 PM

HRS AASHTO

1166

**Complete Issue Information**

Please see the attached Word document for a detailed explanation. Also see the attached .bbd file.

Possible Stress block calc's in error. Looking at the beta-1 factor and c (distance from the compression face to the neutral axis.

FROM:bgoodrich DATE:Friday, February 22, 2002 5:55:59 PM  
This issue is identical to that reported in Incident 3600.

|                                   |
|-----------------------------------|
| Issue ID: 3617                    |
| Subject: Windows XP Compatibility |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/22/2002 1:30:12 PM |
| Modified By: administrator     | 6/19/2008 4:05:37 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:16:23 PM

HRS AASHTO

1167

### Complete Issue Information

|                 |             |      |                |
|-----------------|-------------|------|----------------|
|                 | Closed      |      | Education      |
| Duray, Jim      | Closed      | High | Education      |
| Duray, Jim      | New         | High | Bug            |
| Goodrich, Brian | Assigned    |      | Bug - BRASS    |
|                 | Open        |      |                |
|                 | System Test |      |                |
|                 | Patch Test  |      | Bug - Export 2 |
| Goodrich, Brian | Patch Test  | High | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Brass Calculations.doc |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3618.11733 | Patch Test    | n(conc) for I cracked in PS |

### Description

FROM:dteal DATE:Friday, February 22, 2002 8:30:12 AM

What is the future? We have consultants buying new PC's and of course everything nowadays is pre-loaded with Windows XP. I checked with our IT folks, KDOT is looking into the migration in's and out's right now. State of Kansas is talking about starting test sites as early as the fall of 2002.

FROM:jduray DATE:2/25/02 8:23:10 AM

XP will eventually be supported, however, the Task Force did not put a high priority on it because the DOT's will probably be slow to move to it. We know Virtis/Opis runs on XP based on a limited amount of testing we have done (we did our standard build testing and found no problems). Until the TF says to support it and we have done more formal testing it will remain unsupported.

Issue ID: 3618

Subject: n(conc) for I cracked in PS

Folder: /Virtis/Support Center

4/19/2016 3:16:23 PM

HRS AASHTO

1168

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/25/2002 2:53:48 PM |
| Modified By: administrator       | 6/19/2008 4:05:37 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

### History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Duray, Jim      | New       | High     | Enhancement    |
|                 | Suspended |          | Change Request |
| Duray, Jim      | Suspended | High     | Change Request |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                               |
|------------|---------------|---------------------------------------------------------------------------------------|
| 3621.11730 | Suspended     | Move sustained modular ratio factor to Mbr Alt level for Girder System Structure Defs |

### Description

FROM:dteal DATE:Monday, February 25, 2002 9:53:48 AM

The n(conc) I have highlighted on the attached document is wrong. On the Deck profile GUI I had entered n=7.70 for the deck concrete. BRASS uses the default of n=8 (instead of the using the ratios of the "e's" given in the materials).

BRASS then used the equation of:  $n(\text{conc}) = 8.0/7.7 = 1.039$  (slab)

Should have been:  $n(\text{conc}) = 7.70/8.0 = 0.9625$  (slab)

Being the slab concrete is weaker than the beam concrete "n" can never be greater than one in this case.

FROM:bgoodrich DATE:Monday, February 25, 2002 6:30:01 PM

Based on the way the modular ratios are specified in the data file, the slab is actually considered

4/19/2016 3:16:23 PM

HRS AASHTO

1169

## Complete Issue Information

stronger than the beam concrete. The default of  $n=8.0$  was used for the beam, which is larger than the  $n=7.7$  computed for the slab. If the beam is stronger, its modular ratio should be less than that of the slab. Therefore, the BRASS engine is functioning correctly. It would be more correct to use the modulus of elasticity of the concretes to compute this value, however, the engine does not support or compute the modulus of elasticity for the deck in general because it doesn't know the unit weight.

The basic problem stems from not being able to specify any mild rebar in the prestress beam. If we could do that, the correct modular ratio could be exported for the beam instead of using the default of 8.0.

Jim - The bottom line is users are getting incorrect results and there is nothing they can do about it in Opis. The export could be modified to compute a modular ratio instead of relying on the fixed BRASS default. The export could utilize the slab rebar material to compute the beam's modular ratio. Another option would be for the export to assume a mild steel material with a modulus of elasticity of 29000 ksi.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 2:58:02 PM

I modified the export to obtain the rebar material from the member alternative default for the beam rebar. Then, the modular ratio for the beam rebar to beam concrete can be obtained and exported to BRASS instead of the default of 8.0. Fixed for Version 5.0 Beta 4.

FROM:dteal DATE:Wednesday, November 12, 2003 10:41:20 AM

What I see in Version 5.1.0 is BRASS is still using the default of 8.0

FROM:bgoodrich DATE:Monday, January 19, 2004 2:15:28 PM

Dean is correct about the problem still existing. This issue was only partially addressed in Jan. 2003. I found another function that should have been revised. Therefore, I have revised both functions to obtain the rebar material from the member alternative default for the beam rebar. To address existing structures in which no default mild rebar material is specified, the modulus of elasticity of the rebar is assumed to be 29000.0 ksi. Then, the modular ratio for the beam rebar to beam concrete can be obtained and exported to BRASS instead of the default of 8.0. Fixed for Version 5.1.1.

FROM:dteal DATE:Tuesday, November 09, 2004 8:10:25 AM

Accepted in 5.1.1

Issue ID: 3621

Subject: Move sustained modular ratio factor to Mbr Alt level for Girder System Structure Defs

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

2/26/2002 2:43:13 PM

Modified By: administrator

6/19/2008 4:05:37 PM

Priority: High

Category: Change Request

## History

4/19/2016 3:16:23 PM

HRS AASHTO

1170

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 3622.11729 | Suspended     | BRASS ASD - update specification used for RC operating shear stress |

**Description**

FROM:kkennelly DATE:2/26/2002 9:46:18 AM

Requested from incident 3361. Girder System struct defs can have some mbr alts that are concrete and some that are steel so having the sustained modular ratio factor on the Structure Typical Section window can cause some mbr alts to use the wrong ratio factor.

## Complete Issue Information

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 3622                                                               |
| Subject: BRASS ASD - update specification used for RC operating shear stress |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 2/27/2002 1:27:35 PM |
| Modified By: administrator     | 6/19/2008 4:05:37 PM |
| Priority: High                 |                      |
| Category: Enhance BRASS        |                      |

## History

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Duray, Jim      | New                | High     | Bug       |
|                 | Information Needed |          | Education |
| Ihnat, Joseph   | Assigned           |          |           |
| Duray, Jim      |                    |          |           |
| Duray, Jim      | Assigned           | High     | Education |

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | RC LL Deflection.bbd |             |

## Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3623.11728 | Assigned      | RC Live Load Deflection Failures |

## Description

FROM:kkennelly DATE:2/27/2002 8:30:03 AM  
Incident initiated by questions of 2 users (John Carney & Michael Mills).

4/19/2016 3:16:24 PM

HRS AASHTO

1172



**Complete Issue Information**

BRASS ASD uses the 1978 maintenance manual spec to compute the allowable reinforced concrete shear stress for Operating rating by the equation  $\text{allow. stress} = 0.05f'c$ . Users are using the current maintenance spec which uses the equation  $\text{allow. stress} = 1.3(\text{sqrt}(f'c))$ . Request to change BRASS ASD to use the current maintenance manual spec equation.

FROM: bgoodrich DATE: Thursday, February 28, 2002 5:33:43 PM  
I have forwarded a request to WYDOT for addressing this issue.

|                                           |
|-------------------------------------------|
| Issue ID: 3623                            |
| Subject: RC Live Load Deflection Failures |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/27/2002 4:48:49 PM |
| Modified By: administrator     | 6/19/2008 4:05:37 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dteal DATE: Wednesday, February 27, 2002 11:48:52 AM  
I have a RC Haunched Slab bridge designed with an earlier version of Opis, most likely 4.0.1. I had no

4/19/2016 3:16:24 PM

HRS AASHTO

1173

## Complete Issue Information

failures – now in version 4.1.0 I get Rating Factor Failures for Live Load Deflection??? Horse sense tells me that LL Deflection will NEVER control a bridge of this type. I can't figure out what this is based on?? Where do find the controlling spec? I found no reference to a change on the Version 4.1 – New Features that would effect this?

See attached .bbd, I checked it with Superstructure 15-20-15 HL-93 (LRFD) and Member HL-93, 11m Rdwy,65 mm Clear.

FROM:bgoodrich DATE:Thursday, February 28, 2002 5:31:23 PM  
Versions of BRASS-GIRDER(LRFD) prior to 1.5.0 (Opis 4.1) did not perform live load deflection checks, which is why you didn't see this check before. The BRASS release notes reflected this new feature.

Note that BRASS uses an allowable deflection of (span length / 800), which yields 25mm for span 2 in the attached bridge. The live load deflection for the design truck alone is 32.95mm. Therefore, the live load deflection does fail based on the input sent to BRASS. Are your deflection distribution factors correct? Also, what allowable live load deflection would you use for this structure?

FROM:dteal DATE:Friday, March 01, 2002 3:28:21 PM  
Kansas doesn't checked Live Load deflections on a reinforced concrete haunched slab structure. This bridge doesn't even know that a truck is on it. How do I turn the LL deflection check off?

FROM:dteal DATE:Saturday, March 02, 2002 4:17:47 PM  
Was this to satisfy the LRFD Specification for Optional Live Load Deflection controls? If so, where do I toggle this on/off?

FROM:dteal DATE:Monday, March 04, 2002 9:00:23 AM  
I think this is related to Incident # 2737

FROM:dteal DATE:Friday, March 08, 2002 7:45:30 AM  
On your Feb 28th comment you said that the BRASS release notes reflected this new feature – Virtis and Opis uses do not read BRASS release notes. If it's not in the VirtisOpis New Features Readme file then where would a VirtisOpis user look?

FROM:jduray DATE:4/1/02 2:58:41 PM  
Apparently we missed including the BRASS release notes with the 4.1 release. They will be with service pack 1.

Joe - see if we have the release notes that should have been included with 4.1 and include them with 4.1.1.

FROM:dteal DATE:Tuesday, April 02, 2002 8:01:23 AM  
Are we really going to require the user to read BRASS release notes to find out how to use Opis? Being the code calls this Optional Live Load Deflection, shouldn't the user be able to turn the option on/off within Opis? Not all agencies are going to implement this option and let live load deflections control.

4/19/2016 3:16:24 PM

HRS AASHTO

1174

**Complete Issue Information**

FROM:jduray DATE:4/9/02 8:53:32 AM

The engine for Opis at this time is BRASS. I think it is reasonable to expect the users to read whatever they have to read in order to understand the engine. You have to realize that AASHTO has little impact on BRASS and what it does. BRASS was developed by and is maintained by Wyoming. Although they have a very good relationship, it would be difficult for us to repeat within Opis a description of all that goes on within BRASS. The BRASS developers (BridgeTech) have done a good job of describing the engine, providing release notes and other documentation. Perhaps someday AASHTO will have it's own LRFD analysis engine and then it is reasonable for AASHTO to provide what you are asking for. I don't think it matters if the title on what they are reading is AASHTO LRFD Analysis Engine or BRASS LRFD.

FROM:dteal DATE:Tuesday, April 09, 2002 1:52:24 PM

I think we are getting away from the issue here, and that was OPTIONAL LL Deflection Control. Is it going to be optional or is this something we will have to work around when the owner does not want to invoke the optional live load criteria as read in AASHTO 3.6.1.3.2? Isn't this something the GUI should be telling the engine we are going to use or not going to use. The engine shouldn't be tell the GUI that this is the way it is so work around it.

FROM:dteal DATE:Tuesday, March 28, 2006 10:54:46 AM

In a 5.4 beta 7 I ran a common 3 span KS slab. I used the POI wizard to find my POI's for Opis. The spec check returned 79 failures of either Rating Factors or Design Ratio's. There isn't enough information in the general GUI of returned spec checks to know what they are for - you have to open each and every on of the 79 pop up windows to verify that the failure was for LL Deflection. There is no way to filter it out that I know of.

|                                      |
|--------------------------------------|
| Issue ID: 3624                       |
| Subject: Opis – Final Design Version |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/27/2002 5:01:40 PM |
| Modified By: administrator     | 6/19/2008 4:05:37 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
|                 | Accepted |          |           |
|                 | Closed   |          |           |

4/19/2016 3:16:24 PM

**HRS AASHTO**

1175

**Complete Issue Information**

|            |        |      |           |
|------------|--------|------|-----------|
| Duray, Jim | Closed | High | Education |
|------------|--------|------|-----------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3625.11726 | Closed        | Export Default Directory |

**Description**

FROM:dteal DATE:Wednesday, February 27, 2002 12:01:50 PM

How can one figure out what version of Opis a design was finalized under. We need to have some sort of permanent record instead of stating that "it used to work".

FROM:jduray DATE:3/1/02 3:12:33 PM

You can save the analysis results and along with that we store the engine and version. If you are not storing analysis results then perhaps you could use the member alt description.

Issue ID: 3625

Subject: Export Default Directory

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

2/27/2002 5:02:46 PM

4/19/2016 3:16:25 PM

HRS AASHTO

1176

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:37 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Bug         |
| Kennelly, Krisha | Assigned           |          | Bug - GUI 2 |
|                  | Patch Test         |          |             |
|                  | Information Needed |          |             |
|                  | Resolved           |          |             |
|                  | Accepted           |          |             |
|                  | Closed             |          |             |
| Kennelly, Krisha | Closed             | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Sidewalk.bbd        |             |
|      | Sidewalk Shot.bmp   |             |
|      | Sidewalk Shot.bbd   |             |
|      | ver411_sidewalk.bbd |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3626.11725 | Closed        | Sidewalk Load – Overlay Load |

### Description

FROM:dteal DATE:Wednesday, February 27, 2002 12:02:46 PM  
Need a way, or is there a way to set the default drive and directory when exporting a .bbd file. The user should not have to select the drive/directory each and every time – need a user defined default.

4/19/2016 3:16:25 PM

HRS AASHTO

1177

**Complete Issue Information**

FROM:jduray DATE:3/1/02 3:11:29 PM

I assume you want the file stored somewhere other than the Virtis/Opis directory (which should be the default).

FROM:dteal DATE:Friday, March 01, 2002 3:34:32 PM

Yes - I would like to store it in another directory

FROM:dteal DATE:Tuesday, October 26, 2004 10:03:24 AM

Well it must have gotten fixed by accident. When I report a bbd now it goes to the directory that I last used (by default). We should close this incident.

FROM:jihnat DATE:10/26/2004 3:09:17 PM

Deleted "Please Close" from Track field and changed Status to Closed.

|                                       |
|---------------------------------------|
| Issue ID: 3626                        |
| Subject: Sidewalk Load – Overlay Load |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 2/27/2002 8:36:25 PM |
| Modified By: administrator        | 6/19/2008 4:05:36 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, February 27, 2002 3:36:25 PM

For the attached bridge we have a sidewalk on the right side. The sidewalk has the same 180 mm thickness as the deck without an overlay. The deck gets a 40 mm overlay so it's now 220 mm thick.

4/19/2016 3:16:25 PM

HRS AASHTO

1178

## Complete Issue Information

The sidewalk is still 180 mm thick. The View Schematic incorrectly shows the overlay covering the sidewalk. Does this also mean the overlay load is applied to the sidewalk too?

FROM:kkennelly DATE:3/6/2002 8:39:59 AM

The overlay load is only applied over the width of the travelway for both BRASS LRFD and BRASS LFD so the analysis is ok. The schematic should be changed to show the overlay over the travelway width only (I think that should always make sense) and the Help for the Wearing Surface tab should be revised to indicate the wearing surface is over the travelway width.

Dean, As an aside, I noticed on your bridge that you have assigned the wearing surface to load case DC2. But the log file for the BRASS LRFD run states that the wearing surface load is always applied to DW in BRASS. You might want to verify that the analysis is using the correct load factors for your wearing surface.

FROM:kkennelly DATE:3/6/2002 3:19:02 PM

Schematic and help updated for Version 4.2 and 4.1 Service Pack 1.

FROM:dteal DATE:Monday, April 01, 2002 10:16:19 AM

The schematic of the Typical Cross section still shows the sidewalk as thick as the deck with the overlay. I don't see any changes, corrections or improvements to the schematic.

FROM:kkennelly DATE:4/1/2002 1:12:01 PM

When I look at the attached bridge in version 4.1.1, the deck overlay is only shown over the travelway width as it should be. Do you see the overlay as a darker gray color over the travelway width? Do you see the darker overlay cover over the sidewalk? (I don't see that.) The sidewalk should be the same thickness as the deck (with no overlay) since this bridge has 0 width and 0 thickness entered for the sidewalk.

FROM:dteal DATE:Monday, April 01, 2002 2:53:24 PM

When I look at the schematic I see the darker color for the overlay on the deck and over on the sidewalk I see sidewalk thickness equal to the deck thickness, but then I also see a line above the sidewalk at the same level as the overlay, but between this line and the sidewalk it is not shaded in like the overlay is. But the line is definitely there.

FROM:kkennelly DATE:4/2/2002 9:04:26 AM

I can't reproduce the line you are seeing. We tried looking at the attached version 4.1.1 file "ver411\_sidewalk.bbd" on 2 pc's and it looks ok. Can you import that file and see how it looks? If it looks ok, please export the bridge you are looking at in 4.1.1 that shows the line and attach it to this incident.

FROM:dteal DATE:Wednesday, April 03, 2002 8:09:27 AM

I don't know if this is a dumb question or not but - how do I import a file (download an attachment) from Visual Intercept. As far as I know I can only attach files to send to you.

FROM:dteal DATE:Wednesday, April 03, 2002 8:26:10 AM

I am attaching 2 files. One is the bbd in 4.1.1 beta that I can create the anomaly with, Sidewalk Shot.bbd . The second file I am sending is Sidewalk Shot.bmp. This clearly shows in the sidewalk area,

4/19/2016 3:16:25 PM

HRS AASHTO

1179

### Complete Issue Information

the deck, a space and a line above the deck. The rail sits on top of this line and not on the sidewalk surface.

FROM:kkennelly DATE:4/3/2002 9:32:57 AM

I imported your bridge Sidewalk Shot.bbd and I see the line you are referring to. That line is showing the sidewalk thickness. This bridge has the sidewalk entered as 3050 wide x 40 thickness. You can see this line move by varying the sidewalk thickness on the Sidewalk tab. (The first file attached to this incident did not have a sidewalk width and thickness entered, they were left blank. That's why we couldn't see the line you are referring to.)

FROM:kkennelly DATE:4/3/2002 9:42:40 AM

I don't think there is any way for you to import a file from Visual Intercept but I don't think you have to import that file now anyway.

FROM:dteal DATE:Wednesday, April 03, 2002 10:16:19 AM

I checked with the designer on this structure. He changed the sidewalk thickness between the time I originally entered the incident to now when I'm trying to check it out. He had added the 40 mm. If I take the extra 40 mm off the graphic is displayed correctly. It appears that we can close this incident.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 3627                                      |
| Subject: Delete File Also in Deleted Bridges Folder |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/27/2002 8:37:53 PM |
| Modified By: administrator     | 6/19/2008 4:05:36 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Assigned |          | Education |
| Duray, Jim      | Assigned | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

4/19/2016 3:16:25 PM

HRS AASHTO

1180



### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 3628.11723 | Closed        | Shear Studs Failure Mismarked |

### Description

FROM:dteal DATE:Wednesday, February 27, 2002 3:37:55 PM

When the administrator goes to the "Deleted Bridges" folder for some clean-up. Select a bridge to delete, I get the check box to delete the files also. Should this be appearing here?

FROM:jduray DATE:3/1/02 3:09:34 PM

I think so. Why do you think it should not? we want to delete analysis files for the bridge being deleted.

FROM:dteal DATE:Friday, March 01, 2002 3:45:12 PM

These files that are deleted were created on the local PC when the analysis was done. Is that correct?

The administrator is the only one in our case that has permission to delete bridges from the deleted bridges folder. Why ask if he would like to delete files that aren't there?

FROM:jduray DATE:3/26/03 12:06:26 PM

He should not check the box if he doesn't want to delete the files. Others may implement Virtis differently and allow any user to delete bridges.

Perhaps the checkbox should also be on the dialog for deleting the bridge.

FROM:dteal DATE:Friday, September 05, 2003 10:38:02 AM

It's not a matter of checking the box or not - the administrator is being asked to delete or not delete files that live on somebody else's local PC that the administrator couldn't delete even if he wanted to.

FROM:dteal DATE:Wednesday, October 15, 2003 3:03:35 PM

If the administrator checks this box, he will get an error message!

FROM:dteal DATE:Tuesday, October 26, 2004 10:10:47 AM

Since the last time I looked at this - the administrator no longer gets an error message (5.1.1) - But the administrator still shouldn't get this message.

Issue ID: 3628

Subject: Shear Studs Failure Mismarked

Folder: /Virtis/Support Center

4/19/2016 3:16:25 PM

HRS AASHTO

1181

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/27/2002 8:38:58 PM |
| Modified By: administrator       | 6/19/2008 4:05:36 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug         |
| Goodrich, Brian | Assigned   |          | Bug - BRASS |
|                 | Patch Test |          |             |
|                 | Closed     |          |             |
| Goodrich, Brian | Closed     | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Fatigue Truck.bbd   |             |
|      | fatigue moment.jpg  |             |
|      | fatigue shear.jpg   |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3629.11722 | Closed        | Fatigue Output Tables |

### Description

FROM:dteal DATE:Wednesday, February 27, 2002 3:38:59 PM

I recently was evaluating shear studs, and discovered a "FAIL" in one of the yellow-icon general calculations, specifically "LRFD 6.10.7.4.4 Shear Connectors: Strength Limit State". In my mind, any "failure" should be brought to the attention of the designer through a red "X" icon, rather than be buried in all the calculations. After discovering this failure in a general calculation, it made me wonder how many other "general calc's" had "failures" in them!

FROM:bgoodrich DATE:Monday, March 04, 2002 4:44:04 PM

4/19/2016 3:16:26 PM

HRS AASHTO

1182

### Complete Issue Information

I modified the engine to label the specification check in question as passed or failed rather than a generic computation. Additionally, I revised some stiffener and stirrup checks in a similar manner. Fixed in BRASS-GIRDER(LRFD) 1.5.1, which should be released with Opis 4.1 Service Pack 1.

FROM:dteal DATE:Monday, January 27, 2003 9:15:12 AM

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:25:39 PM  
Track field marked as accepted on 1/27/03. Incident closed.

|                                |
|--------------------------------|
| Issue ID: 3629                 |
| Subject: Fatigue Output Tables |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/27/2002 8:41:41 PM |
| Modified By: administrator       | 6/19/2008 4:05:36 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, February 27, 2002 3:41:42 PM  
Concerning the presentation of the LRFD Critical Loads FATIGUE-I moments and shears, both in the output tables and charts. If both HL-93 (SI) Truck and Fatigue Truck (SI) are included in the analysis run, the fatigue results are mis-represented. If the HL-93 truck is removed from the analysis setup and the bridge run with only the fatigue truck, the charts and tables look correct. In any case, the individual unfactored shear and moments look good as well as the spec checks concerning fatigue; it's only the LRFD Critical Loads that seem to have a problem working. I tried turning off all Limit States but fatigue,

4/19/2016 3:16:26 PM

HRS AASHTO

1183

**Complete Issue Information**

but still included the HL-93 truck in the run, and the fatigue results still looked wrong.

FROM:bgoodrich DATE:Monday, March 04, 2002 3:28:22 PM  
I corrected the problem with fatigue limit state results. The truck number for fatigue was being stored instead of the combination number. Fixed in BRASS-GIRDER(LRFD) 1.5.1, which should be released with Opis 4.1 Service Pack 1.

FROM:dteal DATE:Thursday, January 09, 2003 12:49:28 PM

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:26:01 PM  
Track field marked as accepted on 1/9/03. Incident closed.

Issue ID: 3630  
Subject: What is the Allowable Fatigue Stress Value

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 2/28/2002 3:12:53 PM  
Modified By: administrator 6/19/2008 4:05:36 PM  
Priority: High  
Category: Education

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Assigned |          | Education |
| Duray, Jim      | Assigned | High     | Education |

**Contacts**

4/19/2016 3:16:26 PM

HRS AASHTO

1184

**Complete Issue Information**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | PS Losses.bbd            |             |
|      | Prestress loss error.doc |             |

**Tasks**

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3631.11720 | Closed        | Calculation of Total PS Losses |

**Description**

FROM:dteal DATE:Thursday, February 28, 2002 10:12:54 AM

This is an excerpt from the BRASS output file from a Virtis Rating Run. What I am looking for is the allowable fatigue stresses. I want to know which windows I can check and what value the program is using. From this excerpt, the Allowable Fatigue Stress is \*\*\*\*? What does that mean? .bbd file is attached

Fatigue Rating Factor - Steel (Positive Action) - BOTTOM OF SECTION

Section Modulus = 1429.42 (in^3)  
 Live Load Moment (max) = 670.60 (ft-kips)  
 Live Load Moment (min) = -130.51 (ft-kips)  
 Moment Range (max - min) = 801.10 (ft-kips)  
 Stress Range (mom. range/sect. mod.) = 6.73 (ksi)  
 Allowable Fatigue Stress = \*\*\*\*\* (ksi)

Note: See parameter 9 of the STEEL-4 command, Fatigue rating will not govern and will print as asterisks

R.F. = Allowable Fatigue Stress

-----  
 Stress Range

R.F. = \*\*\*\*\*

FROM:dteal DATE:Thursday, February 28, 2002 12:51:48 PM

BRASS uses an Allowable Fatigue Stress Default = 1x10^10 KSI. We change this in BRASS to 21 ksi. How do I control this in Virtis?

FROM:bgoodrich DATE:Thursday, February 28, 2002 5:05:15 PM

To get the allowable fatigue stress into Virtis, add a row to the fatigue grid on the Fatigue tab in the

**Complete Issue Information**

Point of Interest window. The only value BRASS LFD uses is the allowable fatigue stress. Additionally, BRASS does not allow input of a vertical distance. Note that the export does not currently generate POI commands to override the schedules, although the engine supports this now. This issue was already submitted as incident 3062.

Now, to get the fatigue data exported to the data file, you will have to make an adjustment to the engine properties on the member alternative window. You will have to select POI Control option 0. Then, you will have to add stiffeners, bracing, etc. data to each of your POIs because the schedules cannot be used for this case. This is only a work-around until Incident 3062 gets addressed.

FROM:dteal DATE:Monday, March 04, 2002 9:24:38 AM

Above you stated - "The only value BRASS LFD uses is the allowable fatigue stress". In the BRASS output, the Allowable Fatigue Stress is listed as \*\*\*\*\*, what does "\*\*\*\*\*" mean? According to Ahmad, our ratings guy, if we use the BRASS default of  $1 \times 10^{10}$  ksi it will never control. That is why he enters 21 ksi in BRASS Girder LFD.

Issue ID: 3631  
 Subject: Calculation of Total PS Losses

Folder: /Virtis/Support Center  
 Primary Contact: Goodrich, Brian  
 Submitted By: Teal, Dean 3/1/2002 1:29:16 PM  
 Modified By: administrator 6/19/2008 4:05:36 PM  
 Priority: High  
 Category: Bug - BRASS

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Goodrich, Brian | Assigned           |          |             |
|                 | Open               |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          | Bug - BRASS |
|                 | Resolved           |          |             |
|                 | Closed             |          |             |
|                 | ReOpen             |          |             |
|                 | System Test        |          |             |
|                 | Closed             |          |             |

**Complete Issue Information**

|                 |        |      |             |
|-----------------|--------|------|-------------|
| Goodrich, Brian | Closed | High | Bug - BRASS |
|-----------------|--------|------|-------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 3632.11719 | Resolved      | Add rating in tons to the Bridge Explorer Bridge and Structure views |

**Description**

FROM:dteal DATE:Friday, March 01, 2002 8:29:16 AM  
See the attached Word document and .bbd file

FROM:bgoodrich DATE:Monday, March 04, 2002 4:47:01 PM  
I corrected the intermediate output to show the loss reports for all spans instead of just span 1.

FROM:bgoodrich DATE:Wednesday, March 13, 2002 8:56:10 AM  
E-mail from Jay Puckett:  
Per 5.9.5.1 the total loss is computed "relative to the stress immediately before release". So does the stress at release contain the R1 loss? See 5.9.5.4.4.b for an estimate of loss prior to transfer. If the fabricator stresses to include the R1 loss, hence the stress immediately before release is the fpj specified then I would say not to include it. But if the fabricator stresses to fpj and does not account for the R1 loss in the stressing process, then I would say it should be include in the computation. See commentary, "initial relaxation loss is determined by the fabricator". I assume (perhaps incorrectly) that the fabricator will over stress so that the net immediately before release is the fpj value (and PCI likely makes this assumption as well) You might wish to ask Dean about this practice.

FROM:bgoodrich DATE:Wednesday, March 13, 2002 9:09:01 AM  
Dean - Please review Jay's comments above and indicate what KDOTs practice is.

FROM:dteal DATE:Thursday, March 21, 2002 3:43:52 PM  
The value on Plans is  $fpu * 0.75 * Aps = 139.5 \text{ kN}$ . The value 138 kN come about converting this calc from english to metric.

To answer Jay's question, our prestress fabricators tension up to the value found on the plans, No additional to account for ES or Relax.

Jay's response did not answer my question on why R1 (relaxation of prestress at transfer) is included in the total loss calculation. The value R2 (total relaxation of prestress) includes the value of R1 and should not be added in again.

4/19/2016 3:16:26 PM

HRS AASHTO

1187

## Complete Issue Information

FROM:bgoodrich DATE:Monday, November 04, 2002 12:27:26 PM

LRFD 5.9.5.4a indicates that the total relaxation loss after transfer is the sum of the R1 and R2 losses. And the LRFD specification seems to assume (based on the commentary) that the R1 loss will be accounted for in the fabrication process. Based on the discussion in Section 7.7.6 (and Example 7.10.4) of the Design of Highway Bridges textbook, it follows that both the R1 and R2 losses should be included in the total prestress loss equation (5.9.5.1-1). I did not find any discussion in the specification or elsewhere that indicates that the R2 loss includes the R1 loss.

To eliminate the R1 loss from consideration, set the transfer time to 1/24 days (1 hour). This causes the R1 loss to be computed as zero.

FROM:dteal DATE:Thursday, January 09, 2003 12:48:17 PM

FROM:bgoodrich DATE:Friday, January 17, 2003 4:37:20 PM  
Track field marked with an "A", so status set to closed.

FROM:bgoodrich DATE:Wednesday, May 28, 2003 9:44:33 AM  
Khalid Obeidat (MN DOT) has similar concerns that need to be addressed.

E-mail from Khalid Obeidat:

As we discussed in our phone conversation last week I'm sending you my findings about my review of prestress losses in OPIS/VIRTIS version 5. Version 5 loss calculations are a step on the right direction. There are still two issues (bugs) on version 5 (these are not new bugs and they are carried from previous versions of OPIS/VIRTIS). These bugs are: 1. OPIS/VIRTIS include R1 (Initial relaxation Losses) in total losses at final. As you can see in equations 5.9.5.1-1 and 2 in section 5.9.5.1 of AASHTO LRFD Bridge Design Manual the initial relaxation losses R1 is explicitly excluded from the total losses. The bug in OPIS/VIRTIS tends to increase total prestress losses. 2. When calculating initial relaxation losses R1, the initial stress in tendon fpj is calculated incorrectly (initial stress in tendons minus elastic shortening). The elastic shortening should not have been subtracted from the initial tendon stresses because initial relaxation happens before elastic shortening (Elastic shortening start immediately after prestressing while elastic shortening happens after cutting the strands). It is a good idea to list initial relaxation losses before the elastic shortening losses in the computations. The bug of subtracting elastic shortening losses from fpj tends to affect R1 and CR losses. I'm attaching a copy of OPIS file for MN/DOT LRFD design example in addition to the computation of our design example. Please let me know if you have any questions about this or if I could be of any help to you. Thanks

FROM:bgoodrich DATE:Wednesday, October 15, 2003 1:52:22 PM  
WYDOT has assigned this issue to BRASS Problem Log 458.

FROM:bgoodrich DATE:Sunday, December 28, 2003 12:24:44 PM  
Modifications have been made to the total loss calculation when AASHTO losses are specified. The relaxation loss at transfer (R1) is no longer included in the total loss calculation as specified in AASHTO LRFD 5.9.5.1. Fixed for BRASS-GIRDER(LRFD) 1.5.4. Fixed for Opis Version 5.2.

FROM:dteal DATE:Tuesday, November 02, 2004 10:56:27 AM

---

4/19/2016 3:16:27 PM

HRS AASHTO

1188



### Complete Issue Information

Issue ID: 3632

Subject: Add rating in tons to the Bridge Explorer Bridge and Structure views

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim

3/1/2002 7:55:53 PM

Modified By: administrator

6/19/2008 4:05:36 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
| Goodrich, Brian | Assigned  |          |               |
|                 | Suspended |          | Enhance BRASS |
|                 | Assigned  |          |               |
|                 | Duplicate |          |               |
|                 | Suspended |          |               |
|                 | Duplicate |          |               |
| Goodrich, Brian | Closed    | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Prestress extended strands.doc |             |
|      | KDOT Bridge Manul.pdf          |             |
|      | End Connections.pdf            |             |
|      | pages106-114-129.pdf           |             |
|      | Strand Extension.bbd           |             |

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3633.11718 | Closed        | PS Continuity Materials - extend strands into diaphragm |

**Description**

FROM:jduray DATE:3/1/02 2:58:44 PM

Submitted on behalf of Brian McCaffrey from an email:

Would it be beneficial to add the ratings in tons in addition to the rating factor at the bridge and structure results level - when viewing from the bridge explorer???

We're trying to get a summary of everything we ran from 2001 for our Federal tape and they require the ratings in tons (this also applies to all the other states). I've been trying to manipulate the results in Access but only the BID (not the Bridge Id) is in the results table. Has anyone else done anything similar to this yet???

Bottom line, we're trying to generate the attached file for every bridge we've ran thru Virtis.

-----end of email -----

I think we can add the tons to the structure and bridge views. If it is simple to do I will try to get it in the service pack we are working on. Otherwise it will have to wait for a later release (possibly June).

If writing SQL to generate the report you will have to make sure you only report on "Existing" stuff (Bridge Alternative, the proper Structure Definition, and Member Alternative). This is not trivial when writing SQL to do the reporting. There is a view in the database (version 4.1) that returns the member alts for "existing" bridge alts, etc.. the name of the view is abw\_v\_cur\_mbr\_alt\_hierarchy.

FROM:mordoobadi DATE:8/14/2003 3:14:29 PM  
Inventory and Operating Capacity columns were added to Bridge and Structure Rating Results windows in version 5.0.1

I change the status of this incident from Suspended to Resolved.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3633                                                   |
| Subject: PS Continuity Materials - extend strands into diaphragm |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/6/2002 2:43:47 PM  |
| Modified By: administrator       | 6/19/2008 4:38:35 PM |
| Priority: High                   |                      |

4/19/2016 3:16:27 PM

HRS AASHTO

1190

## Complete Issue Information

Category: Enhance BRASS

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
|                 | Accepted |          |           |
|                 | Closed   |          |           |
| Duray, Jim      | Closed   | High     | Education |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3634.11717 | Closed        | Wizard and Built up Sections |

## Description

FROM:dteal DATE:Wednesday, March 06, 2002 9:43:50 AM

See the attached .bbd file. Kansas extends strands to make the beams continuous over the pier. One method we tried was to increase the Yield Strength (fy) in the continuity bars over the pier to approximate the actual prestressed strands instead of rebar. So the instead of using fy=420 MPa, fy was increased to 1674 MPa. A new material was created for it and used in the beam details, continuity diaphragm tab. Beam #1 was set up this way. The beam was analyzed. In the output results (attached word doc) BRASS is not using the new material with fy=1674 MPa, it is still using fy=420 MPa.

FROM:bgoodrich DATE:Friday, April 05, 2002 6:06:44 PM

BRASS only supports one rebar yield stress for the entire structure. Therefore, increasing the yield stress for the continuity steel will not work right now. It may be possible to modify BRASS to allow different yield stresses for the girder and slab rebar. Internally, BRASS would only use one of the yield stresses in the computations, but the rebar areas could be adjusted to compensate. This issue really pertains to Virtis/Opis users only because BRASS users could modify their data file directly and adjust the mild steel areas accordingly.

4/19/2016 3:16:27 PM

HRS AASHTO

1191

## Complete Issue Information

FROM:dteal DATE:Monday, August 12, 2002 11:48:10 AM

One solution that was discussed at the 2002 UserGroup meeting was: In the beam details window, we should select which strands to extend and use those strands as fully developed continuity steel

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:57:41 PM

WYDOT has added this issue to the list of BRASS enhancements.

FROM:dteal DATE:Thursday, October 23, 2003 10:28:34 AM

FROM:dteal DATE:Thursday, October 23, 2003 10:28:34 AM

Copy of email from Jay to Brian to Ken to Me requesting further information: I attached the examples Ken referred to.

Dean,

Check with Loren or Rich Mesloh on the 'strand extension' for P/S.

Br Manual - Positive Moment connection

Example - bent-up strand extension

Reference to Missouri Research

Please e-mail to Brian Goodrich.

Thanks.

KFHurst

-----Original Message-----

From: Jay Puckett [mailto:puckett@bridgetech-laramie.com]

Sent: Tuesday, May 13, 2003 2:24 AM

To: Goodrich@BridgeTech-Laramie.com

Cc: Kenneth Hurst

Subject: VI 3633

Brian-

The prestressed continuity steel issues will be in 5.1 – we will need to get WyDOT permission for this. VI 3633.

Brian-can you develop the request for Ken Hurst to WyDOT; this should follow the standard process and be billed to AASHTO T&M. Ken Hurst will send us information about the development length for the continuity strands; we should consider both strands in the top and bottom of the girder. I see two scenarios:

1. Assume continuity strands are fully developed – simpler.
2. Use Ken's approach regarding a lesser stress for development length. We can discuss in more detail later.

No reply necessary today.

Jay

During the Alabama user group meeting (Aug 2003) Jay asked me how KS wanted to handle the strand extension issue for continuity. I discussed our options with Ken Hurst and this is what we would like to

4/19/2016 3:16:27 PM

HRS AASHTO

1192

**Complete Issue Information**

see to handle strand extensions and continuity steel.

Option 1: In the beam details GUI window we could provide a wizard that calculates the number of strands you need to extend. Knowing that number the user could select which strands to extend in the GUI.

Option 2: In the beam details GUI window we should have the ability to select which strands to extend, consider them developed, supply some sort of output (in spec checker) that checked these strands to be sure they haven't been overstressed.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:15:16 AM

A formal request was made to WYDOT requesting modifications to BRASS, which is documented in Incident 4683. The status of this incident will be set to Duplicate and all future work will be documented in Incident 4683.

FROM:dteal DATE:Tuesday, October 26, 2004 11:53:21 AM  
Accepted

FROM:hlee DATE:7/14/2005 12:43:36 PM  
Duplicate of Incident 4683 which was resolved for 5.2.

|                                       |
|---------------------------------------|
| Issue ID: 3634                        |
| Subject: Wizard and Built up Sections |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 3/6/2002 3:10:43 PM  |
| Modified By: administrator     | 6/19/2008 4:05:36 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:16:27 PM

HRS AASHTO

1193

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, March 06, 2002 10:10:43 AM

Am I correct here – I have a built up steel beam which uses angles for the top flange. I can model them as cross section based ok but I can not use the wizard to create the structure definition for a built up section. Is this intended, the wizard does not handle built up steel sections?

FROM:dteal DATE:Wednesday, March 06, 2002 10:47:21 AM

More on Built Up sections – Built Up sections can not be entered using schedule based either – is this correct? I am trying to enter a parabolic built up section. We have many pre 1960 bridges of this type.

FROM:jduray DATE:3/6/02 2:55:52 PM

Both observations are correct...the wizard does not handle built-up sections and built-up sections can only be described using cross-section based.

FROM:dteal DATE:Wednesday, March 06, 2002 2:52:49 PM

Issue ID: 3636

Subject: Modify export to allow the bottom of slab to be even with bottom of top flange

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krisha

3/6/2002 7:27:45 PM

Modified By: administrator

6/19/2008 4:38:35 PM

Priority: High

Category: Bug - Export 2

4/19/2016 3:16:28 PM

HRS AASHTO

1194

## Complete Issue Information

### History

| Primary Contact | Status     | Priority | Category |
|-----------------|------------|----------|----------|
| Duray, Jim      | New        | High     | Bug      |
| Ihnat, Joseph   | Patch Test |          |          |
|                 | Accepted   |          |          |
|                 | Closed     |          |          |
| Ihnat, Joseph   | Closed     | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3637.11714 | Closed        | Folder Description Field |

### Description

FROM:kkennelly DATE:3/6/2002 2:32:12 PM

Submitted via email on behalf of Aran Lessard, Bayside Engineers. Incident 3539 says BRASS LFD allows a negative haunch. Export is currently forcing the haunch to be zero.

Hi Krisha,

Here is the file for the embedded flange beam that we spoke of. Like I explained, my goal is to model it with the top flange completely embedded in the deck slab. The bottom of the slab is at the same elevation as the bottom of the top flange of the beam.

Let me know if we can do it.

Aran Lessard (617)-625-5095 ext 626

FROM:kkennelly DATE:3/6/2002 2:37:34 PM

FROM:bgoodrich DATE:Saturday, January 25, 2003 10:05:40 AM  
WYDOT has placed this issue on the BRASS enhancement list.

4/19/2016 3:16:28 PM

HRS AASHTO

1195

**Complete Issue Information**

FROM: bgoodrich DATE: Tuesday, July 22, 2003 1:35:52 PM  
The export has been corrected to address this issue. The BRASS-GIRDER(LRFD) engine was modified to permit an embedded flange in the same manner as the BRASS-GIRDER engine. Fixed for Version 5.0.1.

|                                   |
|-----------------------------------|
| Issue ID: 3637                    |
| Subject: Folder Description Field |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 3/7/2002 3:43:13 PM  |
| Modified By: administrator     | 6/19/2008 4:05:36 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dteal DATE: Thursday, March 07, 2002 10:43:14 AM  
When creating a new folder or editing a folder I have ownership to – In the “Description“ field – I am not able to use the enter key or arrow keys to create a second line of text. I seem to be limited to the first line only?

FROM: jihnat DATE: 3/7/2002 1:13:42 PM  
We can change this for the next service pack to be consistent with other dialogs.  
In the meantime, you can start another line with <CTRL><ENTER>.

FROM: jduray DATE: 4/4/02 2:59:55 PM  
Also accepted by Gale (informed via email).

4/19/2016 3:16:28 PM

HRS AASHTO

1196



## Complete Issue Information

Issue ID: 3644  
Subject: Haunch DL Calculations

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 3/8/2002 5:23:31 PM  
Modified By: administrator 6/19/2008 4:05:35 PM  
Priority: High  
Category: Bug - Export 1

### History

| Primary Contact  | Status     | Priority | Category       |
|------------------|------------|----------|----------------|
| Duray, Jim       | New        | High     | Bug            |
| Kennelly, Krisha | Assigned   |          |                |
| Goodrich, Brian  |            |          | Bug - Export 1 |
| Kennelly, Krisha |            |          | Bug            |
| Goodrich, Brian  |            |          | Bug - Export 1 |
|                  | Patch Test |          |                |
|                  | Closed     |          |                |
| Goodrich, Brian  | Closed     | High     | Bug - Export 1 |

4/19/2016 3:16:28 PM

HRS AASHTO

1197

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 3647.11704 | Resolved      | PS Load Designations |

### Description

FROM:dteal DATE:Friday, March 08, 2002 12:23:33 PM  
For Jeff Ruby

BRASS LRFD is having a hard time calculating the haunches correctly. The attached graphic shows my situation.

BRASS Calculates...(From output)

COMMENT This load case is derived from data provided.  
LOAD-DEAD-DESCR 1, DC, 1, Haunches  
—>LOAD-DEAD-UNIFORM 1, 1, 0.000, 0.009434, 1456.693, 0.009434  
LOAD-DEAD-UNIFORM 1, 1, 1456.693, 0.010241, 1830.709, 0.010241  
LOAD-DEAD-UNIFORM 1, 1, 1830.709, 0.002560, 2086.614, 0.002560  
LOAD-DEAD-UNIFORM 1, 2, 0.000, 0.002560, 275.591, 0.002560  
LOAD-DEAD-UNIFORM 1, 2, 275.591, 0.010241, 629.921, 0.010241  
LOAD-DEAD-UNIFORM 1, 2, 629.921, 0.009434, 1968.504, 0.009434  
LOAD-DEAD-UNIFORM 1, 2, 1968.504, 0.010241, 2322.835, 0.010241  
LOAD-DEAD-UNIFORM 1, 2, 2322.835, 0.002560, 2598.425, 0.002560  
LOAD-DEAD-UNIFORM 1, 3, 0.000, 0.002560, 255.906, 0.002560  
LOAD-DEAD-UNIFORM 1, 3, 255.906, 0.010241, 629.921, 0.010241  
LOAD-DEAD-UNIFORM 1, 3, 629.921, 0.009434, 2086.614, 0.009434  
LOAD-DEAD-DESCR 2, DC, 2, Rail

I get: (400x25mm top flange for highlighted line above)

$400 * (85 - 25) / 25.4 / 25.4 / 12 / 12 * (0.15 \text{ kip/ft}^3) / 12 = 0.003229 \text{ kip/in}$  NOT 0.009434 kip/in

Or you could use Unit wt = 438.2 lb/ft<sup>3</sup> to get your answer. (That's almost the density of Steel.)

FROM:kkennelly DATE:3/11/2002 2:08:53 PM  
Member G2, member alt G2-4 exhibits this behavior. I had to change the system of units to US on the member alt window and then run BRASS LRFD to get the results that the user got. Dead load value

4/19/2016 3:16:28 PM

HRS AASHTO

1198

**Complete Issue Information**

for first haunch range should be 0.00323 kip/in.

FROM:kkennelly DATE:3/12/2002 10:38:30 AM

When I run this bridge under the current Virtis 4.1 Service Pack 1 I get the correct haunch load of 0.00323.

Looks like user must have copied the exterior mbr alt to the interior mbr alt prior to Version 4.1. Version 4.1 should have set the Z3 and Z4 values for the haunch range set to null when the ext mbr alt was copied to the int mbr alt. Can the user verify if Member G2, member alt G2-4 was copied from the exterior mbr alt prior to Version 4.1? Otherwise we have to figure out how the Z3 and Z4 values got in the database.

Brian, can you verify your Service Pack 1 code in sourcesafe fixes this problem? Thanks.

FROM:kkennelly DATE:3/12/2002 11:23:28 AM

FROM:bgoodrich DATE:Wednesday, March 13, 2002 8:35:39 AM

Copying the bridge from an exterior to interior girder works fine in version 4.1, so I suspect this bridge had to be entered prior to version 4.1. I just modified the export to ignore the Z3 and Z4 dimensions for an interior girder. I sent this code to Joe Ihnat on 3/11/02. Fixed for Virtis/Opis 4.1 Service Pack 1.

FROM:dteal DATE:Thursday, January 09, 2003 12:47:46 PM

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:24:22 PM

Track field marked as accepted on 1/9/03. Incident closed.

|                               |
|-------------------------------|
| Issue ID: 3647                |
| Subject: PS Load Designations |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Hurd, Mike         | 3/11/2002 4:13:34 PM |
| Modified By: administrator       | 6/19/2008 4:05:35 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |

4/19/2016 3:16:29 PM

HRS AASHTO

1199

**Complete Issue Information**

|                 |          |      |           |
|-----------------|----------|------|-----------|
| Goodrich, Brian | Resolved | High | Education |
|-----------------|----------|------|-----------|

**Contacts**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

|            |               |                                                          |
|------------|---------------|----------------------------------------------------------|
| Name       | Current State | Summary                                                  |
| 3649.11702 | Discard       | Add Engine Related help for BRASS for the Vehicle window |

**Description**

FROM:mhurd DATE:Monday, March 11, 2002 12:13:34 PM

My question is in regard to dead load designations for a 3-span, prestressed concrete bridge. In the Load Case Description, I have listed the barrier and future wearing surface as being composite, long term. These loads will be placed after the deck is composite with the girders. During analysis, a warning states, "Brass does not support a composite (long term) stage. The results from loads are applied to this stage will appear under the composite short term stage".

Due to the possible long term effects such as creep, I would think that the barrier and FWS should be analyzed as long term. Is there a way to input these loads so Brass looks at them as being composite, long term?

FROM:bgoodrich DATE:Wednesday, March 13, 2002 12:59:37 PM

BRASS-GIRDER and BRASS-GIRDER(LRFD) analyze composite prestressed concrete structures in two stages. The first is non-composite and the second is composite. BRASS-GIRDER(LRFD) calculates transformed section properties utilizing the sustained modular ratio,  $m \cdot n$ , where  $m$  is the sustained factor input in Virtis/Opis. There is no BRASS-GIRDER command that provides input for the sustained modular ratio or the associated factor. With Opis, the  $(m)$  factor can be set to 1 and all loads to the composite structure will be considered as short-term. Or, the  $(m)$  factor can be set to 2 and all loads to the composite structure will be considered as long term.

Issue ID: 3649

Subject: Add Engine Related help for BRASS for the Vehicle window

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

3/12/2002 5:31:37 PM

4/19/2016 3:16:29 PM

HRS AASHTO

1200

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:35 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact  | Status     | Priority | Category |
|------------------|------------|----------|----------|
| Kennelly, Krisha | New        | High     | Unknown  |
|                  | Assigned   |          | Help     |
| Kennelly, Krisha | Patch Test | High     | Help     |
|                  | Accepted   |          |          |
|                  | Accepted   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3650.11701 | Accepted      | Structure Typical Section Appurtenances help |

### Description

FROM:kkennelly DATE:3/12/2002 1:35:50 PM

Request based on question received via email from Ken Teng, RQAW: Does BRASS uses the tire contact width on the library window?

We don't currently have any engine related help in the Library windows. I think that's ok for the items that get copied to the bridge, but we should add engine related help for the library vehicle since we use the library vehicle in the analysis.

FROM:jduray DATE:3/13/02 9:44:19 AM  
I agree.

FROM:hlee DATE:4/30/2008 2:28:11 PM  
Discarded by TAG 12/07.

4/19/2016 3:16:29 PM

HRS AASHTO

1201

## Complete Issue Information

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3650                                        |
| Subject: Structure Typical Section Appurtenances help |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 3/12/2002 6:36:55 PM |
| Modified By: administrator        | 6/19/2008 4:05:35 PM |
| Priority: High                    |                      |
| Category: Help                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnath DATE:3/12/2002 2:39:42 PM

On the appurtenance tabs of the Structure Typical Section window, there are links to the Library Appurtenances. Shouldn't these be links to the Bridge Appurtenances instead?

Likewise for the link to Library - Materials - Concrete on the Sidewalk tab.

FROM:kkennelly DATE:3/13/2002 3:38:43 PM

Help fixed for 4.1 service pack 1 and version 4.2.

FROM:jduray DATE:4/4/02 3:00:21 PM

Accepted by Gale (informed via email).

4/19/2016 3:16:29 PM

HRS AASHTO

1202

**Complete Issue Information**

Issue ID: 3652  
Subject: Cracking Moment in PS Structure

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 3/13/2002 1:16:25 PM  
Modified By: administrator 6/19/2008 4:05:35 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug         |
| Goodrich, Brian | Assigned   |          | Bug - BRASS |
|                 | Patch Test |          |             |
|                 | Closed     |          |             |
| Goodrich, Brian | Closed     | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                          |
|------------|---------------|--------------------------------------------------------------------------------------------------|
| 3653.11698 | Suspended     | Opis and BRASS Engine Help Not Consistent - Provide links in Engine help to BRASS default values |

### Description

FROM:dteal DATE:Wednesday, March 13, 2002 9:16:27 AM

In the design of a four span prestress I found what I think is an error in the specification check of AASHTO LRFD Specification 5.7.3.3.2. This specification was violated in the negative flexure sense at the mid-span of span #2. At this location the minimum factor moment, Mu, is 1499.43 (kNm). Since this is a positive moment, should Mr minimum be set to zero?

Why is the critical factored moment for all live loads used as Mu in the negative flexure sense and not just the loads applied in construction stage 2 (fws, rail, and live loads)? The construction stage 2 moments are 199.376 (kNm) for the total DL and - 467.791 (kNm) for LL. Adding these up gives - 268.415 (kNm).

I have attached Virtus/Opis input/output.

FROM:bgoodrich DATE:Thursday, March 21, 2002 2:16:47 PM

I have modified BRASS to take Mu as zero when the original Mu has a sign opposite the flexure sense. This causes the Mr minimum to be zero. Because we are using the flexural resistance for the strength limit state, it follows that the dead load from all stages be combined with the live load to obtain the Mu value. BRASS only computes the minimum reinforcement check one time for each point, so the Mu value shown in this check is the critical factored moment based on ALL dead and live load combinations for the Strength limit states. Fixed for Opis 4.1 Service Pack 1.

FROM:dteal DATE:Thursday, January 09, 2003 12:47:16 PM

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:26:36 PM

Track field marked as accepted on 1/9/03. Incident closed.

|                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|
| Issue ID: 3653                                                                                            |
| Subject: Opis and BRASS Engine Help Not Consistent - Provide links in Engine help to BRASS default values |

|                                  |
|----------------------------------|
| Folder: /Virtis/Support Center   |
| Primary Contact: Goodrich, Brian |

4/19/2016 3:16:30 PM

HRS AASHTO

1204



### Complete Issue Information

|                          |                        |
|--------------------------|------------------------|
| Submitted By: Teal, Dean | 3/13/2002 6:46:27 PM   |
| Modified By: hlee        | 10/16/2011 10:58:30 PM |
| Priority: High           |                        |
| Category: Enhance BRASS  |                        |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
| Goodrich, Brian  | Resolved |          | Education |
|                  | Accepted |          |           |
|                  | Closed   |          |           |
| Goodrich, Brian  | Closed   | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3654.11697 | Closed        | 3n Over Pier, 1n Elsewhere |

### Description

FROM:dteal DATE:Wednesday, March 13, 2002 2:46:28 PM

In Opis, the help screen brought up by F1 for "Structural Typical Section: Deck (Cont'd) refers to "Sustained Modular Ratio Factor, n" With the LRFD BRASS Engine Help it is called "Creep Factor, m". They should refer to and use the same terminology.

Is the GUI correct in calling it a Sustained Modular Ratio Factor for Opis?? It would be correct for Virtis, not sure about Opis?

FROM:kkennelly DATE:3/13/2002 3:41:49 PM

The Opis Help and BRASS LRFD engine related help for this window both use the same terminology

4/19/2016 3:16:30 PM

HRS AASHTO

1205

**Complete Issue Information**

so I think the Opis help system is ok. The LRFD BRASS Engine Help was written for BRASS being used stand alone and they can use any terminology they feel is appropriate. Opis will not be changed to match any analysis engines.(maybe another engine calls it "a"). I checked the AASHTO LRFD Specs 6.10.3.1.1b and AASHTO does not give this factor a name. They do however use the "modular ratio" term when referring to n and 3n. AASHTO 5.7.1 refers to "...an effective modular ratio of 2n...". So I think it is ok to use the terminology "Sustained Modular Ratio Factor" in both Virtis and Opis.

FROM:dteal DATE:Thursday, March 14, 2002 12:05:59 PM

The problem arises when in OPIS, I use the Help. Then I ask for engine help, being BRASS LRFD. BRASS states that input is optional and if left blank it will use BRASS defaults. That's all good and fine – so now search in BRASS to find out what the defaults are. You can not find "Sustained Modular Ratio" but if you really dig you will find the defaults under "Creep Factor".

Unless you know this – how would a user find out what the defaults are???

FROM:kkennelly DATE:3/14/2002 2:07:46 PM

You're right on that point. I guess the Engine related help should provide a link to the BRASS help topic showing the default. (I don't think they want the defaults listed in both the BRASS help and the Engine related help for Opis cause then they have to maintain their help in two places.) I'll change this incident to an enhancement for engine help to provide a link to their help file for defaults.

|                                     |
|-------------------------------------|
| Issue ID: 3654                      |
| Subject: 3n Over Pier, 1n Elsewhere |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/13/2002 6:47:33 PM |
| Modified By: administrator       | 6/19/2008 4:05:35 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:16:30 PM

HRS AASHTO

1206

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, March 13, 2002 2:47:33 PM

For a multi span steel structure. In trying to resolve and utilize LRFD 6.10.3.4 and C6.10.3.4 in our agency, is it somehow possible to assign 3n over the pier and 1n elsewhere?

FROM:kkennelly DATE:3/13/2002 4:12:13 PM

I believe 6.10.3.4 is referring to the stiffness or moment of inertia to use when determining the stage 1, stage 2 and stage 3 moments and shears along the beam. I don't think Opis has any way for the user to enter what stiffness they want to use when the engine computes the stage 1 and stage 2 dead loads and the stage 3 live load. Brian, does BRASS LRFD have a way for the user to specify what stiffness to use when it computes the stage 1, stage 2 and stage 3 loads?

FROM:kkennelly DATE:3/14/2002 7:58:44 AM

And I guess Dean wants the ability to vary the stiffness along the length of beam for each stage.

FROM:bgoodrich DATE:Thursday, March 14, 2002 10:55:59 AM

For the purposes of structural analysis, BRASS considers the bare steel section for the non-composite stage. For the long-term composite stage, BRASS uses 3n anywhere a slab is defined. For the short-term composite stage, BRASS uses 1n anywhere a slab is defined. There is currently no mechanism to control this process. Note that once the moments and shears have been established, BRASS utilizes section properties based on the sign of the moment to compute stresses.

FROM:dteal DATE:Thursday, March 14, 2002 12:04:27 PM

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:26:42 PM  
Closed.

|                                            |
|--------------------------------------------|
| Issue ID: 3655                             |
| Subject: n for Deck Profile, Deck Concrete |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/13/2002 6:49:55 PM |
| Modified By: administrator       | 6/19/2008 4:05:35 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
|                 | Accepted |          |                |
|                 | Closed   |          |                |
| Goodrich, Brian | Closed   | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 3656.11695 | Closed        | Default Value - n |

### Description

FROM:dteal DATE:Wednesday, March 13, 2002 2:49:55 PM

I am experimenting with one of the provided example bridges, MatrixBridge07. In the Deck Profile – Deck Concrete I enter a different n's for span 1 and span 2. After running a design review and looking at the BRASS input DAT file I find that the only n that got used was for span 1. Only one COMPOSITE-MATERIALS command line was generated.

If I leave span 1 blank and let BRASS use it's default and enter a value for span 2, span 2 gets ignored. The DAT file uses the first one it comes to and ignores the second.

FROM:bgoodrich DATE:Thursday, March 14, 2002 10:45:36 AM

BRASS only supports one concrete deck material for the entire bridge, i.e., one COMPOSITE-MATERIALS command. Therefore, the export fills the appropriate parameters at the first opportunity, which is for the first span. Warning messages are then issued when those materials differ from those in other cross sections or spans.

FROM:dteal DATE:Thursday, March 14, 2002 12:02:59 PM

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:27:22 PM

4/19/2016 3:16:30 PM

HRS AASHTO

1208

## Complete Issue Information

Closed.

|                            |
|----------------------------|
| Issue ID: 3656             |
| Subject: Default Value - n |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/13/2002 6:51:15 PM |
| Modified By: administrator       | 6/19/2008 4:05:35 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:Wednesday, March 13, 2002 2:51:15 PM

Structural Typical Section: Deck (Cont'd) - Sustained Modular Ratio Factor – Default.

If I leave this blank, for an Opis LRFD run, The BRASS DAT file never fills in what default it uses. If I where to leave the n blank in the Deck Profile-Deck Concrete BRASS enters a calculated value. Why are the default values for the Sustained Modular Ratio not printed in the BRASS DAT file?

FROM:bgoodrich DATE:Thursday, March 14, 2002 10:34:11 AM

The BRASS commands have several fixed defaults that may or may not be calculated. It makes sense to calculate a modular ratio because BRASS would use a default of 8.0. The sustained modular ratio factors are either 2.0 for concrete and 3.0 for steel and require no calculation. Rather than code the BRASS default in both the export and the engine, we have chosen to accept the engine default by leaving the appropriate command parameters blank. The value that BRASS uses for these types of parameters can be found somewhere in the main and intermediate output files.

FROM:dteal DATE:Thursday, March 14, 2002 12:01:23 PM

4/19/2016 3:16:31 PM

HRS AASHTO

1209

**Complete Issue Information**

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:27:53 PM  
Closed.

Issue ID: 3657  
Subject: Changes results views to filter on results\_use\_type

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Duray, Jim 3/13/2002 6:55:12 PM  
Modified By: administrator 6/19/2008 4:05:35 PM  
Priority: Urgent  
Category: Enhancement

**History**

| Primary Contact    | Status   | Priority | Category    |  |
|--------------------|----------|----------|-------------|--|
| Ordoobadi, Mehrdad | Assigned | High     | Enhancement |  |
|                    | Resolved |          |             |  |
|                    | Resubmit |          |             |  |
|                    |          |          | Urgent      |  |
|                    | Resolved |          |             |  |
|                    | Closed   |          |             |  |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Enhancement |  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:16:31 PM

HRS AASHTO

1210

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | NewMbrAltDialog.pdf |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 3658.11693 | Suspended     | Make New Member Alternative Dialog easier to use |

### Description

FROM:jduray DATE:3/13/02 3:01:12 PM  
Standard results: results\_use\_type = 37601  
Product Validation results: results\_use\_type = 37602

All of the results views except for abw\_v\_product\_validation should have results\_use\_type = 37601 in the where clause.

FROM:jduray DATE:3/13/02 3:04:09 PM  
Also add the following view to the db:

```
create view abw_v_product_validation as
select a.bridge_id, a.struct_def_id, a.super_struct_mbr_id, a.super_struct_spng_mbr_alt_id,
c.event_timestamp, d.username, e.name vehicle, f.display vehicle_type,
a.mbr_alt_last_modified_event_id, a.virtis_opis_version, a.analysis_engine_version,
b.design_method_type, round(inv_capacity,3) inv_capacity, round(opr_capacity,3) opr_capacity, round
(inv_rf,4) inv_rf, round(opr_rf,4) opr_rf,
round(inv_location,3) inv_location, round(opr_location,3) opr_location, inv_limit_state, opr_limit_state
from abw_spng_mbr_alt_events a, abw_rating_results_summary b, abw_event c, abw_person d,
abw_lib_vehicle e, abw_sys_type f
where a.bridge_id = b.bridge_id and
a.struct_def_id = b.struct_def_id and
a.super_struct_mbr_id = b.super_struct_mbr_id and
a.super_struct_spng_mbr_alt_id = b.super_struct_spng_mbr_alt_id and
b.vehicle_id = e.vehicle_id and
a.event_id = b.event_id and
a.event_id=c.event_id and
c.entered_by=d.person_id and
b.vehicle_type = f.sys_type and
a.results_use_type = 37602
```

FROM:jduray DATE:4/8/02 11:20:20 AM  
Please add event\_id to the selected columns.

FROM:mordoobadi DATE:4/12/2002 11:55:16 AM  
Fixed.

|                |
|----------------|
| Issue ID: 3658 |
|----------------|

### Complete Issue Information

|                                                           |                      |
|-----------------------------------------------------------|----------------------|
| Subject: Make New Member Alternative Dialog easier to use |                      |
| Folder: /Virtis/Support Center                            |                      |
| Primary Contact: Duray, Jim                               |                      |
| Submitted By: Kennelly, Krisha                            | 3/14/2002 1:02:44 PM |
| Modified By: administrator                                | 6/19/2008 4:05:35 PM |
| Priority: High                                            |                      |
| Category: Enhancement                                     |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 24843a.bbd          |             |
|      | 24843.bbd           |             |

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 3660.11691 | Resolved      | Parabolically haunched steel girder - BRASS LFD won't run |

### Description

FROM:kkennelly DATE:3/14/2002 9:08:20 AM

Can we make the New Mbr Alternative dialog easier to use by either:

1. Replace the drop down list for type with bitmaps of the beam shapes.
2. Make the drop down lists wider so users can easily distinguish between beam types (users in training have a lot of problems with rc i beams and t beams)

FROM:jduray DATE:3/20/02 7:49:03 AM

Sounds good to me...sketch up some ideas and give me an estimate of the time to do the bitmap

4/19/2016 3:16:31 PM

HRS AASHTO

1212











### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 3/20/2002 6:26:30 PM |
| Modified By: administrator     | 6/19/2008 4:05:34 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ahmad 182.doc       |             |
|      | Ahmad B 182.bbd     |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3667.11684 | Duplicate     | Web Depth Not Correct |

### Description

FROM:kkennelly DATE:3/20/2002 2:32:52 PM  
Submitted on behalf of Eric Evenson, URS via email:  
>>> <Eric\_Evenson@URSCorp.com> 03/20/02 11:53AM >>>

I entered in a 5 beam system with 3-span continuous W24x84's and cover plates at the pier. I entered and ran G2 first and got incredibly low ratings. I looked through all of my entered data to make sure I didn't misplace a decimal on the loads, but I couldn't see anything out of place. Out of curiosity I copied the member alternative up to G1 and re-computed the LL distribution and EFW. When I ran G1 the ratings were closer to what I was expecting to see. Can you think of any reason why G2 would be running so low and G1 be running so well with almost the exact same input?

Thanks,

4/19/2016 3:16:32 PM

HRS AASHTO

1217



### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

### History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Bug         |
| Kennelly, Krisha | Information Needed |          | Bug - GUI 2 |
|                  | Assigned           |          |             |
|                  | Patch Test         |          |             |
|                  | Accepted           |          |             |
|                  | Closed             |          |             |
| Kennelly, Krisha | Closed             | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ahmad B 182.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3668.11683 | Closed        | Diaphragm at Abutment 1 Missing in Member Alt Schematic |

### Description

FROM:dteal DATE:Friday, March 22, 2002 7:54:59 AM

For Ahmad B.

May not be calculating the depth of the beam properly using the haunches web depth. The attachment shows the web depths are negative in some locations.

My calculations indicate the depth @ first 10th point should be 48.40988 inches and for the second tenth point 43.06679 inches instead of -353.84 and -21.91 inches respectively.

The depth of the web will never be negative values.

FROM:kkennelly DATE:3/22/2002 10:12:00 AM

I think this has already been fixed in BRASS but we don't have the new BRASS executables so I can't test it. Brian, can you test this and verify the new BRASS dll for Service Pack 1 fixes this?

4/19/2016 3:16:32 PM

HRS AASHTO

1219

**Complete Issue Information**

FROM: bgoodrich DATE: Monday, March 25, 2002 12:16:16 PM  
Same as Incident 3660, which has been addressed.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3668                                                   |
| Subject: Diaphragm at Abutment 1 Missing in Member Alt Schematic |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 3/22/2002 11:57:20 AM |
| Modified By: administrator        | 6/19/2008 4:05:34 PM  |
| Priority: High                    |                       |
| Category: Bug - GUI 2             |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: dteal DATE: Friday, March 22, 2002 7:57:20 AM  
For Ahmad B.

The schematic does not show the diaphragm at abutment # 1; but it shows the diaphragm at abutment # 2 and also in the framing plan schematics. See attached bbd file.

FROM: kkennelly DATE: 3/22/2002 10:41:37 AM

Can you tell me what Mbr Alt you're having a problem with? I'm not able to reproduce this. I looked at the mbr alt schematics for all of the mbr alts in structure 018(010)Br. over Timber Creek Sch. Base and I see crossframe at the beginning of the member. Also, what tolerances do you have set in the System Defaults window for feet and inches? I'm not sure if that's the problem but it might be.

FROM: dteal DATE: Tuesday, March 26, 2002 11:32:37 AM

4/19/2016 3:16:33 PM

HRS AASHTO

1220



**Complete Issue Information**

Tolerances at set in SI, m=0.001 & mm=0.1 giving us ft=0.003281 & in=0.003937.

Ahmads response to which mbr alt:

The member I am working on is member Alt for interior girder cross section base (G2) and also I get the same result for member alt sch. base for the same member.

FROM:kkennelly DATE:3/26/2002 3:55:29 PM

There is a piece of text that I think may be overlapping the 'x' depicting the cross frame in the mbr alt schematic. I can see part of the 'x' but not the total 'x' because some text saying "PL 5/8"x14"x" seems out of place. Do you see that text?

When I open the Girder Profile window for member 2, I see the first range for the top flange has a 0" width by 0" thick. Putting dimensions in for the width and thickness does not solve the schematic problem.

FROM:kkennelly DATE:3/26/2002 4:07:11 PM

FROM:kkennelly DATE:3/27/2002 1:05:16 PM  
Fixed for Version 4.1, Service Pack 1

FROM:dteal DATE:Monday, April 01, 2002 10:32:07 AM

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 3669                                                |
| Subject: Steel Girder Shear Capacity Computation in BRASS LFD |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Aboesono, Boby     | 3/25/2002 12:14:05 PM |
| Modified By: administrator       | 6/19/2008 4:05:34 PM  |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status   | Priority | Category               |
|-----------------|----------|----------|------------------------|
| Goodrich, Brian | Assigned | High     | Unknown<br>Bug - BRASS |
|                 | Resolved |          |                        |
| Goodrich, Brian | Resolved | High     | Bug - BRASS            |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

When is the SP-1 for version 4.1 plan to be released?

FROM:kkennelly DATE:3/25/2002 4:02:24 PM

We have not received the new BRASS executables yet from Wyoming DOT. I'm guessing it will be one to two weeks after we receive the new BRASS files.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 3671                                            |
| Subject: Add progress bar to the Analysis Progress window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 3/27/2002 7:05:30 PM |
| Modified By: administrator     | 6/19/2008 4:05:34 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | Patch Test | High     | Enhancement |
|                 | Accepted   |          |             |
| Duray, Jim      | Accepted   | High     | Enhancement |

## Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jduray DATE:3/27/02 3:08:33 PM

It would be useful to display a progress bar on the window so the user has some idea of how many more bridges are remaining to be rated when rating groups of bridges from the Bridge explorer.

Also, change the Cancel button to force the rating to abort instead of aborting just the current bridge. In the future we should add a dialog box to give the user the option to abort the entire group of bridge

4/19/2016 3:16:33 PM

HRS AASHTO

1223

**Complete Issue Information**

or just the current member, structure or bridge.

FROM:gbarhill DATE:Monday, April 08, 2002 12:14:22 PM

The progress bar is in place.

The CANCEL Button stops the entire analysis process.

|                                   |
|-----------------------------------|
| Issue ID: 3672                    |
| Subject: Analysis Progress Dialog |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Ordoobadi, Mehrdad | 3/28/2002 3:10:20 PM |
| Modified By: administrator       | 6/19/2008 4:05:34 PM |
| Priority: Medium                 |                      |
| Category: Bug - GUI 2            |                      |

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Unknown     |
|                 | Assigned    | Medium   | Bug         |
|                 | System Test |          | Bug - GUI 2 |
| Duray, Jim      | System Test | Medium   | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

**Documents**

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | ver411_020254.bbd<br>020254.bbd |             |

**Tasks**

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 3677.11674 | Duplicate     | Steel Girder Shear Capacity computed by BRASS |

**Description**

FROM:mordoobadi DATE:3/28/2002 11:16:11 AM

The recently added progress bar does not work properly when the user resizes the window. It covers the Print, OK, Cancel Buttons.

FROM:mordoobadi DATE:12/11/2002 3:11:57 PM

Fixed for 5.0 Alpha 5.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3677                                         |
| Subject: Steel Girder Shear Capacity computed by BRASS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Aboesono, Boby     | 4/2/2002 12:04:45 PM |
| Modified By: administrator       | 6/19/2008 4:05:33 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |









**Complete Issue Information**

FROM:bgoodrich DATE:Friday, April 05, 2002 11:30:25 AM

Richard,

I would carefully check the intermediate output for these type of structures. This will be the only place where you can see the unbraced length values. Points of interest at or near the interior supports may list incorrect unbraced lengths due to the missing ranges at the beginning of some spans. Also, Virtis/Opis handles the input of these structure just fine. The issue that needs addressed is with the BRASS export and/or possibly the BRASS engines.

Please send the framing plan to me or attach it to the incident. That way anyone on the development team involved with this incident can review it. I'll keep you informed as we address this incident.

FROM:bgoodrich DATE:Friday, April 05, 2002 12:26:50 PM

Attached framing plan schematic from Richard.

FROM:jduray DATE:4/23/02 8:28:56 AM

I think this is a BRASS (and perhaps the export) enhancement, not a bug in either the export or BRASS.

FROM:bgoodrich DATE:Friday, January 31, 2003 12:57:37 PM

Gale Barnhill reported a problem in Incident 4306 regarding bracing that does not coincide with a support.

FROM:hlee DATE:4/30/2008 2:28:26 PM

Discarded by TAG 12/07.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3689                                               |
| Subject: View Analysis Charts – Problem with one bridge only |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 4/10/2002 7:08:18 PM |
| Modified By: administrator          | 6/19/2008 4:05:33 PM |
| Priority: High                      |                      |
| Category: Bug - Performance         |                      |

**History**

| Primary Contact    | Status   | Priority | Category          |
|--------------------|----------|----------|-------------------|
| Duray, Jim         | New      | High     | Bug               |
| Ordoobadi, Mehrdad | Assigned |          | Bug - Performance |
|                    | Resolved |          |                   |
|                    | Accepted |          |                   |
|                    | Closed   |          |                   |

**Complete Issue Information**

|                    |        |      |                   |
|--------------------|--------|------|-------------------|
| Ordoobadi, Mehrdad | Closed | High | Bug - Performance |
|--------------------|--------|------|-------------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 3690.11661 | Resolved      | Spec-check caption is incorrect |

**Description**

FROM:dteal DATE:Wednesday, April 10, 2002 3:08:18 PM

I have a problem with this one bridge only in Version 4.1.0 using Win NT 4.0. I attached the structure. Used the Wizard Structure, Member 2, Modified Wizard. I did a HL-93 design review.

When I selected the View Analysis Charts, it was so slow to come in I had to pop up a print screen utility program and take a screen shot of the empty window (very slow screen.jpg). When I exited the Charts window, again it was slow enough to get a screen shot utility up and save it to a file (slow screen.jpg).

We rebooted out Oracle server, no change – I tried another 4 span bridge and the charts window acted properly. It is only this bridge that is giving me trouble. Is there any reason for this one bridge to slow down the charts window so drastically?

FROM:mordoobadi DATE:7/26/2002 9:35:29 AM

I tested this on my machine. I noticed the same behavior as Dean reported.

FROM:mordoobadi DATE:7/26/2002 1:53:40 PM

Code updated so that the screen gets updated while processing. The user can resize or move the window while processing.

Also added capability to stop drawing the graph when the user hits the X button.

Fixed in version 5.0.

FROM:mordoobadi DATE:8/22/2003 1:32:53 PM

Accepted by Dean Teal on 1/27/2003.

|                                          |
|------------------------------------------|
| Issue ID: 3690                           |
| Subject: Spec-check caption is incorrect |

**Complete Issue Information**

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Duray, Jim 4/11/2002 5:53:45 PM   |
| Modified By: administrator 6/19/2008 4:05:33 PM |
| Priority: High                                  |
| Category: Bug - GUI 2                           |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Goodrich, Brian | Assigned           | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Open               |          |          |
|                 | Resolved           |          |          |
|                 | Closed             |          |          |
| Goodrich, Brian | Closed             | High     | Unknown  |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Compact Sections-Toll<br>Road.doc |             |
|      | Moment Report.doc                 |             |
|      | Compact<br>Section-4-12-2002.bbd  |             |
|      | Compact Section.txt               |             |
|      | Compact Section.bbd               |             |

**Tasks**

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 3691.11660 | Closed        | Question re: BRASS LFD compact checks |

**Description**

4/19/2016 3:16:35 PM

HRS AASHTO

1231





## Complete Issue Information

Thank you very much.

Ken

FROM:bgoodrich DATE:Friday, April 12, 2002 10:43:22 AM

I am unclear as to why you cannot assign the barrier and curb loads to the non-composite stage (Stage 1). Is it because you want those loads to be distributed differently from the self-weight of the slab? BRASS was designed to analyze non-composite structures in ONE stage, and the output was developed accordingly. It appears that analyzing the structure in more than one stage produces different results than if it is analyzed in one. Dan is checking into this in more detail.

We need more information before we investigate the negative moment issue you discussed. We need a list of the axle weights and spacings for the Toll Road Truck and a schematic if possible.

FROM:bgoodrich DATE:Friday, April 12, 2002 12:42:40 PM

E-mail from Ken Teng (4/12/02):

The concrete barrier and curb are placed in the field after the slab is poured. They (barrier & curb) are supported by the composite bridge (because the deck is set).

Also from the VIRTIS help, Stages 1, it says, "Non-composite (Stage 1) represents a non-composite structure. Loads applied to this stage are resisted by the non-composite girder". Since the slab is set up, I guess that the bridge is acting as composite bridge.

So for my case 1, non-composite, I use Stage 1, and for my case 2, composite, I use Stage 2. Now, Brass shows the compact check for any loading. I think you are right. (I attach a new bbd file)

For Toll Road Loading 90K, the non-composite section (case 1) shows both of the positive & negative moment check. But, for H20 or HS20, it only checks positive moment.

For the composite section (case 2), it only checks the positive moment for any loading (H20, HS20, Toll Road). Wired, isn't it?

FROM:bgoodrich DATE:Friday, April 12, 2002 1:37:09 PM

The new BBD file you sent has a new structure definition, which is composite this time because you added composite regions using the Shear Connectors window. Because your previous structure was non-composite for all stages, BRASS did not generate output for certain checks. Now that you defined your structure as composite, it appears you are getting the necessary compactness output. Therefore, I believe this output issue is resolved.

Dan does not think there is anything wrong with the algorithm that checks positive and/or negative moment. The weight and configuration of your truck may cause the moments to be such that positive and negative moment are checked. When the dead loads and live loads (H20, HS20, and toll truck) are factored and combined for the composite structure, the resulting moments are positive. However, for the non-composite structure, the live load moments are different. In general, BRASS only computes a positive moment capacity when positive moment is detected and then likewise for negative. Please review the live load moment reports for the non-composite and composite structures in Virtis or BRASS. I believe this BRASS issue is resolved as well.

4/19/2016 3:16:35 PM

HRS AASHTO

1234

**Complete Issue Information**

FROM:bgoodrich DATE:Friday, April 12, 2002 3:42:26 PM  
Another e-mail from Ken Teng (4/12/02):

Thank you for the help. I checked the moment reports and I still can not figure out why negative moment has to be check? The moment reports is attached with some explanations. Please let me know if I investigate in a wrong way.

FROM:bgoodrich DATE:Friday, April 12, 2002 3:43:44 PM  
Are you factoring your dead loads by 1.3 and live loads by 1.3 x 1.67?

FROM:bgoodrich DATE:Monday, April 15, 2002 12:34:38 PM  
E-mail from Ken Teng (4/12/02):

I got it. This issue is resolved.

FROM:bgoodrich DATE:Monday, April 15, 2002 12:35:38 PM  
Ken accepted the resolution in the last 4/12/02 e-mail, so I am closing the incident.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3692                                           |
| Subject: Can't save prestressed LRFD results to database |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 4/12/2002 2:43:48 PM |
| Modified By: administrator       | 6/19/2008 4:05:33 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | Urgent   | Bug         |
|                 | Accepted |          |             |
|                 | Closed   |          | Bug - BRASS |
| Goodrich, Brian | Closed   | Urgent   | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1   | Phone 1      |
|----------------|------------------|-----------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@ | 307 222-4688 |

**Complete Issue Information**

BridgeTech-Laramie.com

**Documents**

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | X-Section Exapmle.bbd |             |

**Tasks**

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 3693.11658 | Closed        | Improve cross-section description capabilities for R/C |

**Description**

FROM:kkennelly DATE:4/12/2002 10:49:16 AM

This was originally found in alpha testing for version 4.1 Service Pack 1. Couldn't save results for one of the sample PS training bridges. Mehrdad found that PS results had duplicate keys. Brian was made aware of this sometime in March. This incident to ensure that problem was fixed and we have the correct dll's.

FROM:hlee DATE:4/12/2002 11:51:38 AM

Tested OK on PCITrainingBridge2, 4, and 6 for the 3/31/02 Girder(LRFD).dll.

FROM:bgoodrich DATE:Friday, April 12, 2002 12:37:36 PM

I successfully analyzed and saved the same bridges. Closed.

FROM:bgoodrich DATE:Thursday, April 18, 2002 11:40:19 AM

When I modified BRASS to not generate duplicate results, I inadvertently caused the initial stresses to not be written to the results object. I have corrected the BRASS DLL.

FROM:jduray DATE:4/22/02 10:36:10 AM

Vi 3700 was created to track this latest problem.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 3693                                                  |
| Subject: Improve cross-section description capabilities for R/C |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 4/12/2002 7:27:27 PM |
| Modified By: administrator     | 6/19/2008 4:05:32 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

4/19/2016 3:16:36 PM

HRS AASHTO

1236



### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Duray, Jim      | New      | Urgent   | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | Urgent   | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3695.11656 | Closed        | Setup for 4.1.1 not working |

### Description

FROM:dteal DATE:Friday, April 12, 2002 3:27:28 PM

A warning or error message is need to alert the user not to use program defined POI's at 10th points for reinforced concrete structures when taking advantage of symmetry and only defining ½ the X-Sections.

See attached bbd.

2 ratings where run. The first had the POI control under the Member Alt Description, Engine Tab set to 5- generate at user defined POI's only. The second run had the POI control set to 3- generate POI's at all 10th points and user defined points.

I ran an HS20 standard truck. When set to user defined POI's only the Axle Inventory Rating was 35.8 Ton @ 16.9% of Span 1. When the 10th points plus user defined points was used the inventory rating is 15.3 Ton @ 90% of Span 2.

Here is what has happened. X-Sections have been defined for ½ the bridge. These X-Sections are used in the Ranges to define the bridge from one end to the other. The X-Section depth is correct in the symmetrical half but the reinforcing in the section range will change (start and end will be reversed). This explains the wild differences the rating results.

There is no work around if you use program defined 10th points (POI Control #3) being BRASS will automatically adds the symmetrical X-Sections. Keep in mind that I am working on a minimum of 3 span parabolically haunched reinforced concrete structures with 3 bar reinforcing patterns in the top and 4 bar patterns in the bottom.

4/19/2016 3:16:36 PM

HRS AASHTO

1237

### Complete Issue Information

3131, 3121, 3045, 2008 are all incidents that are related to this problem. This is not a duplicate. It is requesting that the user be restricted from using POI control #3.

FROM:jduray DATE:4/22/02 4:42:14 PM  
How can Virtis/Opis know that you only defined half the structure?

FROM:dteal DATE:Monday, April 29, 2002 8:51:22 AM  
To answer the above question - for a three span bridge, the x-sections are cut at exactly the same place on each half of the bridge. It is how the ranges are handled. Igf x-sections are to be entered for both halves of the bridge we will be talking about 50 to 60 x-sections!

Please, try to do a LRFD design for this type structure. 3 span, parabolic haunch, 3 bar top pattern and 4 bar bottom pattern. Try to find NOT just an exceptable design but an economical design. You will need to find the most economical place to terminate your bars. To do this you will have to move x-sections around in the parabolic region. Until you have actually tried to do this type of design you will not know what the problems are.

FROM:jduray DATE:4/29/02 10:32:34 AM  
I don't think this is a bug. I changed the incident to and enhancement. I think we need to find a way to improve the cross-section description. Perhaps we should consider an interim solution to get us by until schedule-based R/C is implemented. I think we could do something like the following for less than \$10k:

- 1) Add a check-box to the cross-section for indicating the cross-section is to be used within a depth variation range.
- 2) The user would then define at parabolic range (or linear variation) bounded by cross-sections with the depth specified.
- 3) Within the parabolic range the user could specify other ranges that use cross-sections with the check-box checked. The depth of those cross-sections would be computed by the software.

There are some details to work out with this approach but I think we can come up with something that reduces the effort required to describe cross-sections based variations relatively inexpensively.

FROM:jduray DATE:5/1/02 9:45:39 AM

FROM:dteal DATE:Friday, August 16, 2002 3:00:59 PM  
This will go away with schedule based input for RC

FROM:dteal DATE:Tuesday, October 26, 2004 8:35:31 AM  
With Schedule based input for RC that I have reviewed in 5.2 - Please close this incident

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3695<br>Subject: Setup for 4.1.1 not working |
|--------------------------------------------------------|

|                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Teal, Dean<br>4/16/2002 6:03:34 PM |
|----------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:16:36 PM

HRS AASHTO

1238

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:32 PM |
| Priority: Urgent           |                      |
| Category: Bug              |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Ihnat, Joseph   | Resolved |          | Education |
|                 | Closed   |          |           |
| Ihnat, Joseph   | Closed   | High     | Education |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3696.11655 | Closed        | Need Environment Variable for Printing |

**Description**

FROM:dteal DATE:Tuesday, April 16, 2002 2:03:34 PM

I installed the service patch on my windows 2000 pc OK. I get the folowing error message when I try installing it on my NT pc.

Error:

RegDBGetitem failed!

Error Code: -2147024894

Message test: The system cannot find the file specified.

FROM:jihnate DATE:4/16/2002 2:39:29 PM

You'll need to reinstall version 4.1.0. Uninstalling is not required, just reinstall it over top of itself into the same directory to reset the Registry entry.

Be sure to select "Don't configure an ODBC Data Source".

Then install SP1.

FROM:dteal DATE:Tuesday, April 16, 2002 2:37:57 PM

We have 32 installations of the software - will this have to be done for all!!!!!!!!!!!!!!

4/19/2016 3:16:36 PM

HRS AASHTO

1239

## Complete Issue Information

FROM:jihnat DATE:4/16/2002 2:56:00 PM

I don't know the history of this particular PC, but it sounds like another instance of VirtisOpis was uninstalled after this instance was installed. This wiped out the required Registry entry. The easiest way to restore it is to reinstall. Or you could perhaps manually edit the Registry (although I haven't tried this).

FROM:dteal DATE:Tuesday, April 16, 2002 2:57:54 PM

I don't think that was the case. I ran register.bat and it didn't fix the problem. I had to do what you said and reinstall 4.1.0 first. I have checked 2 other installations (before I send this out to the all) and they worked OK.

|                                                 |
|-------------------------------------------------|
| Issue ID: 3696                                  |
| Subject: Need Environment Variable for Printing |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 4/17/2002 8:13:52 PM |
| Modified By: administrator     | 6/19/2008 4:05:32 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:Wednesday, April 17, 2002 4:13:52 PM

In BRASS you can select an environment variable to define an editor for viewing/printing. If you do nothing it will use notepad. Notepad has no control for printing selections, it only prints all.

In Virtis, when you view an output file it defaults to notepad. We fooled Windows by:

4/19/2016 3:16:36 PM

HRS AASHTO

1240

**Complete Issue Information**

- 1) Finding and renaming Windows copies of notepad.exe to notepadorg.exe
- 2) Putting a copy of our editor of choice where the original copies of notepad.exe were.
- 3) Renaming the relocated copies of our editor of choice to notepad.exe.

But this has to be done with each PC.

It would be nice to have an option to select what editor you use in VIRTIS/OPIS.

FROM:jihnat DATE:4/19/2002 7:56:26 AM

Look at View/Preferences. On the Analysis tab you can enter your own Analysis output viewer.

FROM:dteal DATE:Friday, April 19, 2002 8:39:55 AM

Thanks

|                                   |
|-----------------------------------|
| Issue ID: 3698                    |
| Subject: Migration Error Messages |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 4/19/2002 12:05:06 PM |
| Modified By: administrator          | 6/19/2008 4:05:32 PM  |
| Priority: Urgent                    |                       |
| Category: Bug - Database 2          |                       |

**History**

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Duray, Jim         | New      | High     | Bug              |
| Ordoobadi, Mehrdad | Assigned | Urgent   | Bug - Database 2 |
|                    | Resolved |          |                  |
|                    | Accepted |          |                  |

4/19/2016 3:16:36 PM

HRS AASHTO

1241

**Complete Issue Information**

|                    |        |        |                  |
|--------------------|--------|--------|------------------|
|                    | Closed |        |                  |
| Ordoobadi, Mehrdad | Closed | Urgent | Bug - Database 2 |
| Duray, Jim         | Open   | High   | Internal         |
|                    | Closed |        |                  |
| Duray, Jim         | Closed | High   | Internal         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3701.11651 | Closed        | Version 4.1 Patch 2 |

**Description**

FROM:dteal DATE:Friday, April 19, 2002 8:05:06 AM

When doing our database migration from 4.1.0 to 4.1.1 on oracle we got 7 error messages. Our Computer Services guy asked me if they mean anything. I looked at the error messages with a blank stare and thought I would pass them off to you guys to see if they mean anything. See attached, Thanks

FROM:mordoobadi DATE:4/30/2002 9:13:17 AM

There was a problem in the order in which some views were created. The service pack should be updated with the revised migration script. Also for the people who have already done the migration and gotten the erros they should just recreate the views with errors. I created a script file for them to run to complete their migration. These people would have problem with bridge explorer viewing of results.

FROM:mordoobadi DATE:4/30/2002 1:07:17 PM

Revised Migration SQL script and also the SQL script to fix the problem reported in this incident are put on the web site.

FROM:dteal DATE:Thursday, January 09, 2003 12:42:31 PM

FROM:mordoobadi DATE:5/14/2003 2:48:13 PM

Accepted by Dean.

|                              |
|------------------------------|
| Issue ID: 3701               |
| Subject: Version 4.1 Patch 2 |

4/19/2016 3:16:37 PM

HRS AASHTO

1242

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 4/22/2002 2:33:30 PM |
| Modified By: administrator     | 6/19/2008 4:38:35 PM |
| Priority: High                 |                      |
| Category: Internal             |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | Assigned |          | Bug - BRASS |
| Goodrich, Brian | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Missing Report.bbd  |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3702.11650 | Closed        | Report Tool Missing Reports |

### Description

FROM:jduray DATE:4/22/02 10:40:28 AM

This Service Pack may be released with 4.2 unless a problem arises that requires immediate attention.

4/19/2016 3:16:37 PM

HRS AASHTO

1243

## Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 3702                       |
| Subject: Report Tool Missing Reports |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/22/2002 4:45:00 PM |
| Modified By: administrator       | 6/19/2008 4:05:32 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Monday, April 22, 2002 12:45:00 PM

For the attached bridge. Analyze member alt. For member 2. Go to the report tool and set report type to LRFD Analysis Output, and select one of the lower 5 items like say "Final Stresses at Transfer of Prestress". The report will be empty. The only reports it will generate are from the top 5 items.

Am I missing something here?

4/19/2016 3:16:37 PM

HRS AASHTO

1244



**Complete Issue Information**

FROM:jduray DATE:4/22/02 3:38:52 PM  
Is this related to the missing Initial Stresses?

FROM:bgoodrich DATE:Tuesday, January 28, 2003 10:24:40 AM  
I was able to generate the report using 4.1.1. I tried a similar bridge with version 5.0.0 and the report was generated.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 1:45:02 PM  
Dean - Please check if you are able to view all the reports in Version 5.0. Note that some of these reports will show nothing if there are no points of interest specified or generated. Could this have been the case?

Also, I noted a problem where the units for some reports are not listed and entered this as Incident 4300.

FROM:dteal DATE:Tuesday, January 28, 2003 3:40:43 PM  
I can't reproduce the problem??

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:57:06 PM  
Track field marked as "Accepted" on 1/28/03. Incident closed.

|                                   |
|-----------------------------------|
| Issue ID: 3705                    |
| Subject: Memory Hoarding and Slow |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 4/23/2002 6:25:04 PM |
| Modified By: administrator          | 6/19/2008 4:05:32 PM |
| Priority: Urgent                    |                      |
| Category: Bug - Performance         |                      |

**History**

| Primary Contact    | Status             | Priority | Category          |
|--------------------|--------------------|----------|-------------------|
| Duray, Jim         | New                | High     | Bug               |
| Ordoobadi, Mehrdad | Information Needed | Urgent   |                   |
|                    | Assigned           |          | Bug - Performance |

4/19/2016 3:16:37 PM

HRS AASHTO

1245

### Complete Issue Information

|                    |           |        |                   |
|--------------------|-----------|--------|-------------------|
|                    | Closed    |        |                   |
| Ordoobadi, Mehrdad | Closed    | Urgent | Bug - Performance |
| Duray, Jim         | New       | High   | Bug               |
| Goodrich, Brian    | Assigned  |        | Bug - BRASS       |
|                    | Duplicate |        |                   |
| Goodrich, Brian    | Duplicate | High   | Bug - BRASS       |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Tenth Point.bbd     |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3706.11646 | Duplicate     | Rating at Tenth Points |

### Description

FROM:dteal DATE:Tuesday, April 23, 2002 2:25:06 PM  
I didn't notice this until upgrading to 4.1.1

First I brought up the NT Task Manager to monitor performance (Mem usage). Memory usage increases after each analysis. Each time I ran an analysis the memory usage figure keeps getting larger. I checked this because my analysis runs kept getting slower and slower with each run. I would have to reboot to speed things up again.

The second problem was exiting Opis. After things slowed down so I would have to reboot and I would hit exit, the hard drive gets very active and nothing seems to be happening. The task manager says that Virtis is not responding. But if you wait (several minutes) Virtis will finally close. If I exit Virtis after only one analysis run it will close right away. But after 4 or 5 runs it becomes very slow.

I am using NT 4.0 SP 6 on a 550 P2 with 128 Mb. I had our IT people take a look at my PC for any other problems. They could not find anything wrong with the PC.

FROM:dteal DATE:Tuesday, April 23, 2002 4:35:15 PM  
It took 80 seconds to close a bridge after it had been saved to the database. I saved it first, I waited until all hard drive activity stopped, then I exited the bridge (not virtis just the bridge). This exit took 80 seconds.

4/19/2016 3:16:37 PM

HRS AASHTO

1246

**Complete Issue Information**

FROM:jduray DATE:4/23/02 4:39:26 PM  
Dean - Were you doing a LFD or LRFD analysis?

The memory usage did not increase when I ran the 200+ validation LFD bridges. Perhaps this is a problem in the LRFD only.

FROM:dteal DATE:Wednesday, April 24, 2002 8:06:48 AM  
Attached the bbd  
Working on the Superstructure Def for 5 girders at 2.50, Wizard Alt for Member #2. I was doing a design review with HL-93 Design load and LRFD Fatigue Truck, both (SI).

FROM:dteal DATE:Wednesday, April 24, 2002 10:10:43 AM  
I found this behavior in both steel and prestressed. It only happens if the POI control for LRFD is set to tenth points. The more points that are defined the more memory it will not free back up. I have been using 3 span bridges with POI set to tenth points.

FROM:dkemna DATE:Wednesday, April 24, 2002 12:25:46 PM  
I have also found this to be true. I have been getting familiar with OPIS over the past few weeks. A couple of weeks ago I was analyzing numerous runs and found that the time to analyze was getting slower each time. I was analyzing a three span P/S\_I member alternative in LRFD (Not a complete definition) with POI's at tenth points. I also experienced a long wait when attempting to exit OPIS at the end of the day/s. I have been using OPIS 4.0.4 as we have not updated to OPIS 4.1 yet.

I am not sure whether this is related but after not rebooting my computer for about a week and a half while performing these numerous runs the Report Tool did not output any data. Rather, all the headings were output along with what appeared to be an infinitesimally small row of data (possibly). The spec checks were being printed jumbled and bolded and the validate and BWS reports were completely blank. These bugs were apparently fixed after rebooting my computer. I have not attempted to perform the numerous runs without rebooting my computer since.

I hope this information is helpful.

FROM:jduray DATE:4/26/02 9:35:41 AM  
There seems to be a memory leak in the LRFD analysis. Either in the results or BRASS. I used the NT performance monitor to track memory (process private and virtual bytes). LFD did not leak.

FROM:jduray DATE:4/26/02 9:51:10 AM  
Mehrdad is checking for leaks in the results objects.

FROM:mordoobadi DATE:5/2/2002 1:31:59 PM  
Here is what I experienced in versions 4.1.0 and 4.1.1

I analyzed TrainingBridge1 using LH-93 Template and monitored the memory using the task manager

| Stage    | Memory Level<br>4.1.0 | Memory Level<br>4.1.1 | Memory Level<br>5.0.0 (Debug) |
|----------|-----------------------|-----------------------|-------------------------------|
| -----    |                       |                       |                               |
| --       |                       |                       |                               |
| Open BWS | 525072                | 525940                | 569304                        |

4/19/2016 3:16:37 PM

**HRS AASHTO**

1247

**Complete Issue Information**

|              |        |        |        |
|--------------|--------|--------|--------|
| 1st analysis | 554376 | 554908 | 605932 |
| 2nd analysis | 582552 | 583412 | 639480 |
| 3rd analysis | 610608 | 611736 | 672392 |
| 4th analysis | 639104 | 640116 | 705612 |
| BWS closed   | 566504 | 566308 | 571152 |

The above results are for total memory usage of all of the processes which can be inaccurate.

FROM:jduray DATE:5/16/02 3:52:55 PM

I'm not sure this is meaningful. It does indicate that memory is being used and not released but since we don't know what the other processes are doing we can't say for sure (based on this) that Virtis is leaking memory. A couple things would be worth investigating:

Do debug builds of 4.1.0 and 4.1.1 show the same growth in memory usage?  
Does a release build of 5.0 show a growth in memory usage?

We need to monitor the memory used by the Virtis/Opis process, not total for all processes.

FROM:dteal DATE:Friday, November 22, 2002 11:49:05 AM  
See incident 4018

FROM:mordoobadi DATE:3/3/2005 3:52:08 PM

Based on Dean's comments in incident 4018 "This hasn't happened anymore as of 5.1.1" I close this incident

|                                 |
|---------------------------------|
| Issue ID: 3706                  |
| Subject: Rating at Tenth Points |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/24/2002 1:35:56 PM |
| Modified By: administrator       | 6/19/2008 4:05:32 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:16:38 PM

HRS AASHTO

1248

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3707.11645 | Resolved      | Operating Rating for P/S Concrete Tension Criteria |

### Description

FROM:dteal DATE:Wednesday, April 24, 2002 9:35:56 AM

Wizard Alt. For Member 2.

Member Alt Description, Engine Tab, POI control set to tenth points only.

I get an HS20-44 Inventory Rating Location at 138.5 ft. This is not a tenth point? Why do I get a rating result that is not at a tenth point when I don't have any User POI's and told Virtis to do tenth points only?

FROM:bgoodrich DATE:Monday, April 29, 2002 11:51:18 AM

The prestress modeling method is set to "centerline of simple-span bearing," which affects the span lengths exported to BRASS. The bearings for interior supports are offset by 0.5 ft, which makes the lengths of spans one and two 64.5 ft and 74.0 ft, respectively. Therefore, there is a BRASS tenth point located at 138.5 ft. Incident 3141 has already been submitted to address the difference between the Virtis/Opis distances and the BRASS distances. Therefore, I am marking this incident as a duplicate.

Issue ID: 3707

Subject: Operating Rating for P/S Concrete Tension Criteria

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Murgoitio, Shanon

4/25/2002 4:17:35 PM

4/19/2016 3:16:38 PM

HRS AASHTO

1249

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:32 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | Urgent   | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Open     |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | o-06-041.bbd        |             |
|      | a-16-062.bbd        |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3708.11644 | Resolved      | PS Shear Analysis and Rating Flaw |

### Description

FROM:smample DATE:Thursday, April 25, 2002 12:17:36 PM

I input values for the ASD factor: P/S Concrete Tension in the Member Alternative Description window. I find that the values are correctly included on the INVENTORY and OPERATING command lines in the BRASS data file. When I review the BRASS output, however, I do not see operating rating factors for this condition. Does BRASS perform P/S Concrete Tension calculations at operating levels? Also, when I review the OPERATING command in the BRASS help files, there are only 3 ultimate strength parameters and no allowable stress parameters listed.

I also reviewed the BWS Report and discovered that the value I entered in for the inventory P/S Concrete Tension parameter is reported for both the inventory and operating value in the report.

FROM:bgoodrich DATE:Monday, April 29, 2002 12:42:44 PM

4/19/2016 3:16:38 PM

HRS AASHTO

1250

### Complete Issue Information

I have forwarded this issue to Dan Glandt for investigation.

FROM:bgoodrich DATE:Monday, May 13, 2002 3:25:43 PM

The syntax of the INVENTORY and OPERATING commands has changed. The current export of the OPERATING command does list some additional parameters (parameter 4, parameter 5, etc.) for prestress. However, these parameters are no longer used and will be removed in the near future.

FROM:bgoodrich DATE:Monday, May 13, 2002 3:27:05 PM

E-mail from Dan Glandt (5/13/02):

Only the first 3 parameters are valid for prestress on the operating command. According to the Manual for Condition Evaluation of Bridges only strength is used for operating and I have followed that.

FROM:kkennelly DATE:6/19/2002 9:58:31 AM

Brian, this incident is listed as resolved. Were any code changes required and if so what version of Virtis will they be in?

FROM:bgoodrich DATE:Monday, June 24, 2002 5:20:53 PM

I modified the LFD export (BrassStdFactors.cpp) to generate the OPERATING, POSTING, and SAFE-LOAD commands with only three parameters for P/S and R/C structures. Fixed for version released AFTER 4.2. The extra parameters on these commands were being ignored by BRASS, so this change will not affect any ratings.

|                                            |
|--------------------------------------------|
| Issue ID: 3708                             |
| Subject: PS Shear Analysis and Rating Flaw |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 4/25/2002 5:22:51 PM |
| Modified By: administrator       | 6/19/2008 4:05:32 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:16:38 PM

HRS AASHTO

1251

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3710.11642 | Closed        | Not Allowing Me to Delete a Material |

### Description

FROM:bha DATE:Thursday, April 25, 2002 1:22:51 PM

The service pack 1 with new Brass engine 5.08.05 is good to calculate the shear strengths at default POI's (tenths points along span). But when we add user defined POI's, the calculated shear strengths at some points change that affect to the rating results.

Enclosed are two PS bridges: A-16-062 (deck beam) and O-06-041 (I beam).

\* Some different rating results from bridge A-16-062: Interior deck beam - Type A

- No user defined POI

|                  |            |     |                         |       |                         |       |       |       |             |
|------------------|------------|-----|-------------------------|-------|-------------------------|-------|-------|-------|-------------|
| HS 20-44 - Truck | Axle       | LFD | Failure                 | 34.34 | 53.43                   | 0.954 | 1.484 | 28.66 | 1 - ( 70.0) |
| 0.00             | 1 - ( 0.0) |     | Ultimate Strength Shear |       | Ultimate Strength Shear |       |       |       |             |

- User defined POI @ 0.45

|                  |            |     |                         |       |                         |       |       |       |             |
|------------------|------------|-----|-------------------------|-------|-------------------------|-------|-------|-------|-------------|
| HS 20-44 - Truck | Axle       | LFD | Failure                 | 34.34 | 50.88                   | 0.954 | 1.413 | 12.28 | 1 - ( 30.0) |
| 0.00             | 1 - ( 0.0) |     | Ultimate Strength Shear |       | Ultimate Strength Shear |       |       |       |             |

- User defined POI @ 0.55

|                  |      |     |                         |       |                         |       |       |       |     |
|------------------|------|-----|-------------------------|-------|-------------------------|-------|-------|-------|-----|
| HS 20-44 - Truck | Axle | LFD | Failure                 | 30.10 | 41.03                   | 0.836 | 1.140 | 40.94 | 40. |
| 94               |      |     | Ultimate Strength Shear |       | Ultimate Strength Shear |       |       |       |     |

\* Shear strengths at 1.0 \* L for bridge O-06-041: G8

- No user defined POI: Shear strength = 299.5 kips (Inventory) - Shear strength = 290.1 kips (Operating)

- With 2 user defined POI's at 26.75' and 0.45 \* L: Shear strength = 217.1 kips (Inventory) - Shear strength = 217.1 kips (Operating)

We have a lot of PS bridges to be rated by Virtis and waiting for a long time for the service pack 1, but it still exists the big flaw of shear category.

Please investigate and have the appropriate solutions as soon as possible.

FROM:bgoodrich DATE:Monday, April 29, 2002 12:06:05 PM

I performed a preliminary investigation and it appears there is something odd occurring in the engine. I have forwarded the BRASS data files to Dan Glandt for a detailed investigation.

FROM:bgoodrich DATE:Monday, June 24, 2002 5:34:08 PM

Dan Glandt has corrected this issue within the BRASS-GIRDER engine (Version 5.8.6). This engine will probably be included in the Virtis release following Virtis 4.2.

FROM:smample DATE:Thursday, July 25, 2002 11:26:40 AM

4/19/2016 3:16:38 PM

HRS AASHTO

1252



**Complete Issue Information**

I have also found some problems with the shear analysis. Many girders are being controlled by the shear due to a very low value of Vci. The correct equation is:  $V_{ci} = 0.6\sqrt{f''c}b'd + V_{dl} + V_{iMcr}/M_{max}$ . The only way that I can match the Brass output is to use  $V_{ci} = 0.6\sqrt{f''c}b'd + V_{dl} + V_i$ . Is this an issue that is addressed in Brass version 5.8.6?

FROM: bgoodrich DATE: Tuesday, August 13, 2002 1:20:10 PM  
Steve Mample's comments from July 25, 2002 are entered as a separate Incident (3826).

|                                               |
|-----------------------------------------------|
| Issue ID: 3710                                |
| Subject: Not Allowing Me to Delete a Material |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/30/2002 1:34:37 PM |
| Modified By: administrator        | 6/19/2008 4:05:32 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

**History**

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          | Bug - GUI 2 |
|                  | Resolved |          |             |
|                  | Closed   |          |             |
| Kennelly, Krisha | Closed   | High     | Bug - GUI 2 |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Delete Material BID 178.bbd   |             |
|      | Delete Materila 2 BID 178.bbd |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:dteal DATE:Tuesday, April 30, 2002 9:34:39 AM

For the attached bridge, I am trying to delete "Grade 60-epoxy" from the Reinforcing Steel Materials list. I have deleted all references to this material and the program will not let me delete it. Can you figure why?

FROM:kkennelly DATE:5/1/2002 8:20:44 AM

The Grade 60-epoxy is showing up in the Points of Interest windows as the default shear reinforcement material. Even though you've chosen not to override the shear reinf at those points Virtis thinks the material is being used there and won't let you delete it. Everything on the shear tab should be blank if the override box is not checked (Stress Limit tab appears correctly).

FROM:dteal DATE:Wednesday, May 01, 2002 9:23:59 AM

I have deleted all User Defined POI's. I still can not delete the Grade 60-epoxy material? Updated bbd is attached.

The default shear reinforcement material in the POI window is something other than Grade 60-epoxy. You said this should be blank if the override schedule is not selected. I tried but I don't think you can blank this out when the Default Materials window is populated with something?? And I don't think you can change that to "blank" either??

The problem still remains, how do I delete the "Grade 60-epoxy"? The program seems to be not letting go of it?

FROM:kkennelly DATE:5/1/2002 11:07:11 AM

You can't blank out the reinf matl now but I fixed it for Version 4.2. What happens now is when you create a new point of interest, Virtis sets some POI defaults for you. One of the defaults is the reinf matl. Virtis looks at the reinf matl shown in the Mbr Alt Default Materials window and assigns that to the shear reinf in the POI window. That will no longer be done in Version 4.2. Do you have Grade 60-epoxy still set as the default steel reinf matl in the Mbr Alt Default Materials window? That would prevent you from deleting the material.

FROM:dteal DATE:Wednesday, May 01, 2002 11:11:17 AM

No, I checked again.

I sent an updated bbd with all User POI's deleted. I can't find anyplace that Grade 60-epoxy is used and I still can not delete it. What next?

FROM:kkennelly DATE:5/1/2002 1:29:43 PM

Members 3,4, and 5 are linked to members 1 and 2. If you unlink members 3,4, and 5 and open their Default Materials windows, you will see that they still have the grade 60-epoxy selected as the default stl reinf matl. Change the selection for the default stl reinf matl then re-link the members. You should now be able to delete the "Grade 60-epoxy" material.

When you link members in Virtis, we don't delete any of the data that was previously entered for the member so users can link and unlink without losing any of their data. We may need to enhance the message issued when the Delete material fails to give the user a better idea of where the material is being used. If you want the error message to tell you where the material is being used, please create a new incident for that so we can keep this incident for the bug that was fixed.

4/19/2016 3:16:39 PM

HRS AASHTO

1254

**Complete Issue Information**

FROM:dteal DATE:Thursday, May 02, 2002 8:53:20 AM  
Yes, that worked, thanks

FROM:kkennelly DATE:5/8/2002 8:44:06 AM  
I backed out your "A" in the track field so the gui changes in Version 4.2 can be tested and accepted.

|                                              |
|----------------------------------------------|
| Issue ID: 3715                               |
| Subject: Default Materials in Linked Members |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/2/2002 12:53:57 PM |
| Modified By: administrator     | 6/19/2008 4:05:31 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3715.11637 | Discard       | Default Materials in Linked Members |

**Description**

4/19/2016 3:16:39 PM

HRS AASHTO

1255

**Complete Issue Information**

FROM:dteal DATE:Thursday, May 02, 2002 8:53:57 AM

When members are linked and a default material is entered in the "mother member" and later changed in the mother member, the child member default material never gets changed along with it.

Here is an example of this problem. I have a 5 girder system. 2 different concrete material where copied in from the library. Member #2 is completely defined and then #3 & 4 are linked to #2. The default material used in #2 is changed to the second choice during the design process. The engineer is now done with the design and deletes the first concrete material for clean up and eliminate confusion later but finds out that the first material can't be deleted because it is being used "someplace". The problem was found to be in the linked members. Once the members where linked, whatever the default material was when linked will remain even if the mother member got changed. The solution is to UNLINK the members, go into each member alternative, change the default material and then re-link the members.

I think that linked members (children) should follow changes 100% of what the mother member contains. I sent a lot of time trying to figure out why I could not delete a material that was no longer used or needed.

FROM:jduray DATE:5/6/02 8:50:52 AM

When two members are linked we simply use the properties of the "mother" when the children are referenced. We do not remove the properties of the children. We could add an option during the linking to remove the properties of the children. Otherwise, I don't think we should change the behavior.

FROM:hlee DATE:4/30/2008 2:28:44 PM

Discarded by TAG 12/07.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3716                                    |
| Subject: Deleting Objects and Where are they Used |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/2/2002 12:55:16 PM |
| Modified By: administrator     | 6/19/2008 4:05:31 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category           |
|-----------------|-----------|----------|--------------------|
| Duray, Jim      | New       | High     | Bug<br>Enhancement |
|                 | Suspended |          |                    |
|                 | Discard   |          |                    |

4/19/2016 3:16:39 PM

HRS AASHTO

1256

**Complete Issue Information**

|            |         |      |             |
|------------|---------|------|-------------|
| Duray, Jim | Discard | High | Enhancement |
|------------|---------|------|-------------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3717.11635 | Closed        | Extremely Slow Results Graph Operations |

**Description**

FROM:dteal DATE:Thursday, May 02, 2002 8:55:16 AM

When deleting materials (objects) you will run into this many times. "The attempt to delete this object has failed! This object is in use by another object in the Bridge Workspace. Remove all references to this object and try again."

Digging out all the object locations can be very frustrating. Can we add the locations of all the references to this object on this message? It would sure help.

FROM:jduray DATE:5/6/02 8:49:46 AM

This can be done but unfortunately it is not a trivial thing to do. I agree it would be very helpful.

FROM:jduray DATE:5/16/02 2:49:36 PM

FROM:hlee DATE:4/30/2008 2:28:49 PM

Discarded by TAG 12/07.

Issue ID: 3717

Subject: Extremely Slow Results Graph Operations

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

5/2/2002 6:12:52 PM

4/19/2016 3:16:39 PM

HRS AASHTO

1257

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Modified By: administrator  | 6/19/2008 4:05:31 PM |
| Priority: High              |                      |
| Category: Bug - Performance |                      |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | New    | High     | Education |
|                 | Closed |          |           |
| Duray, Jim      | Closed | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 411_Non-or-composite BR.bbd |             |
|      | Non-or-composite BR.bbd     |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3722.11630 | Closed        | Composite and non-composite (BRASS) |

### Description

FROM:dteal DATE:Thursday, May 02, 2002 2:12:55 PM

After a single span prestressed LRFD analysis go to the results graph. Select the "Concrete Stress – Rating Factors", it takes a very long time to populate the graph.

Now click the "x" to exit the window – this also takes forever.

I didn't see this slower operation in the previous versions, I think it has started with this version.

FROM:dteal DATE:Thursday, May 16, 2002 3:35:21 PM

I have had designers coming to me left and right complaining about the results graph. They all believed that the program had locked up. It didn't lock up, it was just that slow. Some of these guys are using 1.4 MHz PC's, they shouldn't be slow.

FROM:dteal DATE:Wednesday, March 29, 2006 8:34:02 AM  
5.4 beta 7

4/19/2016 3:16:39 PM

HRS AASHTO

1258

### Complete Issue Information

The first part of this is good (the concrete rating factors graph populates at a blazing speed)

The second part: clicking the "x" to exit the window takes a fair amount of time. Is this expected? Should it take this long?

If so, mark this as Accepted, if not, Assign it for fix'in

|                                              |
|----------------------------------------------|
| Issue ID: 3722                               |
| Subject: Composite and non-composite (BRASS) |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Hart, Erich      | 5/7/2002 2:54:54 PM  |
| Modified By: administrator     | 6/19/2008 4:05:31 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: bgoodrich DATE: Tuesday, May 07, 2002 10:54:55 AM  
E-mail from Ken Teng (5/6/02):

I have a non-composite bridge (I do not input any shear connection data in the Deck Profile tab). From the BRASS output, it shows that the beam properties are all the same for construction stage 1, 2, and 3 which are correct because it is a non-composite bridge.

My question is why I got different rating results when I assigned my Railings to either DC1 (Non-composite, stage 1) or DC2 (Composite, stage 2) since the beam properties are all the same? Attached is the ddb file.

4/19/2016 3:16:40 PM

HRS AASHTO

1259

## Complete Issue Information

FROM:bgoodrich DATE:Tuesday, May 07, 2002 10:57:46 AM

You are getting different results for the condition you describe because the stage two distribution method is set to "Uniformly to all girders" (see the DL Distribution tab of the Superstructure Loads window), which is different from the "Tributary area" method set for stage one. For non-composite bridges in general, there should be no references to composite stages in the Load Case Description window.

FROM:bgoodrich DATE:Tuesday, May 07, 2002 10:58:45 AM

E-mail from Krisha (5/6/02):

I took a quick look at the attached email that Ken Teng sent to Dan and copied to me. It seems to be related to the export not BRASS. I think the difference in the ratings is due to the different ways the user has specified to distribute the stage 1 and stage 2 loads on the Superstructure Loads window. I've attached a version 4.1.1 bbd file of this bridge to this email. (Ken sent a version 4.1.0 bbd file with his email). Can you take a look at it and make sure the export is correctly generating the input file?

FROM:bgoodrich DATE:Tuesday, May 07, 2002 10:59:42 AM

Three e-mails from Ken Teng (5/6/02):

1. Thank you. Could you tell me what is different between those two loadings? The Barrier is continuous from beginning to end, so I guess that the loadings caused by barrier should be the same for my case. Please kindly let me know if I get the wrong direction.

2. Is it different because of tributary of the outer Girder/Beam?

3. I just found out that BRASS does not use this Barrier loads for inner (interior) Girder/beam of non-composite bridge. BRASS only applies those barrier loads on outer (exterior) Girder/Beam for non-composite bridge. Are those correct? Or is it a bug?

FROM:bgoodrich DATE:Tuesday, May 07, 2002 11:02:04 AM

For non-composite bridges (where there is only one stage of construction), all loads should be input in stage 1. The loads applied to each stage are distributed according to the dead load distribution method as specified by the user. Currently, there is no way to specify different distribution methods for loads applied in the same stage. Therefore, for your case, the slab and barriers are being applied using tributary area because that is the specified method. The barrier loads are located within the tributary width of the exterior girders, so the interior girders get no load from the barrier.

Also, the export is generating the BRASS commands based on the information supplied by the user. It is not making any assumptions in the case of dead load distribution. Likewise, BRASS is interpreting the input commands and not making any assumptions regarding dead load distribution. The user controls how all the loads within a stage are distributed. It would be better to be able to assign different distribution methods to each of the various loads in the same stage. This MAY be a future enhancement.

If you want the barrier (railing) to be uniformly distributed, there is a work-around. Set the railing load to zero. Then, determine the contribution of the railing load to each girder and input it on the Member Loads window.

FROM:bgoodrich DATE:Wednesday, May 08, 2002 12:24:51 PM

E-mail from Ken Teng (5/7/02):

4/19/2016 3:16:40 PM

HRS AASHTO

1260



### Complete Issue Information

I tried your suggestion #3 and set the railing to zero. Then, I input the railing on Member loads window. Guess what? I got all the same results no matter that I input DC1 (NON-COMPOSITE) or DC2 (COMPOSITE) to Member loads window. Besides, if I input the railing loads as composite loadings (stage 2), I also got the same results as those DC1 and DC2 have.

I'm kind of confusing. If I decide to distribute my railing to all beams, I can pick one of all three choices (DC1, DC2, or stage 2) for non-composite bridge. Do I follow your points? Let me know, please.

FROM: bgoodrich DATE: Wednesday, May 08, 2002 1:00:18 PM

I called Ken this morning and addressed his questions verbally. After our conversation, he had no further questions. This issue is resolved.

|                                    |
|------------------------------------|
| Issue ID: 3725                     |
| Subject: back compatibility issues |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Shah, Shyam      | 5/9/2002 8:37:08 PM  |
| Modified By: administrator     | 6/19/2008 4:05:31 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Open      |          |             |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:16:40 PM

HRS AASHTO

1261

## Complete Issue Information

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3725.11627 | Resolved      | back compatiblity issues |
| 3729.11623 | Resolved      | Pontis Link              |

## Description

Louisiana out sources a large portion of the bridge rating work. The consultants utilize the Virtis software to perform the work. When a new version of Virtis comes out there are new idiosyncrasies that have to be figured out and compensated for or accepted. For example many consultants had structures that rated correctly in 4.0.4. Some of these structures did not rate the same in 4.1 without input manipulation. Other structures simply would not rate correctly in 4.1. In addition to investigating the above problems consultants also had to Re-burning CD's, Re-printing reports, etc. However they could not turn in work in 4.0.4 because 4.1 is not back compatible. We had several cases were consultants where at the end of two-year projects, then 4.1 was released creating lots unexpected extra work. The Virtis version update process creates lots of unforeseen extra work for these consultants therefore lots of extra expenditures and headaches for us. If we were able to accept work in 4.0.4 and import it into 4.1 much of this could be avoided. We are now beginning to have the same problem with 4.1 and 4.1.1. We foresee this as being a reoccurring problem.

To help resolve the problem we are requesting the following:

- 1) Develop a utility that can import .bbd files made in the previous release (previous few releases if possible but at least one release back).
- 2) Outline an upgrade schedule plan and do not deviate from it. This will allow us to plan for the inherent expenses involved with upgrading.
- 3) Improve the quality of upgrades prior to release to avoid introducing new errors or unexpected changes at every upgrade.

Any input or comments on this issue are welcome.

Thank you,  
William J. Metcalf Jr., E.I.T.  
Louisiana Department of Transportation and Development  
Bridge Rating Unit.  
ROM:snshah DATE:Thursday, May 09, 2002 4:37:08 PM

FROM:jduray DATE:5/14/02 11:20:40 AM

These are good suggestions...we will be addressing numnber 1 in a future release. Until then you can migrate the database to compatible versions prior to the bbd export/import.

The release schedule for major releases is announced usually a year in advance and is discussed at the user group meeting. For example, our next minor release is June 2002 (this release was not known at the User Group meeting) and our next major release is scheduled for Feb. 2003. I agree we can do a better job of informing the users of this schedule. Service Packs are not scheduled and are usually in response to problems in the software that must be fixed prior to a major release. Sometimes enhancements are included in Service Packs. We are working on posting our annual workplan on our web site so users are better informed of what is being worked on.

4/19/2016 3:16:40 PM

HRS AASHTO

1262

## Complete Issue Information

During the testing of 4.1.1 we developed a product validation feature. With this feature we can analyze hundreds or thousands of bridges and quickly compare the results for the current version with those from previous versions. We can then resolve the differences more efficiently. This feature is partially implemented in 4.1.1 but not available to users. We plan to further develop it and make it available to end users in 5.0 (Feb 2003 release). End users can then use the feature to evaluate the release (or service pack) prior to implementing it within the agency.

There are two enhancements in this incident:

- 1) Modify the export/import process to work for different versions
- 2) Product Validation

FROM:hlee DATE:7/10/2006 3:12:25 PM  
Changed Status to Resolved.

|                      |
|----------------------|
| Issue ID: 3729       |
| Subject: Pontis Link |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Klossner, Dale   | 5/13/2002 9:59:45 PM |
| Modified By: administrator     | 6/19/2008 4:05:31 PM |
| Priority: Medium               |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | Medium   | Education |

## Contacts

| Name          | Company       | Email 1                       | Phone 1      |
|---------------|---------------|-------------------------------|--------------|
| Dale Klossner | Minnesota DOT | Dale.Klossner@dot.state.mn.us | 651-366-4480 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:16:40 PM

HRS AASHTO

1263

## Complete Issue Information

### Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 3764.11591 | Duplicate     | wizard- |

### Description

FROM:dklossner DATE:Monday, May 13, 2002 5:59:45 PM

Where can I find information/documentation on configuring Pontis Link data? We have Virtis and Pontis in separate Oracle instances (same server).

FROM:jduray DATE:5/14/02 11:12:14 AM

The release scheduled for June 26th will include the information you are requesting . This release specifically addresses the linking of Pontis, Virtis and Opis.

|                  |
|------------------|
| Issue ID: 3764   |
| Subject: wizard- |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Jensen, Paul     | 5/29/2002 11:48:17 AM |
| Modified By: administrator     | 6/19/2008 4:05:29 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:16:40 PM

HRS AASHTO

1264

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Duplicate |      | Enhancement |
| Duray, Jim | Duplicate | High | Enhancement |
| Duray, Jim | New       | High | Unknown     |
| Duray, Jim | Duplicate | High | Bug         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3765.11590 | Duplicate     | breaking and relinking bridges |

**Description**

FROM:jihnat DATE:5/29/2002 7:47:20 AM

Submitted by pjensen via email:

If you are using the wizard for inputting a bridge, why dose it no fill in the other analysis types ie asd brass, lfd brass? should it not fill those items also? It dose when you create an alternative from scratch.

FROM:jduray DATE:5/30/02 9:25:15 AM

This is a duplicate. The wizard was developed for LRFD and Opis. The Tf later later decided to make it available to Virtis but without enhanceing it to handle LFD.

Issue ID: 3765

Subject: breaking and relinking bridges

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Jensen, Paul     | 5/29/2002 11:49:24 AM |
| Modified By: administrator     | 6/19/2008 4:05:29 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Kennelly, Krisha | Assigned | High     | Unknown     |
| Goodrich, Brian  |          |          | Bug - BRASS |
|                  | Open     |          |             |
|                  | Resolved |          |             |
| Goodrich, Brian  | Resolved | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0690507.bbd         |             |

**Tasks**

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3776.11579 | Resolved      | Rating improves if deck rebar not included in model |

**Description**

FROM:jihnat DATE:5/29/2002 7:48:44 AM

Submitted by pjensen via email:

I simulated a mistake that could happen-  
I had a bridge with data in pontis and virtis and broke the link and committed the changes. everything was fine, i then tried to relink the bridge and received the following error message:

4/19/2016 3:16:41 PM

HRS AASHTO

1266

### Complete Issue Information

Unable to save Bridge data!

02:05:49 PM - Line 841 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Delete process failed while deleting CDmBridge (SaveOrder object 27).

02:05:49 PM - Line 396 in source file D:\Virtis\data  
management\abmbche\DmBridgeCache.cpp.

Error deleting record from database record set.

02:05:49 PM - Line 2446 in source file D:\Virtis\data  
management\abmbrdg\DmBridge.cpp.

State:23000,Native:2292,Origin:[Oracle][ODBC][Ora]

State:23000,Native:2292,Origin:[Oracle][ODBC][Ora]

ORA-02292: integrity constraint (PONTIS41.R\_3189) violated - child record  
found

ORA-02292: integrity constraint (PONTIS41.R\_3189) violated - child record  
found

I logged out and logged back in and tried again and received the same error  
message. I the process only for bridges that have no current data or did i  
miss something.

FROM:jduray DATE:5/30/02 9:23:22 AM

This is a duplicate of 3761.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3776                                               |
| Subject: Rating improves if deck rebar not included in model |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Best, Richard      | 6/4/2002 1:15:57 PM  |
| Modified By: administrator       | 6/19/2008 4:05:28 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:16:41 PM

HRS AASHTO

1267

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 3779.11576 | Discard       | Default Analysis Settings Template cannot be set to NULL |

### Description

FROM:kkennelly DATE:6/4/2002 9:13:48 AM

Submitted on behalf of Richard Best via email:

>>> "Best, Richard M." <BESTRM@nt.dot.state.il.us> 06/03/02 03:37PM >>>

Hello Jim,

We are finding that on some composite I-beam bridges, that the VIRTIS rating actually improves if the deck slab reinforcement is left out of the model (deck slab profile). The attached bbd file illustrates this. The inventory rating factor for girder G2 with rebars specified in the deck is 0.966. The rating becomes 1.062 when the reinforcement tab is left blank. We are using version 4.1.1. Is this something that has already been reported? Is there a rule of thumb for modeling rebars for added composite strength?

<<0690507.bbd>>

Richard M. Best, PE

Computer Design Group Engineer

Illinois Department of Transportation

Bureau of Bridges & Structures

2300 South Dirksen Parkway

Springfield, Illinois 62764

Phone:(217) 785-2922

FROM:kkennelly DATE:6/4/2002 9:20:18 AM

Incident 3354 had the same behavior as this incident.

FROM:bgoodrich DATE:Wednesday, June 05, 2002 12:22:17 PM

I generated BRASS-GIRDER data files with and without deck rebar. I forwarded the data files to Dan Glandt for further investigation.

FROM:bgoodrich DATE:Wednesday, June 12, 2002 1:17:43 PM

E-mail from Dan Glandt (6/12/02):

The shear depth changes from 40.82 to 38.04. The ratings are for the 110 which is over a support and handled as a plain reinforced section so the tool is used and the rebar affects the shear depth.

FROM:bgoodrich DATE:Friday, June 28, 2002 12:17:41 AM

Dan indicated that this issue is resolved based on his 6/12/02 comments.

Issue ID: 3779

Subject: Default Analysis Settings Template cannot be set to NULL

4/19/2016 3:16:41 PM

HRS AASHTO

1268



## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/5/2002 2:08:57 PM  |
| Modified By: administrator     | 6/19/2008 4:05:28 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krisha   | Assigned | High     | Bug      |
| Goodrich, Brian    |          |          |          |
| Kennelly, Krisha   |          |          |          |
| Ordoobadi, Mehrdad |          |          |          |
| Goodrich, Brian    | Resolved |          |          |
| Goodrich, Brian    | Resolved | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3795.11560 | Resolved      | Inconsistent spec references |

## Description

FROM:dteal DATE:Wednesday, June 05, 2002 10:08:57 AM

After a default Analysis Settings Template has been selected there is no way to remove the default without deleting it, you can only select another one to be the default. There should be a 'None' selection. Right now you can only delete the template or select another one as the default.

FROM:hlee DATE:4/30/2008 2:29:01 PM

4/19/2016 3:16:41 PM

HRS AASHTO

1269

## Complete Issue Information

Discarded by TAG 12/07.

|                                       |
|---------------------------------------|
| Issue ID: 3795                        |
| Subject: Inconsistent spec references |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: McCaffrey, Brian   | 6/20/2002 8:02:26 PM |
| Modified By: administrator       | 6/19/2008 4:05:27 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:6/20/02 4:01:37 PM  
Email from Brian:

Is there any way to make references to the AASHTO specifications consistent? The on-line help states AASHTO 16th edition w/2000 interims, the LFD factors window says 16th edition w/1997 interims. I

4/19/2016 3:16:42 PM

HRS AASHTO

1270

## Complete Issue Information

know nothing has changed with the factors but it is confusing to users when trying to determine what spec to follow. Also, the BRASS output file states the following:

AASHTO SPECIFICATIONS:

THE ULTIMATE STRENGTH ANALYSIS (LFD) PORTIONS OF BRASS-GIRDER ARE CURRENT WITH THE AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES, SIXTEENTH EDITION - 1996, WITH INTERIMS. NO RECENT MAINTENANCE HAS BEEN PERFORMED ON THE WORKING STRESS SECTIONS OF THE CODE. WORKING STRESS RESISTANCE AND RATINGS WERE HELD AT THE AASHTO 1983 SPECIFICATIONS WITH INTERIMS THRU 1989. THIS IS A MANAGEMENT DECISION TO FOCUS LIMITED RESOURCES ON LFD METHODS.

What interims are being referenced in the output file???

The references to the ASD spec are also different.

From the on-line help:

AASHTO Specification

The Ultimate Strength Analysis (LFD) portions of BRASS-GIRDER\* is current with the AASHTO Specifications for Highway Bridges, Sixteenth Edition, 1996, with 1997, 1998, 1999, and 2000 Interims. For steel girders, the omnibus steel specification changes have been incorporated. It is anticipated that the omnibus steel girder design specifications will be available from AASHTO in 2001. The steel girder splice component of BRASS-GIRDER is current with the AASHTO Standard Specifications with 1997 and 1998 Interims. There were numerous changes for splice analysis in the 1999 Interims and these changes have not been incorporated. No recent maintenance has been performed on the Working Stress sections of the code. Working Stress resistance and ratings were held at the AASHTO 1992 Specifications with 1993 Interims. This is a management decision made in order to focus limited resources on LFD methods.

FROM:kkennelly DATE:6/24/2002 8:16:57 AM

We can update the LFD and LRFD library factors delivered with Virtis to the current specs for Virtis/Opis Version 5.0. The remainder of the incident pertains to the BRASS engines. Brian, please assign back to me when you are done so I can update the library factors in Version 5.0.

FROM:bgoodrich DATE:Monday, June 24, 2002 9:58:40 AM

I have forwarded the BRASS issues to Dan Glandt.

FROM:bgoodrich DATE:Tuesday, October 22, 2002 6:14:17 PM

Krishna, it's been months since I forwarded this issue to WYDOT and I'm not sure where they are with approving this issue. Please assign this back to me when you are finished with the library factors. In the mean time, I will find out what is being done on the BRASS side.

FROM:kkennelly DATE:1/24/2003 3:13:49 PM

Jim is going to ask the Task Force next week how they want the factors to appear in the library

FROM:kkennelly DATE:2/24/2003 9:45:00 AM

Task Force said to add Factors for current interim to Virits/Opis library.

4/19/2016 3:16:42 PM

HRS AASHTO

1271

### Complete Issue Information

Mehrdad,

I've added 2 agency factors to the Virtis50-Sample.db in Sourcesafe. Please revise these factors to the Standard library and then assign this incident to Brian so he can work on the BRASS side.

FROM:mordoobadi DATE:2/24/2003 2:31:38 PM

Fixed.

FROM:bgoodrich DATE:Tuesday, February 25, 2003 5:48:23 PM

The AASHTO Specification section of the BRASS on-line help has been revised for consistency with the specification information from the BRASS-GIRDER output file. This will be available in the Virtis 5.0 release.

Issue ID: 3799

Subject: Report Tool cannot generate reports for imported bridges.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Lee, Herman

6/26/2002 12:59:06 PM

Modified By: administrator

6/19/2008 4:05:27 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Bug         |
|                 | Assigned        |          | Bug - GUI 2 |
|                 | On Hold         |          |             |
| Duray, Jim      | Rejected by TAG | High     | Bug - GUI 2 |
|                 | Rejected by TAG |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:16:42 PM

HRS AASHTO

1272

### Complete Issue Information

| Name       | Current State   | Summary                                                   |
|------------|-----------------|-----------------------------------------------------------|
| 3799.11556 | Rejected by TAG | Report Tool cannot generate reports for imported bridges. |
| 3800.11555 | Closed          | Message Detail combo box should be read-only.             |

### Description

FROM:hlee DATE:6/26/2002 8:46:29 AM

For Bars Import file G:\PROJ\VIRTIS\LONGTERM\Bars files\C0010\_01010.dat,

Error processing attribute Analysis Module Name - LFD for the DoGirderMbrAlt class.  
08:54:02 AM - Line 1409 in source file D:\Virtis\gui\abgreport\UiReportToolEngine.cpp.

For Brass Import file G:\PROJ\VIRTIS\LONGTERM\BRASS files\AAK.dat.

Error processing attribute Analysis Module Name - LRFD for the DoGirderMbrAlt class.  
08:52:59 AM - Line 1409 in source file D:\Virtis\gui\abgreport\UiReportToolEngine.cpp.

FROM:jduray DATE:4/12/2005 1:59:45 PM  
Fix the report tool.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3800                                         |
| Subject: Message Detail combo box should be read-only. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 6/26/2002 1:04:18 PM |
| Modified By: administrator     | 6/19/2008 4:05:27 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |

4/19/2016 3:16:42 PM

HRS AASHTO

1273

**Complete Issue Information**

|            |          |      |             |  |
|------------|----------|------|-------------|--|
|            | Resolved |      |             |  |
|            | Accepted |      |             |  |
| Duray, Jim | New      | High | Unknown     |  |
|            | Assigned |      | Bug - GUI 2 |  |
|            | On Hold  |      |             |  |
|            | Resolved |      |             |  |
| Duray, Jim | Resolved | High | Bug - GUI 2 |  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Hidden.bmp          |             |

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3801.11554 | Resolved      | Partial hidden Strand Layout schematic. |

**Description**

FROM:hlee DATE:6/26/2002 8:59:15 AM

In the System Error dialog, the Message Detail combo box should be read-only.

FROM:jihnmat DATE:7/30/2002 2:44:51 PM

Fixed for version 5.0

|                                                  |
|--------------------------------------------------|
| Issue ID: 3801                                   |
| Subject: Partial hidden Strand Layout schematic. |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Duray, Jim    |

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Lee, Herman  | 6/26/2002 1:24:42 PM |
| Modified By: administrator | 6/19/2008 4:05:27 PM |
| Priority: High             |                      |
| Category: Bug - GUI 2      |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

| Name      | Company      | Email 1                       | Phone 1      |
|-----------|--------------|-------------------------------|--------------|
| Mac Hasan | Colorado DOT | mahmood.hasan@dot.state.co.us | 303-757-9064 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | F10D.bbd            |             |
|      | F17IE.bbd           |             |

**Tasks**

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 3806.11549 | Resolved      | Virtis/Opis Errors |

**Description**

FROM:hlee DATE:6/26/2002 9:22:04 AM  
Please see attached bitmap.

## Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 3806              |
| Subject: Virtis/Opis Errors |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Hasan, Mac          | 7/5/2002 5:14:18 PM  |
| Modified By: administrator        | 6/19/2008 4:05:26 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mhasan DATE:Friday, July 05, 2002 1:14:21 PM

Structure F-10-D failed to perform a rating due to 'Stirrup-Schedule command' error(s). I have used Virtis/Opis 4.1.0 to model this 2-span prestressed girder structure. Structure F-17-IE, a 3-span Prestressed girder bridge - modeled using version 4.0.4, has rated okay without the 'Stirrup-Schedule error(s).

For both structures, I have used the PS2-3 span spread box example in your Support Center as a guide.

FROM:kkennelly DATE:7/8/2002 8:50:43 AM

I imported F10D into Virtis 4.1.0 and I am able to rate with no errors.

4/19/2016 3:16:43 PM

HRS AASHTO

1276



## Complete Issue Information

I imported F17IE and I get the following types of errors when I try to rate:

Member G2:

Preparing Load Case: Haunch load

WARNING (Medium):

The time of load application was not specified! This may affect the P/S losses computed using the PCI method.

ERROR - Unable to compute span where load is applied!

ERROR - Error preparing concentrated load for BRASS commands!

ERROR - Unable to get adjusted distance of load (P/S beams)!

On your Structure Definition window, the span lengths entered add up to 167.6773'. On your windows for the Deck Profile and Haunch Profile you have entered the lengths of these ranges as 167.680'. I think you may have a problem with the tolerances you are using. You should be consistent with the number of decimal places when entering lengths into Virtis. For example, if your structure definition length is 167.6773' on the Structure Definition window you should enter all lengths meant to represent the entire structure length as 167.6773' not 167.68'.

You can specify the tolerances you want to use in Virtis and the export to the BRASS files. Open the Configuration Browser and select System Defaults from the tree, then click the Tolerances tab. Here you can specify tolerances for Virtis and the export to BRASS to use when comparing if two lengths or two locations are the same. This tab has a Help topic to further explain the use of tolerances in Virtis. The tolerances set in the System Defaults window apply only to your pc. These tolerances are not saved with individual bridges nor are they exported when you create a bbd file. It is possible that the tolerances on your pc have changed from when you rated this structure in 4.0.

Please let me know if adjusting your tolerances does not solve your problem. If it does not, let me know what the tolerances on your pc are so I can try to reproduce the errors you get with F10D.

Issue ID: 3809

Subject: Reverting changes in BWS

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Ordoobadi, Mehrdad

7/10/2002 2:01:36 PM

Modified By: administrator

6/19/2008 4:05:26 PM

Priority: High

Category: Bug - GUI 2

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |

4/19/2016 3:16:43 PM

HRS AASHTO

1277

### Complete Issue Information

|            |          |     |     |
|------------|----------|-----|-----|
|            | Resolved |     |     |
| Duray, Jim | Resubmit | Low | Bug |
| Duray, Jim | Resubmit | Low | Bug |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3827.11528 | Resubmit      | Input of shear stud |

### Description

FROM:mordoobadi DATE:7/10/2002 9:34:08 AM

After Revert is selected in the BWS menu the Save button in the toolbar and also the Save menu item should be disabled if bridge has not been saved since BWS was opened for the bridge.

One more issue is that the bridge\_id (Bridge Tree Item) does not refresh in the BWS tree after the revert.

FROM:jihnmat DATE:8/17/2005 3:48:58 PM  
Fixed for 5.4.0

|                              |
|------------------------------|
| Issue ID: 3827               |
| Subject: Input of shear stud |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Duray, Jim    |

4/19/2016 3:16:43 PM

HRS AASHTO

1278

### Complete Issue Information

|                               |                      |
|-------------------------------|----------------------|
| Submitted By: Obeidat, Khalid | 8/1/2002 5:25:21 PM  |
| Modified By: administrator    | 6/19/2008 4:05:25 PM |
| Priority: Low                 |                      |
| Category: Bug                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Assigned  | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |
| Ihnat, Joseph   | Discard   | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 3837.11518 | Discard       | Preferences - add "No Template" option to the analysis settings templates |

### Description

FROM:kobeidat DATE:Thursday, August 01, 2002 1:25:22 PM

The input of shear studs should be continuous over the pier otherwise OPIS will consider the section non-composite. For the same shear studs spacings you might get composite or noncomposite section over the pier depending on the way the stud spacing has been input.

## Complete Issue Information

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 3837                                                                     |
| Subject: Preferences - add "No Template" option to the analysis settings templates |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 8/12/2002 1:58:36 PM |
| Modified By: administrator     | 6/19/2008 4:05:25 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:8/12/02 9:54:44 AM  
From the 2002 User Group training:

Preferences window, Analysis tab, Default Analysis Settings Template should have a selection to set the template to NULL.

FROM:jduray DATE:8/12/02 9:58:26 AM

FROM:hlee DATE:4/30/2008 2:29:22 PM  
Discarded by TAG 12/07.

4/19/2016 3:16:44 PM

HRS AASHTO

1280

## Complete Issue Information

Issue ID: 3838

Subject: Default load cases should be configurable in the Configuration Browser

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

8/12/2002 2:00:56 PM

Modified By: administrator

6/19/2008 4:05:25 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Assigned  | High     | Enhancement |
|                 | Suspended |          |             |
| Ihnat, Joseph   | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:16:44 PM

HRS AASHTO

1281

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                                                |
|------------|------------------|--------------------------------------------------------|
| 3839.11516 | Not Reproducible | Trouble editting counties in the Configuration Browser |

### Description

FROM:jduray DATE:8/12/02 9:58:20 AM

From the 2002 User Group training:

Add a window to the Configuration Browser for modifying the Default Load Cases. Should also add security.

FROM:jduray DATE:8/12/02 10:00:43 AM

Issue ID: 3839

Subject: Trouble editting counties in the Configuration Browser

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim

8/12/2002 2:04:00 PM

Modified By: administrator

6/19/2008 4:05:25 PM

Priority: High

Category: Bug - GUI 2

4/19/2016 3:16:44 PM

HRS AASHTO

1282

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category               |
|-----------------|-----------|----------|------------------------|
| Duray, Jim      | New       | High     | Unknown<br>Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement            |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3840.11515 | Suspended     | Put BRASS default shear method to use in Configuration Browser |

### Description

FROM:jduray DATE:8/12/02 10:00:59 AM  
Entered on behalf of Robert Fulton:

Robert was not able to edit the county names. He was trying to add a number in front of the county name. He was able to edit a few. I believe he was using Oracle.

## Complete Issue Information

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 3840                                                          |
| Subject: Put BRASS default shear method to use in Configuration Browser |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Koenig, David    | 8/12/2002 2:31:25 PM |
| Modified By: administrator     | 6/19/2008 4:05:25 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 3841.11514 | Duplicate     | Add "Default Load Cases" values to the Configuration Browser |

## Description

FROM:kkennelly DATE:8/12/2002 10:06:09 AM

Requested by Dave Koenig at the Virtis 2002 User Group meeting:

Once users are given the option in Virtis to select the default shear method to use in BRASS LFD (I think that is in a separate incident), this default method should be stored in the Configuration Browser so everyone in the state uses the same method.

FROM:hlee DATE:9/24/2007 9:18:07 AM

Related to Incident 3865.

4/19/2016 3:16:45 PM

HRS AASHTO

1284



## Complete Issue Information

Issue ID: 3841

Subject: Add "Default Load Cases" values to the Configuration Browser

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Koenig, David

8/12/2002 2:47:50 PM

Modified By: administrator

6/19/2008 4:05:25 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:8/12/2002 10:45:30 AM

Requested at Virtis 2002 User Group Meeting by Dave Koenig:

4/19/2016 3:16:45 PM

HRS AASHTO

1285

## Complete Issue Information

Load Case Description window has a button to "Add Default Load Cases". These load cases are currently hard coded. Let users set their own default load cases in the Configuration Browser.

FROM:kkennelly DATE:8/12/2002 10:48:46 AM  
Duplicate of 3838

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3842                                               |
| Subject: Shortcut not getting removed with Uninstall with XP |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/12/2002 4:12:57 PM |
| Modified By: administrator     | 6/19/2008 4:05:25 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:16:45 PM

HRS AASHTO

1286

### Complete Issue Information

|                 |                    |      |             |
|-----------------|--------------------|------|-------------|
| Ihnat, Joseph   | Information Needed |      |             |
|                 | Resolved           |      | Education   |
| Duray, Jim      | New                | High | Unknown     |
|                 |                    |      | Bug         |
| Goodrich, Brian | Assigned           |      | Bug - BRASS |
|                 | Resolved           |      |             |
| Goodrich, Brian | Resolved           | High | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Example1.bbd        |             |

### Tasks

| Name       | Current State | Summary                                                                                          |
|------------|---------------|--------------------------------------------------------------------------------------------------|
| 3843.11512 | Resolved      | LRFD 5.8.4 Interface Shear Transfer displayed as "General Comp" in spec check but actually fails |

### Description

FROM:dteal DATE:Monday, August 12, 2002 12:12:58 PM

When uninstalling Virtis Opis 4.1.1 from my laptop that has an XP operating system the shortcut on the desktop did not get removed.

FROM:jihnat DATE:8/12/2002 1:19:20 PM

Had you changed the text of the shortcut?

FROM:dteal DATE:Monday, August 12, 2002 3:38:00 PM

I may have renamed it to 4.1.1 so I knew what version it was?? Being the version is no longer changed with service patches.

FROM:jihnat DATE:8/15/2002 2:28:24 PM

The uninstaller will not uninstall things (e.g. shortcuts, files, etc.) that have been modified after installation.

4/19/2016 3:16:45 PM

HRS AASHTO

1287

**Complete Issue Information**

FROM:dteal DATE:Thursday, August 15, 2002 4:31:46 PM  
Accepted

|                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|
| Issue ID: 3843                                                                                            |
| Subject: LRFD 5.8.4 Interface Shear Transfer displayed as "General Comp" in spec check but actually fails |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Smith, Jeff        | 8/12/2002 7:12:07 PM |
| Modified By: administrator       | 6/19/2008 4:05:25 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:8/12/2002 3:10:00 PM  
Submitted on behalf of Jeff Smith via email:

1. For interface shear transfer, although the spec check indicates the design passes, the detailed description window shows that in some locations it fails. (Example1.bbd)

FROM:kkennelly DATE:8/12/2002 3:12:24 PM  
Run BRASS LRFD, open Spec Check window. Stage 3 Span1 - 60' Strength I is an example of this behavior.

FROM:kkennelly DATE:8/12/2002 3:17:46 PM

### Complete Issue Information

FROM:bgoodrich DATE:Friday, August 16, 2002 4:59:29 PM

Mike Watters approved correcting this issue within the BRASS-GIRDER(LRFD) engine. His e-mail follows (8/16/02):

"...it sounds like an issue regarding passing values to Opis. In which case, go ahead and make the correction under the Opis Incident Number and not under a BRASS Problem Log number."

FROM:bgoodrich DATE:Friday, August 16, 2002 5:21:49 PM

I have modified the BRASS-GIRDER(LRFD) 1.5.2 engine, so the interface shear transfer specification check is assigned a pass or fail result code instead of being categorized as a computation. Fixed for Opis 5.0.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 3844                                                                             |
| Subject: LRFD 5.8.4 Spec Check shows 0 Avf steel even though shear reinf extends into deck |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Smith, Jeff        | 8/12/2002 7:17:43 PM |
| Modified By: administrator       | 6/19/2008 4:05:24 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

4/19/2016 3:16:46 PM

HRS AASHTO

1289

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Example2.bbd        |             |
|      | Example3.bbd        |             |

### Tasks

| Name       | Current State | Summary                                                                           |
|------------|---------------|-----------------------------------------------------------------------------------|
| 3845.11510 | Resolved      | Prestress Design Tool Strand Pattern not found but Details window shows a pattern |

### Description

FROM:kkennelly DATE:8/12/2002 3:16:13 PM  
Submitted on behalf of Jeff Smith via email:

2. Also for interface shear transfer, even though the boxes to indicate that the vertical shear steel extends into the deck are checked, the detailed description windows shows the area of steel, Avf, is zero. (Example1.bbd and Example2.bbd)

FROM:bgoodrich DATE:Friday, August 16, 2002 5:25:32 PM  
I have modified the export (BrassStirrupScheduleGroupCmd.cpp) to correctly determine the % Stirrup Area for Horizontal Shear parameter for BRASS-GIRDER(LRFD). The BRASS export file, BrassStifTranScheduleGroupCmd.cpp, contained similar logic, so I modified it as well. Fixed for Opis 5.0 and any patch after Opis 4.2.

|                                                                                            |                      |
|--------------------------------------------------------------------------------------------|----------------------|
| Issue ID: 3845                                                                             |                      |
| Subject: Prestress Design Tool Strand Pattern not found but Details window shows a pattern |                      |
| Folder: /Virtis/Support Center                                                             |                      |
| Primary Contact: Kennelly, Krisha                                                          |                      |
| Submitted By: Smith, Jeff                                                                  | 8/12/2002 7:19:56 PM |
| Modified By: administrator                                                                 | 6/19/2008 4:05:24 PM |
| Priority: High                                                                             |                      |
| Category: Bug - GUI 2                                                                      |                      |

### History

4/19/2016 3:16:46 PM

HRS AASHTO

1290

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3846.11509 | Suspended     | Schematic View of girder details at section changes |

### Description

FROM:kkennelly DATE:8/12/2002 3:18:40 PM  
Submitted on behalf of Jeff Smith via email:

3. In Example3.bbd when using the PS Tool to compute the span an initial window came up that indicated that a strand pattern could not be found. After clicking OK, the resulting window contained a strand pattern. The details also contained details for a strand pattern. When I then clicked to apply to span only the shear steel spacing was applied and the strand locations were not.

FROM:kkennelly DATE:2/25/2003 3:21:46 PM  
Fixed for Version 5.0, Beta 6.

## Complete Issue Information

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3846                                               |
| Subject: Schematic View of girder details at section changes |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 8/12/2002 7:40:27 PM |
| Modified By: administrator     | 6/19/2008 4:05:24 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                              |
|------------|---------------|------------------------------------------------------------------------------------------------------|
| 3847.11508 | Suspended     | Add ability to jump to window with missing info for Errors/Failures that prohibit analysis or rating |

## Description

FROM:dteal DATE:Monday, August 12, 2002 3:40:32 PM  
Enhancement request for Mark Studt, Montana DOT, 2002 UserGroup Meeting  
mstudt@state.mt.us

Would like the capability to view cross section plate girder profiles at any change of section.

4/19/2016 3:16:46 PM

HRS AASHTO

1292



## Complete Issue Information

Issue ID: 3847

Subject: Add ability to jump to window with missing info for Errors/Failures that prohibit analysis or rating

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

8/12/2002 7:42:51 PM

Modified By: hlee

9/7/2012 1:47:05 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Monday, August 12, 2002 3:42:52 PM

Enhancement request for Mark Studt, Montana DOT, 2002 UserGroup Meeting

4/19/2016 3:16:47 PM

HRS AASHTO

1293

**Complete Issue Information**

mstudt@state.mt.us

Would like the capability to easily find and modify errors and failures that prohibit analysis or rating results. ie: If an effective flange width is omitted in the input, no output is generated. The time to find this missed input is significant.

**Solutions:**

1. See the BRASS-PIER error generator – double click to correct the error and jump to that input screen.
2. The BWS tree could highlight (red) the branch that was missing the information. Validation loop might be a spot to catch this export level.

FROM: Herman Lee DATE: 9/7/2012 9:43:36 AM Eastern Daylight Time  
Duplicate of Incident 2569.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3871                                                     |
| Subject: BRASS LFD gives 0 inv rating and nonzero operating rating |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Kennelly, Krisha   | 8/20/2002 12:36:38 PM |
| Modified By: administrator       | 6/19/2008 4:05:23 PM  |
| Priority: Urgent                 |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned | Urgent   |             |

4/19/2016 3:16:47 PM

HRS AASHTO

1294



**Complete Issue Information**

FROM:dteal DATE:Tuesday, November 02, 2004 12:23:29 PM  
I checked this in 5.1.1 and it appears to be fixed

|                                  |
|----------------------------------|
| Issue ID: 3876                   |
| Subject: Zero Inventory for Axle |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 8/28/2002 4:51:47 PM |
| Modified By: administrator       | 6/19/2008 4:05:23 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, August 28, 2002 12:51:47 PM  
When rating the attached bridge I get a ZERO Inventory for Axle LL

From attached bbd use "Final Lightest":  
Member 3 gets a zero inventory for the HS20-44 axle  
Member 6 gets zero inventory for the H20, Type3 and Type 3S2 axle

FROM:kkennelly DATE:8/29/2002 8:13:53 AM  
Appears to be similar to behavior in Incident 3871.

Member 3 Span 1 9.9m ( POI 106.0) has nominal positive moment capacity = -51598.80 kft, ll moment = +543.7 kft. This results in rating factor = -43.676 which is reported as zero in BRASS's summary.

BRASS calcs at point 106.0 for the moment capacity appear wrong:  
AASHTO 10.50.1.2.1

4/19/2016 3:16:47 PM

HRS AASHTO

1296

**Complete Issue Information**

Effective Transformed Area, Afc = -10.157 sq in  
Rb\_prime (see AASHTO Commentary) = \*\*\*\*\*

FROM: bgoodrich DATE: Thursday, August 29, 2002 11:14:42 AM  
Duplicate of Incident 3856, even though zero inventory rating. The same issue is causing the problem in both incidents. Same as Incident 3871 too.

Issue ID: 3879  
Subject: Tolerances in Virtis affects rating produced by BRASS

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 9/9/2002 12:58:51 PM  
Modified By: administrator 6/19/2008 4:05:22 PM  
Priority: High  
Category: Export 1

**History**

| Primary Contact  | Status      | Priority | Category |
|------------------|-------------|----------|----------|
| Goodrich, Brian  | Assigned    | High     | Export 1 |
| Kennelly, Krisha |             |          |          |
| Goodrich, Brian  | System Test |          |          |
| Goodrich, Brian  | System Test | High     | Export 1 |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Example Report.pdf  |             |

### Tasks

| Name       | Current State | Summary                                                                                         |
|------------|---------------|-------------------------------------------------------------------------------------------------|
| 3881.11474 | Suspended     | Report Writer Enhancement - add analysis output like code checks & section properties to report |

### Description

FROM:kkennelly DATE:9/9/2002 8:59:13 AM  
Submitted on behalf of Richard Best via email:

The attached file is for a 3 span PPC I-beam made continuous for live load. Our LFD analysis was coming up with a rating of 0.0 with Ultimate Strength Shear controlling @ the 98.1% of Span2. We noticed that if we change our system default tolerance from 0.108 ft to 0.01 ft that it runs and gives a decent rating. Perhaps you can explain why this happens. In comment I would like to add that juggling system tolerances is very tricky. We can get it to work for some bridges and then other bridges that were previously rated will no longer work. Is there a way to specify the tolerances at the bridge level so as not affect the entire database? If not then perhaps an enhancement is needed.

FROM:kkennelly DATE:9/9/2002 9:13:42 AM

I ran the attached file using both tolerances specified by Richard in his email and I see that different Stirrup-Schedule commands are generated based on the tolerances. When the tolerance is set to 0.01', two Stirrup-Schedule commands are generated with a stirrup spacing of 0.5906". These commands were not generated when the tolerance was 0.108'(1.296") which is the expected behavior for the tolerances since 0.5906" < 1.296". But I can't figure out where the export gets the 0.5906" stirrup spacing, I think it is related to the prestressed modeling method and this area being between the CL of simple supports.

FROM:bgoodrich DATE:Saturday, January 25, 2003 5:07:34 PM

The P/S modeling method is set to centerline of simple span bearing. The 0.5906" stirrup spacing is computed because there is a stirrup located at 240mm to the right of the left end of span 3. Because the overhang length at the left end of span 3 is 225mm, the stirrup spacing is 15mm (0.5906").

FROM:bgoodrich DATE:Monday, January 27, 2003 6:42:45 PM

I attached the BBD files for Version 5.0 Beta 3 current and final. I modified a section of code that places stirrups in sequential order for determining the spacing exported to BRASS. This block used the user-defined tolerance, which prevented the locations from being put in sequential order. The export is fixed for Version 5.0 Beta 4.

Krishna - Please respond to the question regarding tolerances at the bridge level?

Please note that BRASS was modified to require deck rebar over the interior supports. This structure

4/19/2016 3:16:47 PM

HRS AASHTO

1298

## Complete Issue Information

must therefore be modified to run in the version of BRASS released with Virtis 5.0.

FROM:kkennelly DATE:2/10/2003 10:19:09 AM

There is currently not a way to set tolerances at the bridge level instead of the database level. An enhancement request should be submitted if this feature is desired.

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| Issue ID: 3881                                                                                           |
| Subject: Report Writer Enhancement - add analysis output like code checks & section properties to report |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Best, Richard    | 9/12/2002 8:36:03 PM |
| Modified By: administrator     | 6/19/2008 4:05:22 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:rmbest DATE:Thursday, September 12, 2002 4:36:03 PM

One of the most frequent complaints from our users is that it is not easy to verify or document the computations from a VIRTIS analysis for a critical point. The Brass output files are bloated with repetitive and sometimes extraneous information and the specifics for a critical point are dispersed throughout hundreds of pages of output. The Brass output files are too verbose and the report writer doesn't give enough information about capacity and code checks. We would like to see the report writer

4/19/2016 3:16:48 PM

HRS AASHTO

1299

### Complete Issue Information

improved to give a detailed but concise report including relevant code checks for user specified and/or critical points. Attached, we have put together a sample report that contains the information that we would like to see produced by report writer. This example is for a 3 span plate girder with one user specified point at pier 1.

FROM:rmbest DATE:Thursday, September 12, 2002 4:40:14 PM

|                                     |
|-------------------------------------|
| Issue ID: 3882                      |
| Subject: dia wiz - incorrect layout |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Jensen, Paul        | 9/17/2002 10:42:07 PM |
| Modified By: administrator        | 6/19/2008 4:05:22 PM  |
| Priority: High                    |                       |
| Category: Bug - GUI 2             |                       |

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          | Bug - GUI 1 |
|                  |          |          | Bug - GUI 2 |
|                  | Resolved |          |             |
| Kennelly, Krisha | Resolved | High     | Bug - GUI 2 |

### Contacts

4/19/2016 3:16:48 PM

HRS AASHTO

1300



### Complete Issue Information

| Name            | Company                    | Email 1                  | Phone 1      |
|-----------------|----------------------------|--------------------------|--------------|
| Paul Jensen     | Montana DOT                | pjensen@mt.gov           | 406-444-9245 |
| Jim Duray       | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com    |              |
| George Colgrove |                            | gcolgrove@mbakercorp.com |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3889.11466 | Resolved      | Uable to verify database schema! |

### Description

FROM:pjensen DATE:Tuesday, September 17, 2002 6:42:07 PM  
I was trying to input diaphams into a bridge using the wizard. the structure is on a skew of 35°. when i put in the start offset and the spacing, it dose not compute the correct number for the muti span structure. attached is the bbd and it is atlt "xxx".

FROM:kkennelly DATE:2/24/2003 1:26:44 PM  
Looks like the Wizard was adding an extra perpendicular diaphragm at the end of span 1 and 2. This diaphragm's left mbr distance = end of span 1 length and right mbr distance was in span 2. Code fixed so that wizard now checks to make sure the left and right distances of a diaphragm are in the same span.

Fixed for Version 5.0, Beta 6.

|                                           |
|-------------------------------------------|
| Issue ID: 3889                            |
| Subject: Uable to verify database schema! |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Colgrove, George      | 9/30/2002 3:35:18 PM |
| Modified By: administrator          | 6/19/2008 4:05:22 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Ihnat, Joseph   | Assigned  |          | Bug - GUI 2 |
|                 | On Hold   |          |             |
|                 | Duplicate |          |             |
| Ihnat, Joseph   | Duplicate | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | mgnelson1.bbd       |             |

### Tasks

| Name       | Current State | Summary                                                                                                   |
|------------|---------------|-----------------------------------------------------------------------------------------------------------|
| 3890.11465 | Duplicate     | Blank space at end of Shear Reinf Def name prevents name from displaying on Shear Reinf Def Ranges window |

### Description

FROM:gcolgrove DATE:Monday, September 30, 2002 11:35:18 AM

I am getting an error that says, "Unable to verify database schema! Please contact database administrator." when logging onto Virtis/opis with any username other than Bridgewater. I am able to log on using Bridgewater. I am also able to log on and successfully test the Oracle database. This is a clean install.

FROM:mordoobadi DATE:9/30/2002 4:36:42 PM

What kind of database are you using? Oracle? Sybase? MSDE?

FROM:jduray DATE:Wednesday, October 02, 2002 5:58:37 AM

FROM:gcolgrove DATE:Monday, October 21, 2002 9:30:19 AM

We reinstalled the usernames and it worked. The answer was Oracle.

**Complete Issue Information**

Issue ID: 3890  
 Subject: Blank space at end of Shear Reinf Def name prevents name from displaying on Shear Reinf Def Ranges window

Folder: /Virtis/Support Center  
 Primary Contact: Ihnat, Joseph  
 Submitted By: Kennelly, Krisha 10/1/2002 12:07:19 PM  
 Modified By: administrator 6/19/2008 4:05:22 PM  
 Priority: High  
 Category: Bug - GUI 2

**History**

| Primary Contact | Status      | Priority | Category |
|-----------------|-------------|----------|----------|
| Duray, Jim      | New         | High     | Unknown  |
| Goodrich, Brian | Assigned    |          |          |
|                 | Open        |          |          |
|                 | System Test |          |          |
|                 | Closed      |          |          |
| Goodrich, Brian | Closed      | High     | Unknown  |

**Contacts**

| Name           | Company          | Email 1                         | Phone 1      |
|----------------|------------------|---------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | point of interest problem.bbd |             |
|      | pointofinterest 4_2.bbd       |             |

**Tasks**

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 3911.11444 | Closed        | Presence of Point of Interest appears to affect PS Shear rating results |

**Description**

FROM:kkennelly DATE:10/1/2002 8:07:58 AM

4/19/2016 3:16:49 PM

HRS AASHTO

1303



### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Kennelly, Krisha | 10/18/2002 2:01:09 PM |
| Modified By: administrator     | 6/19/2008 4:05:20 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Accepted           |          |          |
|                    | Closed             |          |          |
| Ordoobadi, Mehrdad | Closed             | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |
| George Colgrove |                 | gcolgrove@mbakercorp.com  |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3922.11433 | Closed        | Problem opening a bridge |

### Description

FROM:kkennelly DATE:10/18/2002 9:59:16 AM  
Submitted on behalf of Ed Lutgen, MNDOT via email:

I have two bridge alternatives that are identical except one has a point of interest at 1.5'. The one without poi rates 0.921 ultimate shear at 52.26'. The other one with the poi rates .568 ultimate shear at 52.26'. This seems very puzzling to me. Why would a bridge rate nearly in half at the same point if you have virtis analyze another point? Is it the way it handles d or h at the abutment?

FROM:kkennelly DATE:10/18/2002 10:23:33 AM  
I attached a version 4.2 bbd file to this incident (pointofinterest 4\_2.bbd). Member in question is B2.

FROM:bgoodrich DATE:Saturday, January 25, 2003 10:19:41 AM

4/19/2016 3:16:49 PM

HRS AASHTO

1305

**Complete Issue Information**

This issue was forwarded to WYDOT.

FROM: bgoodrich DATE: Tuesday, January 28, 2003 11:10:00 AM  
WYDOT has assigned this issue to BRASS Problem Log 399.

FROM: bgoodrich DATE: Friday, January 31, 2003 1:05:11 PM  
This issue has been addressed in BRASS-GIRDER 5.8.6, which will be released with Virtis 5.0. The DLL will be forwarded soon.

|                                   |
|-----------------------------------|
| Issue ID: 3922                    |
| Subject: Problem opening a bridge |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Colgrove, George      | 10/21/2002 1:32:12 PM |
| Modified By: administrator          | 6/19/2008 4:05:20 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: gcolgrove DATE: Monday, October 21, 2002 9:32:14 AM  
We get this error everytime we open a bridge from Opis/Virtis

File error while writting data.  
09:26:39 AM - Line 819 in source file D:\Virtis\data management\abmbche\DmBridgeCache.cpp.  
File exception!  
Error reading file [C:\Program Files\AASHTO BridgeWare\VirtisOpis41\Bridgeld\_3\_revert.bak]!  
The file could not be accessed.

**Complete Issue Information**

We are also having problems saving bridges that were modified

FROM:mordoobadi DATE:10/21/2002 1:13:06 PM

It is probably because of low free disk space. Please update this incident with the information about your free disk space on drive C:.

FROM:bmccaffrey DATE:Monday, November 04, 2002 3:31:48 PM

We used to get that message also in NY. It only started to happen when we went to Windows 2000 and installed Virtis/Opis on the C: drive. Users do not have priveleges to write to the C: drive here so we have to install the system on our D: drives (or whatever drive is set up for file use).

FROM:gcolgrove DATE:Wednesday, December 31, 2003 11:43:01 AM

This was the problem. Sice the IT people have opened the C drive and all has become well.

Thanks!  
George

FROM:mordoobadi DATE:3/12/2004 12:37:23 PM

Accepted by George Colgrove

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 3952                                                              |
| Subject: Floor system Windows should display which group they are a part of |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Kennelly, Krisha | 10/24/2002 2:08:28 PM |
| Modified By: administrator     | 6/19/2008 4:05:19 PM  |
| Priority: Urgent               |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Assigned  | High     | Requirement |
|                 |           | Urgent   | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | Urgent   | Enhancement |

4/19/2016 3:16:49 PM

HRS AASHTO

1307

**Complete Issue Information**

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 3958.11397 | Resolved      | Document how diaphragm loads are applied to structure |

**Description**

FROM:kkennelly DATE:10/24/2002 10:07:28 AM

The Task Force Meeting minutes from Jan 2002 says the following in Agenda Item 05: "It was firmly decided that the windows should display which group they are a part of."

We don't do that right now.

FROM:jduray DATE:1/22/03 12:12:33 PM

We do not have an enhancement budget to do this at this time.

FROM:hlee DATE:4/30/2008 2:30:29 PM

Discarded by TAG 12/07.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 3958                                                 |
| Subject: Document how diaphragm loads are applied to structure |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Hasan, Mac         | 10/30/2002 3:22:45 PM |
| Modified By: administrator       | 6/19/2008 4:05:18 PM  |
| Priority: High                   |                       |



## Complete Issue Information

Category: Documentation

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Help     |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Help     |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 3959.11396 | Closed        | Add structure types that can be imported from BARS to help |

## Description

FROM:bgoodrich DATE:Wednesday, October 30, 2002 11:22:45 AM

Entered based on phone conversation with Mac Hasan:

There is no documentation in the help for how (or even if) the diaphragm weight is applied to the structure. The Dead Loads topic in the help should be updated to include diaphragm weight.

FROM:bgoodrich DATE:Wednesday, October 30, 2002 11:22:45 AM

The diaphragm weight is divided between the supporting girders and applied as a concentrated load to the BRASS model.

FROM:kkennelly DATE:12/10/2002 3:11:36 PM

Resolved in the Virtis help for Version 5.0. Brian, you might want to add what BRASS does to the BRASSEngineHelp.

FROM:bgoodrich DATE:Friday, January 24, 2003 5:30:03 PM

I updated the engine helps for BRASS-GIRDER and BRASS-GIRDER(LRFD) accordingly. Fixed for Version 5.0 Beta 4.

**Complete Issue Information**

Issue ID: 3959  
Subject: Add structure types that can be imported from BARS to help

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 10/30/2002 7:24:31 PM  
Modified By: administrator 6/19/2008 4:05:18 PM  
Priority: High  
Category: Help

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:10/30/2002 3:24:11 PM  
I got an email from a user asking what types of BARS structures can be imported into Virtis. We should add the types of BARS structures that can be imported into Virtis using the BARS import utility to our Help file.

FROM:kkennelly DATE:12/6/2002 10:28:51 AM  
Added to help for 5.0

## Complete Issue Information

Issue ID: 3973  
Subject: Point of Interest -> Numeric fields in edit boxes accepting letters

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Bhanushali, Girish 11/7/2002 4:50:12 PM  
Modified By: administrator 6/19/2008 4:05:18 PM  
Priority: High  
Category: Bug - GUI 2

### History

| Primary Contact | Status          | Priority | Category           |
|-----------------|-----------------|----------|--------------------|
| Duray, Jim      | New             | High     | Unknown            |
| Ihnat, Joseph   | Assigned        |          | Bug<br>Bug - GUI 2 |
|                 | On Hold         |          |                    |
|                 | Rejected by TAG |          |                    |
| Ihnat, Joseph   | Rejected by TAG | High     | Bug - GUI 2        |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:16:50 PM

HRS AASHTO

1311

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3974.11381 | Closed        | Unable to delete from deleted bridges folder |

**Description**

FROM:gbhanushali DATE:11/7/2002 11:48:12 AM

Point of Interest -> Numeric fields in edit boxes accepting letters

Also Edit boxes in Engine Tab of the same window

FROM:jduray DATE:11/8/02 11:35:05 AM

These have been this way since version 2.0 ...fix and charge to maintenance.

FROM:gbhanushali DATE:11/15/2002 10:00:19 AM

Cross section based / Build up Member Alt / Cross Sections window / top cover plates & bottom cover plates tabs grid column Relative position accepts non numeric characters

FROM:jihnat DATE:11/15/2002 4:17:51 PM

Cross Section Cover Plate grids are fixed.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3974                                        |
| Subject: Unable to delete from deleted bridges folder |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 11/7/2002 8:12:16 PM |
| Modified By: administrator          | 6/19/2008 4:05:18 PM |
| Priority: High                      |                      |
| Category: Bug - Domain 2            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:16:51 PM

**HRS AASHTO**

1312

### Complete Issue Information

|                    |                 |      |                |
|--------------------|-----------------|------|----------------|
| Ordoobadi, Mehrdad | Assigned        |      | Bug - Domain 2 |
|                    | Resolved        |      |                |
| Duray, Jim         | New             | High | Bug            |
|                    | On Hold         |      | Bug - GUI 2    |
|                    | Rejected by TAG |      |                |
| Duray, Jim         | Rejected by TAG | High | Bug - GUI 2    |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | schematic.bbd       |             |

### Tasks

| Name       | Current State   | Summary                                   |
|------------|-----------------|-------------------------------------------|
| 3976.11379 | Rejected by TAG | Schematic Profile and the end of the beam |

### Description

FROM:dteal DATE:Thursday, November 07, 2002 3:12:17 PM

We have run into another bridge that the Administrator can not delete from the Deleted Bridges folder. We had this problem some time back (Incident #2823). At that time we solved it by using the "Microsoft ODBC for Oracle" driver. I tried that with this one and it did not work. Below is the error message I received.

Unable to delete bridge!

01:42:40 PM - Line 2979 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Delete process failed while deleting CDmLrfdLs (SaveOrder object 127).

01:42:33 PM - Line 396 in source file D:\Virtis\data management\abmbche\DmBridgeCache.cpp.

Error deleting record from database record set.

01:42:33 PM - Line 917 in source file D:\Virtis\data management\abmbrdg\DmLrfdLs.cpp.

State:S1000,Native:2292,Origin:[Oracle][ODBC Oracle Driver][Oracle OCI]

ORA-02292: integrity constraint (VIRTIS.R\_2265) violated - child record found.

FROM:mordoobadi DATE:11/26/2002 8:42:13 AM

We should add to the function CDoBridgeManager::DeleteBridge(long IBridgeld) code to delete the analysis events before attempting to delete the bridge.

4/19/2016 3:16:51 PM

HRS AASHTO

1313

**Complete Issue Information**

FROM:mordoobadi DATE:11/26/2002 8:49:47 AM  
Fixed for 5.0 Alpha 3.

FROM:mordoobadi DATE:11/26/2002 9:38:36 AM  
One work around is to delete all of the analysis events for the bridge before attempting to delete it.

FROM:mordoobadi DATE:11/26/2002 10:42:09 AM  
Dean confirmed that the work around that I suggested worked.

FROM:dteal DATE:Friday, February 21, 2003 11:54:12 AM  
Fixed until I run into it again

|                                                    |
|----------------------------------------------------|
| Issue ID: 3976                                     |
| Subject: Schematic Profile and the end of the beam |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Teal, Dean 11/8/2002 3:15:19 PM   |
| Modified By: administrator 6/19/2008 4:05:17 PM |
| Priority: High                                  |
| Category: Bug - GUI 2                           |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, November 08, 2002 10:15:19 AM  
On the member Alt description we enter the end bearing locations, left & right. This will find the end of the beam in relation to the centerline of bearing. So now we have described the span length and the beam length. Two pair of abutment stiffeners have been added with one pair some distance from centerline of bearing on each side. This was done in the bearing stiffener location window using a pos.

4/19/2016 3:16:51 PM

HRS AASHTO

1314

**Complete Issue Information**

and a neg. distance. When viewing the schematics profile for a steel beam, the beam is not displayed past the end of the centerline of bearing (span length). So the very outside abutment bearing stiffener will appear to be displayed past (not on) the end of the beam.

The beam should be displayed in it's entirety to the end of the beam and not just to the centerline of bearing. The way it is done right now makes the user think they have made a mistake by seeing the bearing stiffener hanging out there not attached to anything.

View the schematic for the wizard alternative of member 2 for an example (attached)

FROM:jduray DATE:4/12/2005 2:34:59 PM  
Take care of R/C, Floor system & timber too.

Issue ID: 3993  
Subject: Only Administrator can log in to Virtis for Version 4.2

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Kennelly, Krisha 11/14/2002 7:56:18 PM  
Modified By: administrator 6/19/2008 4:05:17 PM  
Priority: Urgent  
Category: Unknown

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | Urgent   | Unknown  |
|                    | Resolved |          |          |
|                    | Closed   |          |          |

4/19/2016 3:16:51 PM

HRS AASHTO

1315

**Complete Issue Information**

|                    |        |        |         |
|--------------------|--------|--------|---------|
| Ordoobadi, Mehrdad | Closed | Urgent | Unknown |
|--------------------|--------|--------|---------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Beam-Top-Debond.bmp |             |

**Tasks**

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 3996.11359 | Suspended     | Allow debonding of PS strands in the center of a span |

**Description**

FROM:kkennelly DATE:11/14/2002 2:52:21 PM

Submitted on behalf of Stephen Lee, via phone call. His phone # is 816-221-4225, ext 242.

Migrated from version 4.1 to 4.2. Can log on to Virtis4.2 when "administrator" log in is used but cannot log in when other users ids are used (including bridgeware, bridgeware). Gets error message "Unable to log on to data source". Sybase 7.0.

FROM:mordoobadi DATE:11/15/2002 9:25:45 AM

I called and left a message for Mr. Stephen Lee on 11/15/2002.

FROM:mordoobadi DATE:11/18/2002 8:43:23 AM

Stephen Lee called on 11/15/2002 and indicated that everything is working properly now.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 3996                                                 |
| Subject: Allow debonding of PS strands in the center of a span |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Kennelly, Krisha | 11/15/2002 2:44:06 PM |

4/19/2016 3:16:52 PM

HRS AASHTO

1316





**Complete Issue Information**

be debonded at the end of the strands, not the center of the strands.

Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
Coraopolis, PA 15108  
(412) 269-7914

FROM:jduray DATE:11/15/02 4:42:44 PM  
We are to prepare an estimate for the TF.

|                                               |
|-----------------------------------------------|
| Issue ID: 4001                                |
| Subject: MSDE Installation can be more robust |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Ihnat, Joseph    | 11/15/2002 9:25:11 PM |
| Modified By: administrator     | 6/19/2008 4:11:15 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:11/15/2002 4:22:13 PM  
The MSDE installation fails if the sp\_addlogin or sp\_attach\_db have already been done. These conditions can probably be caught so that the installation can continue.

FROM:jihnat DATE:3/4/2003 3:45:19 PM

4/19/2016 3:16:52 PM

HRS AASHTO

1318

## Complete Issue Information

Done for Version 5.0.0 Beta Build 6.

|                                                   |
|---------------------------------------------------|
| Issue ID: 4015                                    |
| Subject: Report definition cannot be saved if the |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 11/19/2002 3:15:54 PM |
| Modified By: administrator     | 6/19/2008 4:11:14 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

### History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | Assigned    | High     | Bug - GUI 2 |
|                 | System Test |          |             |
| Duray, Jim      | System Test | High     | Bug - GUI 2 |

4/19/2016 3:16:52 PM

HRS AASHTO

1319

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 4028.13317 | Resolved      | BrassImport and BarsImport can't connect to Access database |

### Description

FROM:jduray DATE:11/19/02 9:47:44 AM

The report definition files written by 4.1 and 4.2 do not contain the report type attribute. It should be added and the logic for handling the file version needs to be improved to inform the user of the automatic conversion.

Issue ID: 4028

Subject: BrassImport and BarsImport can't connect to Access database

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Ihnat, Joseph

11/21/2002 3:55:43 PM

4/19/2016 3:16:52 PM

HRS AASHTO

1320

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:11:13 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Unknown     |
| Goodrich, Brian | Assigned    |          | Bug - BRASS |
|                 | Open        |          |             |
|                 | System Test |          |             |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Incident 4035.bbd   |             |

**Tasks**

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 4035.13310 | System Test   | BRASS moments incorrect when point of interest is very near a hinge |

**Description**

FROM:jihnath DATE:11/21/2002 10:51:57 AM

Reported by New Mexico State University (Nick, 505-646-3035):

The BrassImport and BarsImport programs are unable to connect to the Access database. The "Unable to Initialize System" message box appears.

FROM:hlee DATE:11/22/2002 1:40:29 PM

Fixed in Version 5.0 for both BarsImport and BrassImport.

**Complete Issue Information**

Issue ID: 4035  
Subject: BRASS moments incorrect when point of interest is very near a hinge

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 11/22/2002 9:01:00 PM  
Modified By: administrator 6/19/2008 4:11:13 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:11/22/2002 3:53:46 PM  
User sent me attached bridge questioning moments from BRASS. I answered his question ok but while playing around with some input changes I noticed the following effects on the dead load moments produced by BRASS. Girder G7 has 2 member alts.

Member alt G07 has following:  
hinge data input in Virtis is as follows:  
Hinge at 5.32291' to the right of Support 2 ( = 7.1% into Span 2)  
Hinge at 5.33' to left of Support 2 which equates to 65.86' into Span 3 ( = 92.5% into Span 3)

point of interest data input in Virtis is as follows:  
a. 5.5432' into Span 2 ( = 7.4% into Span 2)

4/19/2016 3:16:53 PM

HRS AASHTO

1322

### Complete Issue Information

BRASS produces output for this point calling it Point No. 2.074 in the BRASS output.

b. 65.86' into Span 3 (=92.5% into Span 3)

BRASS produces output for this point calling it Point No. 3.925 in the BRASS output.

The following BRASS output was obtained for the Stage 1 dead load near hinges:

#### ACTIONS AND DISPLACEMENTS FOR GIRDER WEIGHT

| Point  | Moment                                                           |
|--------|------------------------------------------------------------------|
| 2.000R | -28.3                                                            |
| 2.074  | 1.1 Hinge is to just left of here, moment = zero like it should. |
| 2.100  | 10.4                                                             |

| Point  | Moment                                           |
|--------|--------------------------------------------------|
| 3.9000 | 7.4                                              |
| 3.925  | 0.0 Hinge is here, moment = zero like it should. |
| 3.100L | -24.7                                            |

That all looks ok but I noticed the following when I copied the member alt to G07 with POI to very left of hinge:

I added a poi at span 2 5.32', right and get the following moments from BRASS:

| Point  | Moment                               |
|--------|--------------------------------------|
| 2.000R | -99.1                                |
| 2.071  | -64.9 Hinge is to very right of here |
| 2.074  | -63.6                                |
| 2.100  | -52.2                                |

| Point  | Moment                                           |
|--------|--------------------------------------------------|
| 3.9000 | 7.7                                              |
| 3.925  | 0.0 Hinge is here, moment = zero like it should. |
| 3.100L | -25.7                                            |

The \*.dat files produced by the export are identical except for the additional POINT OF INTEREST and INTERMEDIATE OUTPUT commands.

FROM:bgoodrich DATE:Friday, January 24, 2003 6:03:11 PM

I suspect BRASS is replacing the hinge node with a point of interest node because they are so close together and the POI is located left of the hinge. BRASS should retain the hinge node above POI.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 11:35:52 AM

WYDOT has assigned this issue to BRASS Problem Log 395.

FROM:bgoodrich DATE:Friday, January 31, 2003 1:03:33 PM

This issue has been addressed in BRASS-GIRDER 5.8.6, which will be released with Virtis 5.0. The DLL will be forwarded soon.

### Complete Issue Information

Issue ID: 4050  
Subject: Need to designate directories for BRASS temporary and output files.

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 11/27/2002 5:12:21 PM  
Modified By: administrator 6/19/2008 4:11:12 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 4060.13285 | Resolved      | 2 DII's being loaded for abobrdg and abostld |

### Description

FROM:jduray DATE:11/27/02 12:12:30 PM

Paul Jensen called to report that Virits has problems running if the user has a secured account. The temporary and output files that BRASS creates and the report definitions cannot be written to directories where the exe's are stored because XP default security sets those directories to read-execute.

FROM:hlee DATE:7/14/2005 12:51:19 PM

Duplicate of Incident 648.



## Complete Issue Information

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4060                                        |
| Subject: 2 Dll's being loaded for abobrdg and abostld |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 12/6/2002 2:51:48 PM |
| Modified By: administrator     | 6/19/2008 4:11:11 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:12/6/2002 9:54:00 AM

Open a BWS for a steel bridge, use HandleEx.exe to see that 2 dll's are loaded for abobrdg and abostld. If abobrdg.tlb and abostld.tlb exist anywhere on the pc, those tlb files are loaded instead of the

4/19/2016 3:16:53 PM

HRS AASHTO

1325

**Complete Issue Information**

duplicate dll files.

FROM:jduray DATE:12/6/02 1:37:19 PM

I confirmed that this also occurred with 4.1. I suspect it has been there since 2.0. I think it is loading the dll the second time to get tlb info that is in the dll.

FROM:mordoobadi DATE:12/9/2002 10:18:26 AM

The following are my findings about this issue:

- (1) When an Object is loaded into memory the corresponding DLL is loaded twice and the two instances of the DLL stay in memory as long as the object is in memory.
- (2) After the object is freed one instance of the DLL is removed from memory and the other stays in memory until the system calls DllCanUnloadNow function inside the Dll. The DllCanUnloadNow is called from OnIdle function. If there are no other objects allocated inside the DLL the DLL can unload.
- (3) The two instances of the DLL are different. One is the actual DLL and the other one is smaller and is marked with an MM.
- (4) The instance of the DLL that unloads first is the one that is marked with MM. It probably contains information about objects that are allocated inside that DLL.
- (5) When a window with an ABxEdit control is opened the behavior is the same as the domain DLLs. Two instances of ABxEdit.ocx get loaded into memory. Then when the window is closed one gets unloaded and the other one stays in memory until the OnIdle function determines that ABxEdit.ocx is not needed.
- (6) One exception is the ABeData.dll. I only see one instance of the DLL loaded.

We concluded that this is the normal behavior and there is nothing to worry about.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4112                                      |
| Subject: Customized input and output file locations |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Duray, Jim      |                       |
| Submitted By: Ordoobadi, Mehrdad | 12/17/2002 7:23:58 PM |
| Modified By: administrator       | 6/19/2008 4:11:07 PM  |
| Priority: High                   |                       |
| Category: Enhancement            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Suspended |      | Enhancement |
|            | Duplicate |      |             |
| Duray, Jim | New       | High | Unknown     |
|            | Assigned  |      | Bug         |
|            | Resolved  |      |             |
| Duray, Jim | Resolved  | High | Bug         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RptTool.bmp         |             |

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 4122.13223 | Resolved      | Inconsistent information on Report Tool window. |

**Description**

FROM:mordoobadi DATE:12/17/2002 2:08:10 PM

This is requested by Mr. Jeff Lindholm from Massachusetts Highway Department.

Since Massachusetts Highway Department has restrictions for the users to create or to change files on C: drive. Jeff suggested adding the capability of selecting the target folder for the input and output files by the users in preferences window.

FROM:hlee DATE:7/14/2005 12:50:23 PM

Duplicate of Incident 648.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 4122                                           |
| Subject: Inconsistent information on Report Tool window. |

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Lee, Herman      | 12/20/2002 4:16:02 PM |
| Modified By: administrator     | 6/19/2008 4:11:06 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned |          | Bug         |
|                    | On Hold  |          | Bug - GUI 2 |
|                    | Resolved |          |             |
|                    | Closed   |          |             |
| Ordoobadi, Mehrdad | Closed   | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 4131.13214 | Closed        | Bridge Explorer - Missing Bridges |

**Description**

FROM:hlee DATE:12/20/2002 10:35:22 AM  
After clicked OK for the message "The file D:\Virtis\main\BWS Report for ps girders.abr has been converted to the current Report Tool format version.", the Save button on the Report Tool window is disabled. But the window's title indicates the file has been changed. Please see attached bitmap.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 4131                             |
| Subject: Bridge Explorer - Missing Bridges |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Ordoobadi, Mehrdad |                        |
| Submitted By: Ordoobadi, Mehrdad    | 12/20/2002 10:27:06 PM |
| Modified By: administrator          | 6/19/2008 4:11:05 PM   |
| Priority: High                      |                        |
| Category: Bug - GUI 2               |                        |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mordoobadi DATE:12/20/2002 5:16:45 PM

The problem was reported first by Alabama DOT.

After they migrated from version 4.1.1 to 4.2.0 they were not able to see some 150 bridges that they used to see in 4.1.1.

We finally figured, it was because those 150 bridges were marked Design Bridges. The product that they use is VIRTIS only.

4/19/2016 3:16:54 PM

HRS AASHTO

1329

**Complete Issue Information**

We should have had the Design check box disabled in VIRTIS only product versions 4.1.1 and below (this is a bug).

There is a check in the program that prohibits viewing of Virtis only bridges in OPIS or Opis only bridges in VIRTIS. This check has caused the problem.

FROM:jduray DATE:2/4/03 12:27:08 PM  
Is this resolved?

FROM:mordoobadi DATE:2/26/2003 9:12:00 AM  
We discussed the issue in a meeting. We decided to add a technical note for this issue on the web site.

FROM:jduray DATE:3/10/03 9:05:53 AM  
Did we add the note? Can we close this incident?

FROM:jduray DATE:4/8/2005 11:35:37 AM

|                                      |
|--------------------------------------|
| Issue ID: 4133                       |
| Subject: effective flange width calc |

|                                   |                        |
|-----------------------------------|------------------------|
| Folder: /Virtis/Support Center    |                        |
| Primary Contact: Kennelly, Krisha |                        |
| Submitted By: Jones, Daniel       | 12/20/2002 11:09:02 PM |
| Modified By: administrator        | 6/19/2008 4:11:05 PM   |
| Priority: High                    |                        |
| Category: Bug - GUI 2             |                        |

**History**

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Bug         |
| Kennelly, Krisha | Information Needed |          |             |
|                  | Assigned           |          | Bug - GUI 2 |
|                  | Resolved           |          |             |

4/19/2016 3:16:54 PM

HRS AASHTO

1330

**Complete Issue Information**

|                   |          |      |             |
|-------------------|----------|------|-------------|
| Kennelly, Krishna | Resolved | High | Bug - GUI 2 |
|-------------------|----------|------|-------------|

**Contacts**

| Name       | Company                | Email 1             | Phone 1 |
|------------|------------------------|---------------------|---------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 4135.13210 | Suspended     | Shear Analysis engine |

**Description**

FROM:rfulton DATE:Friday, December 20, 2002 6:09:02 PM

When using the calculate button for effective flange width for an outside girder, it gave me the actual flange width instead of the effective. the bridge had 4 girders @ 7'4" spacing and a 2'6" overhang. the slab was 6.5 inches. actual = 74" and effective =  $6 \times 6.5 + 30 = 69$ ". Interior girder seemed to work correctly.

FROM:kkennelly DATE:1/3/2003 1:35:21 PM

Can you please export your bridge to a \*.bbd file and either attach the file to this incident or email it to me at kkennelly@mbakercorp.com so I can reproduce the problem? Thanks.

FROM:kkennelly DATE:1/14/2003 2:58:54 PM

Computation should consider s/6, etc. on each side of the web as per AASHTO 8.10.1.1

FROM:kkennelly DATE:1/24/2003 12:58:17 PM

FROM:kkennelly DATE:2/25/2003 11:08:45 AM

Fixed for Version 5.0, Beta 5.

Issue ID: 4135

Subject: Shear Analysis engine

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Pierce, Ron

12/26/2002 9:01:39 PM

Modified By: hlee

10/13/2009 5:16:24 PM

4/19/2016 3:16:55 PM

HRS AASHTO

1331

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: Urgent      |
| Category: Enhancement |

**History**

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Unknown     |
| Ihnat, Joseph   | On Hold         |          | Bug - GUI 2 |
|                 | Rejected by TAG |          |             |
| Ihnat, Joseph   | Rejected by TAG | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State   | Summary            |
|------------|-----------------|--------------------|
| 4166.13179 | Rejected by TAG | File Menu / Export |

**Description**

FROM:rpierce DATE:Thursday, December 26, 2002 4:01:40 PM

Prestressed Girder Shear Analysis codes. Currently, Virtis uses the 1980 Shear analysis engine. The 1979 method is used in Arizona. Brass girder can perform the 1979 method. The 1979 method can not be accessed from virtis. It would good if the system defaults could be changed to use the 1979 method.

FROM: Herman Lee DATE: 10/13/2009 1:15:03 PM Eastern Daylight Time

Resolved in 6.1 Release.



**Complete Issue Information**

|                             |
|-----------------------------|
| Issue ID: 4166              |
| Subject: File Menu / Export |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Ihnat, Joseph   |                      |
| Submitted By: Bhanushali, Girish | 1/6/2003 3:31:19 PM  |
| Modified By: administrator       | 6/19/2008 4:11:03 PM |
| Priority: High                   |                      |
| Category: Bug - GUI 2            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:gbhanushali DATE:1/6/2003 10:28:47 AM

While exporting the bridge from the file menu, hour glass cursor is missing.

## Complete Issue Information

Issue ID: 4171

Subject: Stringer Group Definition Geometry window - Computed Span Length grid

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Kennelly, Krisha

1/6/2003 6:51:07 PM

Modified By: hlee

7/17/2014 1:37:51 PM

Priority: High

Category: Enhancement

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Assigned  | High     | Unknown     |
| Duray, Jim       |           |          | Enhancement |
| Ihnat, Joseph    |           |          |             |
| Kennelly, Krisha |           |          |             |
| Ihnat, Joseph    | Suspended |          |             |
| Ihnat, Joseph    | Suspended | High     | Enhancement |
|                  | Resolved  |          |             |

4/19/2016 3:16:55 PM

HRS AASHTO

1334

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State   | Summary                    |
|------------|-----------------|----------------------------|
| 4200.13145 | Rejected by TAG | Fonts in XP not Consistent |

### Description

FROM:kkennelly DATE:1/6/2003 1:49:53 PM

Should be able to select span length cells in Computed Span Length grid so user can see all of the numbers behind the decimal. Keep read only.

FROM:kkennelly DATE:1/8/2003 10:51:10 AM

This grid is behaving like our current grids with ranges. For example, in the Deck Concrete grid, the End Distance is read only and is displayed showing 2 #'s past the decimal place. User could have entered a start distance and length with up to 6 #'s past the decimal place but user doesn't get to see that in the End Distance cell. This could be frustrating when dealing with tolerances and precision. Would be nice to have cells read only but selectable so you could see more significant digits.

We should find a way to allow this in all of our current grids and then this new grid we added for 5.0 will work better.

FROM:jihnat DATE:2/6/2003 3:49:10 PM

Removing the .SetEnabled(FALSE) call for this column will give this behavior.

Be aware, however, that "selectable" means that cell will be a tab stop.

In the GUI, we've always tabbed over the readonly cells. Not sure what the ramifications will be by making this a wholesale change.

FROM:jduray DATE:2/7/03 8:57:23 AM

We need to test all grids that are getting this new behavior. Charge to maintenance.

FROM:kkennelly DATE:2/10/2003 8:25:14 AM

I removed the .SetEnabled(False) for the column on the Stringer Group Definition Geometry window.

FROM:jduray DATE:2/19/03 9:01:13 AM

This is going to require too much testing to do for this release. Change to Suspended and do for future release when we have time to properly test.

FROM:hlee DATE:7/10/2006 8:50:01 AM

Changed Project to Support Center.

4/19/2016 3:16:55 PM

HRS AASHTO

1335

**Complete Issue Information**

FROM: Herman Lee DATE: 7/17/2014 9:32:41 AM Eastern Daylight Time  
 I believe this has been resolved.

|                                     |
|-------------------------------------|
| Issue ID: 4200                      |
| Subject: Fonts in XP not Consistent |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/13/2003 9:23:18 PM |
| Modified By: administrator     | 6/19/2008 4:11:00 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Bug         |
|                 | On Hold         |          |             |
|                 | Rejected by TAG |          | Bug - GUI 2 |
| Duray, Jim      | Rejected by TAG | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Monday, January 13, 2003 4:23:19 PM

When I change the fonts from normal to extra large not all fonts get changed. The window header and the left side of the explorer window change to the larger font. The active GUI window doesn't change size (ever). This is OK with me, but I don't think it is supposed to work that way.

FROM:jduray DATE:1/16/03 11:33:26 AM

4/19/2016 3:16:55 PM

HRS AASHTO

1336

## Complete Issue Information

This is a maintenance issue.

FROM:jduray DATE:1/16/03 11:34:21 AM

Issue ID: 4204  
Subject: DF calc beta5.0

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Jones, Daniel 1/14/2003 2:04:45 PM  
Modified By: administrator 6/19/2008 4:11:00 PM  
Priority: High  
Category: Bug

## History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Duray, Jim      | New              | High     | Bug      |
| Lee, Herman     | Assigned         |          |          |
|                 | Open             |          |          |
|                 | Not Reproducible |          |          |
| Lee, Herman     | Not Reproducible | High     | Bug      |

## Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

## Documents

4/19/2016 3:16:56 PM

HRS AASHTO

1337

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4213.13132 | Resolved      | Allowable plate girder shear computed incorrectly by BRASS |

**Description**

FROM:rfulton DATE:Tuesday, January 14, 2003 9:04:45 AM  
made model of simple steel stringers with 4' spacing and 3.5" timber deck. virtis calculated a DF = S/5.25 ( for a tmb deck 6" or thicker on stl str) virtis should have used DF = S/4.5

FROM:hlee DATE:1/15/2003 8:14:17 AM  
Cannot reproduce. I have steel girders with 4' spacing and 3.5" timber deck. Virtis calculated DF = S/4.5.

FROM:hlee DATE:1/15/2003 9:22:19 AM  
Checked with Robert. Calculation in Virtis is correct.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4213                                                      |
| Subject: Allowable plate girder shear computed incorrectly by BRASS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krishna  | 1/14/2003 5:12:18 PM |
| Modified By: administrator       | 6/19/2008 4:10:59 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:16:56 PM

HRS AASHTO

1338

### Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
| Duray, Jim         | New      | High | Unknown     |
| Goodrich, Brian    | Assigned |      |             |
| Duray, Jim         | New      | High | Bug         |
| Ordoobadi, Mehrdad | Assigned |      |             |
|                    |          |      | Bug - GUI 2 |
|                    | Resolved |      |             |
|                    | Accepted |      |             |
|                    | Closed   |      |             |
| Ordoobadi, Mehrdad | Closed   | High | Bug - GUI 2 |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 4219.13126 | Closed        | error trying to save a GENERIC APPURTENANCE |

### Description

FROM:kkennelly DATE:1/14/2003 12:11:16 PM

Submitted on behalf of Elizabeth Balcha, Bayside Engineering via phone and email:

Attached bridge, structure Spans 2-4, member G5. Span 1, 83.5' allowable shear computed by BRASS ASD doesn't match allowable computed by hand.

FROM:kkennelly DATE:1/14/2003 12:14:45 PM

1. The user has specified a point of interest at 83.5', right. The section properties I see in the BRASS output for the 5 tenths point of span 1 are actually for the section to the left of point 83.5'.

2. If I change the point of interest to the left of 83.5', I get the same section properties as when the poi was to the right of 83.5'. My hand calcs show the following should be the allowable shear stress to the left of the poi at 83.5'.

AASHTO 10.34.4.2

$$k = 5 + 5/(do/D)^2 = 5 + 5/(62.6/102)^2 = 18.275$$

$$7500*\sqrt{k}/\sqrt{Fy} = 7500*\sqrt{18.275}/(\sqrt{36000}) = 169$$

4/19/2016 3:16:56 PM

HRS AASHTO

1339





### Complete Issue Information

select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows."

So to use this work around you will need to:

1. Change the POI control option on the Member Alternative Description: Engine (BRASS ASD) to the 0 option (No point of interest data will be generated).
2. Create a point of interest at the points you want rated. (Your bridge is currently being rated for only 3 points of interest so the amount of work to use the work around for this member may not be a significant amount.)
3. At each point of interest, specify the stiffener spacing, lateral support, etc. data on each of the tabs of the Point of Interest window. Be sure to select "Account for combined shear and bending" on the ASD tab.

FROM: bgoodrich DATE: Monday, March 10, 2003 2:02:51 PM  
This issue has been addressed.

|                                                      |
|------------------------------------------------------|
| Issue ID: 4219                                       |
| Subject: error trying to save a GENERIC APPURTENANCE |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Barnhill, Gale        | 1/14/2003 6:17:37 PM |
| Modified By: administrator          | 6/19/2008 4:10:58 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:16:56 PM

HRS AASHTO

1341

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:gbarnhill DATE:Tuesday, January 14, 2003 1:17:37 PM  
created a new generic appurt  
OK  
clicked save workspace

Unable to save Bridge data!  
12:19:49 PM - Line 841 in source file D:\Virtis\GUI\ABGBRDG\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmConcRailing (SaveOrder object 106).  
12:19:49 PM - Line 431 in source file D:\Virtis\data management\abmbche\DmBridgeCache.cpp.

Error updating database record set.  
12:19:49 PM - Line 780 in source file D:\Virtis\data management\abmbrdg\DmConcRailing.cpp.  
State:23000,Native:-196,Origin:[Sybase][ODBC Driver][Adaptive Server Anywhere]  
Integrity constraint violation: Index 'XAK1abw\_conc\_railing' for table 'abw\_conc\_railing' would not be unique

I HAD THE NAME 'NEW' FOR A MEDIAN APPURT AND USED THE SAME NAME FOR THE GENERIC. I CHANGED THE NAME FOR THE MEDIAN TO NEW1 AND THEN SAVED OK.

FROM:kkennelly DATE:1/14/2003 2:05:54 PM  
In the database, the parapets, medians and generic appurtenances are stored in the same table. I think that is the correct behavior you should get except you are able to save 2 concrete materials with the same name. Any ideas Mehrdad?

FROM:mordoobadi DATE:1/16/2003 8:21:09 AM  
The problem is the name. It should be unique among all of the appurtenances for a bridge. We have an alternate key on the bridge\_id and name.  
For bridge materials and shapes unlike library items we do not have any restrictions on uniqueness of the name. This was a requirement.

Maybe for bridge appurtenance windows when the user hits apply or OK we should check for uniqueness of names before applying the changes to the domain. By doing this we can avoid the error. Which could be confusing to the users.

FROM:mordoobadi DATE:1/30/2003 11:55:46 AM  
Code added to Appurtenance windows to validate the uniqueness of the name before Apply or OK.

FROM:gbarnhill DATE:Tuesday, February 18, 2003 3:36:14 PM  
In 5.0.0 beta 4 - PARAPET, MEDIAN and GENERIC check for duplicate names, but RAIL does not. I see by the discussion above, that RAILS are apparently not in the same situation as the others. Is that what's intended ??

4/19/2016 3:16:56 PM

HRS AASHTO

1342

**Complete Issue Information**

FROM:gbarnhill DATE:Tuesday, March 25, 2003 10:21:03 AM

I'm satisfied with the way the program checks for duplicate names, even if RAILS don't have to be unique.

OK in beta 7

|                                  |
|----------------------------------|
| Issue ID: 4234                   |
| Subject: Column Depth Definition |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 1/14/2003 9:18:44 PM |
| Modified By: administrator        | 6/19/2008 4:10:57 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          | Education |
|                  | Resolved |          |           |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4234.13111 | Closed        | Column Depth Definition |

**Description**

FROM:dteal DATE:Tuesday, January 14, 2003 4:18:44 PM

4/19/2016 3:16:57 PM

HRS AASHTO

1343

**Complete Issue Information**

In the help for the Structure Framing Pan:Frame Connections, what is meant by Column Top Depth and Bottom Depth as shown below from the help file.

**Top Depth**

Enter the column depth at the top of the column. The depth is measured parallel to the structure definition reference line.

**Bottom Depth**

Enter the column depth at the bottom of the column. The depth is measured parallel to the structure definition reference line.

FROM:kkennelly DATE:2/10/2003 10:01:20 AM

The terms "Depth" and "Width" are used to describe the cross section properties of the column. If you look at the cross section of a rectangle it has a height and a width. We use the term "depth" instead of height to describe the column cross section because we thought it would be confusing for users to see "height" since the column we are describing also has a height. The structure definition reference line runs along the length of the structure (in the direction of traffic) and we use it as reference to determine which direction is the depth and which is the width.

FROM:dteal DATE:Friday, February 21, 2003 2:56:43 PM

|                                                  |
|--------------------------------------------------|
| Issue ID: 4236                                   |
| Subject: Shear Reinf. Spacing - range validation |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Mullins, Randall | 1/14/2003 9:47:30 PM |
| Modified By: administrator     | 6/19/2008 4:10:57 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Bug         |
| Kennelly, Krisha | Assigned  |          |             |
| Duray, Jim       |           |          | Bug - GUI 2 |
|                  | On Hold   |          |             |
|                  | Suspended |          | Enhancement |
|                  | On Hold   |          | Bug - GUI 2 |

### Complete Issue Information

|            |                 |      |             |
|------------|-----------------|------|-------------|
|            | Rejected by TAG |      |             |
| Duray, Jim | Rejected by TAG | High | Bug - GUI 2 |
| Duray, Jim | New             | High | Bug         |
|            | Suspended       |      | Enhancement |
| Duray, Jim | Suspended       | High | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4238.13107 | Suspended     | Explorer Window Columns |

### Description

FROM:rmullins DATE:Tuesday, January 14, 2003 4:47:31 PM

When placing shear reinf., if the spacing is incorrectly input such that the total length is greater than the beam length, then the left column goes to "0". At that point the summation of length is disconnected from the previous input.

FROM:jduray DATE:1/16/03 3:23:18 PM

Krishna - is this a new problem or has this been there in previous releases?

FROM:kkennelly DATE:1/16/2003 4:15:48 PM

FROM:kkennelly DATE:1/16/2003 4:16:50 PM

Randall showed me this problem. He said it was in previous versions also.

FROM:kkennelly DATE:1/16/2003 4:21:03 PM

I tested this in 4.2 and it was a bug then so I've changed the Project and version for this incident.

FROM:jduray DATE:4/12/2005 3:06:54 PM

Do not allow saving if stirrups are off the beam.

FROM:jduray DATE:4/12/2005 3:16:45 PM

Also fix other ranges similar to stirrups (stiffeners, diaphragms, floor systems, shear connectors).

FROM:jduray DATE:4/13/2005 3:30:07 PM

When the changed cell loses focus do not ripple the change if any item ends up off the beam. We will

4/19/2016 3:16:57 PM

HRS AASHTO

1345

### Complete Issue Information

have to do the computations before changing the data to determine if items are off the beam. Issue a warning message if items are off the beam.

|                                  |
|----------------------------------|
| Issue ID: 4238                   |
| Subject: Explorer Window Columns |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/15/2003 1:19:00 PM |
| Modified By: administrator     | 6/19/2008 4:10:57 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, January 15, 2003 8:19:00 AM  
Gail and I talked about this enhancement request this AM. We would like to be able to select which columns are displayed and be able to re-position the columns in the Bridge Explorer.

FROM:hlee DATE:9/24/2007 2:45:24 PM  
Related to Incident 8158.

## Complete Issue Information

Issue ID: 4246

Subject: Structural vs Actual Deck Thickness

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

1/15/2003 3:16:07 PM

Modified By: administrator

6/19/2008 4:10:56 PM

Priority: High

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          |             |
| Duray, Jim       | On Hold  |          | Enhancement |
|                  | Discard  |          |             |
| Duray, Jim       | Discard  | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:16:58 PM

HRS AASHTO

1347

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 4250.13095 | Suspended     | U Beam Interior Diaphragm Load (Box beams also) |

**Description**

FROM:dteal DATE:Wednesday, January 15, 2003 10:16:08 AM

On PCITrainingBridge6 I changed the Structural thickness of the deck on the deck profile window to 20" and left the Total thickness on the Structural Typ. Section Deck (Cont) tab at 8". Validate gave no warnings, passed on to BRASS for analysis and ran to completion without any errors. Should it have done this or should it done a reality check first?

FROM:jduray DATE:1/22/03 9:53:32 AM

Add a check to the validation to warn the user if the structural thk is greater than the total thk.

FROM:kkennelly DATE:1/23/2003 2:52:04 PM

Other than verifying that there are no gaps or overlaps in things like flange ranges or deck ranges, etc. we don't do any reality checks anywhere in Virtis.

FROM:hlee DATE:4/30/2008 2:31:15 PM

Discarded by TAG 12/07.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 4250                                           |
| Subject: U Beam Interior Diaphragm Load (Box beams also) |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/15/2003 4:07:27 PM |
| Modified By: administrator     | 6/19/2008 4:10:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:16:58 PM

HRS AASHTO

1348



**Complete Issue Information**

|                  |          |        |           |
|------------------|----------|--------|-----------|
| Duray, Jim       | New      | High   | Bug       |
| Kennelly, Krisha | Assigned |        |           |
| Duray, Jim       | New      | Medium | Education |
| Goodrich, Brian  | Resolved |        |           |
| Goodrich, Brian  | Resolved | Medium | Education |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4272.13073 | Resolved      | Inventory/Operating Questions |

**Description**

FROM:dteal DATE:Wednesday, January 15, 2003 11:07:27 AM

The user has given the software everything it needs to know for the diaphragm weight but still has to get the calculator out to get the number. This should be calculated by the software.

FROM:jduray DATE:1/16/03 11:50:17 AM

Krisha - We need to discuss this.

FROM:kkennelly DATE:1/23/2003 4:30:42 PM

Good suggestion for an enhancement. We don't currently compute this value for a box beam either. Are the interior diaphragms always full depth?

Issue ID: 4272

Subject: Inventory/Operating Questions

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Goodrich, Brian    | 1/17/2003 10:49:58 PM |
| Modified By: administrator       | 6/19/2008 4:10:54 PM  |
| Priority: Medium                 |                       |
| Category: Education              |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | one void ps box.bmp |             |

### Tasks

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 4274.13071 | Resolved      | build2a - PS BOX BEAM shape - why ctr to ctr void for single void ? |

### Description

FROM:bgoodrich DATE:Friday, January 17, 2003 5:49:58 PM  
E-mail from Timothy Laurence:

Sir,

Attached is the bridge file. The Design Load is an H-15. After my brief phone conversation with you this morning, I did think of another question, so...

My questions are:

1) After analyzing the bridge and selecting a Member Alternative, I view the charts. I select to

4/19/2016 3:16:58 PM

HRS AASHTO

1350

## Complete Issue Information

Deflection-Live Load-Non composite-H15 44-Axle-Positive. And this gives me a deflection close to what was actually measured and hand calculated. However, my question is about the Critical (LFD) max & min deflections under Inventory and Operating. Where do these values come from?

2) The load rating of the bridge is very close to what is calculated, 9.94 for Inv and 16.6 for Opr. However, it says that the limiting state is the Ultimate Shear Capacity not Moment like calculated. In the hand calculations, the shear reinforcing does not come in the equations for determining Load Ratings, so why is this the limiting state?

Thanks for your help.

Timothy Lawrence, EI

FROM:bgoodrich DATE:Friday, January 17, 2003 5:52:18 PM  
Timothy,

I have reviewed your bridge and the analysis results.

Issue 1: The max & min deflections under Inventory and Operating represent the sum of the dead and live load deflections from all stages of construction, which are multiplied by the appropriate inventory or operating beta and gamma factors. For inventory, these factors would be  $1.3 * 1.0$  for dead and  $1.3 * 1.67$  for live. This is why the inventory deflections are higher than the live load deflections.

Issue 2: If you wish for shear to be ignored in the rating, you need to check the "Ignore shear" checkbox (lower right corner of window) for LFD on each Member Alternative Description window (Description tab). This will allow flexure to control the rating. However, when I did this the flexure ratings increased quite a bit. This issue may require some more investigation if you do not agree with the flexure ratings.

Regards,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Friday, January 17, 2003 5:56:53 PM  
E-mail from Timothy Lawrence:

I have another question about Virtis that I was hoping you can give me a quick answer for.

Percent effective, can this be changed or is it automatically 100%? The numbers that I am outputting are consistent with 100% effectiveness for the concrete structure. Does Pontis export data concerning this to Virtis? I know Pontis generates a sufficiency percentage based on NBI inspection data. Any help on this would be great.

FROM:bgoodrich DATE:Friday, January 17, 2003 5:57:07 PM

The percent of concrete area effective for shear can be set, but it must be done for each point of interest under the member alternative level in the tree. Note that Pontis does not export this analysis

4/19/2016 3:16:58 PM

HRS AASHTO

1351

## Complete Issue Information

information to Virtis. If you want BRASS to consider the percent effective value, there are items that you need to modify in Virtis. For each point of interest, all the shear override fields must be completed. Any stirrup schedule you may have entered will not be used by BRASS. To get the point of interest overrides to take effect, you will need to change the engine properties in the member alternative window. For the BRASS LFD engine, set the POI Control drop-down to option 0, which means that no point of interest data will be generated from the stirrup schedules, i.e., it will all come from the point of interest overrides. Note that we are working to address the override issue.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 4274                                                               |
| Subject: build2a - PS BOX BEAM shape - why ctr to ctr void for single void ? |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Barnhill, Gale   | 1/20/2003 3:04:05 PM |
| Modified By: administrator     | 6/19/2008 4:10:54 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:gbarnhill DATE:Monday, January 20, 2003 10:04:05 AM

Trying to create a PS Box shape with one circular void.

I have to input a center to center distance of voids that is equal to or greater than the void diameter.

Why ???

This also occurs in 4.2.

FROM:hlee DATE:1/22/2003 1:37:56 PM

This is an existing bug for PS box shape.

Shouldn't need to input center to center distance of voids.

4/19/2016 3:16:58 PM

HRS AASHTO

1352

**Complete Issue Information**

Fixed for Beta Build 4.

FROM:gbarhill DATE:Tuesday, February 18, 2003 3:33:19 PM  
Checked OK in beta 4

|                                                          |                      |
|----------------------------------------------------------|----------------------|
| Issue ID: 4279                                           |                      |
| Subject: Strand Layout Validation window can cause crash |                      |
| Folder: /Virtis/Support Center                           |                      |
| Primary Contact: Ihnat, Joseph                           |                      |
| Submitted By: Kennelly, Krisha                           | 1/20/2003 9:00:55 PM |
| Modified By: administrator                               | 6/19/2008 4:10:53 PM |
| Priority: High                                           |                      |
| Category: Bug - GUI 2                                    |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
|                 | Assigned |          | Bug         |
|                 |          |          | Bug - GUI 2 |
| Ihnat, Joseph   | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |

4/19/2016 3:16:59 PM

HRS AASHTO

1353

**Complete Issue Information**

|               |        |      |             |
|---------------|--------|------|-------------|
| Ihnat, Joseph | Closed | High | Bug - GUI 2 |
|---------------|--------|------|-------------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Stud Fail.bbd       |             |
|      | Stud Fail.JPG       |             |

**Tasks**

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 4295.13050 | Closed        | Negative Number for Shear Connectors Provided |

**Description**

FROM:kkennelly DATE:1/20/2003 3:52:47 PM

PCITrainingBridge1. Open Strand Layout window. Pick Left radio button, Modify and change debond location to 576" (1/2 of span from left end of beam). Click Ok to close Location dialog, click OK to close Strand Layout window. 2 windows appear, small one says "Errors were detected....." click yes to continue. Strand Layout Validation Summary window is still displayed. Move this window and then click Close to close it. Debug always asserts and crashes sometimes. Can't reproduce crash every time.

FROM:jihnata DATE:8/2/2005 3:39:48 PM

Fixed for 5.4.0

Issue ID: 4295

Subject: Negative Number for Shear Connectors Provided

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

1/27/2003 4:20:04 PM

Modified By: administrator

6/19/2008 4:10:52 PM

Priority: High

Category: Bug - BRASS

4/19/2016 3:16:59 PM

HRS AASHTO

1354

## Complete Issue Information

### History

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Unknown     |
|                 | Assigned        |          | Bug - GUI 2 |
|                 | On Hold         |          |             |
|                 | Rejected by TAG |          |             |
| Duray, Jim      | Rejected by TAG | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 48-1.bbd            |             |
|      | Incident4307.bbd    |             |

### Tasks

| Name       | Current State   | Summary                                                           |
|------------|-----------------|-------------------------------------------------------------------|
| 4307.13038 | Rejected by TAG | Member Alt Profile Schematic rounding lengths to different values |

### Description

FROM:dteal DATE:Monday, January 27, 2003 11:20:04 AM

Version 4.2.0

In attached bbd, Superstructure Definition Alternate 1, Member 2, Wide Beam Member Alt., Span 2 Stage 3, HL93 Analysis.

Spec 6.10.7.4.4 tells me that I have provided a -212 studs (negative number). See attached jpg for Spec Check 6.10.7.4.4 fail.

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:15:17 PM

WYDOT has assigned this issue Problem Log 400.

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:56:13 PM

This issue has been fixed in BRASS-GIRDER(LRFD) 1.5.2, which will be released with Opis 5.0.

FROM:dteal DATE:Friday, May 02, 2003 8:44:13 AM

4/19/2016 3:16:59 PM

HRS AASHTO

1355

**Complete Issue Information**

FROM: bgoodrich DATE: Wednesday, May 07, 2003 1:55:57 PM  
Track field marked with "Accepted". Incident Closed.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 4307                                                             |
| Subject: Member Alt Profile Schematic rounding lengths to different values |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Hart, Erich      | 1/31/2003 1:10:38 PM |
| Modified By: administrator     | 6/19/2008 4:10:51 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: kkennelly DATE: 1/31/2003 8:12:13 AM  
Submitted on behalf of Ming Teng via email:

I got two questions (please see attached file). The first one is why the beam span length and flange transitions are different in the schematics? And second one is how could I remove the welds in the stiffener tab (I knew that it is "Not used by BRASS LFD")? Detailed pictures are shown in the attached file. Thank you very much.

Regards,

Ken Teng

4/19/2016 3:16:59 PM

HRS AASHTO

1356



**Complete Issue Information**

RQAW Corp.  
(317) 255-6060 X 260

FROM:kkennelly DATE:1/31/2003 8:15:06 AM  
Attached bbds: 48-1.bbd is version 4.2. Incident4307.bbd is a similar brigde in Version 5.0.

FROM:jduray DATE:Tuesday, February 04, 2003 10:45:45 AM

|                                |
|--------------------------------|
| Issue ID: 4311                 |
| Subject: Deleting a User, How? |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 2/3/2003 1:30:00 PM  |
| Modified By: administrator          | 6/19/2008 4:10:50 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

**History**

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
|                    | Resolved |          |             |
|                    | Accepted |          |             |
|                    | Closed   |          |             |
| Ordoobadi, Mehrdad | Closed   | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:17:00 PM

**HRS AASHTO**

1357

### Complete Issue Information

|              |                                |                           |                |
|--------------|--------------------------------|---------------------------|----------------|
| Dean Teal    | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001  |
| David Koenig | Missouri DOT                   | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 4313.13032 | Resolved      | Profile schematic - memory leak |

### Description

FROM:dteal DATE:Monday, February 03, 2003 8:30:01 AM

How do you delete a User from the Users List? I have a User that has left. So in doing clean up I checked in all the bridges he had check out (3 bridges). Then I when to the all users list as the Administrator, highlighted the user name and selected delete for the pull down. The User name disappeared. I closed the Config Browser window and then reopened it, the user reappeared? I unchecked the users name from so he has no "check-out authorizations". User still reappears?

FROM:dkoenig DATE:Monday, February 03, 2003 12:31:24 PM

We have had this exact same problem in Missouri. I talked our IS people about several months back. I don't know that they ever talked with anyone about it at Michael Baker.

FROM:jduray DATE:2/4/03 12:16:19 PM

Mehrdad - please look at this resolve for beta 5.

FROM:jduray DATE:2/4/03 12:22:45 PM

I think this is the same as 3300.

FROM:mordoobadi DATE:2/19/2003 12:17:16 PM

The following is implemented:

Rules for deleting users:

- (1) A user cannot be deleted if he/she has events.
- (2) If a user owns private folders, those folders should be deleted before attempting to delete the user.
- (3) If a user has authorizations to check-out bridges, those authorizations should be revoked before attempting to delete the user.
- (4) A user is not allowed to delete himself/herself.
- (5) User Deletion Process
  - 5-a) Is user trying to delete himself/herself? If YES: Issue Error.
  - 5-b) Does user have any corresponding events? If YES: Issue Error. Recommend deactivating the user.
  - 5-c) Does user own private folders? If YES: Delete the folders.
  - 5-d) Is User authorized to check-out any bridges? If YES: Revoke authorizations
  - 5-e) Delete the user.

4/19/2016 3:17:00 PM

HRS AASHTO

1358

**Complete Issue Information**

FROM:dteal DATE:Friday, May 02, 2003 10:15:11 AM

I have a user that has retired – I have reviewed the “Rules for Deleting a User” – I am unable to delete this user because the user has events in the database. The error message suggested to deactivate the user instead of deleting him. Being this user has retired, are you telling me he is in our database forever??

How can I remove events in the database??

FROM:dteal DATE:Monday, May 05, 2003 2:14:33 PM

What are "events"? A search in the Help Topics turned up nothing?

FROM:mordoobadi DATE:5/23/2003 9:15:10 AM

Yes the user would stay in your database.  
The events record the changes made to bridges in your database.

One solution is to change the ID of the user in the event table to point to some other user. In order to do that you need to write SQL commands.

(1) SELECT person\_id, username FROM abw\_person;

PERSON\_ID USERNAME

-----

|   |               |                                         |
|---|---------------|-----------------------------------------|
| 2 | BridgeWare50s |                                         |
| 3 | VirtisUser    |                                         |
| 4 | VirtisMgr     |                                         |
| 5 | VirtisAdmin   |                                         |
| 6 | OpisUser      | <----- Transfer the events to this user |
| 7 | Virtis        |                                         |
| 8 | JohnSmith     | <----- retired user                     |

- (2) find the person\_id for the retired user from the results of step 1. (Here it's JohnSmith --> 8)
- (3) find the person\_id for the user that you want events be transfered to (suppose OpisUser here --> 6)
- (4) Write an SQL statement to transfer the events from RetiredUser to OpisUser.  
Like this:  
UPDATE abw\_event SET entered\_by = 6 WHERE entered\_by = 8;
- (5) COMMIT;
- (6) Start Virtis/Opis and delete the user.

If you are concerned about transferring the user events to some other user. You can create a new user account for all retired users and make it inactive then transfer the events of your currently retired user and all others who retire in the future to this retired users account. you do not need to add a database login for the retired users account.

FROM:dteal DATE:Friday, May 23, 2003 10:07:09 AM

FROM:mordoobadi DATE:5/23/2003 1:22:43 PM

I created incident 4618 to do this in the BridgeWareAdmin utility program.

Issue ID: 4313

### Complete Issue Information

|                                          |                      |
|------------------------------------------|----------------------|
| Subject: Profile schematic - memory leak |                      |
| Folder: /Virtis/Support Center           |                      |
| Primary Contact: Duray, Jim              |                      |
| Submitted By: Duray, Jim                 | 2/4/2003 5:12:27 PM  |
| Modified By: administrator               | 6/19/2008 4:10:50 PM |
| Priority: High                           |                      |
| Category: Bug - GUI 2                    |                      |

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Ihnat, Joseph    | Assigned |          | Bug - GUI 2 |
| Kennelly, Krisha |          |          |             |
| Ihnat, Joseph    | Resolved |          |             |
| Ihnat, Joseph    | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Bolt_Rivet.jpg      |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 4317.13028 | Resolved      | incorrect lable for bolt/riwet |

### Description

FROM:jduray DATE:2/4/03 12:13:09 PM

The reference count for the structure def is incremented too many times. Girder mbr and flr bm mbr cause leaks when the struct def is retrieved from the domain. Remove the Detach().

FROM:jduray DATE:2/4/03 12:15:49 PM

Fixed for 5.0 Beta 4.

4/19/2016 3:17:00 PM

HRS AASHTO

1360

**Complete Issue Information**

FROM:jduray DATE:2/5/03 9:32:25 AM

|                                         |
|-----------------------------------------|
| Issue ID: 4317                          |
| Subject: incorrect lable for bolt/rivet |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 2/4/2003 11:31:25 PM |
| Modified By: administrator     | 6/19/2008 4:10:50 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pjensen DATE:Tuesday, February 04, 2003 6:31:26 PM  
the screens on the builtup sections using rivets is miss labled in the cover top and cover bottom. attached is a screen shot of the problem for the top plate connection. The same hold true for the bottom.

4/19/2016 3:17:00 PM

HRS AASHTO

1361

### Complete Issue Information

FROM:jihnata DATE:2/6/2003 11:35:32 AM  
GUI updated for version 5.0.0 beta build 4.  
Krisha, the Help should be updated.

FROM:kkennelly DATE:2/10/2003 10:00:40 AM  
Help updated for beta 5

FROM:jihnata DATE:2/12/2003 10:14:49 AM  
I guess that does it, then.

|                              |
|------------------------------|
| Issue ID: 4318               |
| Subject: TN008 is incomplete |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Jensen, Paul          | 2/4/2003 11:36:49 PM |
| Modified By: administrator          | 6/19/2008 4:10:50 PM |
| Priority: Medium                    |                      |
| Category: Bug                       |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Medium   | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

4/19/2016 3:17:00 PM

HRS AASHTO

1362

### Complete Issue Information

|                    |          |        |             |  |
|--------------------|----------|--------|-------------|--|
|                    | Rejected |        |             |  |
| Ordoobadi, Mehrdad | Rejected | Medium | Bug         |  |
| Duray, Jim         | New      | High   | Bug         |  |
| Ihnat, Joseph      | Assigned |        | Bug - GUI 2 |  |
| Duray, Jim         |          |        |             |  |
| Kennelly, Krishna  |          |        |             |  |
| Duray, Jim         |          |        |             |  |
|                    | On Hold  |        |             |  |
|                    | Resolved |        |             |  |
|                    | Closed   |        |             |  |
| Duray, Jim         | Closed   | High   | Bug - GUI 2 |  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 4321.13024 | Closed        | Recent ADTT Returns Neg Number |

### Description

FROM:pjensen DATE:Tuesday, February 04, 2003 6:36:50 PM

Reading TN008 on upgrade, the information is not consistent with the information that Sybase is publishing. The intent of the upgrade utility is for updating the JDK of the database. This utility will allow the opening of the database in some third party products (V/O being one of them). To properly upgrade the database for 7.x.x RDBMSs, the user will need to use the unload/reload utility. This will insure the security and file format is properly updated. The use of this utility is documented in the admin guide.

I found out the hard way that this was an issue when I was creating the combined P/V/O database and need to use Sybase Central. The database would not open until I ran the unload/reload utility on the database. I also confirmed when I followed the tech note procedure and the DB utility made me upgrade thier way before I could use it.

FYI

FROM:mordoobadi DATE:2/7/2003 9:07:12 AM

4/19/2016 3:17:01 PM

HRS AASHTO

1363

**Complete Issue Information**

TN008 includes instructions on upgrading Sybase 5.5 to 8.0 not 7.0. I tried it. It works without any problems. I was able to open the upgraded database in Sybase Central (ASA 8.0). Paul If you have versions of ASA other than 8.0 you have to uninstall them and then install 8.0 as instructed in TN008. If you have more than one version of ASA (say 5.5 and 8.0), when you issue dbupgrad the system might execute the dbupgrad of the wrong version (SQL Anywhere 5.5). and the version of the DB file would stay unchanged.

Here is the description of DBUPGRAD in ASA help:

The dbupgrad command-line utility upgrades a database created with earlier versions of the software to enable features from the current version of the software. The earliest version that can be upgraded is Watcom SQL 3.2. While later versions of the database server do run against databases were created with earlier releases of the software, some of the features introduced since the version that created the database are unavailable unless the database is upgraded.

FROM:pjensen DATE:Monday, February 10, 2003 2:14:52 PM

If this is the case, when I opened the file in Sybase Central, the program asks me to upgrade by unload/load. It references the fact that it is still a 5.5 databse and not all of the fuctionality is available and it disconnects me from the database. The only way I was able to get into Central and admin the db was to use the unload/load utility.

FROM:mordoobadi DATE:2/13/2003 3:15:46 PM

Paul, do you have different versions of Sybase SQL Anywhere on your PC?

|                                         |
|-----------------------------------------|
| Issue ID: 4321                          |
| Subject: Recent ADTT Returns Neg Number |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/6/2003 3:39:16 PM  |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 4322.13023 | Closed        | Recent ADTT and Percent Trucks |

### Description

FROM:dteal DATE:Thursday, February 06, 2003 10:39:16 AM

Version 4.2.0 and 5.0 beta 3

If you enter a large number for Recent ADTT it will return a negative number. Not when you "Apply" or "OK" but you will only see it if you OK the screen and then open the screen back up again.

If you enter 32767 it will be ok.

If you enter 32768 it returns -32768.

If you enter 32769 it returns -32767.

If you enter 32770 it returns -32766 and so on.

We have well over 600 entered in Virtis. Many of these structures may have negative numbers in the ADTT field. When this is fixed, how will the existing structures in the database be fixed? Will the migration script for the database take care of this?

FROM:jduray DATE:2/6/03 11:31:04 AM

We need to determine if the data type in the database and C++ code is short or long. If it is a short then the true value is lost.

FROM:jihnat DATE:2/6/2003 11:41:29 AM

This is a short.

We should have -32768/32767 or 0/32767 (or something) for the min/max in the data dictionary (for all of our "short" items).

FROM:jduray DATE:2/7/03 8:39:56 AM

What is a reasonable limit for this value?

FROM:dteal DATE:Friday, February 07, 2003 8:46:46 AM

The answer to that question depends on how Incident #4322 is answered (ADT or ADTT)

FROM:kkennelly DATE:2/7/2003 4:15:25 PM

This value can be any number, it should be a long.

FROM:dteal DATE:Tuesday, March 28, 2006 3:24:47 PM

Accepted 5.4 beta 7

Issue ID: 4322

Subject: Recent ADTT and Percent Trucks

**Complete Issue Information**

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 2/6/2003 3:40:02 PM  |
| Modified By: administrator          | 6/19/2008 4:10:50 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
| Kennelly, Krisha   | Assigned           |          |          |
|                    | Resolved           |          |          |
| Kennelly, Krisha   | Resolved           | High     | Bug      |

**Contacts**

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | trideck.bbd         |             |

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 4323.13022 | Resolved      | Doctor Watson Error when using SI units |

**Description**

FROM:dteal DATE:Thursday, February 06, 2003 10:40:02 AM

Is there an error here? The GUI calls for ADTT (avg daily truck traffic) and right below it ask for Truck PCT (truck percentage value used to compute the ADTT).

From the help it states:  
Recent ADTT

4/19/2016 3:17:01 PM

HRS AASHTO

1366

## Complete Issue Information

Enter a recent value for the average daily truck traffic (ADTT) in one direction on the bridge.

Truck PCT

Enter the truck percentage value used to compute the ADTT.

Shouldn't the GUI have Recent ADT and not ADTT?

And shouldn't the help state "average daily traffic (ADT)" instead of truck traffic. As it is the Truck PCT doesn't make sense.

One should be the Avg Daily Traffic (ADT) and the other should be the truck percentage used to compute the ADTT.

FROM:kkennelly DATE:2/7/2003 4:23:41 PM

Virtis and Opis have had the ADTT on the Bridge Description window since either version 2.0 or 2.1.

For Version 4.2 we added the truck percentage to this window based on the requirements for the integration with Pontis database. In reviewing the Bridgeware Integration document, it appears we may have missed including the ADT from Pontis on this window.

I think we should keep the ADTT since users may already have data entered. We should probably also add the ADT to this window and then the truck percentage could be used to compute the ADTT for the user.

However, I am not totally convinced that the pontis roadway.adtttotal we mention in the Bridgeware integration document can really be used to compute the ADTT since ADTT should be in one direction, from the name of the "roadway.adtttotal" I'm not sure it is one way (See incident 3836)

FROM:jduray DATE:4/12/2005 4:25:12 PM

Change the label to read: "Design ADTT"...note in the release notes. We have been using this value in the export to BRASS as the Design ADTT. BRASS uses this for fatigue.

FROM:sboukamp DATE:7/11/2005 3:15:38 PM

During LRFR Factor implementation the following was decided:

- new tab Traffic on Bridge window -> with input for TruckPCT, ADT, Directional PCT, Recent ADTT and Design ADTT

(-> this change removes the input for Recent ADTT and Truck PCT from Bridge Descr. tab)

- Truck PCT and ADT come from Pontis (if bridge is associated with Pontis).

- Recent ADTT can be computed for user = TruckPCT\*ADT\*DirectionalPCT

- Design ADTT is what we previously called Recent ADTT on Bridge Descr. tab.

Resolved for 5.4 Release

FROM:kkennelly DATE:7/27/2005 9:51:25 AM

I think we need a script for 5.4 to move the previously entered Recent ADTT to the Design ADTT field. Verify with Jim.

FROM:mordoobadi DATE:4/11/2006 3:10:01 PM

SQL scripts added to the Migration Scripts to move the recent adtt to design adtt. (5.4 Beta 8)

FROM:jihnath DATE:4/12/2006 11:09:06 AM

Sample bridges also should be using Design ADTT instead of Recent ADTT.

FROM:mordoobadi DATE:4/12/2006 1:17:24 PM

4/19/2016 3:17:01 PM

HRS AASHTO

1367

**Complete Issue Information**

Sample bridges updated.

FROM:dteal DATE:Wednesday, April 19, 2006 2:47:46 PM

Not sure if I understand what is supposed to happen here with the migration.

In 5.3.1 I have Recent ADTT as 20000

After migration to 5.4 beta 8 we have Recent ADTT as 0 and Design ADTT as 20000.

Why is recent ADTT set to zero with the migration? In 5.3.1 we don't have any of the ADT or the Directional PCT to arrive at the value for Recent ADTT , therefore this value will always be zero after the migration. Is this the way we want this to work?

FROM:dteal DATE:Monday, February 26, 2007 11:42:21 AM

In light of the changes that have been made to the "Traffic" tab I think we can close this incident, as Accepted.

two other incidents have been added (VI #7672 & 7673)

|                                                  |
|--------------------------------------------------|
| Issue ID: 4323                                   |
| Subject: Doctor Watson Error when using SI units |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Jensen, Paul        | 2/6/2003 3:51:00 PM  |
| Modified By: administrator        | 6/19/2008 4:10:50 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pjensen DATE:Thursday, February 06, 2003 10:51:00 AM

4/19/2016 3:17:01 PM

HRS AASHTO

1368

## Complete Issue Information

I have been trying to insert into the database PS-Tbeam desing. The units for this bridge is SI. When I have been trying to save the data to the database, V/O crashes. This happens for all of the of the typical section tabs. The workaround currently is to change the units to US and save. In addition, the strand layout screens are experiancing the same problem.

Additional to the program crashing, the schematic diagrams are not drawing correctly.

I have attached a BBD with the data to this point.

FROM:pjensen DATE:Thursday, February 06, 2003 11:03:59 AM  
BTW I tried this on both ASA 8.0.2 and Oracle 8.1.7.3 with Windows 2Ksp2.

FROM:mordoobadi DATE:2/6/2003 2:08:11 PM  
Paul, I do not understand. Could you please write down the steps I should take to duplicate the crash? Here is what I did:  
I imported the BBD file and saved. Bridge's system of unit was SI and structure def's system of units was US. Then I opened the bridge and changed structure system of units to SI and saved. No crash.

FROM:pjensen DATE:Friday, February 07, 2003 10:47:24 AM  
add a new record in the median tab using SI then save- I get a crash

FROM:mordoobadi DATE:2/11/2003 3:30:11 PM  
I was able to reproduce it.  
Krisha, the crash happens in the domain when validating.

Here is the code fragment at line 11411 of file DoGirderMbrAlt.cpp that causes the crash

```
for(int i = 1; i <= iNumSpans; i++)
{
    // Each span can have a different beam assigned to it.
    bDeckInc = FALSE;
    DoSpanPtr = DoPsPrecastTeeBeamDefPtr->GetSpan(i);
    dSpanEndDistance += pdArraySpanLengths[i-1];

    LPDISPATCH lpShapeDisp;
    lpShapeDisp = DoSpanPtr->GetPsShapeDef();           <----- Crash here
    IDoPsTeeShapePtr DoPsTeeShapePtr;
    ....
}
```

Before the crash the program ASSERTs at lline 11360

```
if(DoSupportDetailsSetPtr->MoveFirst())
{
    short iCount = 0;
    short iNumSupports = DoSupportDetailsSetPtr->GetCount();

    ASSERT(iNumSupports == iNumSpans + 1);           < ----- Asserts
    ....
}
```

4/19/2016 3:17:01 PM

HRS AASHTO

1369

**Complete Issue Information**

could you please investigate this.

FROM:kkennelly DATE:2/12/2003 10:16:49 AM

I can reproduce this problem in 4.2 for our steel training bridge 1. Open Structure Typical Section window, open Parapet tab, change units to SI, OK to close window. Save bridge. Open the G1 member window and see that it now has an extra span it.

Crash is new to 5.0 and that is fixed. Still working on why extra span added.

FROM:kkennelly DATE:2/12/2003 10:21:57 AM

FROM:kkennelly DATE:2/12/2003 11:25:42 AM  
Structure Typical Section fixed for Version 5, Beta 5.

I think the problem you experienced in the Strand Layout window was due to the geometry of the members being messed up by the actions on the Structure Typical Section window. I could reproduce a crash after saving after the Strand Layout window before I made the changes to the Structure Typ Section but I can't reproduce it after fixing the Structure Typical Section window. So I think the Strand Layout window issue is also resolved.

|                                  |
|----------------------------------|
| Issue ID: 4327                   |
| Subject: Validate Not Consistent |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/7/2003 3:36:07 PM  |
| Modified By: administrator     | 6/19/2008 4:10:49 PM |
| Priority: High                 |                      |
| Category: Bug - Domain 2       |                      |

**History**

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | On Hold  |          | Bug - Domain 2 |
|                  | Resolved |          |                |
| Ihnat, Joseph    | Closed   |          |                |
| Ihnat, Joseph    | Closed   | High     | Bug - Domain 2 |

## Complete Issue Information

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State   | Summary                                                                      |
|------------|-----------------|------------------------------------------------------------------------------|
| 4345.13000 | Rejected by TAG | PS Beam Properties - Inconsistency between Help and what we compute for user |

### Description

FROM:dteal DATE:Friday, February 07, 2003 10:36:08 AM

In the attached bbd – highlight the Superstructure Definition “Design MEF” and select validate from the toolbar. You will get 1 error message on shear studs overlapping. Close the validate window and do it again, now you will get 3 error messages for overlapping shear studs. Shouldn't it give 3 error messages each time?

FROM:jihnata DATE:7/1/2005 2:44:52 PM

For future testing, I've attached a 5.3.0 version of the BBD file.

Fixed for version 5.4.0

(Not sure why you feel it should always be 3 error messages. How about zero?)

FROM:dteal DATE:Tuesday, March 28, 2006 4:31:38 PM

Accepted 5.4 beta 7

FROM:jihnata DATE:3/29/2006 7:07

Issue ID: 4345

Subject: PS Beam Properties - Inconsistency between Help and what we compute for user

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Kennelly, Krisha

2/10/2003 7:09:07 PM

Modified By: administrator

6/19/2008 4:10:48 PM

Priority: High

Category: Bug

4/19/2016 3:17:02 PM

HRS AASHTO

1371

## Complete Issue Information

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |
|                 | Closed |          |          |
| Duray, Jim      | Closed | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 4349.12996 | Closed        | PS Beam Shapes St Venant torsional constant |

### Description

FROM:kkennelly DATE:2/10/2003 2:05:26 PM

PS Beam Propertis tab - For Half Depth Area for Pos. flex and Half Depth area for neg. flex the help says "Enter the area of longitudinal mild steel in the flexural tension side of the beam in the negative moment region. The flexural tension side of the beam is taken as one-half the overall depth of the beam." This would correspond to  $A_s$  in equation 5.8.3.4.2-1 in the AASHTO specs.

But when you use the compute button on the window we compute the half depth area of the concrete beam which corresponds to  $A_c$  in equation 5.8.3.4.2-3.

FROM:jduray DATE:Thursday, February 13, 2003 11:24:13 AM

FROM:jduray DATE:4/12/2005 4:37:34 PM

Check what the PennDOT programs and the spec need for this. Change accordingly. BRASS is not using this value.



**Complete Issue Information**

|                                                      |
|------------------------------------------------------|
| Issue ID: 4349                                       |
| Subject: PS Beam Shapes St Venant torsional constant |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 2/11/2003 1:28:32 PM |
| Modified By: administrator     | 6/19/2008 4:10:48 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |
|                 | Accepted  |          |             |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4360.12985 | Resolved      | Bridge Exchange Enhancement |

**Description**

FROM:kkennelly DATE:2/11/2003 8:29:53 AM

Properties tab for the ps beams has attribute "St. Venant torsional constant" with units of in^4. The compute button computes this constant such that it is unitless.

FROM:kkennelly DATE:2/11/2003 10:02:11 AM

Never mind, compute button produces value in correct units.

4/19/2016 3:17:02 PM

HRS AASHTO

1373

**Complete Issue Information**

|                                      |
|--------------------------------------|
| Issue ID: 4360                       |
| Subject: Bridge Exchange Enhancement |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Ordoobadi, Mehrdad | 2/12/2003 7:13:25 PM |
| Modified By: administrator       | 6/19/2008 4:10:47 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:2/12/2003 2:08:47 PM  
Originally requested by Paul Jensen in Incident #4354. (Item 6)

4/19/2016 3:17:02 PM

**HRS AASHTO**

1374

**Complete Issue Information**

The process requires that the person that exchanged the data out is the one that exchanges the data back in. If the user as admin or manger privilege, that user should be able to bring back ANY exchange data. If this is not the case, the data admin will need to change the REPOSITORY by hand and risk limbo data.

Here is the resolution:

We add a feature to Virtis/Opis for user's with certain privileges (Administrators) to be able to impersonate another users. By doing this those users would be able to check-in a bridge that is checked-out by another user. They can also complete the exchange of a bridge that another user originated.

FROM:jduray DATE:12/2/2005 11:46:45 AM

This should be an option for the privilege that enables checkout for a user. It should function for both checked out bridges and bridges checked out for exchange. The current capability in the admin utility is too drastic plus it is desired the feature be implemented in Virtis.Opis.

FROM:jduray DATE:12/2/2005 3:24:22 PM

FROM:xli DATE:3/24/2006 10:33:49 AM

Tested with 5.4 Beta 7.

FROM:hlee DATE:7/10/2006 3:19:39 PM

Changed Status to Resolved.

|                                          |
|------------------------------------------|
| Issue ID: 4362                           |
| Subject: Save Analysis Events – Location |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/14/2003 8:33:30 PM |
| Modified By: administrator     | 6/19/2008 4:10:47 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Suspended |      | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |
| Duray, Jim | New       | High | Bug         |
|            | Resolved  |      | Education   |
|            | Closed    |      |             |
| Duray, Jim | Closed    | High | Education   |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 4364.12981 | Closed        | Units in the Report Tool |

**Description**

FROM:dteal DATE:Friday, February 14, 2003 3:33:31 PM

When you "Save the Analysis Events" is there any way to save them locally? Or do they always get saved to the database? I wouldn't mind if a user filled up his own drive with saved data, but we can't have him filling up the database.

FROM:jduray DATE:2/18/03 10:14:05 AM

They always get saved to the db.

FROM:dteal DATE:Thursday, February 20, 2003 9:37:47 AM

Would it be feasible to consider this enhancement. Capability to save an analysis to your local drive instead of the database. We just can't give users the ability to save to the database – the size would become uncontrollable.

FROM:jduray DATE:7/13/2004 11:39:10 AM

|                                   |
|-----------------------------------|
| Issue ID: 4364                    |
| Subject: Units in the Report Tool |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

**Complete Issue Information**

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Teal, Dean    | 2/14/2003 8:34:36 PM |
| Modified By: administrator  | 6/19/2008 4:10:46 PM |
| Priority: High              |                      |
| Category: Education         |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 4366.12979 | Resolved      | Incorrect effective flange width for right exterior girder. |

**Description**

FROM:dteal DATE:Friday, February 14, 2003 3:34:36 PM

When working with the Report Tool – how do you switch between units, SI/USC

FROM:jduray DATE:2/18/03 10:28:59 AM

The report tool uses the units assigned to the item. For example, for a member alt and anything in the member alt branch of the tree the units are based on the mbr alt.

## Complete Issue Information

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 4366                                                       |
| Subject: Incorrect effective flange width for right exterior girder. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 2/17/2003 3:13:57 PM |
| Modified By: administrator     | 6/19/2008 4:10:46 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:2/17/2003 10:03:49 AM

For TrainingBridge1, calculated effective flange widths for the right exterior girder are not the same as the left exterior girder.

FROM:hlee DATE:2/17/2003 4:58:54 PM

Fixed for Beta Build 5.

## Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 4381                                    |
| Subject: beta 4 - knee braces for "deck" type gfs |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Barnhill, Gale        | 2/20/2003 10:32:57 PM |
| Modified By: administrator          | 6/19/2008 4:10:45 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
|                    | Assigned |          |             |
| Ordoobadi, Mehrdad |          |          | Enhancement |
|                    | Resolved |          |             |
|                    | Accepted |          |             |

4/19/2016 3:17:04 PM

HRS AASHTO

1379

### Complete Issue Information

|                 |                    |  |      |             |
|-----------------|--------------------|--|------|-------------|
|                 | Closed             |  |      |             |
| Duray, Jim      | New                |  | High | Bug         |
| Goodrich, Brian | Assigned           |  |      | Bug - BRASS |
|                 | Open               |  |      |             |
|                 | Information Needed |  |      |             |
|                 | Closed             |  |      |             |
| Goodrich, Brian | Closed             |  | High | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 4389.12956 | Closed        | Ductility – 5.7.3.3.1 – BRASS Values Question |

### Description

FROM:gbarnhill DATE:Thursday, February 20, 2003 5:32:57 PM

If I can use knee braces to indicate brace points for a "through" gfs, why can't I have them in a "deck" gfs.

For a non-composite member, I think it's normal to place a gusset type brace from the top of the floorbeam to the main girder web.

FROM:jduray DATE:2/21/03 10:35:51 AM

Can you provide a sketch of the knee brace for the deck gfs?

FROM:jduray DATE:2/21/03 11:35:22 AM

Need to be able to indicate where floorbeams provide lateral support for the girder. Perhaps on the Floorbeam Member Locations dialog.

FROM:jduray DATE:2/21/03 11:37:09 AM

Also may need a way to indicate points of lateral bracing for the floorbeams.

FROM:kkennelly DATE:3/7/2003 11:07:19 AM

Jim discussed proposed changes to Floorbeam Member Locations window in attached pdf for users to

4/19/2016 3:17:04 PM

HRS AASHTO

1380



**Complete Issue Information**

specify which fb's brace the girder with Ken and decided to add the attributes to the database now but not implement them in the gui for Version 5.0.

Mehrdad, add 2 new attributes to abw\_fsys\_floor\_beam\_mbr\_loc named something like "brace\_girder\_top\_flange\_ind" and "brace\_girder\_bot\_flange\_ind". Assign back to Jim after you're done.

FROM:mordoobadi DATE:3/17/2003 12:18:50 PM  
Fixed for 5.0 Acceptance build.

FROM:gbarnhill DATE:Monday, April 07, 2003 12:20:14 PM  
OK in Release 5.0.0

FROM:mordoobadi DATE:5/14/2003 2:32:44 PM  
Accepted by Gale.

FROM:hlee DATE:7/10/2006 10:02:08 AM  
Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 4389                                         |
| Subject: Ductility – 5.7.3.3.1 – BRASS Values Question |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/21/2003 7:16:08 PM |
| Modified By: administrator       | 6/19/2008 4:10:45 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:dteal DATE:Friday, February 21, 2003 2:16:09 PM

In PS concrete beam design how are the values for "de" and "c" derived. I don't think the "de" that BRASS uses includes the slab like it should and I can't figure out where "c" comes from.

This question became important when looking at how many times the spec checker fails in ductility, over and under reinforced.

FROM:bgoodrich DATE:Friday, February 28, 2003 4:51:44 PM

WYDOT has assigned this issue to BRASS Problem Log 410. Incident 4316 will also be included in this problem log as it pertains to the same specification article.

FROM:bgoodrich DATE:Tuesday, October 21, 2003 6:30:40 PM

WYDOT authorized this issue on 10/16/03.

The "c" value is determined as outlined in the flexural resistance calculations (5.7.3.2). The "de" value is calculated as outlined in the maximum reinforcement calculations (5.7.3.3.1). BRASS performs the maximum reinforcement calculations for each stage. I wonder if you were looking at the non-composite stage when you suggest that the slab thickness is not considered. Please forward the appropriate BBD file, the name of the member alternative in question, and the POI you are reviewing. Note that Incident 4316 pertains to addressing possible problems in determining the area of prestress, which may be the same reason you are receiving fails for the maximum reinforcement checks.

FROM:dteal DATE:Thursday, October 23, 2003 10:27:28 AM

The problem has been resolved. Refer to VI #3633: Can only use one rebar yield stress for the entire structure. We use one rebar yield stress for mild rebar in the slab and also use a much higher yield stress for the rebar that we can continuity steel. (To simulate extended strands). I have discovered that this doesn't work.

FROM:bgoodrich DATE:Thursday, October 23, 2003 12:48:23 PM

Dean indicated the incident has been resolved, so I am setting the stated to closed.

Issue ID: 4395

Subject: Incorrect effective flange width computation for PS I beams with wide top flanges

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha

2/25/2003 2:24:59 PM

Modified By: administrator

6/19/2008 4:10:44 PM

Priority: High

Category: Bug

### History

4/19/2016 3:17:05 PM

HRS AASHTO

1382

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Bug         |
|                 | Assigned  |          | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | T-14 LRFD Design Specs<br>6.10.8.1.31.doc |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 4403.12942 | Suspended     | Stiffener or Frame Connector Plate |

### Description

FROM:kkennelly DATE:2/25/2003 9:22:11 AM

The Compute button on the Deck Profile window does not correctly compute the effective flange width for PS I Beams with wide top flanges.

As per AASHTO 9.8.3.3, the third criteria for the effective flange width is (3) one-half the clear distance on each side of the effective web width plus the effective web width.

The compute button is currently evaluating criteria (3) simply using the 1/2 the beam spacing.

FROM:kkennelly DATE:2/25/2003 9:57:16 AM

Fixed for Version 5.0, beta 6.

**Complete Issue Information**

|                                             |
|---------------------------------------------|
| Issue ID: 4403                              |
| Subject: Stiffener or Frame Connector Plate |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/27/2003 8:31:18 PM |
| Modified By: administrator     | 6/19/2008 4:10:44 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          | Enhancement |
| Lee, Herman      | Resolved |          |             |
|                  | Accepted |          |             |
| Lee, Herman      | Accepted | High     | Enhancement |

**Contacts**

| Name          | Company                 | Email 1                 | Phone 1       |
|---------------|-------------------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech              | gale.barnhill@aecom.com | (402)363-9515 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com   |               |

**Documents**

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Computed Distribution Factors.pdf |             |

**Tasks**

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 4417.12928 | Accepted      | beta 5 - LL distribution factors for main girders - need to allow 2 |

**Complete Issue Information**

lanes in 18 ft roadway

**Description**

FROM:dteal DATE:Thursday, February 27, 2003 3:31:18 PM

When entering data for a rolled beam we as a rule enter Transverse Intermediate Stiffeners to be used as connector plates. Pairs on the interior girders and singles on exterior girders. On a rolled beam these are NOT intermediate stiffeners but only frame connector plates. The LRFD spec check is going to check them as intermediate stiffeners and fail them on the exterior girder line do to a low moment of inertia value. You can ignore the RED Fails on the Spec Check but it would be much cleaner if they never appeared. A rolled beam is going to fail in moment long before any shear needs to be checked.

If you leave the connector plates off the input data and run an analysis everything will work just fine. But now the structure is missing the size of the plates used for the connections. Somebody down the road will have to dig the plans out to look up this info.

The best solution would have been to call them stiffeners for welded plates and connector plates for rolled beams. And then use the Spec Check accordingly.

FROM:dteal DATE:Friday, February 28, 2003 8:29:02 AM

Don't you think there should be a check to see if Intermediate Stiffeners are needed first, if not needed why check them? Or, if using a rolled beam consider them as connector plates and not stiffeneres.

FROM:jduray DATE:2/28/03 9:17:33 AM

Perhaps there should be a check box on the stiffener ranges window to indicate the connnection plates should be ignored?

FROM:dteal DATE:Friday, February 28, 2003 1:48:09 PM

See Attached document

Issue ID: 4417  
Subject: beta 5 - LL distribution factors for main girders - need to allow 2 lanes in 18 ft roadway

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Barnhill, Gale 3/3/2003 12:39:46 AM  
Modified By: administrator 6/19/2008 4:10:42 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:17:05 PM

HRS AASHTO

1385

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | F14N.bbd            |             |

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 4433.12912 | System Test   | Consecutive parabolic ranges in reinforced concrete members |

### Description

FROM:gbarnhill DATE:Sunday, March 02, 2003 7:39:46 PM

I appears the compute buttons cut off at 24 ft for 2 lane distribution factor calcs.

Per the Std spec 3.6.3, 20 to 24 ft should have two equal lanes.

Per the MANUAL FOR CONDITION EVALUATION OF BRIDGES 6.7.2.2, this should be further reduced to 18 ft.

FROM:jduray DATE:Monday, March 03, 2003 8:01:41 AM

We are working on this. Krishna prepared a description of what we have been doing for this and what you are proposing for the TF to review.

FROM:kkennelly DATE:3/7/2003 11:18:33 AM

Jim discussed with Ken and they decided to add a user preference to let the user pick if they want to follow AASHTO Std Spec 3.6.3 or the Manual for Condition Evaluation of Bridges 6.7.2.2. Won't be done for Version 5.0 initial release though.

FROM:gbarnhill DATE:Friday, March 07, 2003 12:34:04 PM

I agree with adding the Preference settings.

FROM:hlee DATE:6/11/2003 10:07:00 AM

In 5.0.1.

FROM:gbarnhill DATE:Monday, June 23, 2003 5:56:02 PM

5.0.1-beta-OK for Girder Systems

See Inc 4654 for Gird-FB-Str systems.

FROM:hlee DATE:7/10/2006 10:02:23 AM

Changed Project from Beta Testing/GUI/Bridge Workspace to Support Center.

**Complete Issue Information**

Issue ID: 4433

Subject: Consecutive parabolic ranges in reinforced concrete members

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krisha

3/4/2003 1:10:56 PM

Modified By: administrator

6/19/2008 4:10:41 PM

Priority: High

Category: Bug - BRASS

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Suspended |          |             |
| Goodrich, Brian | Suspended | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | bridge.bbd          |             |

**Tasks**

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 4440.12905 | Suspended     | Clarification on different ratings obtained for two symmetrical points. |

**Description**

FROM:kkennelly DATE:3/4/2003 8:12:01 AM

Submitted on behalf of Mac Hasan, Colorado, via email:

4/19/2016 3:17:06 PM

HRS AASHTO

1387

## Complete Issue Information

Structure F-14-N, except for one girder, fails to perform the required rating due to web depth variations between the user and calculated values. Is there any way we may be able to set the vertical tolerance i.e., normal to the longitudinal axis of the member in Virtis?

I have attached the bbd file for your information.

FROM:kkennelly DATE:3/4/2003 8:14:21 AM

FROM:bgoodrich DATE:Thursday, March 13, 2003 4:02:24 PM  
WYDOT assigned this issue to BRASS Problem Log 418.

FROM:bgoodrich DATE:Monday, March 24, 2003 4:51:22 PM  
This issue has been addressed in both BRASS-GIRDER and BRASS-GIRDER(LRFD) for the Virtis/Opis 5.0 release. The web depth tolerance was increased to 0.1 inches.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 4440                                                                   |
| Subject: Clarification on different ratings obtained for two symmetrical points. |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: xu, han            | 3/4/2003 8:49:46 PM  |
| Modified By: administrator       | 6/19/2008 4:10:41 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:hxu DATE:Tuesday, March 04, 2003 3:49:46 PM  
Dear Sir or Madam:

4/19/2016 3:17:06 PM

HRS AASHTO

1388



## Complete Issue Information

I am writing to obtain a clarification on some of the results from a Virtis run used for a bridge rating. This bridge is two span continuous with 7 beams. All beams are symmetrical with respect to the support pier at the middle of the bridge with minor variation to the transverse stiffeners spacing on both sides of the pier. Engineering considerations lead to the selection of girders No. G2 and G7 for rating. The rating was performed at all the section transition points and at the 0.375 and the 0.75 of the spans.

Since the beams are symmetrical and the truck is run in both directions the rating of symmetrical points of interest are expected to be similar. For the ASD rating, all the symmetrical points of interest had similar ratings as expected. For the LFD rating, all the symmetrical points of interests got similar rating except for the two symmetrical points corresponding to the 0.75 of span 1 and 0.25 of span 2. The rating for these two points were considerably different and were controlled by shear stress for span 1 and flexural stress for span 2.

After examining the output files from the runs of these two points for girder G2, it became apparent that for the point of 0.75 of span 1 the controlling inventory R.F. (4.7482) was from the strength rating of shear under combined shear and bending interaction. For the point of 0.25 of span 2 the controlling inventory R.F. (6.5498) was from the strength rating of flexure without interaction of shear and bending. It was also observed that for the 0.75 of span 1 point "negative action" was considered when calculating the strength rating of shear under combined shear and bending. This resulted in the selection of the negative shear from the LL shear envelop (-48.67 kips) to be considered with the concurrent LL moment. When calculating the strength rating of shear under combined shear and bending for the 0.25 point of span 2, the "negative action" was also considered which again resulted in the selection of the negative shear from the LL shear envelop (-8.51 kips) to be combined with the concurrent LL moment. Obviously the absolute values of shears used for the rating of the two points are significantly different which may account for the fact that shear controlled for the first point but not for the second. The reason for considering "negative action" for the shear rating under combined shear and moment for both points is not fully understood.

As mentioned earlier, due to the symmetry of the beams and the fact that the truck is run in both directions, one would expect the rating of these two symmetrical points to be similar. Could you please clarify the reason for the difference of ratings for these two symmetrical points?

Thanks

FROM:hxu DATE:Tuesday, March 04, 2003 4:03:40 PM

FROM:hxu DATE:Tuesday, March 04, 2003 4:26:08 PM  
P.S. The truck used for the LFD rating is AASHTO's HS 20.

FROM:bgoodrich DATE:Friday, March 07, 2003 5:42:08 PM  
I have forwarded this issue to WYDOT

FROM:bgoodrich DATE:Tuesday, March 11, 2003 6:51:02 PM  
WYDOT assigned this issue to BRASS Problem Log 417.

FROM:bgoodrich DATE:Thursday, March 20, 2003 5:44:08 PM

4/19/2016 3:17:06 PM

HRS AASHTO

1389

**Complete Issue Information**

Summary of e-mail from Dan Glandt:

At this time, BRASS does not carry dual cross section properties to handle moment reversal for composite structures, which is on the list of BRASS enhancements. A work around that will show the symmetry is to run the analysis twice. Once with a Section Type code of 4 for both the 1.75 and the 2.25 and another with a code of 5 for both the 1.75 and the 2.25. This will also show that for moment, code 4 is more critical. 4.36 vs 7.0 for strength and 5.34 vs 7.30 for service. However, these values should not control the rating of the bridge.

The Section Type codes can be controlled from Virtis by adjusting contraflexure locations on the member alternative engine properties. The contraflexure locations are used to generate the STEEL-GIRDER-CONTROL command, which includes the Section Type code. Code 4 indicates a region where dead load moment is positive, while a code 5 indicates a region where dead load moment is negative. The BRASS export generates the Section Type code accordingly for the regions left, right, and in between contraflexure locations.

This issue has been suspended for now.

FROM:bgoodrich DATE:Tuesday, October 28, 2003 1:03:28 PM  
This issue was placed on the BRASS Enhancement List.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:12:02 AM  
See Incidents 3059 and 4860 also.

|                                                      |
|------------------------------------------------------|
| Issue ID: 4443                                       |
| Subject: Section Properties of Prestress Beam Shapes |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ha, Binh         | 3/6/2003 6:38:27 PM  |
| Modified By: administrator     | 6/19/2008 4:10:40 PM |
| Priority: High                 |                      |
| Category: Enhance BRASS        |                      |

**History**

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
|                 | Resolved  |          | Enhancement   |
|                 | Assigned  |          | Enhance BRASS |
|                 | Suspended |          |               |

4/19/2016 3:17:07 PM

HRS AASHTO

1390

### Complete Issue Information

|                  |           |      |               |
|------------------|-----------|------|---------------|
|                  | Discard   |      |               |
| Duray, Jim       | Discard   | High | Enhance BRASS |
| Duray, Jim       | New       | High | Unknown       |
| Kennelly, Krisha | Assigned  |      | Bug           |
| Ihnat, Joseph    | Suspended |      | Enhancement   |
| Ihnat, Joseph    | Suspended | High | Enhancement   |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 4465.12880 | Suspended     | BWS Tree - nails after deck window |

### Description

FROM:bha DATE:Thursday, March 06, 2003 1:38:28 PM

Bridge Section - MassHighway mostly use New England Bulb Tee not AASHTO-PCI Bulb Tee for bridge construction, the shapes of NEBT are different than AASHTO-PCI Bulb Tee so we are not able to use Dimensions tab to input the dimensions in order to be used by BRASS LFD engine for computing the section properties precisely. (The difference of section properties computed by BRASS LFD based on the dimensions entered on the Dimensions tab and the accurate computing methods are significant)

Because the BRASS LFD does not use any of the section properties entered on this tab, so we do not know how to solve the problems. I suggest we may use the input (by user) on the Properties tab to be used for analysis.

Enclosed is the NEBT drawing and the section properties (AutoCad drawing).

Please respond to this problem as soon as possible. Thank you

FROM:kkennelly DATE:3/6/2003 3:43:19 PM

The request to use the data on the Properties tab in Virtis has been made before and unfortunately I don't think it is going to be implemented any time soon. Maybe the following will help in the meantime.

The standard drawing for NEBT 1000 shows the following values

Area                      lx                      yb

4/19/2016 3:17:07 PM

HRS AASHTO

1391



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 4466.12879 | Resolved      | Null data in user's database |

### Description

FROM:kkennelly DATE:3/13/2003 8:57:12 AM

(From incident 4457. See that incident for attachments, bbd files, etc.)

The nail section with decks is not in a good workflow. The user must go down the tree to put the nail value in before finishing the nail lam deck properties. The program will not run if this value is not set (seems a little odd to me since we are rating not designing).

FROM:jduray DATE:3/13/03 2:52:40 PM

Joe - how long would it take to add an option to the nail dropdown in the deck window to create a new nail (which is lower in the tree)?

FROM:jduray DATE:3/19/03 9:37:42 AM

Joe says a few days - since this is a significant effort we cannot do it at this time. This will be addressed as an enhancement for a future release.

FROM:hlee DATE:7/10/2006 8:50:33 AM

Changed Project to Support Center.

Issue ID: 4466

Subject: Null data in user's database

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Kennelly, Krisha

3/13/2003 3:33:02 PM

Modified By: administrator

6/19/2008 4:10:39 PM

Priority: High

4/19/2016 3:17:08 PM

HRS AASHTO

1393

## Complete Issue Information

Category: Bug - GUI 2

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Medium   | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | Medium   | Bug      |

## Contacts

| Name           | Company                 | Email 1                   | Phone 1      |
|----------------|-------------------------|---------------------------|--------------|
| Jordi Parisian | Wilbur Smith Associates | jparisian@wilbursmith.com | 518-783-1887 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 4475.12870 | Resolved      | initial passwords |

## Description

FROM:kkennelly DATE:3/13/2003 11:29:16 AM

Submitted on behalf of David Koenig, Missouri DOT via email. David responded to an email I sent him in response to incident 4310. That incident was his db had appurtenances in it that had NULL for the appurtenance id. Following is part of his email:

For your benefit, we have had one previous problem with getting invalid data in our database. The other incident involved getting an invalid timestamp on structures. We traced this problem to a specific computer. We ended up updating some drivers on this machine to fix the problem. The timestamp issue was an Oracle problem.

Another thing that we have noticed on occasions is that data that has been selected in some windows will disappear. We have not reported this, but it may be related to the above problems. The main example of this happening has been on the windows where you put the plate sizes in for plate girders. It has happened in other situations, but I can't remember which windows they were. This problem only occasionally shows up. What happens is that a previously selected material for a plate will get blanked out. When you save, the program flags the error. If you go back to that window, the material that had been selected and saved will show as a blank. To get rid

4/19/2016 3:17:08 PM

HRS AASHTO

1394

**Complete Issue Information**

of the problem, we have to delete the plates and reenter them. This is something that has showed up in the last six months or so. I think the appurtenance window may have been one of the other areas where this was happening, but I am not one hundred percent sure on this.

Also, I was wondering if there would be some way to scan our database for invalid data. It may be that there is other data out there that we just have not found at this point. Doing this might offer some clues as to what is causing the incident problem as well as the other one mentioned above.

FROM:mordoobadi DATE:3/12/2004 12:16:39 PM  
Related top 4971, 4972.

|                            |
|----------------------------|
| Issue ID: 4475             |
| Subject: initial passwords |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Parisian, Jordi       | 3/17/2003 4:34:50 PM |
| Modified By: administrator          | 6/19/2008 4:10:38 PM |
| Priority: Medium                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jparisian DATE:Monday, March 17, 2003 12:34:50 PM

Upon first time using Virtis 4.2.0, I can't login as a rating engineer, Username: Virtisuser, Password: virtisuser. I'm setup using the MSDE stand alone database and am able to access as an administrator, Username: Virtis, Password: virtis. My question is whether I even need to access Virtis as a rating

4/19/2016 3:17:08 PM

**HRS AASHTO**

1395

**Complete Issue Information**

engineer or if I can just go ahead and rate bridges as an administrator.

FROM:jduray DATE:3/20/03 9:49:40 AM

You can rate bridges as an administrator if you are not concerned with security issues.

FROM:mordoobadi DATE:3/21/2003 11:03:18 AM

With an MSDE database the only users that are valid and have database login are BridgeWare and Virtis.

If you need to add users please refer to Virtis/Opis Help topic: "Adding Users to the Virtis/Opis Database" section "Adding Users to MSDE/SQL Server 7.0".

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 4484                                                             |
| Subject: Which MSDE system DSN to use, create new, Virtis42, or Virtis42s? |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Parisian, Jordi       | 3/19/2003 3:17:55 PM |
| Modified By: administrator          | 6/19/2008 4:10:37 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Urgent   | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

4/19/2016 3:17:08 PM

HRS AASHTO

1396



### Complete Issue Information

|                    |                  |        |         |
|--------------------|------------------|--------|---------|
|                    | Closed           |        |         |
| Ordoobadi, Mehrdad | Closed           | Urgent | Bug     |
| Duray, Jim         | New              | High   | Unknown |
| Lee, Herman        | Assigned         |        | Bug     |
|                    | Not Reproducible |        |         |
| Lee, Herman        | Not Reproducible | High   | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | virtisproblem.bbd   |             |

### Tasks

| Name       | Current State    | Summary                  |
|------------|------------------|--------------------------|
| 4504.12841 | Not Reproducible | Problems with Demo only? |

### Description

FROM:jparisian DATE:Wednesday, March 19, 2003 11:17:55 AM

I recently started to use VIRTIS for the first time and am running into some difficulty. I work for a consultant to the NYSDOT. They have an oracle database where they keep all VIRTIS data. We, as consultants, are required to choose our own database and then just export the .bbd files to send to the NYSDOT. My problem is that I've installed the MSDE for a stand alone workstation. Now when I initially log in, I'm not sure as to what SQL server I should be rating our bridges on. I'm not allowed to log onto a local server as any user. I can log on as an administrator, Virtis/virtis (Username/Password) to the other 2 choices but I'm not sure what the difference is between the Virtis42 or the Virtis42s SQL. Should I be creating a new database that will show up in the list of system DSN's with Virtis42 & Virtis42s to start rating our own NY bridges? If not then which DSN, Virtis42 or Virtis42s, should our NY bridges be rated in?

FROM:mordoobadi DATE:3/21/2003 11:10:55 AM

The difference between Virtis42 (Production database) and Virtis42s (Sample Database) is not much. Virtis42 has the same bridges as Virtis42s. But the bridges in Virtis42 are marked as template bridges. That means you can copy them and modify them so that they match the bridge description that you want.

You can pick either one of the databases to save your bridges in. Most of the people use the production database [Virtis42) to enter bridge information and use the sample database for testing.

Issue ID: 4504

Subject: Problems with Demo only?

**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 3/24/2003 4:47:48 PM |
| Modified By: administrator     | 6/19/2008 4:10:36 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category               |
|-----------------|----------|----------|------------------------|
| Duray, Jim      | New      | High     | Unknown                |
|                 | Assigned |          | Bug                    |
|                 |          |          | Maintenance            |
| Duray, Jim      | Closed   | High     | Maintenance            |
|                 | Closed   |          | Maintenance - Internal |

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4508.12838 | Closed        | Installing Virtis 4.2 Release - MSDE on Windows XP |

**Description**

FROM:jhnat DATE:3/24/2003 12:46:12 PM  
Submitted via email:

I have experienced several problems with the program. I am like to know if the problems are because is a demo or not.

1. Unable to save agency vehicles or temporary vehicles. Vehicles are erased once I exit the program.
2. When using pre-stressed girder line system or girder system, once I

4/19/2016 3:17:09 PM

HRS AASHTO

1398

**Complete Issue Information**

go to the pre-stress beam detail tab the girder specified under the beam shape for pre-stress does not appear.

3. I did review the examples that are with the program and I can not find any difference that will cause it to not recognize the girder shapes.

Thank you

OSIRIS QUINTANA  
Triangle Associates Inc.

FROM:hlee DATE:3/26/2003 7:54:25 AM  
Attached bbd is in 4.1.0.3002 format.

Response e-mail:

=====

Hi Osiris,

Your request has been posted as VI 4504. Please refer to this number for further assistance.

I'm not able to reproduce the reported problems in the Demo version. Suggestions are listed below:

1. When creating a new vehicle, remember to specify whether the vehicle is for ASD/LFD rating and/or LRFD rating. Also, you have to hit the Save to Agency button in order to save the temporary vehicle into the Agency library.
2. Member alternatives 1B and 9D are defined as "PS Precast Box". The only PS shapes that you have created is an I shape. That's the reason why the drop-down box for the prestress beam in the Beam Details window is empty.

Let me know if you need additional information.

Regards,  
Herman Lee

=====

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 4508                                              |
| Subject: Installing Virtis 4.2 Release - MSDE on Windows XP |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Bhanushali, Girish | 3/25/2003 7:25:18 PM |
| Modified By: hlee                | 5/17/2010 2:03:00 PM |
| Priority: High                   |                      |
| Category: Maintenance - Internal |                      |

4/19/2016 3:17:09 PM

HRS AASHTO

1399

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 4512.12834 | Resolved      | Report Tool doesn't restore tree when groups are added |

### Description

FROM:gbhanushali DATE:3/25/2003 3:21:46 PM  
During the installation following errors were reported ,

1. SQLConfigDataSource Failed!
2. Driver's ConfigDSN, ConfigDriver, or ConfigTranslator failed

FROM:jduray DATE:3/28/03 8:23:09 AM  
Windows XP issue.

## Complete Issue Information

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 4512                                                  |
| Subject: Report Tool doesn't restore tree when groups are added |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 3/26/2003 2:14:12 PM |
| Modified By: administrator     | 6/19/2008 4:10:35 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          |             |
| Goodrich, Brian  |          |          | Bug - BRASS |
|                  | Resolved |          |             |
| Goodrich, Brian  | Resolved | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S-25-026 (1WF).bbd  |             |

## Tasks

| Name       | Current State | Summary                                                                                   |
|------------|---------------|-------------------------------------------------------------------------------------------|
| 4514.12832 | Resolved      | Rating factor at harp point of a PS beam is equal zero beause of tolerance issue or else? |

## Description

FROM:jduray DATE:3/26/03 10:16:13 AM  
Beta 7  
Used the steel abr file.

4/19/2016 3:17:09 PM

HRS AASHTO

1401

**Complete Issue Information**

Works ok in debug build.  
Problem existed in 4.2.

FROM:jduray DATE:3/26/03 3:03:14 PM

FROM:jihnat DATE:3/27/2003 3:05:03 PM  
Fixed for the 5.0.0 Release.

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 4514                                                                                     |
| Subject: Rating factor at harp point of a PS beam is equal zero beause of tolerance issue or else? |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 3/26/2003 6:10:35 PM |
| Modified By: administrator       | 6/19/2008 4:10:35 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bha DATE:Wednesday, March 26, 2003 2:10:36 PM

4/19/2016 3:17:09 PM

HRS AASHTO

1402

**Complete Issue Information**

Bridge Section - MassHighway

We have rated a lot of PS AASHTO Beam bridges, the rating factors at harp points are OK except one bridge (.bbd file enclosed)the rating factors are all zero. But we exactly know the harp point location is not the control element for the rating.

We do not know the problem which belongs to tolerance issue or else? Please investigate and give us the solution. Thanks

FROM:kkennelly DATE:3/28/2003 11:25:08 AM

I ran member B1 and see in the BRASS output that at poi 103.987 (the harp point) the stresses printed out when checking AASHTO 9.15.2.2 are listed as "\*\*\*\*\*". I added points of interest to the very left and right of this harp point and the stresses printed out when checking this AASHTO spec appear ok. I don't know why the stresses can't be computed at the harp point.

FROM:bgoodrich DATE:Monday, April 07, 2003 10:41:59 AM

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, April 07, 2003 12:31:25 PM

After running this bridge with the new version of BRASS-GIRDER released with Virtis 5.0, the stresses are now computed and rating factors greater than 1.0 are reported.

Issue ID: 4516  
Subject: Library Import and Export - show progress meter in window

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Ordoobadi, Mehrdad 3/26/2003 9:45:40 PM  
Modified By: administrator 6/19/2008 4:10:35 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:17:10 PM

**HRS AASHTO**

1403

**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
|               | Suspended |      | Enhancement |
| Duray, Jim    | New       | High | Bug         |
| Ihnat, Joseph | Assigned  |      | Enhancement |
|               | Suspended |      |             |
| Ihnat, Joseph | Suspended | High | Enhancement |

**Contacts**

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | mem def in tree.bmp |             |

**Tasks**

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 4520.12826 | Suspended     | Show member def assigned to Str Mem Alt and FB Mem Alt in the tree |

**Description**

FROM:mordoobadi DATE:3/26/2003 5:37:43 PM

Import of the old library shapes take a long time and the user would not know whether the program is stuck or it is processing the import.

It would be nice if we show a progress meter and also process windows messages so that the Virtis/Opis application windows refresh themselves.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 4520                                                              |
| Subject: Show member def assigned to Str Mem Alt and FB Mem Alt in the tree |



### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Barnhill, Gale   | 3/27/2003 1:29:43 PM |
| Modified By: administrator     | 6/19/2008 4:10:35 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Unknown     |
| Goodrich, Brian | Assigned    |          | Bug - BRASS |
|                 | System Test |          |             |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 6566.bbd            |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4525.12821 | System Test   | Continuous Steel Partially Braced (AASHTO 10.48.4) problem |

### Description

FROM:gbarnhill DATE:Thursday, March 27, 2003 9:29:43 AM

In the tree item for Stringer Member Alts and FB Member Alts, we need to show what Member Definition is assigned to the Alt.

This would look similar to the Structure Alt tree where the Superstruct Def is shown assigned to the Struct Alt.

## Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4525                                                      |
| Subject: Continuous Steel Partially Braced (AASHTO 10.48.4) problem |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Lutgen, Ed         | 3/28/2003 12:19:07 PM |
| Modified By: administrator       | 6/19/2008 4:10:34 PM  |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:3/28/2003 8:18:22 AM  
Submitted on behalf of Ed Lutgen, Minnesota DOT via email:

I have a question that I think might need to be reported as an incident due to bug in BRASS LFD. It has to do with the Interim 2000 braced non-compact (10.48.2) and partially braced members (10.48.4). I have this attached 3 span steel bridge that over the pier has 19' unbraced tension flanges. The bridge was built in 1955 as this does not meet our

4/19/2016 3:17:10 PM

HRS AASHTO

1406

**Complete Issue Information**

current code for bracing. At the pier the bridge does not meet criteria for braced noncompact (10.48.2) so partially braced (10.48.4) applies.

The program then correctly follows the code until equation 10-103e. The program calculates 10-103e correctly but then limits the moment to My. The problem is that the program does not use My but the Mu it calculated from 10.48.2 equation 10-99 which is lower than My. So in effect the final Mu has two reductions for Rb, one from 10.48.2 equation 10-99 and the other from 10.48.4 equation 10-103a. As it turns out the yield strength of steel has no effect on critical rating calculations. Equation 10-99 controls design which is a function of dimensions and yield independent. I think I am interpreting the code and Virtis 4.2 correctly. If you have any questions just let me know. Thanks in advance.

Ed Lutgen  
Asst MnDOT Rating Engineer  
651-747-2124

FROM:kkennelly DATE:3/28/2003 8:25:32 AM

FROM:bgoodrich DATE:Monday, April 07, 2003 10:57:06 AM  
I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, May 05, 2003 11:03:32 AM  
WYDOT has assigned this issue to BRASS Problem Log 421.

FROM:bgoodrich DATE:Friday, November 28, 2003 7:56:34 PM  
This issue has been corrected in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

FROM:bgoodrich DATE:Wednesday, April 21, 2004 3:06:59 PM  
BRASS-GIRDER 5.8.8 was actually released with Virtis 5.1.1.

Issue ID: 4531  
Subject: Export of ps shear reinforcement at support not correct

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 3/31/2003 2:59:49 PM  
Modified By: administrator 6/19/2008 4:10:34 PM  
Priority: High  
Category: Bug - Export 1

**History**

| Primary Contact | Status   | Priority | Category                      |
|-----------------|----------|----------|-------------------------------|
| Duray, Jim      | New      | High     | Unknown                       |
| Goodrich, Brian | Assigned |          | Bug - Export 1<br>Bug - BRASS |

4/19/2016 3:17:11 PM

**HRS AASHTO**

1407

### Complete Issue Information

|                 |          |      |                |
|-----------------|----------|------|----------------|
|                 | Resolved |      | Bug - Export 1 |
| Duray, Jim      | New      | High | Bug            |
| Goodrich, Brian | Assigned |      | Bug - BRASS    |
|                 | Resolved |      |                |
| Goodrich, Brian | Resolved | High | Bug - BRASS    |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | s-25-022 (1w6) Final.bbd |             |
|      | s-25-022 (1w6).bbd       |             |
|      | PS Shear Problem.xls     |             |

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 4537.12809 | Resolved      | PS Shear Analysis and Rating Results vary if increasing the wheel advancement |

### Description

FROM:kkennelly DATE:3/31/2003 10:57:47 AM  
Submitted on behalf of Elizabeth Bacha at Bayside Engineers via email:

I have the same problem for the shear rating for this prestressed beam (B-15-002(1V4)).

When we check the out put file the Vci(min) value is calculated as zero.

FROM:kkennelly DATE:3/31/2003 11:00:14 AM  
I rated the member alt for Member B-37 in structure NB Span 2. Shear rating at point 0 is 0. I added a poi at that point and see in the detailed BRASS output at that point that Av = 0 and s = 0, percent of concrete used in vertical shear = 0. Then Vci min =  $1.7(\sqrt{f'c})bd = 0$ .

If I change the first start distance for the shear reinforcement for this mbr alt from 0.26 ft to 0.25 ft, BRASS runs ok.

FROM:bgoodrich DATE:Tuesday, September 23, 2003 11:37:08 AM  
The export (BrassStirrupScheduleGroupCmd.cpp) was modified to use the GetTolerance function instead of the CSysUnits::GetTolerance function. This corrected the problem with the stirrup area and spacing. Fixed for Version 5.1.

4/19/2016 3:17:11 PM

HRS AASHTO

1408

## Complete Issue Information

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 4537                                                                         |
| Subject: PS Shear Analysis and Rating Results vary if increasing the wheel advancement |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 4/1/2003 5:54:25 PM  |
| Modified By: administrator       | 6/19/2008 4:10:33 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | M-06-007(281).bbd   |             |
|      | M-06-007(282).bbd   |             |

## Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 4545.12801 | Resolved      | BRASS LFD Element Too Small error |

## Description

FROM:bha DATE:Tuesday, April 01, 2003 1:54:25 PM  
Please mention this incident to Brian Goodrich and Dan Glandt.

Shear strengths are calculated by Virtis at the ends and other locations will vary (very significant) if we

4/19/2016 3:17:11 PM

HRS AASHTO

1409

## Complete Issue Information

increase the wheel advancement.

Enclosed are the .bbd file and the spreadsheet containing some rating results for comparisons.

I know that Mr. Glandt have fixed the shear problem for PS from my reported incident #3708 for the next version, but I suggest that you should investigate every aspect of the problem in computing the shear strengths for future release.

FROM:bgoodrich DATE:Monday, April 07, 2003 11:04:51 AM

This issue has been forwarded to WYDOT.

FROM:bgoodrich DATE:Tuesday, April 08, 2003 3:22:00 PM

E-mail from Binh Ha:

Through my own investigate, one of main factors that cause the shear strength problem for PS is the shear concurrent with max. mom. If you change wheel advancement.

Enclosed is my finished project file (.bbd) (the control element of rating is shear at H/2).

1. If you run with wheel advancement = 100 and 400 with POI control #3 (HS20) - Beam B1:

\* POI Control #3, Wheel advancement = 100  
Inventory RF = 1.454 - Operating RF = 2.166

\* POI Control #3, Wheel advancement = 400  
Inventory RF = 1.726 - Operating RF = 2.333

2. At location 0.15 span 1 - Beam B1: The RF differences come from the shear concurrent with max. mom.

\* POI Control #5, Wheel advancement = 100  
Inventory RF = 1.581 - Operating RF = 2.423

\* POI Control #5, Wheel advancement = 400  
Inventory RF = 2.138 - Operating RF = 2.967

The RF differences come from the shear concurrent with max. mom., with wheel advancement = 100 - shear concurrent with max. mom. = -0.51 K, with wheel advancement = 400 - shear concurrent with max. mom. = 16.61 K. Why?

3. At location 0.10 span 1 - Beam B1: The RF = 0.0 . Why?

And the problems continue...I do not have time to find more. I suggest you should consider all aspects of shear flaws for PS for the next Brass-Girder release. Thanks <<s-25-022 (1w6).bbd>>

Binh Ha, P.E.  
MassHighway-Bridge Section  
10 Park Plaza, Room 6430  
Boston, Ma 02116  
binh.ha@mhd.state.ma.us  
617-973-7561, 617-973-7990 (fax)

4/19/2016 3:17:11 PM

HRS AASHTO

1410

## Complete Issue Information

FROM: bgoodrich DATE: Tuesday, April 08, 2003 3:23:26 PM  
I attached his final BBD file as "s-25-022 (1w6) Final.bbd".

FROM: bgoodrich DATE: Monday, May 05, 2003 11:04:54 AM  
WYDOT has assigned this issue to BRASS Problem Log 422.

FROM: bgoodrich DATE: Saturday, January 03, 2004 12:28:44 PM  
This issue has been addressed in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

|                                            |
|--------------------------------------------|
| Issue ID: 4545                             |
| Subject: BRASS LFD Element Too Small error |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 4/2/2003 5:08:00 PM  |
| Modified By: administrator       | 6/19/2008 4:10:33 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: kkennelly DATE: 4/2/2003 1:06:07 PM  
Submitted on behalf of Elizabeth Balcha, Bayside Engineers via email & phone:

According to our telephone conversation I have attached the BBD file of this bridge M-06-007(282) .  
The problem I have with is the beams (G2 & G3) I run G1 and I don't have any problem.

FROM: kkennelly DATE: 4/2/2003 1:09:17 PM  
I tried to run member G2 in the SB Span 1 structure. I get an element too small error, change point at

4/19/2016 3:17:11 PM

HRS AASHTO

1411

**Complete Issue Information**

0' from left end too close to another node point at 0.0987'. I don't see how the node point at 0.0987' is generated based on Virtis input. If I change the Left End Beam Projection from 17.5" to 17.49" on the Beam Details window, the beam runs ok.

FROM:kkennelly DATE:4/3/2003 11:18:05 AM  
Member G32 in M-06-007(281).bbd is exhibiting the same problem. I'm unable to find a work around by adjusting any Virtis data.

FROM:bgoodrich DATE:Monday, April 07, 2003 11:12:05 AM  
This issue has been forwarded to WYDOT.

FROM:bgoodrich DATE:Monday, May 05, 2003 11:07:14 AM  
WYDOT has assigned this issue to BRASS Problem Log 423.

FROM:bgoodrich DATE:Saturday, January 03, 2004 12:32:14 PM  
This issue has been addressed in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

Issue ID: 4551  
Subject: XSection Deck Type in DoSteelCrossSection not being set

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Kennelly, Krisha 4/14/2003 6:28:34 PM  
Modified By: administrator 6/19/2008 4:10:32 PM  
Priority: Urgent  
Category: Bug - Warranty

**History**

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | High     | Bug            |
| Ihnat, Joseph      | Assigned | Urgent   | Bug - GUI 1    |
| Duray, Jim         |          |          | Bug - Warranty |
| Ordoobadi, Mehrdad |          |          |                |



### Complete Issue Information

|                    |          |        |                |  |
|--------------------|----------|--------|----------------|--|
|                    | Resolved |        |                |  |
| Ordoobadi, Mehrdad | Resolved | Urgent | Bug - Warranty |  |
| Duray, Jim         | Assigned | High   | Bug            |  |
|                    | Resolved |        |                |  |
| Duray, Jim         | Resolved | High   | Bug            |  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 4553.12793 | Resolved      | Metric Typ Sect Schematic does not draw the beams correctly if undefined... |

### Description

FROM:kkennelly DATE:4/14/2003 2:26:24 PM

I created a new girder line structure def with a timber deck and created a steel plate girder cross section based mbr alt. I created a steel cross section and the CrossSectionDeckType is not being set in the database.

FROM:jihnmat DATE:4/24/2003 1:50:32 PM

Shouldn't the Domain be setting this? It knows what the deck type is. Doesn't seem right that the Gui should have to know that this needs to be set in the Domain. The Gui doesn't use it.

FROM:jduray DATE:4/28/03 8:11:12 AM

I agree with Joe, can it be set in the domain?

FROM:kkennelly DATE:4/28/2003 9:27:54 AM

I think the GUI should use it determine what deck tabs to display.

The domain can set it but that would mean the deck type for a cross section always has to match the deck type of the structure def. The GUI is set up that way now but it doesn't always have to be that way.

FROM:jihnmat DATE:4/30/2003 11:29:12 AM

Setting this in the Domain \*wouldn't\* mean the deck type for a cross section always has to match the deck type of the structure def, it only means that they would match initially (as they should).

FROM:kkennelly DATE:5/7/2003 1:27:51 PM

Fixed for Version 5.0 Service Pack 1.

4/19/2016 3:17:12 PM

HRS AASHTO

1413

**Complete Issue Information**

TESTING: Verify xsection deck type set for new steel cross sections.

Utility also needed to fix db's for users who have created new steel cross sections in 5.0 so this incident now assigned to Mehrdad.

FROM:mordoobadi DATE:5/21/2003 2:36:19 PM  
SQL scripts created for Sybase, MSDE, and Oracle databases to fix the missing cross section deck types in the database.

FROM:mordoobadi DATE:6/11/2003 8:56:11 AM  
Krisha noticed that the SQL scripts do set the XSection Deck Type for floorline bridges.

Floor lines can only have concrete decks right now so I think it's ok to just make them all concrete in this utility. We should probably add a deck\_type to the floor line struct def to make it similar to the other structure defs (in 5.1.0).

FROM:mordoobadi DATE:6/11/2003 12:09:57 PM  
Sybase/Oracle/MSDE scripts updated.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 4553                                                                       |
| Subject: Metric Typ Sect Schematic does not draw the beams correctly if undefined... |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jensen, Paul     | 4/15/2003 4:30:07 PM |
| Modified By: administrator     | 6/19/2008 4:10:32 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:jduray DATE:4/15/03 12:31:33 PM  
Discussed with Paul on the phone:

Metric Typ Sect Schematic does not draw the beams correctly if undefined or placeholders.

FROM:jduray DATE:4/15/03 1:39:57 PM  
Metric units are not being handled for undefined shapes.

FROM:jduray DATE:6/27/03 8:57:00 AM  
Fixed for 5.0.1.

Issue ID: 4554

Subject: Not getting moment analysis results at specified POI

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Barnhill, Gale

4/15/2003 8:20:03 PM

Modified By: administrator

6/19/2008 4:10:32 PM

Priority: High

Category: Bug - Export 1

### History

4/19/2016 3:17:12 PM

HRS AASHTO

1415

### Complete Issue Information

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug         |
| Duray, Jim      | New        | High     | Bug         |
| Goodrich, Brian | Assigned   |          |             |
|                 | Resolved   |          | Education   |
|                 | Resubmit   |          | Enhancement |
|                 | Patch Test |          |             |
|                 | Accepted   |          |             |
|                 | Closed     |          |             |
| Goodrich, Brian | Closed     | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | PS box from LA<br>County_strands as P_CGS.bbd |             |

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 4559.12787 | Closed        | Rating error with strands as P & CGS and zero harp dist |

### Description

FROM:gbarnhill DATE:Tuesday, April 15, 2003 4:20:03 PM

This is an steel plate girder bridge - 3 span.

We have specified POI in order to obtain moment and shear output at those locations.

We ran an LRFD HL93 analysis for member 2.

In the analysis results dialog, we see moment output for POI 6.135m, but non of the other POI locations specified.

The results graph dialog shows 2 lines for 6.135, one with data, the other without. There are blank lines for the other POI specified.

There is a bottom flange change at 6.135. If I eliminate that change in the girder profile OR eliminate the POI for 6.135, then only one line of analysis results is displayed for 6.135 with values.

4/19/2016 3:17:12 PM

HRS AASHTO

1416

**Complete Issue Information**

This is also related to how close the POI is to a 10th point. For this member, 10th point is at 6.100m. If I move the flange change and POI to 6.235m, then the analysis output shows only one blank line for 6.235. My tolerance setting is at 0.01m.

FROM: bgoodrich DATE: Tuesday, April 22, 2003 4:19:10 PM  
By default, the actions are only output at tenth points. The engine properties accessed from the Analysis Settings window must be modified. Change the Action Output Level to "Print actions at all node points."

After doing this, I found a bug in the export (BrassLrfdOutput.cpp) when this parameter is written to the BRASS command. I have addressed this bug for the next release.

FROM: gbarnhill DATE: Thursday, June 19, 2003 9:21:13 AM  
I still get the same results in 5.0.1.

FROM: bgoodrich DATE: Wednesday, July 02, 2003 11:18:17 AM  
Unfortunately, the export modifications were not included in the first 5.0.1 build. Please try the next build.

FROM: gbarnhill DATE: Thursday, July 10, 2003 6:03:34 PM  
OK in 5.0.1 July 7 beta

FROM: bgoodrich DATE: Tuesday, July 29, 2003 1:22:38 PM  
Track field marked with "gale OK 5.0.1 July 7 beta".

FROM: bgoodrich DATE: Tuesday, July 29, 2003 1:23:00 PM  
Closed.

Issue ID: 4559  
Subject: Rating error with strands as P & CGS and zero harp dist

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Barnhill, Gale 4/23/2003 1:11:03 PM  
Modified By: administrator 6/19/2008 4:10:31 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 90 seconds.bbd      |             |
|      | 390 seconds.bbd     |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 4561.12785 | Closed        | Extremely Slow Analysis 5.0 VS 4.2 |

### Description

FROM:gbarnhill DATE:Wednesday, April 23, 2003 9:11:03 AM

This bridge came from LA County.

It's a simple span PS box system. The strands are entered as P & CGS. The harp distances were entered as zero for both left and right.

The analysis runs but gives zero rating factor for moment. The calculated moment capacity is very low. I changed the harp distances to 1 and 62 (1 ft in from each bearing).

The analysis gives a reasonable rating factor.

According to the HELP for STRAND LAYOUT, I should leave the harp numbers blank for straight strands.

If I do that, then I get a BRASS error..

Error generating BRASS prestress commands!

Unable to create BRASS strand profile commands for P\*e method!

Error determining type of strand configuration!

FROM:bgoodrich DATE:Monday, April 28, 2003 5:35:58 PM

For STRAIGHT strands, leave the left and right harp point distances blank and leave the left and right CGS distances blank.

For HARPED strands, enter the left and right harp point distances and enter the left and right CGS distances. I added some additional text to the error message to help the use understand what needs to be entered. Fixed for Service Pack 1.

FROM:gbarnhill DATE:Thursday, June 19, 2003 5:11:55 PM

I still see the same error messages in 5.0.1

FROM:bgoodrich DATE:Wednesday, July 02, 2003 11:19:41 AM

4/19/2016 3:17:13 PM

HRS AASHTO

1418

### Complete Issue Information

Unfortunately, the export modifications were not included in the first 5.0.1 build. Please try the next build.

FROM:gbarnhill DATE:Thursday, July 10, 2003 6:03:03 PM  
OK in 5.0.1 July 7 beta

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:23:31 PM  
Track field marked with "gale OK 5.0.1 July 7 beta".

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:23:49 PM  
Closed.

|                                             |
|---------------------------------------------|
| Issue ID: 4561                              |
| Subject: Extremely Slow Analysis 5.0 VS 4.2 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/23/2003 4:23:45 PM |
| Modified By: administrator       | 6/19/2008 4:10:31 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | Urgent   | Bug         |
| Goodrich, Brian | Assigned   |          | Bug - BRASS |
|                 | Patch Test |          |             |
|                 | Accepted   |          |             |
|                 | Closed     |          |             |
| Goodrich, Brian | Closed     | Urgent   | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 4568.12778 | Resolved      | IDoBmDefSteelAnalysisPoint::GetFatigueLocationSet returns wrong interface |

### Description

FROM:dteal DATE:Wednesday, April 23, 2003 12:23:45 PM

Attached are 2 identical structures. Doing an HL93 Design Review of the Wizard Alt of Member 2. In Version 4.2 run 90 seconds.bbd and it will take 90 seconds to complete. In Version 5.0 run 390 seconds.bbd and it will take 6 ½ minutes (390 seconds) to do the exact same thing. In version 5.0 when the analysis starts it runs fine, then all of a sudden it comes to a big slow down. I didn't see this slowed analysis process during the beta testing process.

I have our version 5.0 running on our test server. This way I can compare version before putting the new one on the production server.

I also see a slowed response time when bringing up the spec checker and when copying structures.

FROM:bgoodrich DATE:Monday, April 28, 2003 6:04:55 PM

I am able to duplicate Dean's findings. Note that the newer version corrected the calculation of the plastic moment, which may be where the slow-down is located. I will forward this issue to WYDOT.

FROM:dteal DATE:Tuesday, April 29, 2003 10:29:52 AM

Is there a possible work around?? Frustrations are being vented. Going from 1.5 to 6.5 minutes for the same analysis has gotten some user very hot!! It's like going back to a 8088 processor again.

FROM:bgoodrich DATE:Wednesday, May 07, 2003 4:14:36 PM

FROM:bgoodrich DATE:Friday, May 09, 2003 6:06:28 PM

WYDOT will assign this issue to BRASS Problem Log 432.

FROM:bgoodrich DATE:Monday, June 23, 2003 3:28:04 PM

BRASS-GIRDER(LRFD) has been modified to address this issue. The analysis time is now comparable to the version released with Opis 4.2. Fixed for version 5.0.1.

FROM:kkennelly DATE:7/24/2003 2:34:36 PM

Ran ok for me.

FROM:dteal DATE:Tuesday, July 29, 2003 8:13:05 AM

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:24:10 PM

Track field marked as "Accepted".

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:24:34 PM

4/19/2016 3:17:13 PM

HRS AASHTO

1420



## Complete Issue Information

Closed.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 4568                                                                     |
| Subject: IDoBmDefSteelAnalysisPoint::GetFatigueLocationSet returns wrong interface |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 4/24/2003 3:00:52 PM |
| Modified By: administrator        | 6/19/2008 4:10:31 PM |
| Priority: Urgent                  |                      |
| Category: Bug - Warranty          |                      |

## History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | Urgent   | Bug - Domain 1 |
|                  | Assigned |          |                |
| Kennelly, Krisha |          |          | Bug - Warranty |
|                  | Resolved |          |                |
| Kennelly, Krisha | Resolved | Urgent   | Bug - Warranty |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:kkennelly DATE:4/24/2003 10:59:45 AM  
Submitted for RQuinn:

\*13. GetFatigueLocationSet() method in IDoBmDefSteelAnalysisPoint seems to be returning the wrong interface should be IDoBmDefSteelFatigueLocationSet, but the return type of interface in ODL is DoSteelFatigueLocationSet.

4/19/2016 3:17:13 PM

HRS AASHTO

1421

**Complete Issue Information**

FROM:kkennelly DATE:5/6/2003 9:39:22 AM

TESTING: Add point of interest Fatigue info for steel alts: girder system, girder line, floor system stringer and fb, floor line stringer and fb and verify the data is exported correctly to analysis engine.

FROM:kkennelly DATE:5/7/2003 1:30:08 PM

Fixed for Version 5.0 Service Pack 1. See testing instructions above.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 4575                                                                                  |
| Subject: Can't reopen the Stringer Mbr Alt window for rolled stringer def with cover plate loss |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 4/30/2003 6:36:40 PM |
| Modified By: administrator        | 6/19/2008 4:10:30 PM |
| Priority: Urgent                  |                      |
| Category: Bug - Warranty          |                      |

**History**

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug - Warranty |
| Ihnat, Joseph      |          | Urgent   |                |
| Kennelly, Krisha   |          |          |                |
| Ordoobadi, Mehrdad |          |          |                |
| Kennelly, Krisha   | Resolved |          |                |
| Kennelly, Krisha   | Resolved | Urgent   | Bug - Warranty |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:17:13 PM

HRS AASHTO

1422

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                    |
|------------|---------------|--------------------------------------------------------------------------------------------|
| 4576.12770 | Resolved      | Error generating report for cross section steel beam with cover plate and cover plate loss |

### Description

FROM:kkennelly DATE:4/30/2003 2:33:16 PM

For BID 13, add a top cover plate to Stringer Def1. Cover plate starts at 5' and is 20' long. Open the Stringer Mbr Alt window for any Stringer in the structure, enter a loss range for the top cover plate. Hit Ok to close Stringer Mbr Alt window, try to reopen the Stringer Mbr Alt Window and get error "Unable to initialize top cover plate tab!"

FROM:kkennelly DATE:5/1/2003 3:04:46 PM

Seems to be a problem calling GetCoverPlateObjectId() when building the grid.

FROM:kkennelly DATE:5/5/2003 11:28:36 AM

I think m\_wndGrid.iColumns should be 8 not 7 for the grid. (this doesn't totally solve the problem).

FROM:kkennelly DATE:5/6/2003 3:52:02 PM

FROM:jihnat DATE:5/28/2003 8:33:17 AM

7 columns looks right to me.

The view calls SetCoverPlateObjectId() with the correct object ID, but when it's reopened

GetCoverPlateObjectId() returns zero.

Krishna, please look into the Domain.

FROM:kkennelly DATE:5/29/2003 12:45:29 PM

My comment about the 8 columns not 7 pertains to UiMemberAltXSecCoverPlateLossDlg.cpp.

FROM:kkennelly DATE:5/29/2003 2:00:47 PM

DoMbrAltStlSchedCovPlateLossRangeSet GetCoverPlateObjectId() looks for a DmSteelAssembly for a specific StructDefId, SpngMbrDefId, and StlAssemblyId. The SpngMbrDefId is null for the loss range on a stringer mbr alt. So the Dm can't find a De object with a SpngMbrDefId = 0. Mehrdad, what should we do?

FROM:kkennelly DATE:6/3/2003 1:07:13 PM

The SpngMbrDefId now being set.

### TESTING INSTRUCTIONS:

Create schedule and cross section based stringer and floorbeam member definitions with cover plates. Assign these definitions to stringer and floorbeam mbr alts and enter cover plate losses. Make sure mbr alt window reopens; run analysis make sure loss is included, use Report Tool to create reports for mbr alts.

4/19/2016 3:17:14 PM

HRS AASHTO

1423

**Complete Issue Information**

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 4576                                                                                      |
| Subject: Error generating report for cross section steel beam with cover plate and cover plate loss |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 4/30/2003 8:52:48 PM |
| Modified By: administrator        | 6/19/2008 4:10:30 PM |
| Priority: High                    |                      |
| Category: Bug - Domain 2          |                      |

**History**

| Primary Contact    | Status   | Priority | Category                            |
|--------------------|----------|----------|-------------------------------------|
| Duray, Jim         | New      | High     | Unknown                             |
|                    | Assigned |          | Change Request<br>Bug - Performance |
| Ordoobadi, Mehrdad | Resolved | High     | Bug - Performance                   |
|                    | Closed   |          |                                     |
| Ordoobadi, Mehrdad | Closed   | High     | Bug - Performance                   |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 4577.12769 | Closed        | Bridge Explorer Performance Issue |

**Description**

FROM:kkennelly DATE:4/30/2003 4:51:06 PM  
 BID2, add a cover plate to cross section 1. Add loss to this cover plate in Deterioration Profile. Try to generate report tool for steel girder for this alt. Get error. I think it is in the domain.

FROM:kkennelly DATE:5/5/2003 9:11:46 AM

4/19/2016 3:17:14 PM

HRS AASHTO

1424

**Complete Issue Information**

This bug existed in 4.1.

FROM:kkennelly DATE:5/7/2003 1:17:55 PM  
Fixed for 5.0 Service Pack 1.

|                                            |
|--------------------------------------------|
| Issue ID: 4577                             |
| Subject: Bridge Explorer Performance Issue |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 5/1/2003 12:46:17 PM |
| Modified By: administrator          | 6/19/2008 4:10:30 PM |
| Priority: High                      |                      |
| Category: Bug - Performance         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:5/1/2003 8:36:45 AM  
IDOT (Richard Best) reported poor performance after bridge explorer is displayed on the screen. It took

4/19/2016 3:17:14 PM

HRS AASHTO

1425

### Complete Issue Information

a while for Virtis/Opis to become active.

They noticed this problem right after they upgraded Virtis/Opis from version 4.1.1 to 5.0.0.

IDOT uses a Sybase ASA 7.0 database on a network as their database server.

The problem was not reproducible when using Sybase ASA 8.0.

I tracked the problem down to an OnUpdate...() function that makes 'Recent rating results' Toolbar button enabled or disabled.

The function queries the database to set the status of the toolbar button.

Since this query is time consuming we need to make the button enabled all the time and let the Recent Rating Results window open empty or close if there isn't any results to display.

I implemented the above changes to ABGDTOP project and sent the new ABGDTOP.DLL to IDOT to see if it has resolved the problem. They indicated that the problem was resolved after replacing the DLL.

This problem should be addressed in Patch 1 of version 5.0.

FROM:jduray DATE:5/22/03 11:27:41 AM

This problem also occurred in 4.2 as a result of the BRIDGEWare integration enhancements.

FROM:mordoobadi DATE:5/23/2003 10:49:08 AM

Fixed for 5.0.1.

FROM:mordoobadi DATE:5/23/2003 1:35:17 PM

Related to incidents 4597, 4598.

Issue ID: 4578

Subject: PS Shear Strength computation based on an unknown assumption

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Ha, Binh

5/1/2003 6:02:13 PM

Modified By: administrator

6/19/2008 4:10:30 PM

Priority: Urgent

Category: Bug - BRASS

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | Urgent   | Bug      |

4/19/2016 3:17:14 PM

HRS AASHTO

1426

### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
| Goodrich, Brian  | Assigned |      | Education   |
|                  |          |      | Bug - BRASS |
| Duray, Jim       | New      | High | Bug         |
| Kennelly, Krisha | Assigned |      | Bug - GUI 2 |
|                  | Resolved |      | Education   |
| Kennelly, Krisha | Resolved | High | Education   |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1005130.bbd         |             |
|      | 2230260.bbd         |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 4583.12763 | Resolved      | Effective flange width wizard for fascia members |

### Description

FROM:bha DATE:Thursday, May 01, 2003 2:02:14 PM

Please notify this problem to Brian Goodrich, Dan Glandt and Wyoming DOT.

I have checked article '9.20.2 Shear Strength Provided by Concrete' and some other references and softwares relating to the calculations of PS shear strength, I can not find down the assumption: "Mmax < Mcr, Eq. 9-27 not calculated, 9-29 used" as BRASS-GIRDER Version 5.08.06 used to calculate shear strength provided by concrete.

Because shear strength is a function of various variables, so by the way Brass-Girder uses above assumption (Mmax < Mcr) will cause a lot of problems to our previous PS bridge ratings (for example: S-25-22.bbd enclosed).

We would like to know where the assumption coming from?

And from equation  $V_{ci} = 0.6 * \sqrt{f'c} b'd + V_d + V_i * M_{cr} / M_{max}$  (AASHTO 9-27) - at two ends of the beam  $M_{max}=0.0$ , please explain how to use above equation (We can not find the explanation from AASHTO and other references).

And again this problem very serious and we are waiting for your response.

Thanks,

FROM:bgoodrich DATE:Thursday, May 08, 2003 4:24:49 PM

The origin of equation 9-27 is based on some 1960's work by MacGregor and associates at the

4/19/2016 3:17:14 PM

HRS AASHTO

1427

## Complete Issue Information

University of Illinois.

BridgeTech asked Dr. Maher Tadros to respond to several questions regarding this equation. Based on his responses, equation 9-27 was never intended to be applied to sections in which  $M_{max}$  does not exceed  $M_{cr}$ . Therefore, equation 9-27 is not applicable when  $M_{max}$  is zero, such as at the ends of a simple-span girder. One option may be to utilize equation 9-27, but restrict the ratio of  $M_{cr}/M_{max}$  to a maximum of 1.0.

Others may question this implementation as well, so we may develop a technical document on the BRASS implementation of equation 9-27. This would include some background on the subject.

Finally, I analyzed several of the members in the BBD file you sent and did not find any rating factors less than one. Shear was controlling, but the ratings were OK. What rating factors are you getting? Is there a specific member alternative where  $V_{ci}$  used to control vs.  $V_{cw}$ ?

FROM:bgoodrich DATE:Wednesday, May 14, 2003 10:36:40 AM  
E-mail from Binh Ha (5/13/03):

Actually I do not care much of our bridge rating numbers are greater or less than 1.0, I only care about the methods of analysis and ratings are right or wrong. For a long time we just used article 9.20 AASHTO to calculate the shear strength and never know or find something similar to the assumptions used in BRASS-GIRDER versions 5.08.05 and 5.08.06. I suggest you should use CONSPAN program to check the calculations of shear strengths. Enclosed are my S-25-023.bbd and the summary table of shear strength computations.

<<S-25-023.bbd>> <<SHEAR STRENGTHS.xls>>

FROM:bgoodrich DATE:Friday, June 13, 2003 4:15:42 PM  
WYDOT has assigned this issue to BRASS Problem Log 436.

FROM:bgoodrich DATE:Friday, June 13, 2003 4:16:39 PM  
E-mail from Binh Ha (6/13/03):

I would like to ask you about incident 4578, because our state has a lot of PS bridges to be rated and mostly the ratings controlled by shear (shear strengths calculated by Virtis based on the assumptions are not reflected by most existing references as my previous e-mail I have sent to you). And again the .bbd file enclosed will also enforce my concern (please go to the output and find the shear strengths calculated by Virtis, especially for G10)

FROM:bgoodrich DATE:Monday, June 23, 2003 3:05:24 PM  
BRASS-GIRDER has been modified to limit the  $M_{cr}/M_{max}$  term to 1.0 in the  $V_{ci}$  equation (AASHTO Eq. 9-27). This procedure is documented in an open forum article by Dr. Puckett and Dr. Tadros (University of Nebraska-Lincoln). See "Design for Shear in Prestressed Concrete Bridge Members" in the PCI Journal (May-June 2001). Fixed for version 5.0.1.

FROM:hlee DATE:7/24/2003 9:58:18 AM  
Patch test ok.

|                |
|----------------|
| Issue ID: 4583 |
|----------------|

4/19/2016 3:17:14 PM

HRS AASHTO

1428



**Complete Issue Information**

|                                                           |
|-----------------------------------------------------------|
| Subject: Effective flange width wizard for fascia members |
|-----------------------------------------------------------|

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: McCaffrey, Brian     | 5/5/2003 3:28:00 PM  |
| Modified By: administrator         | 6/19/2008 4:10:30 PM |
| Priority: High                     |                      |
| Category: Education                |                      |

**History**

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | Urgent   | Bug - Warranty |
| Ordoobadi, Mehrdad | Assigned |          |                |
| Lee, Herman        | Resolved |          |                |
| Lee, Herman        | Resolved | Urgent   | Bug - Warranty |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                                |
|------------|---------------|----------------------------------------------------------------------------------------|
| 4584.12762 | Resolved      | Stringer mbr alt cover plate loss for xsec member is not being stored in correct table |

**Description**

FROM:bmccaffrey DATE:Monday, May 05, 2003 11:28:00 AM

It appears that the effective flange width calculation wizard for fascia members is ignoring the 1/12th of span length criteria. See the attached .bbd file - see G1.

FROM:kkennelly DATE:5/9/2003 2:32:34 PM

The Compute button does not interpret AASHTO 10.38.3.2 to apply to exterior beams. That article specifies the 1/12 span length criteria "For girders having a flange on one side only...". Your exterior beam has a concrete slab on both sides of the web.

4/19/2016 3:17:15 PM

HRS AASHTO

1429

## Complete Issue Information

FROM:bmcaffrey DATE:Friday, May 09, 2003 2:50:14 PM  
What was fixed for incident 4366? The release notes state:

Incident 4366 - The "Compute Effective Flange Width" button on the Deck Profile window incorrectly computed the effective flange width for the right exterior girder when the overhang width controlled the computation

FROM:kkennelly DATE:5/9/2003 3:11:01 PM  
The right overhang width computed by the Compute button incorrectly had a negative sign. This resulted in an incorrect eff flange width being computed for right fascia girders where the girder spacing criteria controlled instead of the 1/4 span length or 12\*slab thickness criteria.

FROM:bmcaffrey DATE:Thursday, May 22, 2003 2:00:27 PM  
OK, I agree with you, but I think there is still something wrong in the calculation for some cases. I've attached the .bbd file for another bridge (1005130.bbd). Here are my numbers and logic for the fascia member G1:

Span length = 42.27'  
Overhang = 16.75"  
Beam spacing = 141.625"  
t eff = 12"

Left side of member;

$bE = 1/2(1/4)(42.27')(12"/') = 63.405"$   
 $bE = \text{overhang} = 16.75" \implies \text{controls}$   
 $bE = 6(12") = 72"$

Right side of member;

$bE = 1/2(1/4)(42.27')(12"/') = 63.405" \implies \text{controls}$   
 $bE = 1/2 \text{ beam spacing} = 70.8125"$   
 $bE = 6(12") = 72"$

Total bE = 16.75" + 63.405" = 80.155" (matches the LRFD eff. fl. width)

Virtis uses 87.6", which if you back calculate it = 16.75" + 70.8125", which is the overhang + 1/2 the interior beam spacing.

I am calculating the effective flange width based on 10.38.3.1 for both sides of the member and then I add the two lowest values together.

FROM:kkennelly DATE:6/2/2003 8:57:05 AM  
AASHTO 10.38.3.1 doesn't specify anything about checking the left and right side of the member but a user previously said we should since AASHTO 8.10.1.1 does. AASHTO 8.10.1.1 says to check the effective flange width overhanging on each side of the web against 6ts or 1/2 spacing. The 1/4 span length check in 8.10.1.1 does not get checked for each side of the web. (At least that's my interpretation.)

4/19/2016 3:17:15 PM

HRS AASHTO

1430

**Complete Issue Information**

We are going to develop an example problem that details the procedures the compute button uses to compute the effective flange width so users will know how Virtis/Opis interprets the AASHTO specs.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 4584                                                                                  |
| Subject: Stringer mbr alt cover plate loss for xsec member is not being stored in correct table |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Kennelly, Krisha | 5/5/2003 3:37:13 PM  |
| Modified By: administrator     | 6/19/2008 4:10:29 PM |
| Priority: Urgent               |                      |
| Category: Bug - Warranty       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:5/5/2003 11:30:30 AM  
 BID 13, create a xsec based stringer member definition. The cross section contains cover plates. Create a new mbr alt for Stringer Mbr 1 in Stringer Unit Layout 1 and assign the xsec based stringer definition to the alt. Add losses to the cover plate in the Stringer Member Alt window. Save bridge, cross section cover plate losses are being stored in abw\_stl\_xsec\_cplate\_loss\_range instead of abw\_mbralt\_xscclt\_loss\_range.

Floorbeam Mbr Alt window is doing the same thing.

FROM:kkennelly DATE:5/7/2003 1:30:32 PM  
 We'll also need Utility to move data entered in 5.0.

FROM:mordoobadi DATE:5/7/2003 4:28:28 PM  
 The bug fixed for version 5.0.1.

**Complete Issue Information**

FROM:mordoobadi DATE:5/23/2003 11:06:19 AM  
SQL Scripts prepared for Sybase, Oracle and MSDE databases to correct the problem. The scripts should be included in the migration from 5.0.0 to 5.0.1.

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 4585                                                                                         |
| Subject: Virtis crashes when opening a window after rating a cross section based stringer or floorbeam |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 5/5/2003 5:08:21 PM  |
| Modified By: administrator        | 6/19/2008 4:10:29 PM |
| Priority: Urgent                  |                      |
| Category: Bug - Warranty          |                      |

**History**

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | Urgent   | Bug - Warranty |
| Kennelly, Krisha | Resolved |          |                |
| Kennelly, Krisha | Resolved | Urgent   | Bug - Warranty |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:17:15 PM

HRS AASHTO

1432

### Complete Issue Information

| Name       | Current State | Summary                                                                                                    |
|------------|---------------|------------------------------------------------------------------------------------------------------------|
| 4585.12761 | Resolved      | Virtis crashes when opening a window after rating a cross section based stringer or floorbeam              |
| 4586.12760 | Accepted      | Deterioration entered for a flr line stringer or floorbeam alt not being considered when analyzing mbr alt |

### Description

FROM:kkennelly DATE:5/5/2003 1:07:17 PM

Virtis crashes when opening a window after rating a cross section based stringer or floorbeam

FROM:kkennelly DATE:5/5/2003 1:08:43 PM

Dispatch should not be released in CDoSuperStructSpngMbrAlt::FillBmDefCrossSectionData().

FROM:kkennelly DATE:5/7/2003 1:31:12 PM

Fixed for Version 5.0 Service Pack 1.

TESTING: Rate steel cross section based girder mbr, girder line mbr, floor system stringer and fb, floor line stringer and fb members several times and try to open some windows in tree after analysis.

|                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------|
| Issue ID: 4586                                                                                                      |
| Subject: Deterioration entered for a flr line stringer or floorbeam alt not being considered when analyzing mbr alt |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 5/6/2003 4:57:06 PM  |
| Modified By: administrator        | 6/19/2008 4:10:29 PM |
| Priority: High                    |                      |
| Category: Bug - Warranty          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:17:15 PM

HRS AASHTO

1433

**Complete Issue Information**

|                    |             |      |                |
|--------------------|-------------|------|----------------|
| Kennelly, Krisha   | Assigned    | High | Bug - Warranty |
|                    | Resolved    |      |                |
| Duray, Jim         | New         | High | Unknown        |
| Ordoobadi, Mehrdad | Assigned    |      | Bug - GUI 2    |
|                    | System Test |      |                |
|                    | Closed      |      |                |
| Ordoobadi, Mehrdad | Closed      | High | Bug - GUI 2    |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Virtis_Error.doc    |             |

**Tasks**

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 4587.12759 | Closed        | Virtis-Pontis Bridge association problem |

**Description**

FROM:kkennelly DATE:5/6/2003 12:55:34 PM

Deterioration entered for a flr line stringer or floorbeam alt not being considered when analyzing mbr alt. Deterioration saved in DoSteelxxxLoss objects but domain is generating the cross sections for analysis considering only DoMbrAltxxxLoss objects.

FROM:kkennelly DATE:5/7/2003 1:33:19 PM

Fixed for Version 5.0 Service Pack 1.

TESTING: Add losses to flr line stringer and fb's and verify that sections exported to BRASS include deterioration.

FROM:gbarnhill DATE:Monday, June 23, 2003 5:44:50 PM

5.0.1 beta - I used the test instruction and can see losses included in the sections exported.

FROM:jduray DATE:6/24/03 3:02:59 PM

Gale accepted.

|                                                   |
|---------------------------------------------------|
| Issue ID: 4587                                    |
| Subject: Virtis-Pontis Bridge association problem |

## Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Withers, Richard      | 5/7/2003 11:59:35 AM |
| Modified By: administrator          | 6/19/2008 4:38:36 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

## History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          |             |
|                  | Resolved |          | Bug - GUI 2 |
|                  | Accepted |          |             |
|                  | Closed   |          |             |
| Kennelly, Krisha | Closed   | High     | Bug - GUI 2 |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | hinge problem.bbd   |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 4592.12754 | Closed        | Section Change at a Hinge |

## Description

FROM:jihnat DATE:5/7/2003 7:58:48 AM  
Submitted via email by Richard Withers, Mississippi DOT:

I am also having a problem when I try to associate bridges in Virtis with Pontis data. If I create a bridge in Virtis that does not have a Pontis record and then go back and try to associate it at a later date it gives me an error. I attached the error message and a snapshot of the bridge before

4/19/2016 3:17:16 PM

HRS AASHTO

1435

**Complete Issue Information**

I tried to link it.

Richard Withers, PE  
Bridge Design Division  
(601) 359-7167

FROM:mordoobadi DATE:5/13/2003 1:39:46 PM  
Fixed for 5.0.1.

FROM:mordoobadi DATE:5/13/2003 1:40:59 PM  
This is how this problem can be duplicated.

Create a bridge with Virtis/Opis mark the bridge as Virtis and Opis bridge. Run Virtis and connect to the same database. Reassign the bridge. An error is returned when SetOpisBridge() is called from the GUI.

FROM:jduray DATE:5/22/03 11:31:43 AM  
Problem existed in 4.2 as well.

|                                    |
|------------------------------------|
| Issue ID: 4592                     |
| Subject: Section Change at a Hinge |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 5/8/2003 12:36:52 PM |
| Modified By: administrator        | 6/19/2008 4:10:29 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:17:16 PM

HRS AASHTO

1436



**Complete Issue Information**

FROM:dteal DATE:Thursday, May 08, 2003 8:36:52 AM

When a hinge is present in a span – often there is a section (depth) change at the hinge. For example we are working on one that is a 72” depth on one side of the hinge and 48” on the other side of the hinge. We are getting an error message related to this and the schematic view is not drawn correctly.

What are the limits for a section change, I can't find any info in Virtis or BRASS help files.

FROM:dteal DATE:Thursday, May 08, 2003 9:08:03 AM

When in the Member 2 Girder Profile, if you select OK you get an error message that states:

“Adjacent web depths are not within tolerance in rows 1 and 2. Left web depth is 78” and right web depth is 48”. Do you want to re-enter a web depth?

These depths are correct – what tolerance is it referring to? The system tolerances set by the administrator or something else?

Also look at the schematic plan view for the bust at the hinge.

bbd attached for BID#811

FROM:kkennelly DATE:5/9/2003 11:50:51 AM

1. The Web Profile window issues the ".web depths are not within tolerance.." message using the System Defaults Tolerance. When we validate the window data before saving it, we check for adjacent web depths to be within this tolerance to help users when entering parabolically varying web ranges. I've added a check to this validation to first check if a hinge exists at the point where the web profile changes. If a hinge exists there, the validation will not issue the tolerance message. If a hinge does not exist at the web profile change point, the tolerance message will be issued.

2. Schematic is fixed.

Above changes are implemented for Version 5.0 Service Pack1.

FROM:dteal DATE:Thursday, June 26, 2003 11:37:30 AM

Issue ID: 4593  
Subject: Stiffener Spacing Graphic

Folder: /Virtis/Support Center  
Primary Contact: lhnat, Joseph  
Submitted By: Teal, Dean 5/8/2003 2:55:45 PM  
Modified By: administrator 6/19/2008 4:10:29 PM  
Priority: High  
Category: Bug - GUI 2

**History**

4/19/2016 3:17:16 PM

HRS AASHTO

1437

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Duray, Jim      | New      | High     | Bug         |
|                 | Assigned |          | Bug - GUI 2 |
| Ihnat, Joseph   | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | X Frame Location Symbol.bbd |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4594.12752 | Closed        | Cross Frame Location Symbol |

### Description

FROM:dteal DATE:Thursday, May 08, 2003 10:55:46 AM

Please look at the Member 2 girder profile. The stiffener spacing dimension has many rows that didn't used to be there. The dimensions are not continuous and don't make a whole bunch of sense?? What has changed for 4.2 to 5.0? See .bbd

FROM:dteal DATE:Friday, May 09, 2003 10:44:29 AM

Some bridges have the Stiffener dimensions as they should be and some give several rows of meaningless dimensions. So it's not on every bridge.

FROM:jihnat DATE:5/9/2003 11:32:16 AM

It'll be on those bridges that have overlapping ranges. We had a problem when the ranges overlapped, the dimensions overlapped also and were unreadable. Now, a new line of dimensions is created whenever a range would overlap a range on the current line. The dimensions are not "meaningless".

4/19/2016 3:17:16 PM

HRS AASHTO

1438

## Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 4594                       |
| Subject: Cross Frame Location Symbol |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 5/9/2003 2:45:02 PM  |
| Modified By: administrator     | 6/19/2008 4:10:29 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned  |          | Bug - GUI 2 |
| Goodrich, Brian    | Duplicate |          |             |
|                    | Closed    |          |             |
| Goodrich, Brian    | Closed    | High     | Bug - GUI 2 |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | No POI Reported.bbd |             |

## Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 4595.12751 | Closed        | No POI Being Reported |

## Description

FROM:dteal DATE:Friday, May 09, 2003 10:45:03 AM

4/19/2016 3:17:17 PM

HRS AASHTO

1439

**Complete Issue Information**

In the attached bbd the "X" that denotes the cross frame location I the girder schematic view is barely visible at 400% zoom.

FROM:jihnata DATE:5/28/2003 8:23:25 AM  
Fixed for 5.0 SP1

|                                |
|--------------------------------|
| Issue ID: 4595                 |
| Subject: No POI Being Reported |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 5/9/2003 4:45:20 PM  |
| Modified By: administrator       | 6/19/2008 4:10:29 PM |
| Priority: High                   |                      |
| Category: Bug - GUI 2            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, May 09, 2003 12:45:21 PM  
bbd attached, use member 2

4/19/2016 3:17:17 PM

HRS AASHTO

1440

**Complete Issue Information**

I defined 2 odd POI's that do not fall on a 10th point. In the Member Alt Description, Engine Tab, LRFD Properties, I requested "Generate at user-defined points" only. After an HL93 Design Review I checked Analysis Results for dead load actions. The only thing in the table are values at 10th points. I can not get my user defined points to appear in the analysis results table.

The user defined points where spec checked.

FROM:mordoobadi DATE:5/14/2003 9:41:06 AM  
This is probably related to incident 4554.  
Brian, could you please investigate.

FROM:bgoodrich DATE:Wednesday, May 14, 2003 10:43:07 AM  
This issue is a duplicate to Incident 4554. The issue has been corrected.

To get non-tenth points to be listed in the analysis results table, the Action Output Level must be set to "Print actions at all node points" (see the Analysis Settings window, Engine tab, LRFD Properties).

FROM:dteal DATE:Monday, June 02, 2003 8:23:40 AM  
Has been corrected for what release? Is there a work a round for this in the mean time?

Issue ID: 4597  
Subject: Recent Rating Results from the Toolbar

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Teal, Dean 5/13/2003 2:04:49 PM  
Modified By: administrator 6/19/2008 4:10:29 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
|                    | Assigned |      | Bug - GUI 2 |
| Ordoobadi, Mehrdad |          |      |             |
| Duray, Jim         | New      | High | Bug         |
|                    | Assigned |      | Bug - GUI 2 |
| Ordoobadi, Mehrdad |          |      |             |
|                    | Resolved |      |             |
|                    | Accepted |      |             |
|                    | Closed   |      |             |
| Ordoobadi, Mehrdad | Closed   | High | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 4598.12748 | Closed        | Error when Rating from Toolbar |

### Description

FROM:dteal DATE:Tuesday, May 13, 2003 10:04:50 AM

When I highlight a bridge in the explorer window and click on the Recent Rating Results button on the tool bar it takes approximately 4 minutes to bring up the rating results window. Could this be an XP thing?

FROM:jduray DATE:5/22/03 11:40:43 AM

Similar to incident 4577.

FROM:mordoobadi DATE:5/23/2003 11:32:28 AM

The object IDoSysBridgeAnalysisEventsListPtr seems to have caused this problem. It performs badly because there is a very complex view behind it.

We need to get information from several less complex views and put the information together by using C++ code, this might help with the performance of IDoSysBridgeAnalysisEventsListPtr object.

FROM:mordoobadi DATE:8/22/2003 9:52:08 AM

A new domain object created for a better performance. The recent rating results summary window performed much better on my test database (Results for 18 bridges saved 12 times ) than before. I need to get Dean's database to continue the performance testing.

4/19/2016 3:17:17 PM

HRS AASHTO

1442

**Complete Issue Information**

FROM:mordoobadi DATE:9/5/2003 9:20:01 AM  
I got Dean's database and I am going to do some performance testing on it.

FROM:dteal DATE:Wednesday, September 10, 2003 9:05:06 AM  
Now that you have my database, I checked out BID #38 and found no improvement.

FROM:dteal DATE:Wednesday, September 10, 2003 9:06:09 AM  
For above I was using 5.1 Beta 2

FROM:mordoobadi DATE:9/16/2003 2:22:25 PM  
I found and fixed the problem, please test it in the next beta build (V 5.1.0 Beta 3).

FROM:mordoobadi DATE:10/28/2004 3:50:48 PM  
Accepted by Dean Teal.

|                                         |
|-----------------------------------------|
| Issue ID: 4598                          |
| Subject: Error when Rating from Toolbar |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 5/13/2003 2:05:27 PM |
| Modified By: administrator          | 6/19/2008 4:10:28 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, May 13, 2003 10:05:28 AM  
I have a bridge that is defined as Opis Only by the Bridgeware Association button. I highlighted this

4/19/2016 3:17:17 PM

HRS AASHTO

1443

## Complete Issue Information

bridge in the explorer window and selected the Rate button from the toolbar.

The first thing I get is a System Error message as follows: "The following bridges could not be rated. They are either 'Template' or 'Opis-only' bridges" followed by the bridge description. After clearing that window Virtis appears to be locked up, if you check the task manager Virtis is reported as "Not Responding". But if you leave it alone it will eventually bring up a totally blank Analysis Progress window. Press OK to clear this window and the tiling of the windows gets all messed up and it appears to be hung. If your patient and wait a total of 9 minutes you will get rating results. Remember at the beginning, this is n Opis-Only structure. Could this be an XP thing?

FROM:mordoobadi DATE:5/13/2003 10:37:17 AM  
Are you using Sybase? If yes which version?

FROM:mordoobadi DATE:5/13/2003 10:43:34 AM  
This is probably related to Incident 4577.

FROM:dteal DATE:Friday, May 16, 2003 11:31:16 AM  
Oracle

FROM:dteal DATE:Friday, May 16, 2003 12:28:34 PM  
Oracle8i Enterprise Edition Release 8.1.6.3.0

FROM:mordoobadi DATE:5/23/2003 11:36:57 AM  
I beleive this has the same problem as incidents 4557 and 4597.

FROM:jduray DATE:8/18/2003 11:05:12 AM  
How is 4557 related to this?

FROM:mordoobadi DATE:8/19/2003 1:46:23 PM  
It is related to 4557 because in both cases the object IDoSysBridgeAnalysisEventsListPtr is used to get information about Bridge Analysis Events. To resolve incident 4557 we no longer query from IDoSysBridgeAnalysisEventsListPtr object. But to resolve the problems in incidents 4597, 4598 we need to improve the performance of the object.

FROM:jduray DATE:8/25/2003 11:13:42 AM  
I don't understand the connection. 4557 is "Remove access to IDoMbrAltSupportsDetailSet from Floorbeam and Stringer Mbr Alts". How is that related to "IDoSysBridgeAnalysisEventsListPtr"?

FROM:mordoobadi DATE:9/17/2003 3:36:16 PM  
Sorry I did not mean 4557 I meant 4577.

FROM:dteal DATE:Tuesday, October 26, 2004 11:48:49 AM  
I checked this in 5.2 beta 4 -

FROM:mordoobadi DATE:10/28/2004 3:50:07 PM  
Accepted by Dean Teal.

Issue ID: 4599

4/19/2016 3:17:18 PM

HRS AASHTO

1444



**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Subject: Non-Active User       |                      |
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/13/2003 6:30:51 PM |
| Modified By: administrator     | 6/19/2008 4:10:28 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |
| Duray, Jim      | Closed             | High     | Bug      |

**Contacts**

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | vo_bug.doc          |             |

**Tasks**

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 4600.12746 | Closed        | Report Tool - Displaying reports |

**Description**

FROM:dteal DATE:Tuesday, May 13, 2003 2:30:51 PM

I have several users that can not be deleted because of events (Incident #4311) I have unchecked the box to make them non-active. These users do not have any bridge check out authorizations. These users still appear in the listing for "Check Out Authorizations – By User". Should they still be there?

FROM:mordoobadi DATE:5/14/2003 12:22:32 PM

Fixed for 5.0.1

4/19/2016 3:17:18 PM

HRS AASHTO

1445

## Complete Issue Information

Issue ID: 4600  
Subject: Report Tool - Displaying reports

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Thompson, Todd                      5/14/2003 12:02:29 PM  
Modified By: administrator                      6/19/2008 4:10:28 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:tthompson DATE:Wednesday, May 14, 2003 8:02:29 AM

When ever I use the report tool and try to generate the report, all I seem to get displayed is the style sheet. How do I get the report to display correctly? I'm not familiar with this XML stuff at all.

4/19/2016 3:17:18 PM

HRS AASHTO

1446

**Complete Issue Information**

We are using IE 6.0.2600.0000 with NT 4 SP 6

I've attached a snap shot of a Report Tool generated report.

FROM:jihnata DATE:5/14/2003 8:39:01 AM

Two things to try:

- 1) Click the "Advanced" button in the report tool and make sure "Use user-defined XSL file" is not checked
- 2) Run the batch file "msxmlfix.bat", which is in the directory where Virtis is installed (just double-click on it)

FROM:tthompson DATE:Wednesday, May 14, 2003 9:11:24 AM

Check of 1) - was NOT checked

Check of 2) - registering these dll's worked.

On my Windows 2000 laptop, the xml reports worked without needing check 2)

You can close this request. Thanks.

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 4601                                                                                         |
| Subject: How to model the floorbeams which are parallel to centerline of abutment (with skewed angle)? |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ha, Binh         | 5/14/2003 2:29:23 PM |
| Modified By: administrator     | 6/19/2008 4:10:28 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

4/19/2016 3:17:18 PM

HRS AASHTO

1447

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 030-092A.bbd        |             |
|      | 061-089D.bbd        |             |
|      | 061-089C.bbd        |             |
|      | 061-089B.bbd        |             |
|      | 030-092B.bbd        |             |
|      | 061-089A.bbd        |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 4602.12744 | Closed        | Identical Bridge ID's |

### Description

FROM:bha DATE:Wednesday, May 14, 2003 10:29:24 AM

Virtis is not allowed to model the floorbeam which are parallel to the centerline of abutment (with a skewed angle)

Enclosed is a framing plan of girder-floorbeam system (AutoCad drawing). Can you help us to model the floorbeams FB1 and FB29 (parrallel to centerline of abutment)?

Thanks,

FROM:kkennelly DATE:5/14/2003 4:24:45 PM

For a floorbeam to be skewed in Virtis, the floorbeam must located along the support line of the main girder. It appears in your drawing that your end floorbeams are offset from the main girder's support lines by 1'-6" so you cannot skew the fb's. You should use the floor line approach to accurately model your structure.

Since your end FB's are offset by only 1.5', I wouldn't think there will be too much error introduced if you use the floor system approach and place your end fb's at the support lines of the girders.

|                                |
|--------------------------------|
| Issue ID: 4602                 |
| Subject: Identical Bridge ID's |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center      |
| Primary Contact: Ordoobadi, Mehrdad |

4/19/2016 3:17:19 PM

HRS AASHTO

1448

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 5/15/2003 1:17:31 PM |
| Modified By: administrator | 6/19/2008 4:10:28 PM |
| Priority: High             |                      |
| Category: Bug - GUI 2      |                      |

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Lee, Herman     | Assigned           |          | Bug - GUI 2 |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |
|                 | Accepted           |          |             |
|                 | Closed             |          |             |
| Lee, Herman     | Closed             | High     | Bug - GUI 2 |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI4604.bmp          |             |
|      | VI4604XP.gif        |             |

**Tasks**

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4604.12742 | Closed        | Unable to Name/Rename Group |

**Description**

FROM:dteal DATE:Thursday, May 15, 2003 9:17:32 AM

I came across two bridges in our database that appear to have Identical Bridge ID's with different NBI numbers. Bridge ID's are unique, how can this happen. Am I not seeing something and the ID's are not in fact the same? They both appear to share Bridge ID: 030-092??

FROM:dteal DATE:Thursday, May 15, 2003 9:34:54 AM

4/19/2016 3:17:19 PM

HRS AASHTO

1449

**Complete Issue Information**

I found 2 more with duplicate Bridge ID: 061-089  
See attached

FROM:dteal DATE:Thursday, May 15, 2003 11:12:00 AM  
I just created 2 more bridges with the same "viewable" Bridge ID (attached). It appears that the validation can see unprintable control keystrokes, like the windows key and space bar, removes trailing spaces and saves it to the database – resulting in identical Bridges ID's?????

FROM:mordoobadi DATE:5/30/2003 3:17:24 PM  
This is related to the resolution of incident 2119.  
I think since CHAR data types are no longer used in table bridge (We have VARCHAR2 instead), we need to remove the code that we added (for incident 2119) to trim trailing spaces on bridge\_id and struct\_num.  
I also noticed that there is no UNIQUE constraint on the bridge\_id in the abw\_overflow table.  
So there are two things that needs to be done:  
(1) Delete the block of code in the file DoBridgeManager.cpp lines 380 thru 430.  
(2) Add a UNIQUE index to abw\_overflow table on bridge\_id.

FROM:mordoobadi DATE:6/11/2003 1:18:27 PM  
Fixed for 5.0.1.

|                                      |
|--------------------------------------|
| Issue ID: 4604                       |
| Subject: Unable to Name/Rename Group |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 5/16/2003 8:06:31 PM |
| Modified By: administrator     | 6/19/2008 4:10:28 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:17:19 PM

HRS AASHTO

1450

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, May 16, 2003 4:06:31 PM

In config browser I am unable to name /rename a group. Logged in as system administrator, highlight "Users", select New, and a User Group called "New Item" is added tot he end of the tree. Now I want to rename this New Item to Rating administrator so I double click on the New Item, type in Rating Administrator and hit enter. It changes back to New Item.

I can not find a way to rename New Item, I can only create New Item and delete New Item??

FROM:hlee DATE:5/23/2003 1:58:21 PM

I cannot reproduce this incident.

Please see the attached bitmap for screen captures.

Information needed if steps to reproduce are different from those in the screen captures.

FROM:dteal DATE:Tuesday, May 27, 2003 8:43:06 AM

Beta testers can not download attachements from visual intercept.

FROM:hlee DATE:5/27/2003 3:00:29 PM

Attachment e-mailed to dean (teal@ksdot.org).

FROM:dteal DATE:Tuesday, May 27, 2003 3:15:00 PM

I did everything as you did in the GUI screen shots. When I hit enter as directed in the 5th screen shot mine returns to "New Item". Did you try this in XP or are you using NT?

FROM:hlee DATE:5/27/2003 3:22:07 PM

I tried in Windows 2000 Service Pack 2.

FROM:dteal DATE:Tuesday, May 27, 2003 3:46:27 PM

You need to try it in XP

FROM:hlee DATE:5/27/2003 4:48:14 PM

I cannot reproduce in Windows XP.

I tried in Windows XP Service Pack 1.

Are you using SP1? Can you rename a file in file explorer?

FROM:dteal DATE:Wednesday, May 28, 2003 11:59:33 AM

Yes, we are using SP1.

Oracle8i Enterprise Edition Release 8.1.6.3.0

Microsoft ODBC for Oracle 2.573.9030.00

FROM:hlee DATE:5/28/2003 12:08:50 PM

The incident can be reproduced with Microsoft ODBC for Oracle 2.573.9030.00 driver.

Work around: Tested OK with Oracle ODBC 8.01.75.00 driver.

=====

**Complete Issue Information**

Error updating the database.

11:48:41 AM - Line 554 in source file D:\Virtis\data management\abmcfg\DmUsersGroup.cpp.

State:S1015,Native:0,Origin:[Microsoft][ODBC Driver Manager]

No cursor name available

=====

FROM:hlee DATE:5/29/2003 9:53:13 AM

More information to reproduce the incident:

Driver Name and Version: Microsoft ODBC for Oracle 2.573.7713 driver

Driver ODBC Version: 2.50

ODBC Version: 3.52.0000

FROM:dteal DATE:Wednesday, June 04, 2003 1:31:38 PM

Our DBA Group just installed Oracle 9i ODBC 9.02.00.00 on my client workstation. I am now able to Name/Rename a group.

FROM:mordoobadi DATE:6/6/2003 11:33:48 AM

I think the problem is with ODBC Driver version. The Microsoft ODBC Driver for Oracle version is 2.50.

The documentation for Microsoft ODBC for Oracle states that Oracle8 has limited support. Oracle 7.3x is fully supported by the driver.

See <http://msdn.microsoft.com/library/default.asp?url=/library/en-us/odbc/hm/orcdrv sdk.asp>

The problem is recorded in Microsoft support site (Article 120511).

See <http://support.microsoft.com/default.aspx?scid=kb;en-us;120511>

We are not supporting Microsoft ODBC for Oracle and we suggest the users to use Oracle's ODBC driver.

FROM:dteal DATE:Thursday, June 26, 2003 9:12:54 AM

Issue ID: 4605  
Subject: Structure Framing Plan Details - Grid Size

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Bertos, Steve 5/19/2003 1:11:58 PM  
Modified By: administrator 6/19/2008 4:10:28 PM  
Priority: High  
Category: Bug - Warranty

**History**

4/19/2016 3:17:19 PM

HRS AASHTO

1452



### Complete Issue Information

| Primary Contact                 | Status   | Priority | Category    |
|---------------------------------|----------|----------|-------------|
| Ihnat, Joseph                   | Assigned | High     | Unknown     |
| Lee, Herman                     | Assigned | High     | Enhancement |
| Kennelly, Krisha<br>Lee, Herman | Resolved |          |             |
| Lee, Herman                     | Resolved | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 4616.12730 | Resolved      | Transfer events to another user |

### Description

FROM:jihnat DATE:5/19/2003 9:09:28 AM  
Reported via email by Connie Wong of Vollmer Assoc:

Attach is a screen capture of my VIRTIS window. Why is the girder spacing window so small? It wasn't like that in the previous versions.

FROM:jihnat DATE:5/27/2003 8:33:12 AM  
My emailed response to Connie:

The Girder Spacing grid was probably narrowed a bit in version 5.0 because a third grid was added to this window for Floor System. As you may have already discovered, when you enlarge the Framing Plan Details window the grids only grow vertically, not horizontally. If you narrow the columns on the Girder Spacing grid everthing will fit nicely.

Had you uninstalled version 4.2 before installing version 5.0? I wouldn't expect this to appear this way if version 4.2 had been uninstalled first.

And her reply:

4/19/2016 3:17:19 PM

HRS AASHTO

1453

**Complete Issue Information**

Thanks for the suggestion. I narrowed the columns and I was able to fit both columns together. Thank you.

I think the IT person did uninstall version 4.2 before installing 5.0 since its folders are not on the computer anymore.

|                                          |
|------------------------------------------|
| Issue ID: 4616                           |
| Subject: Transfer events to another user |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 5/23/2003 2:01:08 PM |
| Modified By: administrator     | 6/19/2008 4:10:27 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:5/23/03 10:02:27 AM

We need to add a feature to the admin utility that will allow the administrator to easily transfer events. This is related to 4311.

See Mehrdad when you are ready to start.

FROM:hlee DATE:6/2/2003 4:08:56 PM

Added a feature to transfer events to another user.

Krishna, please update Help for admin utility similar to below:

=====

4/19/2016 3:17:19 PM

HRS AASHTO

1454

**Complete Issue Information**

Transfer Events

From

Select the user to transfer the events from.

To

Select the user to transfer the events to.

Transfer Now button

Select this button to transfer events from the "From" user to the "To" user.

=====

FROM:kkennelly DATE:6/3/2003 2:12:58 PM

Help updated. Herman, please review it to be sure it appears as you want.

FROM:hlee DATE:6/4/2003 10:46:02 AM

Help reviewed.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4618                                        |
| Subject: Transferring events from one user to another |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lee, Herman     |                      |
| Submitted By: Ordoobadi, Mehrdad | 5/23/2003 5:26:49 PM |
| Modified By: administrator       | 6/19/2008 4:10:27 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Ordoobadi, Mehrdad | New       | High     | Unknown     |
| Lee, Herman        | Assigned  |          |             |
|                    | Duplicate |          |             |
|                    |           |          | Enhancement |
| Lee, Herman        | Duplicate | High     | Enhancement |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4622.12724 | Resolved      | Enhance Analysis Progress window (tree item boxes) |

### Description

FROM:mordoobadi DATE:5/23/2003 1:25:46 PM  
See Incident 4311.

FROM:mordoobadi DATE:5/23/2003 1:27:44 PM  
Add to the BridgeWareAdmin program a way to transfer user's events to another users.

FROM:hlee DATE:5/23/2003 2:33:39 PM  
Same as 4616.

Issue ID: 4622

Subject: Enhance Analysis Progress window (tree item boxes)

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Goodrich, Brian 5/28/2003 6:19:46 PM

Modified By: administrator 6/19/2008 4:10:27 PM

Priority: High

Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

### Contacts

| Name          | Company      | Email 1                                                                  | Phone 1       |
|---------------|--------------|--------------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech   | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>     | (402)363-9515 |
| Richard Best  | Illinois DOT | <a href="mailto:BESTRM@nt.dot.state.il.us">BESTRM@nt.dot.state.il.us</a> | 217-785-2922  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Metric Test.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4624.12722 | Closed        | Schematic units don't always match system units toggle box |

### Description

FROM:bgoodrich DATE:Wednesday, May 28, 2003 2:19:46 PM

Jay Puckett and I were discussing the Analysis Progress window, which lists the various structure definitions, member alternatives, etc. with a box to the left of each tree item. The box can contain a check or X. Additionally, it can be left empty in the case of a floor system analysis where certain members are not included in the analysis. We suggest each analysis result be identified with a unique symbol:

1. Empty = Analysis not performed yet, but it will be.
2. Check = Successful analysis
3. X = Unsuccessful analysis
4. ????? = No member alternative assigned, which is OK
5. ????? = Member not considered in analysis, which is OK

An empty box may lead users to believe an analysis was not performed because some problem was encountered but not reported.

**Complete Issue Information**

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4624                                                      |
| Subject: Schematic units don't always match system units toggle box |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Best, Richard    | 6/4/2003 7:19:01 PM  |
| Modified By: administrator     | 6/19/2008 4:10:27 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Ihnat, Joseph    | Assigned |          | Bug      |
| Kennelly, Krisha |          |          |          |
| Ihnat, Joseph    | Resolved |          |          |
| Ihnat, Joseph    | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 4638.12708 | Resolved      | Deck type not being set for new girder system structure defs |

**Description**

FROM:rmbest DATE:Wednesday, June 04, 2003 3:19:01 PM

In the attached file, the default units are set to SI/Metric. When the framing plan schematic is displayed, the system units toggle box says SI/Metric, but the schematic is displayed in English. Switching the toggle box to US Customary does nothing, but switching the toggle box back to SI/Metric displays the measurements then in metric. The framing plan measurements should be displayed initially in the default units.

4/19/2016 3:17:20 PM

HRS AASHTO

1458

**Complete Issue Information**

FROM:jihnat DATE:6/4/2003 4:13:36 PM  
This has been fixed for 5.0 SP1 (related to 4594).

FROM:gbarnhill DATE:Monday, June 23, 2003 5:52:43 PM  
5.0.1-beta--The units first display according to the default settings.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 4638                                                        |
| Subject: Deck type not being set for new girder system structure defs |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 6/10/2003 7:33:07 PM |
| Modified By: administrator     | 6/19/2008 4:10:26 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:6/10/2003 3:27:06 PM  
When a new girder system structure def is created, the deck type is not being set by the gui.. (It is set for a girder line). Even though the gui checks the deck panel range type to determine the deck type for

4/19/2016 3:17:21 PM

HRS AASHTO

1459

**Complete Issue Information**

a system, we now have the GetDeckType() function that should be set by the gui when a new system structure def is created.

The utility written to set the steel cross section deck type for incident 4551 looks at this structure def deck type value to set the steel cross section deck types. If the user has created new system structure defs and cross sectoin based mbr alts in 5.0.0, then runs the utility to migrate to 5.0.1, they could still have null deck types for their steel cross sections.

FROM:jihnna DATE:6/12/2003 8:44:25 AM  
I don't see a GetDeckType function in IDoGirderSystemStructDef

FROM:kkennelly DATE:6/12/2003 1:43:49 PM  
You're right, it wasn't there. It is now added.

FROM:jihnna DATE:6/12/2003 2:55:39 PM  
Fixed for 5.0 SP1

|                             |
|-----------------------------|
| Issue ID: 4639              |
| Subject: Setup new accounts |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Hoover, Bobie    | 6/11/2003 3:08:52 PM |
| Modified By: administrator     | 6/19/2008 4:10:26 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |
|                 | Closed |          |          |



### Complete Issue Information

|                 |          |      |                |
|-----------------|----------|------|----------------|
| Duray, Jim      | Closed   | High | Education      |
| Duray, Jim      | New      | High | Education      |
| Lee, Herman     | Assigned |      | Bug            |
| Goodrich, Brian | Resolved |      | Bug - Warranty |
| Goodrich, Brian | Resolved | High | Bug - Warranty |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | ANALYSIS_ERROR.xls  |             |
|      | w-44-107.bbd        |             |
|      | w-44-107_5101.bbd   |             |
|      | w-44-107_8-11.bbd   |             |
|      | BRASS-GIRDER(ASD)   |             |
|      | Window.bmp          |             |

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 4640.12706 | Resolved      | Floorbeam can not get stringer DL reactions in Floorbeam-Stringe system |

### Description

FROM:bhoover DATE:Wednesday, June 11, 2003 11:08:52 AM

Hello!

Bobie is out of town and we are having a problem. While we have the password for Bobie's account, we would prefer to not open a ticket under it as then we would not be able to respond to the contact methods. How do we add/setup a new account??

Please respond to winkid1@modot.net and clutt@mail.modot.state.mo.us. Or if you prefer, you can call myself (Dennis) at 573-526-8957 or Tamara at 573-526-3959.

Thanks,

4/19/2016 3:17:21 PM

HRS AASHTO

1461

**Complete Issue Information**

Dennis Winkie

FROM:b Hoover DATE:Thursday, June 12, 2003 7:37:42 AM

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 4640                                                                    |
| Subject: Floorbeam can not get stringer DL reactions in Floorbeam-Stringer system |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 6/12/2003 1:04:56 PM |
| Modified By: administrator       | 6/19/2008 4:10:26 PM |
| Priority: High                   |                      |
| Category: Bug - Warranty         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bha DATE:Thursday, June 12, 2003 9:04:56 AM

We have been so eager to apply the new features Floor System Superstructure of Version 5.0 to rate one Floorbeam-Stringer bridge, the stringer ratings are OK but for floorbeams the Virtis has the message:

"Error generating LFD/ASD commands!  
 Error generating load group commands"  
 Error in the loads utility!  
 Error getting stringer dead load reaction!  
 Error preparing stringer dead loads reactions! "

We have been very disappointed with that result. Please find the enclosed .bbd file and give us the solution as soon as possible.

4/19/2016 3:17:21 PM

HRS AASHTO

1462

**Complete Issue Information**

FROM:hlee DATE:6/17/2003 4:37:42 PM  
Fixed a bug in UiAnalysisProgressDlg.cpp for the above error message.

E-mail to Brian:

=====  
Hi Brian,

Please take a look at this incident. The bbd ("w-44-107\_5101.bbd") attached in the incident is in 5.1.0.1 format. Also, there is a capture of the engine dos window. When I tried to rate floorbeam2, seems like the engine got struck in an infinite loop. In order to start rating, I fixed a bug in UiAnalysisProgressDlg.cpp (attached) for the error message report in the incident.

Thanks,  
Herman  
=====

FROM:bgoodrich DATE:Wednesday, June 18, 2003 11:54:50 AM  
The floorbeam is quite long, so there are numerous combinations of lane positions that must be checked. In the floorbeam definition window (engine tab), I found that if I change the BRASS Lane Advancement Increment from the default of 1 ft to 4 ft, the analysis time is reduce to something reasonable.

FROM:hlee DATE:6/18/2003 1:08:30 PM  
To fix the tolerance problem in the original bbd file (w-44-107.bbd), change the lengths of the web, top flange, and bottom flange in Stringer Profile window to agree with the length in GroupDef1.

FROM:hlee DATE:6/19/2003 9:34:15 AM  
Included in Service Pack 1 (5.0.1).

FROM:hlee DATE:8/12/2003 8:53:11 AM  
Attached "ANALYSIS\_ERROR.xls" and "w-44-107.bbd" from Mr. Ha e-mail on 8/11/03.  
Renamed "w-44-107.bbd" to "w-44-107\_8-11.bbd".

FROM:bgoodrich DATE:Tuesday, August 12, 2003 11:21:05 AM  
For Floorbeam 1, the left cantilever of the floorbeam is 1.79 ft and the default of 100 is used for the BRASS wheel advancement denominator (see floorbeam def engine properties). This value must be changed to 15 for BRASS to successfully run.

Issue ID: 4643  
Subject: Distribution of Stage 2 dead loads on reinforced concrete tee beam bridge

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 6/13/2003 2:37:51 PM

4/19/2016 3:17:22 PM

**HRS AASHTO**

1463

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:25 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
| Ihnat, Joseph   | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | A4431Harped.bbd            |             |
|      | A4431Harped (4651 531).bbd |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 4651.12695 | Resolved      | Harped Distance Check |

### Description

FROM:kkennelly DATE:6/13/2003 10:05:25 AM  
Submitted for Vinacs via email:

Attached bridge is a reinforced concrete tee beam bridge. User wants the appurtenances to be distributed equally to all girders. BRASS only has 1 stage for reinforced concrete so appurtenances are distributed as Stage 1 loads by tributary area. Jim wants the export changed so that user can enter appurtenances as Stage 2 loads and then export computes additional member load due to appurtenances being distributed equally to all girders (if user has picked that for Stage 2 DL distribution). If user has picked a different type of stage 2 DL distribution, I guess the export will have to continue the way it works now because there is no way for the export to distribute the appurtenances by continuous beam.

Text from user email:

4/19/2016 3:17:22 PM

HRS AASHTO

1464

## Complete Issue Information

...

Users tend to believe that the barrier loads are distributed to ALL girders (by default). However, it apparently is not true for Tee beam bridges. I don't know how many users are aware of this problem. Furthermore, this is an inconsistent behavior of Virtis.

This problem arises only on Tee beam bridges-becuae BRASS does not have the stage 2 condition for Tee beam bridges. BRASS will automatically treats the load identified with the stage 2 condition as a stage 1 load (see below).

### WARNING (High):

A load is being applied to Stage 2, which does not exist in BRASS for this structure type! The load(s) will be applied to the last allowable stage (Stage 1).

Why not we modify the Brass-export program and treat the barrier rail loads (if the user identify it as stage 2 load case) and distribute the loads as specified in the stage 2 condition first before applies to the last allowable stage?

Why do I like the automated method? Because it gives a lot of flexibility in the future.

1. If we identify another software that can distribute the loads evenly, then I need to revisit all the Tbeam bridges and remove the member loads that are placed to "work around" the problem.
2. In case, we upgrade the barrier rail on bridges, instead just update the barrier rail properties, I need to check each member and adjust the member loads to reflect the barrier upgrading
3. If the spec is modified and recommends the way we distribute the barrier rail, again, I have to revisit all the Tee beam bridges
4. Furthermore, as I mention earlier, this brings an inconsistency within Virtis. Users have to be told that barrier rail loads will not be distributed between girders for certain type of bridges and on.

Vinacs M Vinayamoorthy

FROM:bgoodrich DATE:Friday, June 13, 2003 1:19:59 PM

This issue is already on the BRASS enhancement list and has been for some time. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Thursday, June 19, 2003 12:37:07 PM

E-mail from Mike Watters (WYDOT):

Brian:

I cannot assign an enhancement to a Problem Log unless it is an approved task. I will add this documentation to the existing enhancement request.

4/19/2016 3:17:22 PM

HRS AASHTO

1465

**Complete Issue Information**

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, June 23, 2003 3:09:10 PM  
I enhanced the export to generate member loads from stage 2 deck loads that are to be uniformly distributed for R/C members. Fixed for version 5.0.1.

FROM:hlee DATE:7/24/2003 11:13:50 AM  
Tested member G1 of span 2 struct def in the attached bbd.  
In 5.0.1, member loads of R/C members from stage 2 deck loads still use the DECKC-LODC command.

FROM:hlee DATE:7/24/2003 12:33:38 PM  
Member G1 of span 2 struct def is a steel member. Incident only apply for rc member.  
Patch test ok for span 1 struct def.

|                                |
|--------------------------------|
| Issue ID: 4651                 |
| Subject: Harped Distance Check |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Koenig, David    | 6/18/2003 8:42:40 PM |
| Modified By: administrator     | 6/19/2008 4:10:25 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:Wednesday, June 18, 2003 4:42:40 PM

4/19/2016 3:17:22 PM

HRS AASHTO

1466

**Complete Issue Information**

We have discovered that Virtis is not checking the harped distances on prestressed girders correctly. On the attached example, these girders have a single harped point at the center of the girder. When this is entered for the first span, Virtis gives a message indicating that the sum of the harp distances exceeds the span length. We think that the program is using the span lengths to check the sum of the harp distances instead of using the end to end beam length.

The value we were trying to enter was 20.7083 with a symetrical harped layout. The end to end girder length on this structure is 41.4167' and the span length is 41.25'.

FROM:jihnna DATE:7/18/2005 3:14:00 PM

Changed to check beam length instead of span length, but note that for this example I still got error until I dropped foot tolerance to 0.01

Fixed for 5.4.0

For future testing, I've attached version 5.3.1 BBD file.

Issue ID: 4653  
Subject: Schematic does not recognize the left cantilever length.

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 6/19/2003 1:03:37 PM  
Modified By: administrator 6/19/2008 4:10:25 PM  
Priority: High  
Category: Bug - Warranty

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:17:22 PM

HRS AASHTO

1467

**Complete Issue Information**

|               |          |      |  |                |
|---------------|----------|------|--|----------------|
|               | Assigned |      |  | Bug - Warranty |
|               | Resolved |      |  |                |
| Duray, Jim    | New      | High |  | Bug            |
|               | Assigned |      |  |                |
|               | On Hold  |      |  |                |
| Ihnat, Joseph | Resolved |      |  |                |
|               | Closed   |      |  |                |
| Ihnat, Joseph | Closed   | High |  | Bug            |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Max Out Spec checker.bbd       |             |
|      | Max Out Spec checker (531).bbd |             |
|      | Spec Check Fail.JPG            |             |

**Tasks**

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 4670.12676 | Closed        | Max Number of Spec-Check Reached |

**Description**

FROM:hlee DATE:6/19/2003 8:34:46 AM  
Submitted on behalf of Binh Ha, MassHighway-Bridge Section.  
The bbd file and a bitmap are attached in the incident.

=====

Hi,

I go to Visual intercept and see the incident resolved but maybe for 5.1.0.1 not for 5.0 (because I have applied your change in Brass Lane Increment Virtis still not working). And one more thing I forgot to report in incident 4640 that on Floorbeam Member Alternatives if we use schematic to view the floorbeam profile, it does not recognize the left cantilever length

4/19/2016 3:17:22 PM

HRS AASHTO

1468



**Complete Issue Information**

which is defined in Floorbeam Definitions.

Thank you for your time.

Binh Ha, P.E.  
MassHighway-Bridge Section  
10 Park Plaza, Room 6430  
Boston, Ma 02116  
binh.ha@mhd.state.ma.us  
617-973-7561, 617-973-7990 (fax)

=====

FROM:jduray DATE:6/19/03 11:28:50 AM  
Vi 4640 is resolved for 5.0.1.

|                                           |
|-------------------------------------------|
| Issue ID: 4670                            |
| Subject: Max Number of Spec-Check Reached |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 6/26/2003 4:23:03 PM |
| Modified By: administrator     | 6/19/2008 4:10:23 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Thursday, June 26, 2003 12:23:04 PM  
This is on a 7 span welded plate girder, analyzing one girder line. I have turned off all Spec Check

4/19/2016 3:17:23 PM

**HRS AASHTO**

1469

**Complete Issue Information**

Articles except 3.6.1.3.2. I still get the system Error message "Max number of Spec-check items has been reached". How do you get around this?  
See Attached

FROM:dteal DATE:Friday, June 27, 2003 11:52:07 AM  
From the attached bbd, see  
Super Struc Def - esign DRT  
Member 2  
Member Alt - 1600 mm Web (c)

FROM:jihnat DATE:7/15/2005 1:23:24 PM  
I was able to reproduce this in version 5.0, but after I migrated it forward to 5.3.0 (and 5.3.1) it works OK.  
For testing, I've attached version 5.3.1 of the BBD file.  
Also, increased the max value in the window from 100000 to 500000 (which is really just some sort of safety valve absolute limit).  
Code changed for version 5.4.0

FROM:dteal DATE:Tuesday, December 06, 2005 2:44:32 PM

FROM:jihnat DATE:12/8/2005 7:16:35 AM  
Track field Accepted.

Issue ID: 4672  
Subject: Zero Ratings in 5.0.0

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 6/30/2003 7:44:12 PM  
Modified By: administrator 6/19/2008 4:10:23 PM  
Priority: Urgent  
Category: Bug - BRASS

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|                 |                    |  |        |           |
|-----------------|--------------------|--|--------|-----------|
| Goodrich, Brian | Assigned           |  |        |           |
|                 |                    |  | Urgent |           |
| Duray, Jim      | New                |  | High   | Bug       |
| Ihnat, Joseph   | Information Needed |  |        |           |
|                 |                    |  |        | Education |
|                 | Resolved           |  |        |           |
| Ihnat, Joseph   | Resolved           |  | High   | Education |

### Contacts

| Name         | Company                   | Email 1             | Phone 1      |
|--------------|---------------------------|---------------------|--------------|
| Paul Yannoni | Fay, Spofford & Thorndike | pyannoni@fstinc.com | 781-221-1109 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4679.12667 | Resolved      | Registration request |

### Description

FROM:dteal DATE:Monday, June 30, 2003 3:44:12 PM

I got the following message from one of our raters. Can you explain the zero ratings in Version 5.0.0? bbd is attached.

Dean:

I am running new Ver. of virtis for steel girder and most of the beams I run I get zero rating at @ 2.3 I think there is something wrong with the program, because 2.4 and 2.5 has greater moment value than 2.3.

This is happening on some of the old files I have run previously and was getting good rating before and now the results has changed to zero.

Please check BID # 856, Bridge # 057(050) for checking, and let me know of the outcome.

Thanks a lot

Ahmad

FROM:bgoodrich DATE:Wednesday, July 02, 2003 11:49:24 AM

The problem stems from BRASS incorrectly calculating a negative yield moment. The same negative yield moment issue was already submitted in Incident 4649. This incident will be marked as a duplicate.

4/19/2016 3:17:23 PM

HRS AASHTO

1471

**Complete Issue Information**

FROM:dteal DATE:Wednesday, July 02, 2003 2:46:04 PM

If I read this correctly we will not get a fix until version 5.1??? Meaning we can't rate many of our steel structures between now and then?? Is there a work around??

FROM:dteal DATE:Wednesday, July 02, 2003 4:13:13 PM

This is more than a zero rating issue - the critical rating is for the 2.3 point. This can never happen, it should be at the 2.5 or center of center span.

|                               |
|-------------------------------|
| Issue ID: 4679                |
| Subject: Registration request |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Yannoni, Paul    | 7/2/2003 4:19:20 PM  |
| Modified By: administrator     | 6/19/2008 4:10:22 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pyannoni DATE:Wednesday, July 02, 2003 12:19:20 PM

We are receiving a registration rquest indicating 29 days of access left to the Virtis software.

User Code 1: 280683245

User Code 2: 5395806

FROM:jihnate DATE:7/2/2003 12:33:18 PM

You can continue to use Virtis by clicking the "Continue" button.

You need to contact AASHTO to renew your license. Then they'll notify us and we can generate new

4/19/2016 3:17:23 PM

HRS AASHTO

1472

**Complete Issue Information**

keys.

FROM:jhnat DATE:8/5/2003 1:15:30 PM  
Paul was emailed his new Registration Keys on 7/25/03.

Issue ID: 4681  
Subject: Units in the View Schematics Acting Odd

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 7/2/2003 8:22:20 PM  
Modified By: administrator 6/19/2008 4:10:22 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Ihnat, Joseph   | Duplicate |          |             |
|                 | Accepted  |          | Bug - GUI 2 |
|                 | Closed    |          |             |
| Ihnat, Joseph   | Closed    | High     | Bug - GUI 2 |

4/19/2016 3:17:24 PM

HRS AASHTO

1473

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Floorbeam Results.pdf |             |

### Tasks

| Name       | Current State | Summary                                                                                                 |
|------------|---------------|---------------------------------------------------------------------------------------------------------|
| 4682.12664 | Resolved      | Single lane floorbeam rating results differ from 5.0 Release and 5.0.1 service pack Permit Restrictions |

### Description

FROM:dteal DATE:Wednesday, July 02, 2003 4:22:20 PM  
Structure was created in SI units (system default is SI)

When you go to the Framing Plan, Schematics, the structure is shown in US units (why?), the pull down lists SI, the schematics is shown in US. Take the Units Pulldown and select SI, it never changes to SI. You have to first select US Customary and then select SI in order to get it to change.

Why is it shown in US when the default is SI and it was created as an SI structure?  
Why can't you change it back to SI with out first selecting US?

FROM:jihnat DATE:7/3/2003 7:47:38 AM  
Duplicate of 4624.  
This is fixed in 5.0 SP1.

FROM:dteal DATE:Thursday, July 03, 2003 8:46:54 AM

|                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------|
| Issue ID: 4682                                                                                                   |
| Subject: Single lane floorbeam rating results differ from 5.0 Release and 5.0.1 service pack Permit Restrictions |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 7/9/2003 3:51:00 PM  |
| Modified By: administrator       | 6/19/2008 4:10:22 PM |
| Priority: High                   |                      |

4/19/2016 3:17:24 PM

HRS AASHTO

1474

**Complete Issue Information**

|                       |
|-----------------------|
| Category: Bug - BRASS |
|-----------------------|

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 09C0006.bbd         |             |

**Tasks**

| Name       | Current State | Summary                                                                                                  |
|------------|---------------|----------------------------------------------------------------------------------------------------------|
| 4684.12662 | Resolved      | Allow user to specify how appurtenance DL should be distributed when only 1 stage (non-composite) exists |

**Description**

FROM:kkennelly DATE:7/9/2003 11:47:18 AM

Attached pdf shows results of rating sample db in 5.0 Release for multi-lane and single lane. Single lane set by setting "single lane" check box on Vehicle Advanced Analysis Settings. Also shows results for Service Pack 1 enhancement for Permit Restrictions.

FROM:bgoodrich DATE:Thursday, July 10, 2003 9:57:47 AM

I did find a bug in the BRASS engine when the results were passed to the results object. I fixed that error.

Additionally, some of the floorbeams are such that the single-lane loaded case produces the critical actions and therefore the critical rating factor. In this situation, BRASS reports the same rating factors for the single-lane and multiple-lanes loaded cases. I spoke with Jay Puckett regarding this issue and he indicated that a vehicle should not rely on another vehicle being in another lane to be able to cross the bridge.

I will forward a new BRASS-GIRDER DLL to WYDOT, so they can forward it to you.

4/19/2016 3:17:24 PM

HRS AASHTO

1475

**Complete Issue Information**

Issue ID: 4684  
Subject: Allow user to specify how appurtenance DL should be distributed when only 1 stage (non-composite) exists

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 7/11/2003 5:18:17 PM  
Modified By: administrator 6/19/2008 4:10:22 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:7/11/2003 1:13:05 PM  
Provide the ability for users to specify how the appurtenance DL should be distributed when the structure only has a non-composite stage. Seems reasonable to allow user to distribute appurtenance loads equally to all girders even if girders aren't composite (eg, timber deck on steel beams - all appurtenance DL currently goes just to exterior girders).

Vinacs (Caltrans) sent the following email and attached bbd file.

Q4. As you know, the girders are non composite girders. Therefore, we typically places deck weight based on tributary area and equally distribute the barrier rail weight to all girders. Since I have a on-composite girder bridge, we have just load case (Stage 1) defined. VIRTIS uses the tributary area method for Stage 1 and as a result, the Barrier Rail is not distributed among all girders, instead it is placed on Exterior girder. I have pointed out this earlier also in a different bridge. Do you think this will get resolved in the near future and a user will get an option to equally distribute the barrier load for non-composite girders?

4/19/2016 3:17:24 PM

HRS AASHTO

1476



## Complete Issue Information

FROM:jduray DATE:Tuesday, July 15, 2003 10:10:43 AM

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4686                                                      |
| Subject: Allow PS U-beams with vertical legs to have harped strands |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 7/14/2003 3:40:40 PM |
| Modified By: administrator     | 6/19/2008 4:10:22 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:17:24 PM

HRS AASHTO

1477



**Complete Issue Information**

I believe that I provided you with copies of plans on all of these shapes at the user's group meeting last summer. If the attached sketches do not have enough detail, please let me know and I will mail you some actual plans for these girders.

Thanks,  
David Koenig  
Bridge Rating and Inventory Engineer  
Missouri Department of Transportation

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4698                                      |
| Subject: Provide Ability to Incorporate Attachments |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/25/2003 2:52:51 PM |
| Modified By: administrator     | 6/19/2008 4:10:21 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM:jduray DATE:7/25/2003 10:45:02 AM  
From A. Gugino 7/14/2003 by letter to Ken.

This is necessary so that we may describe general features, history of the load rating models and

### Complete Issue Information

details of the structure that are important to the checker or others that might review the Virtis file in the future. These include drawings or text that associate permit movements with elements of the structure and comments that clarify details of the bridge modeling and reasoning for assumptions that were made. It seems reasonable to include the multi-media functionality of Pontis into Virtis.

|                                                    |
|----------------------------------------------------|
| Issue ID: 4699                                     |
| Subject: Provide Access to All Load Rating Results |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/25/2003 2:53:41 PM |
| Modified By: administrator     | 6/19/2008 4:10:21 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:17:25 PM

HRS AASHTO

1480

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 4700.12646 | Suspended     | Provide Shear Skew Adjustment Factors |

**Description**

FROM:jduray DATE:7/25/2003 10:55:12 AM  
From A. Gugino 7/14/2003 by letter to Ken.

It is very difficult and time consuming to access non-controlling rating results from Virtis that reside in BRASS. Additionally, it is difficult to access member capacity for any rating results. We often utilize non-controlling rating results to determine if a permit load is acceptable. For instance, with steel girders we have found that the bearing stiffener rating sometimes controls. This is useful information for conventional vehicles, but for permit routing may not be as critical to us as flexure, shear and overload (provision) rating results. Additionally, we use flexure and shear design load (the loading that the bridge was designed for) rating results and member capacity results to assist in determining if the bridge is correctly modeled. As noted, this information is often difficult to obtain in that it is buried in reams of output. We sometimes spend more time accessing rating results than we do modeling the bridge. Basically, we want to easy access to all rating results - not just the controlling ones.

|                                                |
|------------------------------------------------|
| Issue ID: 4700                                 |
| Subject: Provide Shear Skew Adjustment Factors |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/25/2003 2:54:41 PM |
| Modified By: hlee              | 7/17/2014 2:37:55 PM |

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 4701.12645 | Suspended     | Enhancements for Permit Routing |

### Description

FROM:jduray DATE:7/25/2003 10:56:07 AM  
From A. Gugino 7/14/2003 by letter to Ken.

3-D modeling and field testing show that bridges with significant skews experience much higher shear demand at the exterior and first interior girder adjacent to the obtuse corners. Accordingly, Caltrans design specifications require that the dead load and live load shear demands be increased at these locations. Virtis does not provide for this. This is not a requirement in the AASHTO LFD design or rating specifications but is required in the LRFD design specifications.

FROM:jduray DATE:7/31/2003 10:23:23 AM  
Requires changes to BRASS.

FROM: Herman Lee DATE: 7/17/2014 10:30:54 AM Eastern Daylight Time  
Shear skew adjustment factors based on the LRFD spec are considered in the LL distribution factor calculations.

## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 4701                           |
| Subject: Enhancements for Permit Routing |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/25/2003 2:55:39 PM |
| Modified By: administrator     | 6/19/2008 4:10:21 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:7/25/2003 10:57:03 AM  
From A. Gugino 7/14/2003 by letter to Ken.

There are at least two features lacking in Virtis that are required to make it a versatile permit routing tool for Caltrans. The first is the capability to associate bridge elements with permit movements, so that only the elements that are associated with the movement are evaluated. Most California bridges carry at least two directions of permit traffic. Bridges that have on or off ramps may contain several permit movements. When evaluating bridges for a permit vehicle it would be ideal to rate the portion of the structures that pertain to the permit movement requested. For instance, if the permit truck is traveling in the southbound direction only the girders in the southbound direction should be evaluated. This becomes important in widened structures where different portions of the bridge have significantly different capacities.

Secondly, the girder framing plan and typical section should be enhanced to display the girder names

4/19/2016 3:17:26 PM

HRS AASHTO

1483

### Complete Issue Information

so that a person reviewing the rating results can easily determine where the controlling members are located. This is required to facilitate escorted permit vehicles, which can often be diverted around a "weak" bridge element.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 4702                                                    |
| Subject: Enhance Girder System to Rate Non-Parallel Steel Girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/25/2003 2:56:10 PM |
| Modified By: administrator     | 6/19/2008 4:10:21 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 4703.12643 | Suspended     | Accommodating Structures with Different Girder Types along girder length |

### Description

FROM:jduray DATE:7/25/2003 10:57:49 AM  
From A. Gugino 7/14/2003 by letter to Ken.

In California steel girders were often used to accommodate odd layouts such as those encountered in tapered bridges, curved alignments, or on and off-ramp situations. As a result, many bridges have non-parallel (tapered) steel girders. Virtis allows tapered girders to be modeled using the Girders System method, but it will not load rate them when modeled using this method. It has therefore been necessary to model tapered girders using the girder-line method to obtain an analysis. We much prefer to use the girder system entry method and would like this feature to be fully functional.

FROM:jduray DATE:7/31/2003 10:23:45 AM

Estimate: 80 hours if all user-defined loads.

160 hours if loads are to be computed within the domain based on tributary area for DL1 and tributary area or equally divided between mbrs for DL2.

FROM:jduray DATE:8/26/2003 11:50:54 AM

Same as 3423.

Issue ID: 4703

Subject: Accommodating Structures with Different Girder Types along girder length

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

7/25/2003 2:56:57 PM

Modified By: administrator

6/19/2008 4:10:21 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:17:26 PM

HRS AASHTO

1485

### Complete Issue Information

| Primary Contact    | Status           | Priority | Category    |
|--------------------|------------------|----------|-------------|
| Duray, Jim         | Suspended        | High     | Enhancement |
| Duray, Jim         | New              | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned         |          | Bug         |
|                    | Not Reproducible |          |             |
| Ordoobadi, Mehrdad | Not Reproducible | High     | Bug         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                                       |
|------------|------------------|-----------------------------------------------|
| 4715.12631 | Not Reproducible | 5.0.1: Error creating instance of COM object. |

### Description

FROM:jduray DATE:7/25/2003 10:58:30 AM  
From A. Gugino 7/14/2003 by letter to Ken.

Widened bridges often have girder types that are different than those of the original structure. The Girder System method does not accommodate these structures well. Each widened structure (sometimes there are several widenings) that have dissimilar girder types must be defined with a separate structure definition. This leads to a multitude of structure definitions within the bridge and is a very inefficient way to model a bridge. We would like Virtis modified, so that a single structure definition can accommodate different girder types.

FROM:kkennelly DATE:7/31/2003 10:01:16 AM

Based on the attached email from Vinacs, the following enhancements are actually being requested:

1. Allow for discrete changes in the deck thickness across the width of the structure in the Structure Typical Section window.
2. Allow for longitudinal deck joints to be described in the GUI. Allow for the distribution of appurtenance DL to take into consideration the presence of these longitudinal deck joints.
3. Allow each span of the member to have a different type of member alternative. For example, span 1 and span 3 are RC tee beams and span 2 is a P/S I beam. The beams are made continuous for live load by pouring a continuous deck.
4. Allow user to add a girder anywhere within the structure typical section instead of current restriction of added members always placed on right side of structure typical section. (request originally made at Caltrans Dec 2002 training.)

4/19/2016 3:17:26 PM

HRS AASHTO

1486

## Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 4715                                         |
| Subject: 5.0.1: Error creating instance of COM object. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Lee, Herman           | 8/5/2003 8:41:39 PM  |
| Modified By: administrator          | 6/19/2008 4:10:20 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned | Medium   |             |
|                 | Resolved |          | Bug - GUI 2 |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | Medium   | Bug - GUI 2 |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 4716.12630 | Closed        | Mouse Pointer Error |

## Description

FROM:hlee DATE:8/5/2003 4:19:23 PM  
To reproduce the error message:

1. Select and rate PCITrainingBridge2 in Bridge Explorer with "HS 20 Rating" template and "Save

4/19/2016 3:17:26 PM

HRS AASHTO

1487

**Complete Issue Information**

- Analysis Results" checked.
- 2. After rating is done, click OK on Analysis Progress window and click Close on Bridge Rating Results window.
- 3. Repeat Step 1 for PCITrainingBridge3. You will get the error message at the end of the analysis.

```

=====
=====
Error creating instance of COM object.
04:26:05 PM - Line 637 in source file
D:\Virtis\DOMAIN\laborslt\DoCriticalMemberRatingResultsSummary.cpp.
=====
=====

```

FROM:mordoobadi DATE:9/24/2003 12:57:39 PM  
 I tried this in 5.1 Beta 3 and I was not able to reproduce the error.

|                              |
|------------------------------|
| Issue ID: 4716               |
| Subject: Mouse Pointer Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/6/2003 2:47:09 PM  |
| Modified By: administrator     | 6/19/2008 4:10:20 PM |
| Priority: Medium               |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, August 06, 2003 10:47:09 AM  
 Submitted for Josh S.

4/19/2016 3:17:27 PM

HRS AASHTO

1488

**Complete Issue Information**

In version 5.0.0 using XP

When I'm in the "View Spec Check" window, if I expand the "Stages" folder and scroll through the stages and points of interest with my arrow keys, the mouse indicator turns to the hourglass and doesn't come out of it until I move the mouse.

FROM:jihnata DATE:8/7/2003 10:26:50 AM  
Fixed for Version 5.1.0

FROM:dteal DATE:Wednesday, September 10, 2003 9:22:30 AM

Issue ID: 4717  
Subject: Existing Timber Training example should be modified to show "Deck" in the BWS tree

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Kennelly, Krisha 8/6/2003 5:30:02 PM  
Modified By: hlee 5/17/2010 2:03:42 PM  
Priority: High  
Category: Maintenance - Internal

**History**

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | Medium   | Maintenance |

4/19/2016 3:17:27 PM

HRS AASHTO

1489

**Complete Issue Information**

|                 |          |      |                |
|-----------------|----------|------|----------------|
| Lee, Herman     | Assigned | High |                |
| Goodrich, Brian | Assigned | High | Unknown        |
|                 | Resolved |      |                |
|                 | Resubmit |      |                |
|                 | Resolved |      |                |
|                 |          |      | Bug - Export 1 |
| Goodrich, Brian | Resolved | High | Bug - Export 1 |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 4718.12628 | Resolved      | Implementation of permit restrictions on timber members |

**Description**

FROM:kkennelly DATE:8/6/2003 1:28:15 PM

The existing training example we have for timber , "TMBR1-SingleSpanTimberExample.pdf", should be revised since 5.0 version now has "Deck" in the BWS tree.

FROM:kkennelly DATE:8/7/2003 8:27:09 AM

The "Deck (Cont'd)" tab has also been removed from the Structure Typical Section window and the "Deck" details window is also different.

FROM:hlee DATE:9/4/2003 8:05:19 AM

"TMBR1-SingleSpanTimberExample.pdf" has been revised for 5.0 version.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 4718                                                   |
| Subject: Implementation of permit restrictions on timber members |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 8/6/2003 5:46:21 PM  |
| Modified By: administrator       | 6/19/2008 4:10:20 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

### History

| Primary Contact | Status   | Priority | Category               |
|-----------------|----------|----------|------------------------|
| Duray, Jim      | New      | Medium   | Maintenance            |
| Lee, Herman     | Assigned | High     |                        |
|                 | Resolved |          |                        |
| Lee, Herman     | Resolved | High     | Maintenance            |
|                 |          |          | Maintenance - Internal |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                  |
|------------|---------------|------------------------------------------------------------------------------------------|
| 4719.12627 | Resolved      | All existing training problems need modified to show new New Structure Definition window |

### Description

FROM:kkennelly DATE:8/6/2003 1:40:41 PM

In 5.0.1, run an HS20 rating for BID 12, Timber Training Bridge, Member G2. View the analysis results window. For axle and lane, 3 rows are displayed. One row is As-Requested for Impact and Lane, one row is Multi-lane and the other row is Single Lane. All 3 rows display the same results. Should we have both the Multi-Lane and Single Lane rows displayed with the same rating factors? The Deck Rating Results window has the same issue.

FROM:bgoodrich DATE:Wednesday, August 06, 2003 3:22:28 PM

Bearing is controlling the rating. The reactions are determined using the "Shear at Supports" distribution factors. For this structure, the same "Shear at Supports" distribution factor (1.0) is entered in the 1 Lane and Multi-Lane fields. If different values are input, the ratings will be different.

The deck rating window should only have two records for the axle: As Requested and Single lane

4/19/2016 3:17:27 PM

HRS AASHTO

1491

### Complete Issue Information

Without Impact. These two will always be the same. There is no Multi-lane case reported for timber deck rating.

FROM:kkennelly DATE:8/7/2003 8:11:02 AM

I see what you are saying for the member alt rating results.

I didn't word the part about the Deck Rating Results correctly. The Deck Rating Results controlling limit states say "Flexure - Multi-lane" but the Lane is listed as Single.

FROM:bgoodrich DATE:Thursday, August 07, 2003 11:36:47 AM

For deck ratings, the lanes loaded was determined based on the travelway width. However, it should have been set to one lane. The export (MaderoAnalysisCtl\_ASD.cpp) was corrected accordingly. I forwarded the updated file to Joe. Fixed for Version 5.1.

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| Issue ID: 4719                                                                                    |
| Subject: All existing training problems need modified to show new New Structure Definition window |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lee, Herman     |                      |
| Submitted By: Kennelly, Krisha   | 8/7/2003 12:20:45 PM |
| Modified By: hlee                | 5/17/2010 2:03:52 PM |
| Priority: High                   |                      |
| Category: Maintenance - Internal |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:8/7/2003 8:20:14 AM

Version 5.0 has a different "New Structure Definition" window than previous versions. Our existing training problems need modified to show this new dialog.

4/19/2016 3:17:27 PM

HRS AASHTO

1492



**Complete Issue Information**

FROM:hlee DATE:9/4/2003 10:31:18 AM

Modified "New Structure Definition" window in PS1, PS2, PS5, PS6, RC1, STL1, STL2, and STL5 for version 5.0.

Issue ID: 4721  
Subject: error trying to execute SP501

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Barnhill, Gale 8/8/2003 1:45:56 PM  
Modified By: administrator 6/19/2008 4:10:19 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Closed   |          |          |

4/19/2016 3:17:28 PM

HRS AASHTO

1493

**Complete Issue Information**

|               |        |      |     |
|---------------|--------|------|-----|
| Ihnat, Joseph | Closed | High | Bug |
|---------------|--------|------|-----|

**Contacts**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                                             |
|------------|---------------|-----------------------------------------------------------------------------------------------------|
| 4725.12621 | Resolved      | Preferences: Automatically save new computed stringer reactions does not save reactions to database |

**Description**

FROM:gbarnhill DATE:Friday, August 08, 2003 9:45:56 AM  
 VirtisOpis is installed in folder C:\VirtisOpis50 and runs.

I unzipped SP501 to folder C:\virtisopis\sp501

I started Setup.exe

I answered YES to the first dialog.

The attached error dialog comes up.

FROM:jihnat DATE:8/8/2003 11:37:20 AM  
 Similar to 3695. Gale told me he uninstalled 4.2 after installing 5.0.0. This probably wiped out a necessary Registry entry.  
 To resolve, reinstall 5.0.0, make sure you select "Don't configure an ODBC data source. Should then be able to install SP1.

FROM:gbarnhill DATE:Friday, August 08, 2003 12:24:51 PM  
 Per Joe's instructions, I reinstalled 5.0.0 and was able to execute SP501.

|                                                                                                              |
|--------------------------------------------------------------------------------------------------------------|
| Issue ID: 4725                                                                                               |
| Subject: Preferences: Automatically save new computed stringer reactions does not save reactions to database |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center      |
| Primary Contact: Ordoobadi, Mehrdad |

4/19/2016 3:17:28 PM

HRS AASHTO

1494

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 8/13/2003 3:10:38 PM |
| Modified By: administrator     | 6/19/2008 4:10:19 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 4729.12617 | Suspended     | Calculations for live load distribution factors and effective flange widths. |

### Description

FROM:kkennelly DATE:8/13/2003 11:00:28 AM

Not working: I have the "Automatic save new computed stringer reactions" checked on my Preferences:Analysis tab. Open BID 13, sit on superstructure definition and rate. Computed Stringer Reactions and Floorbeam Stringer Reactions windows open with correct data. Close BWS, not asked to save changes. Reopen BWS, reopen the Computed Stringer Reactions and Floorbeam Stringer Reactions windows and they don't have any data. These reactions should have been saved.

Working ok: Uncheck the "Automatic save new computed stringer reactions" on Preferences. Open BID13, rate superstructure definition. Open Computed Stringer Reactions window, appears ok, get open to select reactions and hit OK to copy the reactions to the Floorbeam Stringer Reactions window. Close BWS, get asked to save changes, say yes. Reopen BWS, the Computed Stringer Reactions and Floorbeam Stringer Reactions show the reactions that were saved.

FROM:mordoobadi DATE:8/22/2003 10:52:43 AM

Code added to the Analysis Progress window to mark BWS document modified if necessary. Fixed for 5.1.0.

4/19/2016 3:17:28 PM

HRS AASHTO

1495

## Complete Issue Information

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 4729                                                                        |
| Subject: Calculations for live load distribution factors and effective flange widths. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Lee, Herman      | 8/14/2003 9:20:37 PM |
| Modified By: administrator     | 6/19/2008 4:10:19 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:8/14/2003 5:14:57 PM

Compute buttons should show how the factors and widths are calculated.

## Complete Issue Information

Issue ID: 4731

Subject: Single Lane Loaded / Tandem Train

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

8/18/2003 2:20:45 PM

Modified By: administrator

6/19/2008 4:10:19 PM

Priority: High

Category: Enhancement

### History

| Primary Contact    | Status             | Priority | Category    |
|--------------------|--------------------|----------|-------------|
| Duray, Jim         | New                | High     | Bug         |
|                    | Information Needed |          | Education   |
|                    | Closed             |          |             |
|                    | Resubmit           |          |             |
| Ordoobadi, Mehrdad | Assigned           |          | Enhancement |
|                    | Suspended          |          |             |
|                    | Assigned           |          |             |

4/19/2016 3:17:29 PM

HRS AASHTO

1497

### Complete Issue Information

|               |                                           |      |             |
|---------------|-------------------------------------------|------|-------------|
| Duray, Jim    | Resolved<br>New<br>Assigned               | High | Bug - GUI 2 |
| Ihnat, Joseph | On Hold<br>Resolved<br>Accepted<br>Closed |      |             |
| Ihnat, Joseph | Closed                                    | High | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 4749.12597 | Closed        | Floorbeam & Stringer Mbr Alt Schematics - cantilever span length not shown |

### Description

FROM:dteal DATE:Monday, August 18, 2003 10:20:45 AM

In version 5.0.1 the Analysis Setting, Advanced Button there used to be a box to force it to be a single lane. Now this box is for a tandem train. Where did the single lane only go?

Up through version 5.0.0 in our Analysis Settings Templates for the Vehicle Properties for a T130 and T170 truck we had single lane loaded checked. Now in 5.0.1 this column has been changed to tandem train and is unchecked. Did the service patch remove the option for single lane loaded and replace it with a tandem train? Did the service patch change the settings in this window without calling the users attention to it other than enhancement #1463? How do we analyze and rate with single lane loaded now?

FROM:jduray DATE:8/18/2003 11:27:01 AM

The "Single-lane Loaded" checkbox was remove at the direction of the TF when we implemented the Permit restrictions in SP1. Another enhancement for 5.0.1 added a column to indicate tandem train. The settings were changed and the only notice is the list of enhancements. How do you suggest we notify the users?

FROM:dteal DATE:Monday, August 18, 2003 12:44:10 PM

4/19/2016 3:17:29 PM

HRS AASHTO

1498

## Complete Issue Information

For an LFD rating how do I force a single lane?  
How do I analyze a single lane in phase const.(LRDF)?

FROM:dteal DATE:Wednesday, August 20, 2003 10:03:10 PM

We talked at the user group meeting and resolved this - please close this incident.

FROM:dteal DATE:Tuesday, September 09, 2003 2:48:35 PM

In Virtis the change has been OK, we can pick which output to look at. But in Opis, how can we force the design review to look at single lane only??

FROM:dteal DATE:Wednesday, September 10, 2003 1:02:30 PM

Does the removal of the Single Lane Loaded option in version 5.0 in the analysis settings over ride the Live Load Lanes in the Girder Line/System Superstructure Definition window? I don't believe that this Live Load lanes button had anything to do with the number of trucks but only the distribution factors?

FROM:dteal DATE:Thursday, September 18, 2003 8:25:57 AM

The single lane loaded option eliminates an opportunity for confusion when determining what the live load reactions are to use in a LRFD substructure design. How do we do this now??

FROM:bgoodrich DATE:Friday, November 07, 2003 5:39:46 PM

Track field marked with "Resubmit 9/9/03", so status set accordingly.

FROM:dteal DATE:Friday, January 30, 2004 1:32:18 PM

Without the single lane loaded option for design we have to play alot of games to do substructure designs!

FROM:bgoodrich DATE:Thursday, September 30, 2004 10:33:37 AM

This issue is related to Incident 5368.

FROM:dteal DATE:Thursday, September 30, 2004 11:13:27 AM

Okay, here's a real problem with the removal of the single lane loaded check box on the advanced tab of the vehicle properties window. When doing a batch rating, we would have 8 trucks in the list. Two of these trucks (T130 & T170) are to be single lane distribution.

Option #1 – Girder Line structure definition requires two runs, declare single lane loaded on the structure definition GUI, run it, then change it to multi lane and run it again. You would have to do this for each structure in your batch. Not a good solution – any suggestions?

Option #2 – Girder System definition completely eliminates batch ratings. In order to get the single lane distribution you have to enter a scale factor for these two trucks. To get the scale factor you divide the single lane Distribution by the multilane distribution. The problem is that this scale factor is not the same for all trucks. The Dist. Factor is based on girder spacing which may be different for every structure in your batch. Any suggestions for a work around?

When the TF directed you to remove this button I don't feel it was a well thought out plan.

4/19/2016 3:17:29 PM

HRS AASHTO

1499

**Complete Issue Information**

FROM:jduray DATE:9/30/2004 3:07:12 PM

For Design/Review only: Add the single lane checkbox back to the db, domain,export, UI and Help. Request approval from Ken before implementing. Dean is to discuss with Ken on Oct 4th and let me know.

FROM:kkennelly DATE:10/6/2004 1:25:13 PM

Approval given on Oct 4. via email.

Help has been updated for 5.2 and 6.0

FROM:bgoodrich DATE:Thursday, October 07, 2004 12:42:25 PM  
Export updated for 5.2 and 6.0.

FROM:mordoobadi DATE:10/7/2004 1:16:42 PM  
Domain, Db, De, Dm classes has been updated for 5.2 and 6.0.

FROM:dteal DATE:Friday, October 22, 2004 12:09:29 PM

FROM:mordoobadi DATE:10/28/2004 3:49:30 PM  
Accepted by Dean Teal.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 4749                                                                       |
| Subject: Floorbeam & Stringer Mbr Alt Schematics - cantilever span lengths not shown |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 8/26/2003 3:21:37 PM |
| Modified By: administrator     | 6/19/2008 4:10:17 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4756.12590 | Closed        | Option to not allow plastic analysis |

### Description

FROM:kkennelly DATE:8/26/2003 11:20:11 AM

View the schematic for a fb mbr alt in BID 14. Cantilever span lengths not shown and main span length shown starting at left end of mbr alt instead of its correct position.

FROM:jihnata DATE:7/14/2005 9:32:11 AM

Fixed for 5.4.0

Issue ID: 4756

Subject: Option to not allow plastic analysis

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krishna

Submitted By: Teal, Dean

8/27/2003 4:29:50 PM

Modified By: administrator

6/19/2008 4:10:17 PM

Priority: High

4/19/2016 3:17:29 PM

HRS AASHTO

1501

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 4766.12580 | Suspended     | Shear Reinforcement Wizard |

## Description

FROM:dteal DATE:Wednesday, August 27, 2003 12:29:57 PM

Kansas has never allowed steel design to take advantage of plastic moments. Now in LRFD it is harder yet to ignore the section reduction resulting from plastic moment design.

Using the flow chart on page 6-67 of the LRFD AASHTO Spec book, is there anyway to work around Article 6.10.4.1.3 (always say NO). This is the second item in the flow chart? ie, never let the section go plastic, be non-compact in both pos and neg.

FROM:dkemna DATE:Thursday, August 28, 2003 2:10:34 PM

Missouri would like to design non-compact throughout, and I have not found a way to do it in OPIS.

FROM:bgoodrich DATE:Friday, October 24, 2003 1:09:36 PM

BRASS will analyze a section as non-compact if any of the following conditions occur at the point of interest being considered:

1. Yield stress > 70 ksi
2. Providing a longitudinal stiffener
3. Variable web depth

4/19/2016 3:17:29 PM

HRS AASHTO

1502

**Complete Issue Information**

However, I doubt any of these conditions occur in the design. Therefore, I believe a user controlled option would be beneficial for this issue. A parameter could be added to the STEEL-SPECIFICATION command for indicating if a non-compact analysis should be performed. BRASS already gives an option for controlling if the Q Formula is used or not, so this would be similar to implement. I will forward this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Monday, October 27, 2003 10:48:37 PM

E-mail from Mike Watters:

I will add this to the enhancement list for consideration and prioritization by the BRASS users.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, October 27, 2003 10:49:10 PM

Changed status to 'Suspended'.

FROM:bgoodrich DATE:Wednesday, February 02, 2005 2:03:44 PM

WYDOT authorized this work under BRASS Problem Log 543. This work was completed for BRASS-GIRDER(LRFD) 1.6.1, but this option must be added to the engine data in Opis.

FROM:jduray DATE:4/14/2005 11:42:30 AM

When the BRASS work is complete assign to jduray so the Opis part can be completed.

FROM:bgoodrich DATE:Tuesday, May 31, 2005 2:19:24 PM

The export has been updated. Fixed for version 5.3 SP1.

FROM:jduray DATE:6/28/2005 9:08:26 AM

Engine data window should have an option for this.

FROM:dteal DATE:Tuesday, June 28, 2005 11:05:18 AM

Accepted in 5.3 SP1 Beta 1

Issue ID: 4766  
Subject: Shear Reinforcement Wizard

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 8/28/2003 6:45:57 PM  
Modified By: hlee 1/3/2011 10:49:30 PM  
Priority: High  
Category: Enhancement

**History**

4/19/2016 3:17:30 PM

HRS AASHTO

1503

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 4767.12579 | Closed        | Partial Tensioning |

**Description**

FROM:dteal DATE:Thursday, August 28, 2003 2:45:57 PM

In Prestressed, we need a wizard to calculate and place shear reinforcement from end to end of the beam. One option could be starting with a common end section (cage) and then place shear bars between.

FROM: Herman Lee DATE: 1/3/2011 5:47:56 PM Eastern Standard Time  
Duplicate of Incident 10173.

## Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 4767              |
| Subject: Partial Tensioning |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 8/28/2003 7:27:45 PM |
| Modified By: administrator        | 6/19/2008 4:10:16 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Help     |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Help     |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                 |
|------------|---------------|-----------------------------------------------------------------------------------------|
| 4769.12577 | Resolved      | Update the FAQ help for the new types of superstructures, members and decks now handled |

## Description

FROM:dteal DATE:Thursday, August 28, 2003 3:27:46 PM

Is there any workarounds to accomplish partial tensioning of prestressed strands? We are working with inverted T's. We have to partially tension 2 strands in the top of the stem for constructability (control cracks). They only get tensioned to about 15 to 20 kN per strand, not much more than pulling the slack out.

FROM:kkennelly DATE:10/24/2003 8:43:36 AM

The only thing I can think of is to enter the Strand Layout using the "P and CGS" method instead of picking the actual strands in the beam schematic on that window.

4/19/2016 3:17:30 PM

HRS AASHTO

1505

## Complete Issue Information

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 4769                                                                                   |
| Subject: Update the FAQ help for the new types of superstructures, members and decks now handled |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 9/3/2003 2:07:27 PM  |
| Modified By: administrator        | 6/19/2008 4:10:16 PM |
| Priority: High                    |                      |
| Category: Help                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

4/19/2016 3:17:30 PM

HRS AASHTO

1506

## Complete Issue Information

Issue ID: 4773

Subject: Floorbeam Definition Loads not being considered when Girder loads are computed

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha

9/4/2003 7:13:05 PM

Modified By: administrator

6/19/2008 4:10:16 PM

Priority: Urgent

Category: Bug - Domain 1

### History

| Primary Contact | Status | Priority | Category                  |
|-----------------|--------|----------|---------------------------|
| Duray, Jim      | New    | High     | Unknown<br>Bug - Domain 1 |

4/19/2016 3:17:30 PM

HRS AASHTO

1507

**Complete Issue Information**

|                  |            |        |             |
|------------------|------------|--------|-------------|
| Kennelly, Krisha | Assigned   | Urgent |             |
| Duray, Jim       | New        | High   | Bug         |
| Goodrich, Brian  | Assigned   |        | Bug - BRASS |
|                  | Patch Test |        |             |
|                  | Closed     |        |             |
| Goodrich, Brian  | Closed     | High   | Bug - BRASS |

**Contacts**

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SGB PS.bbd          |             |

**Tasks**

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4779.12568 | Closed        | PS Centroid Location |

**Description**

FROM:kkennelly DATE:9/4/2003 3:11:36 PM  
Submitted on behalf of Felton Suthon, Modjeski & Masters via email:

Floorsystem.bbd is the file that describes the entire bridge without stringers and is not transporting the dead loads imposed on the floorbeam to the girder.

FROM:kkennelly DATE:9/4/2003 3:13:55 PM  
When the domain computes the floobeam loads to apply to the girders, it does not include the loads the user may have entered on the "Floorbeam Definition Loads" window .  
Modify code in DoFlrSystemFloorbeamMbr::ComputeTotalFloorbeamDeadLoad() to include the effects of loads on the Floorbeam Definition Loads window.

FROM:kkennelly DATE:9/16/2003 12:37:14 PM  
Resolved for 5.1. Also fixed code to get Stringer Definition Loads. As per discussion with Jim, we are not transferring any user entered moments to the girders.

Issue ID: 4779

Subject: PS Centroid Location

4/19/2016 3:17:31 PM

HRS AASHTO

1508



## Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/9/2003 3:45:40 PM  |
| Modified By: administrator       | 6/19/2008 4:10:15 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status      | Priority | Category       |
|-----------------|-------------|----------|----------------|
| Duray, Jim      | New         | High     | Bug - Export 2 |
|                 | Assigned    |          |                |
|                 | System Test |          |                |
| Duray, Jim      | System Test | High     | Bug - Export 2 |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | STDC.xml            |             |
|      | STDB.xml            |             |
|      | STDA.xml            |             |

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 4780.12567 | System Test   | Unable to export some vehicles to BRASS in 5.0.1 |

## Description

FROM:dteal DATE:Tuesday, September 09, 2003 11:45:40 AM

In reviewing the LRFD analysis results for a prestressed beam bridge, an error was discovered in the output. This error is for the moment in the beam produced by the prestress force. The location of the error is at the beginning end point of the beam in the last span. In this particular 3 span bridge, that location is at the 3.000L pt. Within the Prestress output file, the program is using 0.000 mm as the centroid location of the prestressed beam at that location. The correct value is 533.436 mm. When calculating the moment, the program subtracts the prestressing strand centroid from the beam centroid

4/19/2016 3:17:31 PM

HRS AASHTO

1509

**Complete Issue Information**

to determine the prestress eccentricity. The prestress eccentricity is then multiplied by the prestress load to compute the prestress moment.  
bbd attached

FROM: bgoodrich DATE: Tuesday, September 09, 2003 3:02:38 PM  
I have confirmed Dean's findings. The output in question follows:

=====  
Span No. 3 ==

No. of Rows of Strands 7

\*\*\*\*\* Row 1 \*\*\*

Straight Strand:

Anchored = F  
Transfer Length (Lt) = 780.000 mm  
Transfer Length (Rt) = 780.000 mm

Moments at span ends of span due to eccentricity of stra

| Point No. | Section Centroid (mm) | Prestressing Strand Area (mm^2) | Centroid (mm) | Stress (MPa) |
|-----------|-----------------------|---------------------------------|---------------|--------------|
| 3.000L    | 0.000                 | 600.000                         | 50.000        | 245.374      |
| 3.036L    | 533.436               | 600.000                         | 50.000        | 1146.169     |
| 4.000R    | 533.436               | 600.000                         | 50.000        | 245.842      |
| 3.964R    | 533.436               | 600.000                         | 50.000        | 1148.579     |

I will forward this issue to WYDOT for assignment to a BRASS problem log.

FROM: bgoodrich DATE: Monday, October 13, 2003 10:30:58 PM  
WYDOT has assigned this issue to BRASS Problem Log 454.

FROM: bgoodrich DATE: Monday, November 03, 2003 5:45:22 PM  
This issue has been addressed for BRASS-GIRDER(LRFD) Version 1.5.4. It is not clear when this version will be released. Possibly for version 5.2.

FROM: dteal DATE: Wednesday, March 29, 2006 3:17:47 PM  
Accepted 5,4 beta 7

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 4780                                            |
| Subject: Unable to export some vehicles to BRASS in 5.0.1 |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Duray, Jim    |                     |
| Submitted By: Klossner, Dale   | 9/9/2003 5:38:06 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:15 PM |
| Priority: High             |                      |
| Category: Bug - Export 2   |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4781.12566 | Suspended     | Copy Diaphragms to All Bays |

### Description

FROM:bgoodrich DATE:Tuesday, September 09, 2003 1:38:06 PM  
Entered for Lowell Johnson (MnDOT) (9/9/03):

We discovered a problem with the names of agency defined vehicles. Quotation marks are not accepted for more than one vehicle named at a time. We had three vehicle names that contained quotation marks which we had been using for a couple years or more. Everything worked after we removed the quote marks. This seems like a minor problem, but Dale Klossner suggested I inform you anyway.

These are the files as we have them now. They now work fine, as they did before, in v 4.2. The change we made was in the truck name. We took out the quotation marks.

|              |              |
|--------------|--------------|
| Present name | Former name  |
| Standard A   | Standard "A" |
| Standard B   | Standard "B" |
| Standard C   | Standard "C" |

4/19/2016 3:17:31 PM

HRS AASHTO

1511

## Complete Issue Information

One of these would run at a time. When we tried to run 2 or three of them at once, we got the following error message:

```
Message detail: Detail
Error generating LFD/ASD load commands!
Error preparing vehicles for export
  Unable to add vehicle to results object
Multiple instances of the same vehicle are not allowed
  Vehicle: STANDARD_"~1
-----
```

I'm not sure of those symbols at the end of that last line.

I recall a year or more ago there was a problem using some other symbol in the name of a vehicle (a dash ?) It worked when we changed that symbol to a slash.

I hope I have thoroughly described this problem. (Former problem) If you have any further questions, please call or email.

Lowell Johnson, PE  
Bridge Rating Engineer  
MnDOT Bridge Office  
3485 Hadley Avenue N  
Oakdale, Minnesota, 55128-3307  
Tel: 651 747 2118  
FAX: 651 747 2114

FROM: bgoodrich DATE: Tuesday, September 09, 2003 1:45:43 PM

The quotation marks are not causing the problem with the export of the vehicle names. The following discussion outlines the problem.

BRASS only permits vehicle names to be 12 characters. Because each Virtis/Opis vehicle can consist of a truck, tandem, and lane, the export modifies the vehicle name by adding a suffix to the end of the Virtis/Opis name. For example, 'Standard "A"' becomes 'Standard\_"A"\_TRK', 'Standard\_"A"\_TAN', and 'Standard\_"A"\_LAN'. These generated names then have to be reduced to 12 characters. When the generated names are longer than the limit, the names are truncated to 10 characters and a new suffix is added indicating the number of the vehicle within the group (1 = truck, 2 = tandem, 3 = lane). The generated names then become: 'Standard\_"~1', 'Standard\_"~2', and 'Standard\_"~3'. This works fine when the first 10 characters in the Virtis/Opis vehicle names are all unique. Otherwise, the export generates the same vehicle names for several vehicles and groups.

The work-around is to keep the first 10 characters of the Virtis/Opis vehicle names unique.

We have tried to export as much of the name as possible, so the user could easily review the BRASS output file and recognize the vehicles. We need to determine how to address the issue. The best solution I can think of is to export the vehicle names with the ~ plus a number that is calculated as: (<Vehicle Number> - 1) \* 3 + <1, 2, or 3 for truck, tandem, or lane types>

The MnDOT trucks would then be exported as:

```
Standard "A" => Standard_"~1
Standard "B" => Standard_"~4
Standard "C" => Standard_"~7
```

4/19/2016 3:17:31 PM

HRS AASHTO

1512

**Complete Issue Information**

We should also add a discussion in the help on how the export generates vehicle names for BRASS.

FROM:jduray DATE:9/9/2003 2:18:45 PM

Brian - go ahead and make the change in the export. It will go in the first service pack for 5.1. The help discussion should go in the engine help.

FROM:jduray DATE:9/12/2003 2:01:44 PM

Perhaps we can get this into 5.1 since it has been delayed two weeks.

FROM:bgoodrich DATE:Monday, September 15, 2003 9:43:00 PM

I updated the vehicle export files in the BRASS export as described in my comments on 9/9/03. Fixed for Version 5.1.

|                                      |
|--------------------------------------|
| Issue ID: 4781                       |
| Subject: Copy Diaphragms to All Bays |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Shah, Shyam      | 9/10/2003 1:18:04 PM |
| Modified By: hlee              | 7/17/2014 2:42:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:snshah DATE:Wednesday, September 10, 2003 9:18:04 AM

Would it be possible to have an enhancement which gives the user the option to copy diaphragms to all bays instead of having to copy the input to each bay individually?

4/19/2016 3:17:31 PM

HRS AASHTO

1513

**Complete Issue Information**

FROM: Herman Lee DATE: 7/17/2014 10:38:23 AM Eastern Daylight Time  
Duplicate of Incident 11563.

Issue ID: 4785  
Subject: Run Time Error & Closes

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 9/10/2003 8:22:51 PM  
Modified By: administrator 6/19/2008 4:10:15 PM  
Priority: High  
Category: Bug - Domain 2

**History**

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
|                  | Assigned |          |                |
| Kennelly, Krisha |          |          | Bug - Domain 2 |

4/19/2016 3:17:32 PM

HRS AASHTO

1514

### Complete Issue Information

|               |                 |      |                            |
|---------------|-----------------|------|----------------------------|
|               | Resolved        |      |                            |
|               | Accepted        |      |                            |
| Duray, Jim    | New             | High | Unknown                    |
| Ihnat, Joseph | Assigned        |      | Bug - GUI 1<br>Bug - GUI 2 |
|               | On Hold         |      |                            |
|               | Rejected by TAG |      |                            |
| Ihnat, Joseph | Rejected by TAG | High | Bug - GUI 2                |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State   | Summary                                               |
|------------|-----------------|-------------------------------------------------------|
| 4786.12561 | Rejected by TAG | Unexpected focus problem in Concrete Material window. |

### Description

FROM:dteal DATE:Wednesday, September 10, 2003 4:22:51 PM

In the attached bbd we ran into some problems with a floor system in version 5.0.1. Our rating engineer entered the top and bottom flanges for the girder member, girder member alternative, girder profile – SAVED the bridge – and then went to a view schematic. First came a run time error followed by an application error followed by Virtis closing.

Upon re-logging into Virtis – went to the girder member, girder member alternative, girder profile and the top and bottom flanges that where entered and saved are not there.

The girder member alternative – Haunche Platte Girder #1 – and selected view schematic (without entering anything) and virtis closed by itself.

FROM:jduray DATE:Thursday, September 11, 2003 7:24:46 PM

FROM:jduray DATE:9/12/03 11:01:50 AM

Line 1421 in CDoFlrSystemGirderMbrLocation::BuildGroupDefDiaphragmList() attempts to get a IDoFlrSystemStringerGroupDefPtr from IDoFlrSystemUnitGeometryPtr. It gets a null object but doesn't

4/19/2016 3:17:32 PM

HRS AASHTO

1515

**Complete Issue Information**

test for null. The next line uses the ptr to get the diaphragm set. Virtis crashes because the pointer is null.

This was in 5.0 as well.

FROM:jduray DATE:9/12/03 11:09:11 AM  
In order to build abofloor I had to link to absres.lib???

FROM:jduray DATE:9/12/2003 1:13:13 PM

FROM:kkennelly DATE:9/15/2003 8:50:52 AM  
absres.lib contains the resource strings used for the validation messages. We issue some of the same validation messages for both abobrdg and abofloor so they are contained in absres instead of being in 2 places.

FROM:kkennelly DATE:9/16/2003 12:36:11 PM  
Fixed for 5.1

FROM:dteal DATE:Monday, March 14, 2005 8:33:42 AM

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 4786                                                 |
| Subject: Unexpected focus problem in Concrete Material window. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: lhnat, Joseph |                       |
| Submitted By: Lee, Herman      | 9/11/2003 12:38:05 PM |
| Modified By: administrator     | 6/19/2008 4:10:14 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:17:32 PM

HRS AASHTO

1516



## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:9/11/2003 8:14:37 AM

To reproduce (Don't switch to another window once the new Concrete window is opened):

1. Double click "Materials/Concrete" in BWS tree to create a new concrete.
2. Set focus (single click) on "Compressive strength at 28 days" edit box.
3. Enter a number in "Compressive strength at 28 days" edit box.
4. Set focus (single click) on "Initial compressive strength" edit box. Select "Yes" to recalculate Modulus of Rupture.
5. Right now, the focus is on "Initial compressive strength" edit box (the cursor is inside the edit box) but you cannot enter a value. If you click on the edit box again, you can enter a value.

FROM:jduray DATE:Thursday, September 11, 2003 7:30:32 PM

Issue ID: 4787

Subject: Schematic of undefined beam in SI unit.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Lee, Herman

9/11/2003 12:51:10 PM

Modified By: administrator

6/19/2008 4:10:14 PM

Priority: High

Category: Bug - GUI 2

4/19/2016 3:17:32 PM

HRS AASHTO

1517

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | Assigned |          | Bug         |
|                 | On Hold  |          | Bug - GUI 2 |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 4788.12559 | Closed        | Copy cell only copy what you can see. |

### Description

FROM:hlee DATE:9/11/2003 8:38:08 AM

1. Open the Structural Typical Section schematic for PCITrainingBridge5 or PCITrainingBridge6.
2. Change the unit to SI/Metric.
3. Problem converting undefined beam to SI?

FROM:jduray DATE:Thursday, September 11, 2003 7:29:54 PM

FROM:jduray DATE:9/12/2003 8:18:01 AM

I ran a debug build and displayed the schematic for PCITrainingBridge5 . I don't see anything wrong. Can you provide more info so I can reproduce?

FROM:jduray DATE:9/12/2003 8:53:37 AM

This was fixed for 5.0.1.

4/19/2016 3:17:32 PM

HRS AASHTO

1518

## Complete Issue Information

|                                                |
|------------------------------------------------|
| Issue ID: 4788                                 |
| Subject: Copy cell only copy what you can see. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 9/11/2003 1:12:11 PM |
| Modified By: administrator     | 6/19/2008 4:10:14 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
| Goodrich, Brian | Assigned  |          |               |
|                 | Duplicate |          | Enhance BRASS |
| Goodrich, Brian | Duplicate | High     | Enhance BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1049181.bbd         |             |

## Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 4790.12557 | Duplicate     | STIRRUP-SCHEDULE or STIRRUP-GROUP error |

## Description

FROM:hlee DATE:9/11/2003 8:56:35 AM

To reproduce:

1. Open the Structure Framing Plan Details window of TrainingBridge1, select the Diaphragms tab.
2. Select (cursor is not inside the cell) the Left Girder Start Distance of the second row "27.31" and hit

4/19/2016 3:17:32 PM

HRS AASHTO

1519

**Complete Issue Information**

Ctrl-C.

3. Select (cursor is not inside the cell) the Right Girder Start Distance of the second row and hit Ctrl-V, you will see "27.31" is pasted to the cell.

4. Select the Left Girder cell to edit the value, you will see "27.311000".

5. Select the Right Girder cell to edit the value, you will see "27.31" only.

FROM:jduray DATE:Thursday, September 11, 2003 7:28:44 PM

FROM:jihnat DATE:7/11/2005 10:41:55 AM

I've opened an incident (# 1154170) with Stingray to ask the best way to handle this.

FROM:jihnat DATE:7/11/2005 2:52:48 PM

Fixed for 5.4.0

|                                                  |
|--------------------------------------------------|
| Issue ID: 4790                                   |
| Subject: STIRRUP-SCHEDULE or STIRRUP-GROUP error |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: McCaffrey, Brian   | 9/12/2003 12:59:34 PM |
| Modified By: administrator       | 6/19/2008 4:10:14 PM  |
| Priority: High                   |                       |
| Category: Enhance BRASS          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bmccaffrey DATE:Friday, September 12, 2003 8:59:35 AM

4/19/2016 3:17:33 PM

HRS AASHTO

1520

**Complete Issue Information**

I'm getting the following error in member G8 of the attached Virtis v/5.0 model. It's telling me I can't have more than 50 stirrups in a member.

Error generating LFD/ASD schedule commands!  
09:00:39 AM - Line 214 in source file D:\Virtis\gui\AbxBrass\BrassStdSchedules.cpp.

No. of ranges per span = 65 (Maximum = 50)  
09:00:39 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Maximum number of schedule ranges exceeded for BRASS!  
09:00:39 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error generating STIRRUP-SCHEDULE or STIRRUP-GROUP commands!  
09:00:39 AM - Line 833 in source file D:\Virtis\gui\AbxBrass\BrassStirrupScheduleGroupCmd.c

FROM: bgoodrich DATE: Monday, September 15, 2003 5:38:14 PM  
This issue is identical to Incident 3884. A maximum of 50 stirrup ranges is allowed in BRASS. BRASS requires consecutive stirrup ranges, i.e., the superimposed stirrup ranges in Virtis results in several small ranges when the superimposed stirrup spacing is not the same.

FROM: bmccaffrey DATE: Wednesday, September 17, 2003 8:55:26 AM

This doesn't make sense. Why did this work in previous releases then???

The user shouldn't have to worry about how the engine handles multiple ranges.

FROM: bmccaffrey DATE: Wednesday, September 17, 2003 8:57:21 AM

Issue ID: 4794  
Subject: Another Flexure-compos slab or rebar controlling limit state

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 9/16/2003 7:43:55 PM  
Modified By: administrator 6/19/2008 4:10:14 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | High     | Bug - BRASS |

4/19/2016 3:17:33 PM

**HRS AASHTO**

1521

### Complete Issue Information

|                 |          |      |           |
|-----------------|----------|------|-----------|
| Goodrich, Brian | Assigned |      |           |
| Duray, Jim      | New      | High | Bug       |
| Goodrich, Brian | Assigned |      | Education |
|                 | Resolved |      |           |
|                 | Closed   |      |           |
| Goodrich, Brian | Closed   | High | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 4797.12550 | Closed        | Cover Plates in BRASS |

### Description

FROM:kkennelly DATE:9/16/2003 3:34:42 PM

Submitted on behalf of Kristen Cary, Edwards & Kelcey via phone call.

ASD rating - BRASS is incorrectly rating the deck in the region of DL contraflexure for tension capacity. Bridge rated ok in 5.0.

FROM:kkennelly DATE:9/17/2003 8:26:29 AM

I checked with Brian and he said there is no work around other than to have them load the BRASS DLL we had with Virtis 5.0 with Virtis 5.0.1 so they can use the new Virtis features with a BRASS DLL that works.

FROM:bgoodrich DATE:Wednesday, September 17, 2003 12:07:37 PM

This issue is the same as Incidents 4687 and 4772. I have forwarded this issue to WYDOT, so they are aware that this is the fourth user that has encountered this problem.

FROM:bgoodrich DATE:Thursday, September 18, 2003 12:28:52 PM

On 9/18/03, WYDOT again denied this request as it pertains to ASD.

FROM:bgoodrich DATE:Monday, October 13, 2003 12:38:20 PM

The correction that addressed Incident 4493 was undone, which prevents the incorrect ASD ratings from this incident. This incident will remain suspended.

4/19/2016 3:17:33 PM

HRS AASHTO

1522

## Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 4797                 |
| Subject: Cover Plates in BRASS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/17/2003 2:45:54 PM |
| Modified By: administrator       | 6/19/2008 4:10:14 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Assigned |          | Education |
|                 | Resolved |          |           |
| Lee, Herman     | Resolved | High     | Education |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 904990.bbd          |             |

## Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 4798.12549 | Resolved      | Problem getting main girder to run |

## Description

FROM:dteal DATE:Wednesday, September 17, 2003 10:45:54 AM

When a steel rolled beam has a cover plate attached to the top flange plate, BRASS combines the top flange plate and cover plate into one equivalent flange plate. This equivalent flange plate has the same cross sectional area as the sum of the top flange plate and cover plate. However, I am not able to determine how BRASS determines the width and thickness of the equivalent flange plate. Can you explain the value BRASS comes up with?

FROM:bgoodrich DATE:Wednesday, September 17, 2003 12:23:33 PM

4/19/2016 3:17:33 PM

HRS AASHTO

1523

### Complete Issue Information

The equivalent area (A) and moment of inertia (I) are calculated for the group consisting of the flange and cover plate. For the equivalent rectangular flange plate,  $A=b*h$  and  $I=b*h^3/12$ , where the width (b) and height (h) are unknown. The moment of inertia equation is rearranged and solved for the height, i.e.,  $h=\text{SQRT}[12*I/(b*h)]=\text{SQRT}[12*I/A]$ . Once the height is known, the width can be found as  $b=A/h$ .

FROM: bgoodrich DATE: Wednesday, September 24, 2003 10:42:32 AM  
Track marked as "Accepted", so I am closing this incident.

|                                             |
|---------------------------------------------|
| Issue ID: 4798                              |
| Subject: Problem getting main girder to run |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Quintana, Osiris | 9/17/2003 3:26:55 PM |
| Modified By: administrator     | 6/19/2008 4:10:14 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: jihnat DATE: 9/17/2003 11:24:28 AM  
Submitted via email by Osiris Quintana of Triangle Associates:

4/19/2016 3:17:34 PM

HRS AASHTO

1524



**Complete Issue Information**

Attached please find bridge file 904990. I am having problem getting the main girder to run, and have tried it as a system or line girder and seem to be having the same problem. Can you help. Thank you Osiris Quintana

FROM:hlee DATE:9/19/2003 2:50:37 PM  
E-mail to Osiris Quintana:

=====  
=====

The easiest way to locate the problems is to validate the structure definition. To validate "Spans 20, 21 and 22" system structure definition, select the definition in the Bridge Workspace and select Bridge/Validate from the menu.

The following are the error messages:

- 1. ERROR: Travelway not on structure typical section at end of structure.
- 2. ERROR: Member Girder 2 not located within structure typical section at end of structure.

These problems are illustrated in the Structure Typical Section schematic at the end of the structure (See attached bitmap). To fix these problems, open the Structural Typical Section window, click on the "Distance from right edge..." edit box and then click on the "Distance from left edge..." edit box, the "Distance from right edge..." will then copy to the end of the structure. Click OK to close the window.

Also, the following need to be fixed/checked for G1 to run:

- 1. Add a floorbeam at the beginning of the structure.
- 2. Assign stringer group definitions to all stringer units and define the stringer member alternatives for the stringer definition.
- 3. Double check the location of the sidewalks and generic appurtenances at the end of the structure.
- 4. Double check the girder web profile. Is it possible to have just one or two parabolic shapes in each span?
- 5. Change the location of the first stringer so it will not be the same as the main girder.

The "FS1 - Girder Floorbeam Stringer Example" under Contents/Tutorials in Virtis support web site (<http://aashto.bakerprojects.com>) shows how to enter a GFS system bridge.

=====  
=====

|                                            |
|--------------------------------------------|
| Issue ID: 4802                             |
| Subject: Error with parabolic web profile. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 9/23/2003 6:59:47 PM |
| Modified By: administrator     | 6/19/2008 4:10:13 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

4/19/2016 3:17:34 PM

**HRS AASHTO**

1525

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
|                    | Resolved |          |             |
|                    | Accepted |          |             |
|                    | Closed   |          |             |
| Ordoobadi, Mehrdad | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Saving Failure.bbd  |             |

### Tasks

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 4804.12543 | Closed        | System Error When Saving when a structure definition is checked out |

### Description

FROM:hlee DATE:9/23/2003 2:37:02 PM

E-mail from Osiris Quintana, info@triangleassociates.cc (9/23/03):

=====  
Hi, thank you for the quick response. Need help again.  
Attached are several screen captures, where the bridge was validated shows no errors, the typical structure drawing is correct and the section sizes are correct but when analyzed it is giving error unknown exception in the analysis module. I have the same error with several other large parabolic girders. Your assistance and quick response is always welcomed.  
Thanks Osiris  
=====

4/19/2016 3:17:34 PM

HRS AASHTO

1526

## Complete Issue Information

The member alternative that generates the attached error message is G2 in "Spans 20, 21 and 22" structure definition.

There is no error message if the last parabolic web profile is changed to linear.

FROM: bgoodrich DATE: Tuesday, September 23, 2003 5:12:46 PM

I have tracked the problem to a domain function. The BRASS export calls CDoGirderMbrAlt::GenerateCrossSectionInfo function which in turn calls CDoGirderMbrAlt::FillCrossSectionData which calls CDoGirderMbrAlt::GetParabola which calls CDoSuperStructSpngMbrAlt::GetParabola(IDoSteelWebPlateRangeSetPtr& DoWebPlateRangeSetPtr, double dDistance, short iUnit). This GetParabola function throws an unhandled exception which is caught by the export. The DoWebPlateRangeSetPtr->GetDepthVariationType() line seems to be the culprit, but I am not sure why.

Krishna - Please investigate.

FROM: hlee DATE: 9/26/2003 1:26:20 PM

Fixed GetParabola() at end of RangeSet. This incident will be resolved in 5.1.0 SP1.

To Do: Update abognr\DoSuperStructSpngMbrAlt.cpp once "Virtis 5.1 Maintenance" is available in sourcesafe.

FROM: hlee DATE: 10/9/2003 12:20:34 PM

abognr\DoSuperStructSpngMbrAlt.cpp has been revised again for VI 4816.

Issue ID: 4804

Subject: System Error When Saving when a structure definition is checked out

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

9/24/2003 2:13:47 PM

Modified By: administrator

6/19/2008 4:10:13 PM

Priority: High

Category: Bug - GUI 2

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

4/19/2016 3:17:34 PM

HRS AASHTO

1527

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 4808.12539 | Discard       | Width/Thickness Ratio of Cover Plates |

## Description

FROM:dteal DATE:Wednesday, September 24, 2003 10:13:47 AM

In the attached bbd. I am attempting to delete the structure definition "OLD Voided Design Check DRT". The delete went fine but when I attempt to save the file I get the below error message. Can you tell me what it means and how to delete this structure definition?

Unable to save Bridge data!

Delete process failed while deleting CDmStructDef (SaveOrder object 69).

Error deleting record from database record set.

State:23000,Native:2292,Origin:[Oracle][ODBC][Ora] State:23000,Native:2292,Origin:[Oracle][ODBC][Ora]

ORA-02292: integrity constraint (VIRTIS.R\_2582) violated - child record found  
ORA-02292: integrity constraint (VIRTIS.R\_2582) violated - child record found

FROM:mordoobadi DATE:9/24/2003 2:40:00 PM

The error appears to be because you have the structure definition "OLD Voided Design Check DRT" checked-out.

If you have a structure definition checked-out (not the whole bridge) The database does not allow you to delete that structure definition. Because of data in some child tables (That store check-out info). GUI should verify that the structure definition that is being deleted is not checked-out then allow the user to delete it.

FROM:mordoobadi DATE:9/24/2003 3:13:05 PM

I talked to Dean Teal and verified that the structure definition was checked-out. After he checked-in the struture defintion and checked-out the whole bridge he was able to delete the struture defintion and save.

FROM:jduray DATE:Friday, September 26, 2003 1:21:41 PM

It seems we need to build a check into the gui or domain so the user gets a more meaningful message.

FROM:mordoobadi DATE:9/30/2003 2:08:06 PM

I think we need to do the following in the domain.

- 1 - If one or more structure definitions are checked-out by a user and the same user is checking out the whole bridge. Domain should check-in the checked-out structure defs and then check-out the bridge.
- 2 - When the user deletes a structure def, we should make sure that it is not checked-out.

4/19/2016 3:17:34 PM

HRS AASHTO

1528

**Complete Issue Information**

FROM:mordoobadi DATE:9/30/2003 2:21:08 PM  
Jim agreed to the above resolution.

Fix for version 5.2.

FROM:dteal DATE:Tuesday, October 26, 2004 8:21:28 AM

FROM:mordoobadi DATE:10/28/2004 3:48:48 PM  
Accepted by Dean Teal.

|                                                |
|------------------------------------------------|
| Issue ID: 4808                                 |
| Subject: Width/Thickness Ratio of Cover Plates |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 9/26/2003 3:51:07 PM |
| Modified By: administrator       | 6/19/2008 4:10:13 PM |
| Priority: High                   |                      |
| Category: Enhance BRASS          |                      |

**History**

| Primary Contact | Status             | Priority | Category      |
|-----------------|--------------------|----------|---------------|
| Duray, Jim      | New                | High     | Bug           |
| Goodrich, Brian | Assigned           |          |               |
|                 | Information Needed |          |               |
|                 | Assigned           |          | Enhance BRASS |
|                 | Suspended          |          |               |
| Goodrich, Brian | Discard            |          |               |
|                 | Discard            | High     | Enhance BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

Cover Plate.bbd

## Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 4809.12538 | Closed        | User-defined POI does not appear in the graph or tabular report |

## Description

FROM:dteal DATE:Friday, September 26, 2003 11:51:08 AM

Design of the cover plated rolled beam bridge. One of the checks that I believe should be made is the Width/Thickness ratio of the cover plates. BRASS LRFD combines the top cover plate with the top flange plate into a single equivalent flange plate. This equivalent flange plate is then used for all specification checks. For the bottom flange, all specification checks are for the bottom flange only. I can not find any specification check of the bottom cover plate. 6.9.4.2 LRFD ASSHTO Specifications covers the slenderness of plates to ensure the development of the yield strength is in compression before the onset of local bending. This is one possible specification that may need to be checked. Is it checked and I've missed it?

FROM:jduray DATE:Friday, September 26, 2003 1:37:12 PM

FROM:bgoodrich DATE:Friday, September 26, 2003 4:42:30 PM

BRASS-GIRDER(LRFD) does not support a top cover plate and composite slab in the same cross section. When this condition occurs in Opis, the export to BRASS merges the top flange and cover plate, so the composite slab can be included. In most cases, the cover plates are not independently checked. Cover plates are considered in determining the yield moment. Finally, BRASS-GIRDER (LRFD) does not check ASSHTO LRFD 6.9.4.2 for cover plates.

Dean - Please provide a list of specification checks you wish to see include the cover plates, so I can forward this request to WYDOT. Also, submit a BBD file with this type of structure.

FROM:dteal DATE:Wednesday, October 08, 2003 12:35:59 PM

bbd attached

6.9.4.2 LRFD ASSHTO Specifications covers the slenderness of plates to ensure the development of the yield strength is in compression before the onset of local bending. This is one possible specification that may need to be checked.

FROM:dteal DATE:Wednesday, October 08, 2003 12:37:52 PM

FROM:bgoodrich DATE:Wednesday, October 08, 2003 1:24:23 PM

I have forwarded this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Thursday, February 12, 2004 10:36:13 AM

This issue was discussed with WYDOT and the request for BRASS modifications was denied.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:18:56 AM

Set status to Suspended.

4/19/2016 3:17:35 PM

HRS AASHTO

1530

## Complete Issue Information

FROM:hlee DATE:4/30/2008 2:33:25 PM  
Discarded by TAG 12/07.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 4809                                                           |
| Subject: User-defined POI does not appear in the graph or tabular report |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Duray, Jim         | 9/26/2003 5:38:06 PM |
| Modified By: administrator       | 6/19/2008 4:10:13 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Assigned | High     | Bug - GUI 2 |
| Goodrich, Brian |          |          | Bug - BRASS |
|                 | Closed   |          | Education   |
| Goodrich, Brian | Closed   | High     | Education   |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:bgoodrich DATE:Tuesday, October 07, 2003 4:56:57 PM

The Action Output Level in the engine properties of the Analysis Settings window must be set appropriately to get output at the user-defined point. The default is 10th points. The "Print Actions at all node points" option must be selected. Was this the case?

4/19/2016 3:17:35 PM

HRS AASHTO

1531

**Complete Issue Information**

FROM:bgoodrich DATE:Tuesday, October 14, 2003 11:48:13 AM  
I spoke with Jim and he indicated this issue came from the Virtis training Montana DOT during September. Jim agreed that the actions probably didn't show up in the graph or tabular report because the actions at 10th point option was specified by default. Therefore, this issue will be closed.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 4810                                              |
| Subject: Right-click menu doesn't always open the schematic |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 9/26/2003 5:43:03 PM |
| Modified By: jduray            | 10/6/2009 5:25:56 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Ihnat, Joseph   | Assigned           | High     | Bug - GUI 2 |
|                 | On Hold            |          |             |
| Duray, Jim      | Information Needed |          |             |
| Duray, Jim      | Information Needed | High     | Bug - GUI 2 |
|                 | Closed             |          |             |

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |



## Complete Issue Information

---

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4811.12536 | Closed        | Typ sect schematic doesn't always refresh properly |

### Description

FROM:jduray DATE:Friday, September 26, 2003 1:43:04 PM

FROM:jihnat DATE:8/3/2005 3:34:48 PM

Issue ID: 4811

Subject: Typ sect schematic doesn't always refresh properly

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

9/26/2003 5:44:31 PM

Modified By: administrator

6/19/2008 4:10:13 PM

Priority: High

Category: Bug - GUI 2

### History

4/19/2016 3:17:35 PM

HRS AASHTO

1533

**Complete Issue Information**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |
| Ihnat, Joseph   | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          | Education   |
| Ihnat, Joseph   | Resolved | High     | Education   |

**Contacts**

| Name      | Company                    | Email 1               | Phone 1 |
|-----------|----------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 4812.12535 | Resolved      | Strand layout - lhs |

**Description**

FROM:jduray DATE:Friday, September 26, 2003 1:44:32 PM  
Close schematic and reopen and schematic will draw correctly.

FROM:jihnate DATE:8/11/2005 2:47:04 PM  
Fixed for 5.4.0

## Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 4812               |
| Subject: Strand layout - lhs |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 9/26/2003 5:51:12 PM |
| Modified By: administrator     | 6/19/2008 4:10:13 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Duray, Jim      | Assigned         | High     | Bug - GUI 2 |
|                 | Not Reproducible |          |             |
| Duray, Jim      | Not Reproducible | High     | Bug - GUI 2 |

## Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State    | Summary             |
|------------|------------------|---------------------|
| 4813.12534 | Not Reproducible | Strand layout - rhs |

## Description

FROM:jduray DATE:Friday, September 26, 2003 1:51:12 PM

5.1 Beta 3

Entering left harp dist did not set the right harp pt in the grid cell. Clicking the cell causes update and display of correct value.

FROM:jihnat DATE:7/29/2005 2:07:19 PM

The right harp pt cell gets updated when the left harp pt cell loses focus.

4/19/2016 3:17:36 PM

HRS AASHTO

1535

## Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 4813               |
| Subject: Strand layout - rhs |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 9/26/2003 5:52:00 PM |
| Modified By: administrator     | 6/19/2008 4:10:12 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:Friday, September 26, 2003 1:52:00 PM  
The schematic does not position correctly when the scale is changed (XP).

4/19/2016 3:17:36 PM

HRS AASHTO

1536

## Complete Issue Information

Issue ID: 4814

Subject: Show hold-down pt on p/s profile schematic

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

9/26/2003 5:53:14 PM

Modified By: administrator

6/19/2008 4:10:12 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | Suspended | High     | Enhancement |

4/19/2016 3:17:36 PM

HRS AASHTO

1537

**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph | Suspended | High | Enhancement |
|---------------|-----------|------|-------------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | G2.bbd              |             |

**Tasks**

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4816.12531 | Closed        | Exported web depths. |

**Description**

|                                                 |
|-------------------------------------------------|
| Issue ID: 4816<br>Subject: Exported web depths. |
|-------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Lee, Herman        | 9/26/2003 7:00:02 PM |
| Modified By: administrator       | 6/19/2008 4:10:12 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Goodrich, Brian | Discard   | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 4817.12530 | Discard       | Wind load not used |

### Description

FROM:hlee DATE:9/26/2003 2:17:29 PM

The GetParabola(...) function in abognrl/DoSuperStructSpngMbrAlt.cpp returns the web depth at a given location along the spans. I don't understand the logic in taking into account the slope of adjacent web range (VI 3222). And I don't think the web depths exported to BRASS are correct.

The G2 girder member alt in the attached bbd has 3 spans (70', 110', 70'), the web profile is symmetrical about the mid-point of the structure. The exported web depth at 49' from the beginning of the structure is different from the exported web depth at 49' from the end of the structure. The web depths should be the same for symmetrical profile.

FROM:jduray DATE:Friday, September 26, 2003 3:19:25 PM

FROM:kkennelly DATE:9/30/2003 3:25:46 PM

The web depths weren't symmetrical due to a bug. That is fixed.

4/19/2016 3:17:37 PM

HRS AASHTO

1539

**Complete Issue Information**

The user has entered 2 adjacent parabolic web ranges but the parabolas are discontinuous. The domain assumes that consecutive parabolas are continuous. The UI does not let the user enter the data needed to describe adjacent parabolas that are discontinuous. Warn user and add restriction to help.

FROM:kkennelly DATE:10/2/2003 12:54:05 PM  
Validation added to Steel Web Profile windows and Steel Cross Section Ranges window to check that adjacent parabolic ranges are continuous. Also added validation that adjacent parabolic ranges are continuous to the GirderMbrAlt, FloorbeamMbrAlt and StringerMbrAlt classes. Validation performed when closing those windows or saving the bridge.

Check in and pin when Version 5.1 Maintenance is available in Sourcesafe.

FROM:kkennelly DATE:10/3/2003 4:23:56 PM  
All versions checked in and pinned.

Brian,  
The export should call ValidateSteelWebContinuousParabola() for DoGirderMbrAlt, DoStringerMbrAlt and DoFloorbeamMbrAlt that are steel plate or built up beams and issue a warning message similar to that issued by the domain if it returns false.

FROM:bgoodrich DATE:Wednesday, October 15, 2003 1:21:21 PM  
I updated the export (EngineExport.cpp) to call the ValidateSteelWebContinuousParabola function and issue a warning similar to the GUI if appropriate. Fixed for Version 5.1 SP1.

FROM:gbarnhill DATE:Tuesday, January 13, 2004 5:08:15 PM  
OK v 5.1.1 -- I get the warning messages in the GUI if I try to create parabolas in adjacent ranges. If I disregard the message, I get the same messages in the EXPORT.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:02:58 AM  
Track field marked with "gale OK". Accepted.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:03:54 AM  
Closed.

|                             |
|-----------------------------|
| Issue ID: 4817              |
| Subject: Wind load not used |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Duray, Jim         | 9/26/2003 8:18:08 PM |
| Modified By: administrator       | 6/19/2008 4:10:12 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Assigned | High     | Bug - GUI 2 |
|                 | Resolved |          |             |
| Lee, Herman     | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 4818.12529 | Resolved      | Report Tool save btn should be disabled if no file name provided |

### Description

FROM:jduray DATE:Friday, September 26, 2003 4:18:09 PM  
Montana training 5.1 beta 3

There is no warning in the export that wind load will be ignored.

FROM:jduray DATE:Friday, September 26, 2003 4:19:00 PM  
Strength results that should include wind are provided but do not include wind.

FROM:bgoodrich DATE:Monday, October 13, 2003 10:17:26 AM  
The Limitations topic of the BRASS technical manuals state that wind effects are not considered.

FROM:bgoodrich DATE:Thursday, October 23, 2003 5:08:39 PM  
I have forwarded this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Monday, October 27, 2003 10:50:49 PM  
E-mail from Mike Watters:  
I will add it to the enhancement list for next year's prioritization.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:hlee DATE:4/30/2008 2:33:40 PM

4/19/2016 3:17:37 PM

HRS AASHTO

1541

### Complete Issue Information

Discarded by TAG 12/07.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 4818                                                            |
| Subject: Report Tool save btn should be disabled if no file name provided |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 9/26/2003 8:20:48 PM |
| Modified By: administrator     | 6/19/2008 4:10:12 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:Friday, September 26, 2003 4:20:49 PM

FROM:hlee DATE:3/4/2005 2:45:33 PM  
Resolved in 5.3.

## Complete Issue Information

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4819                                        |
| Subject: Report Tool requires ASD engine be populated |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 9/26/2003 8:22:07 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Assigned  | High     | Bug - GUI 2 |
| Lee, Herman     | On Hold   |          |             |
|                 | Duplicate |          |             |
| Lee, Herman     | Duplicate | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:17:37 PM

HRS AASHTO

1543

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4820.12527 | Suspended     | Export warnings filter needed |

### Description

FROM:jduray DATE:Friday, September 26, 2003 4:22:10 PM  
Montana training - 5.1 Beta 3

|                                        |
|----------------------------------------|
| Issue ID: 4820                         |
| Subject: Export warnings filter needed |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Duray, Jim         | 9/26/2003 8:23:28 PM |
| Modified By: administrator       | 6/19/2008 4:10:12 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Suspended | High     | Enhancement |

4/19/2016 3:17:38 PM

HRS AASHTO

1544

**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Goodrich, Brian | Suspended | High | Enhancement |
|-----------------|-----------|------|-------------|

**Contacts**

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | stresses.txt        |             |
|      | GGG2.OUT            |             |

**Tasks**

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4821.12526 | Suspended     | Need tabular report showing stresses |

**Description**

FROM:jduray DATE:Friday, September 26, 2003 4:23:28 PM

It would be helpful to be able to view just the warnings and to filter them. Also useful to disable certain warnings that always appear, have been reviewed to be acceptable.

Issue ID: 4821

Subject: Need tabular report showing stresses

Folder: /Virtis/Support Center

4/19/2016 3:17:38 PM

HRS AASHTO

1545





## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
| Li, Xinmei      | Assigned |          |             |
|                 | Resolved |          |             |
| Li, Xinmei      | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                    | Email 1               | Phone 1 |
|-----------|----------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4823.12524 | Resolved      | Typ section schematic not drawing metric railing correctly |

### Description

FROM:jduray DATE:Friday, September 26, 2003 4:32:15 PM

It would be helpful for Opis to provide a tool for designing shear reinforcement. Perhaps the computations provided by the p/s design tool could be used as a start.

FROM:dteal DATE:Wednesday, October 08, 2003 3:01:07 PM

See also VI 4766



## Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4823                                                      |
| Subject: Typ section schematic not drawing metric railing correctly |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Duray, Jim       | 9/26/2003 9:12:40 PM |
| Modified By: administrator     | 6/19/2008 4:10:12 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BID 973-971.bbd     |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 4830.12517 | Closed        | Bearing Stiffener Problem |

## Description

FROM:jduray DATE:Friday, September 26, 2003 5:12:41 PM  
3StemPSBridge

FROM:jihnata DATE:8/10/2005 3:29:03 PM

4/19/2016 3:17:39 PM

HRS AASHTO

1549

### Complete Issue Information

The PS7 tutorial doesn't show a railing height being entered. That's why the schematic comes out funny.

FROM:xli DATE:3/29/2006 1:44:40 PM  
Updated PS7 in training manual with 5.3.1 version

|                                    |
|------------------------------------|
| Issue ID: 4830                     |
| Subject: Bearing Stiffener Problem |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 10/2/2003 1:54:54 PM |
| Modified By: administrator     | 6/19/2008 4:10:11 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Thursday, October 02, 2003 9:54:54 AM  
See attached .bbd file.

4/19/2016 3:17:39 PM

HRS AASHTO

1550

## Complete Issue Information

There is a bearing stiffener called "Pier # 3 & 4 Bearing Stiffeners". Looking at Member 2, Support 4 (which is pier #3) the pulldown list has the pier 3 & 4 stiffener listed, select it and OK the window. Reopen the window the name field will be blank.

You can not select this bearing stiffener for any support. It appears in the pulldown, it's there after an apply, when you leave and come back to the window it's gone.

FROM:jihnata DATE:10/6/2003 4:14:05 PM

The stiffener name has an extra space on the end. Remove the trailing space, then the stiffener can be selected in the support.

|                                              |
|----------------------------------------------|
| Issue ID: 4831                               |
| Subject: Unable to Delete from Admin Utility |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 10/2/2003 4:06:44 PM |
| Modified By: administrator          | 6/19/2008 4:10:11 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:17:39 PM

HRS AASHTO

1551

**Complete Issue Information**

|                    |                  |      |             |
|--------------------|------------------|------|-------------|
| Ordoobadi, Mehrdad | Assigned         |      |             |
|                    | Not Reproducible |      |             |
| Duray, Jim         | New              | High | Unknown     |
| Lee, Herman        | Assigned         |      | Bug - GUI 2 |
| Kennelly, Krisha   | Resolved         |      |             |
| Kennelly, Krisha   | Resolved         | High | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                                                            |
|------------|---------------|--------------------------------------------------------------------------------------------------------------------|
| 4834.12513 | Resolved      | LRFD Analysis Output Report in Report Tool does not report if the controlling moment/ shear is due to Tandem Train |

**Description**

FROM:dteal DATE:Thursday, October 02, 2003 12:06:49 PM  
5.1 Beta 3, same in 5.0.1, using Oracle

I have one bridge in my "Deleted Bridges" folder. Using the BridgeWare Admin Utility program logged in as the administrator, I selected the Empty Deleted Bridges Folder from the Database Cleanup area. I get the following error message – Unable to delete bridge from the database! I am able to empty the deleted bridges folder from inside Virtis with the same login.

If the folder was empty I get a message stating that Zero bridges where deleted.

FROM:mordoobadi DATE:3/11/2004 12:23:13 PM  
The "Empty Deleted Bridges Folder" does exactly what the GUI does. (calls CDoBridgeManager::DeleteBridge(IBridgeld) )  
I am not able to reproduce this problem.

|                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 4834                                                                                                              |
| Subject: LRFD Analysis Output Report in Report Tool does not report if the controlling moment/ shear is due to Tandem Train |

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 10/6/2003 6:49:51 PM |
| Modified By: administrator        | 6/19/2008 4:10:10 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

### History

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | High     | Unknown        |
| Goodrich, Brian | Assigned   |          | Bug            |
|                 | Patch Test |          | Bug - Export 1 |
|                 |            | Urgent   |                |
|                 | Accepted   |          |                |
|                 | Closed     |          |                |
| Goodrich, Brian | Closed     | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                                          |
|------------|---------------|----------------------------------------------------------------------------------------------------------------------------------|
| 4835.12512 | Closed        | Tandem train always included in BRASS LRFD analysis even when the Tandem Train checkbox is not checked on Advanced Vehicle windo |

### Description

FROM:kkennelly DATE:10/6/2003 2:52:24 PM

We don't have a LL code for the Design Tandem Train + Design Lane. In our tables we indicate with a number what live load combo controlled and we need to add a "4" to indicate design tandem train + design lane.

4/19/2016 3:17:40 PM

HRS AASHTO

1553

**Complete Issue Information**

FROM:kkennelly DATE:10/6/2003 3:03:02 PM

FROM:kkennelly DATE:10/6/2003 3:03:42 PM  
This vehicle combo was a recent enhancement.FROM:kkennelly DATE:12/30/2003 11:06:28 AM  
Fixed for 5.1.1

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 4835                                                                                                                             |
| Subject: Tandem train always included in BRASS LRFD analysis even when the Tandem Train checkbox is not checked on Advanced Vehicle window |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center                      |
| Primary Contact: Goodrich, Brian                    |
| Submitted By: Kennelly, Krisha 10/6/2003 7:13:50 PM |
| Modified By: administrator 6/19/2008 4:10:10 PM     |
| Priority: Urgent                                    |
| Category: Bug - Export 1                            |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bgoodrich DATE:Tuesday, October 07, 2003 5:08:02 PM

I revised the export (BrassLrfdLoadControl.cpp) to obtain the tandem train indicator from analysis event and use that to control whether or not a command is generated for the tandem train live load. Fixed for 5.1 Service Pack 1.

4/19/2016 3:17:40 PM

HRS AASHTO

1554

**Complete Issue Information**

FROM:gbarnhill DATE:Monday, January 12, 2004 11:13:22 AM  
OK in v5.1.1

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:04:53 AM  
Track field marked with "gale OK". Accepted.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:05:30 AM  
Closed.

Issue ID: 4836  
Subject: Question with regards to Positive Moment Capacity Calculation by BRASS of a PS girder

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: vinayagamoorthy, vinacs 10/8/2003 5:29:03 PM  
Modified By: administrator 6/19/2008 4:10:10 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Goodrich, Brian | New         | High     | Unknown     |
|                 | Assigned    |          | Bug - BRASS |
|                 | System Test |          |             |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

4/19/2016 3:17:40 PM

HRS AASHTO

1555

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                      |
|------------|------------------|------------------------------|
| 4838.12509 | Not Reproducible | Analysis Settings Engine Tab |

### Description

FROM:kkennelly DATE:10/8/2003 1:26:14 PM  
Submitted by KKennelly on behalf of Vinacs via email:

Problem Statement:

Two different criteria are used to estimate positive moment capacity numbers at the 0.4th point of Span 1 of a 2 Span continuous prestressed girder bridge. (See below shown in blue color). It appears to us that the strength based on prestressed section criteria is used to estimate HS20 Truck rating, however, non-Prestressed section criteria is used to estimate HS20 Lane rating. Why? What is the difference?

Note that  $\Phi \cdot M_n$  of the value estimated yield the same value (4877.51 ft-kip).

Other Questions:

1. Program does not show the intermediate steps that is used (such as  $f'_c$ ,  $d_{ps}$ ,  $f_{pu}$ ) to arrive the capacity.

Bridge: 53C1011

Structure Alternative: Span 1and 2 (Model 1)

Girder: G2

Girder Alternative: Interior

Performing Rating Factor Calculations

Analysis Point: 104.01

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

Load Factors:

Gamma = 1.30      Phi(flexure) = 1.00

Beta (DL) = 1.00      Beta (LL) = 1.67

Strength Rating Factor - Flexure (Positive Action)

4/19/2016 3:17:40 PM

HRS AASHTO

1556



**Complete Issue Information**

Strength based on Prestressed section  
Stage 1 Dead Load Moment = 1405.58 (ft-kips)  
Stage 2 Dead Load Moment = 100.83 (ft-kips)  
Secondary Moment = 103.95 (ft-kips)  
Dead Load M + Secondary M = 1610.36 (ft-kips)  
Live Load Moment = 759.62 (ft-kips)  
Nominal Capacity = 4877.51 (ft-kips)

$$R.F. = \frac{[(\Phi(\text{flexure}) * Mn) - (\Gamma * \beta(DL) * (DLM+S))]}{(\Gamma * \beta(LL) * LLM)}$$

\*\*R.F. = 1.7071

**Performing Rating Factor Calculations**

Analysis Point: 104.01

Load Level : 1

Truck No. : 2 - Lane: AASHTO H 20-S 16 Loading, 1944 Edi

**Load Factors:**

Gamma = 1.30      Phi(flexure) = 0.90  
Beta (DL) = 1.00      Beta (LL) = 1.67

**Strength Rating Factor - Flexure (Positive Action)**

Strength based on Non-prestressed section  
Stage 1 Dead Load Moment = 1405.58 (ft-kips)  
Stage 2 Dead Load Moment = 100.83 (ft-kips)  
Secondary Moment = 103.95 (ft-kips)  
Dead Load M + Secondary M = 1610.36 (ft-kips)  
Live Load Moment = 599.10 (ft-kips)  
Nominal Capacity = 5419.46 (ft-kips)

$$R.F. = \frac{[(\Phi(\text{flexure}) * Mn) - (\Gamma * \beta(DL) * (DLM+S))]}{(\Gamma * \beta(LL) * LLM)}$$

\*\*R.F. = 2.1645

(See attached file: 53c1011.bbd)

FROM: bgoodrich DATE: Wednesday, October 08, 2003 2:48:13 PM  
I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM: bgoodrich DATE: Monday, October 13, 2003 11:48:31 AM  
WYDOT has assigned this issue to BRASS Problem Log 453.

FROM: bgoodrich DATE: Friday, November 28, 2003 7:58:58 PM

4/19/2016 3:17:40 PM

**HRS AASHTO**

1557

**Complete Issue Information**

This issue was investigated and an error was found that affected the calculation of the moment capacity for all live loads except the first. The flag that identifies if a prestressed concrete section is considered mildly reinforced was not reinitialized for each flexure sense (positive and negative) for each live load. This is why the moment capacity for the first live load (HS20 Truck) was fine, but the moment capacity for the second was incorrect. This issue was corrected in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

The lack of intermediate output for the moment capacity is due to the lack of a control option within the BRASS™ engine properties in the Virtis® user interface. This output can be enabled using the SYSTEM-1 command. This issue must be addressed in Virtis®. This issue is requested in Incident 4899.

FROM:vvinayagamoorthy DATE:Monday, December 01, 2003 10:18:13 AM

When I reported this incident, I thought, BRASS correctly estimate the capacity and incorrectly printout the header message "Strength based on Non-prestressed section". I thought control card was reset inadvertently.

However, your findings are some what puzzling.

Estimated Capacities of the section with different assumptions (ps tendons are treated as tendons in the first case, and prestressed tendons are considered as reinforcement in the second case) were found to be the same. These should be, in my opinion, different. The ultimate tendon stress is fsu (given by equation 9-17) when we treat the tendon as ps tenson. However, I believe, the ultimate stress will be f's when we treat the tendon as reinforcement. I am not sure how BRASS estimated the ultimate stress when it treated the tendons as reinforcement. Please check the intermediate steps and be sure BRASS estimate the capacity correctly.

If the intermediate results (f'c, fps, etc) are reported, user could verify the results.

|                                       |
|---------------------------------------|
| Issue ID: 4838                        |
| Subject: Analysis Settings Engine Tab |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 10/8/2003 6:55:13 PM |
| Modified By: administrator          | 6/19/2008 4:10:10 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |

4/19/2016 3:17:41 PM

HRS AASHTO

1558

**Complete Issue Information**

|            |           |      |             |             |
|------------|-----------|------|-------------|-------------|
|            | On Hold   |      |             |             |
| Duray, Jim | New       | High | Bug - GUI 2 | Enhancement |
|            | Suspended |      |             |             |
|            | Discard   |      |             |             |
| Duray, Jim | Discard   | High |             | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4839.12508 | Discard       | Add symmetry option for the description of girder. |

**Description**

FROM:dteal DATE:Wednesday, October 08, 2003 2:55:14 PM

I would like to save analysis settings templates with different settings on the engine tab. One for Steel (Strength I, Service I&II and Fatigue), one for Prestressed (Strength I, Service I&III and Fatigue) and one for Reinforced Concrete (Strength I, Service I and Fatigue).

No matter what template I save the engine tab doesn't save with it. It comes up the way it was last used regardless of the saved template. Is this acting correctly? If it is – can this enhancement be added to our wish list.

FROM:jduray DATE:10/9/2003 8:40:48 AM

Mehrdad - Are we saving engine settings with the template?

FROM:jduray DATE:4/8/2005 1:54:06 PM

Engine properties are being saved properly.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 4839                                              |
| Subject: Add symmetry option for the description of girder. |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:17:41 PM

HRS AASHTO

1559

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Quintana, Osiris | 10/9/2003 4:34:35 PM |
| Modified By: administrator     | 6/19/2008 4:10:10 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 4840.12507 | Suspended     | No option to add hinge for main girder in floor system. |

### Description

FROM:hlee DATE:10/9/2003 12:29:45 PM  
Submitted via e-mail by Osiris Quintana of Triangle Associates:

Good morning and thank you for the response. It will be a good idea to include add symmetry option (like with the prestress ashto girders) for the description of girders especially when they are long and parabolic. This will reduce errors and data entry. Thanks Osiris

FROM:hlee DATE:7/19/2006 10:43:51 AM  
Changed Project to Support Center.

FROM:hlee DATE:4/30/2008 2:33:47 PM  
Discarded by TAG 12/07.

4/19/2016 3:17:41 PM

HRS AASHTO

1560

**Complete Issue Information**

Issue ID: 4840  
Subject: No option to add hinge for main girder in floor system.

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Quintana, Osiris 10/9/2003 4:46:53 PM  
Modified By: hlee 3/24/2015 7:07:22 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:10/9/2003 12:35:05 PM  
Submitted via e-mail by Osiris Quintana of Triangle Associates:

=====  
In addition to the symmetry request, been able to add a hinge in a span is necessary on bascule girders. When using the current options for main girder floor beam system I am not getting that option to come up. Please explain. Osiris  
=====

4/19/2016 3:17:41 PM

HRS AASHTO

1561

**Complete Issue Information**

Symmetry request is entered in VI 4839.

FROM:hlee DATE:1/20/2006 9:45:15 AM  
Also in Incident 7050.

FROM:hlee DATE:7/24/2007 1:21:22 PM  
Also in Incident 8028.

FROM: Herman Lee DATE: 3/24/2015 3:04:09 PM Eastern Daylight Time  
Duplicate of BRDRSUP-581.

|                              |
|------------------------------|
| Issue ID: 4841               |
| Subject: PS Library Tee Beam |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 10/10/2003 1:17:49 PM |
| Modified By: administrator     | 6/19/2008 4:10:10 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Duray, Jim      | New                | High     | Bug       |
| Lee, Herman     | Assigned           |          |           |
|                 | Information Needed |          |           |
|                 | Resolved           |          |           |
|                 | Closed             |          | Education |

4/19/2016 3:17:41 PM

HRS AASHTO

1562

### Complete Issue Information

|             |        |      |           |
|-------------|--------|------|-----------|
| Lee, Herman | Closed | High | Education |
|-------------|--------|------|-----------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI4843 28 0140L.bbd |             |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 4843.12504 | Closed        | Composite Steel Girder Positive Moment Capacity is wrong |

### Description

FROM:dteal DATE:Friday, October 10, 2003 9:17:50 AM

When the GUI for the dimensions shows a Single Tee , the GUI for the strand grid shows a double tee. It always shows a double tee. In the strand grid. Is this the way it was intended to be shown in the strand grid?

FROM:hlee DATE:10/13/2003 8:01:53 AM

The intend of the strand grid bitmap is to clarify the terms "Row No." and "Vertical Distance from bottom". For 1-void and 3-void PS box beam, the strand grid bitmap will show a 1-void box beam. For 1-stem, 2-stem, and 3-stem PS tee beam, the strand grid will show a 1 1/2 stem typical tee beam.

Dean, do you want to change this to an enhancement request?

FROM:dteal DATE:Monday, October 13, 2003 3:00:13 PM

All I wanted to know was if you intended on showing 1 1/2 stems in the strand grid GUI when the Dimensions GUI only showed 1 stem,?? If this is what was intended – fine. I just wanted to be sure. Not asking for an enhancement, just wanted to clarify.

FROM:hlee DATE:10/13/2003 4:59:52 PM

Showing 1 1/2 stems in the tee beam strand grid GUI when the dimensions GUI only showed 1 stem is what was intended.

FROM:dteal DATE:Tuesday, October 14, 2003 11:41:04 AM

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 4843                                                    |
| Subject: Composite Steel Girder Positive Moment Capacity is wrong |

**Complete Issue Information**

|                                                      |
|------------------------------------------------------|
| Folder: /Virtis/Support Center                       |
| Primary Contact: Goodrich, Brian                     |
| Submitted By: Kennelly, Krisha 10/13/2003 5:09:06 PM |
| Modified By: administrator 6/19/2008 4:10:09 PM      |
| Priority: High                                       |
| Category: Bug - Export 2                             |

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Ordoobadi, Mehrdad | Assigned           | High     | Unknown  |
|                    | Information Needed |          |          |
|                    | Not Reproducible   |          |          |
| Ordoobadi, Mehrdad | Not Reproducible   | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State    | Summary                |
|------------|------------------|------------------------|
| 4846.12501 | Not Reproducible | Error importing bridge |

**Description**

FROM:kkennelly DATE:10/13/2003 1:06:10 PM  
 Submitted on behalf of Vinacs via email received 10/10/03:

I am attaching a bridge that has 11 span and every other span has two hinges (or dropped-in span). This bridge is a composite steel girder bridge. The positive moment capacity with dropped-in span bridge is estimated wrong. Although the section is composite and capacity could be based on composite-compact section, program estimated the capacity based on first yield only. Please check this!

In order to verify this program, I created the dropped-in span bridge model as a simple span bridge and the program estimated the capacity based on compact-composite section details.

You could look at any of the Girder, however, I recommend you review the G5 (exterior on the right)

4/19/2016 3:17:42 PM

HRS AASHTO

1564



## Complete Issue Information

(See attached file: 28 0140L.bbd)

FROM:kkennelly DATE:10/13/2003 1:09:48 PM

FROM:bgoodrich DATE:Monday, October 13, 2003 1:12:53 PM

Vinacs - I have been investigating Incident 4843, which pertains to BRASS calculating the flexural capacity of a composite steel bridge as the moment at first yield. Have you tried checking the "Compactness at the Pier" boxes for each span in the engine properties for the member alternative? If not, please review the window and associated help topic that discusses that this must be done for BRASS to consider AASHTO Equations 10-129b and 10-129c. This help topic also points to the STEEL-GIRDER-CONTROL command help topic.

FROM:bgoodrich DATE:Tuesday, October 14, 2003 2:43:23 PM

E-mail from Vinacs (10/14/03):

For your information: The girders at the bent location are not compact (BRASS calculations at bents confirms that). However as you suggested I checked the boxes for compactness over the piers. When I checked the boxes for the compactness at pier, program gave me the plastic moment capacity.

I understand the logic that you are suggesting. According to AASHTO specification, the section capacity can be taken as  $M_p$  only if the girder is compact at pier. If the sections at Pier is noncompact, the moment capacity will be  $M_y + A(\mu - M_s)$  (subscript: pier) and BRASS does not do the  $A(\mu - M_s)$  pier and as a result, it reports the capacity as  $M_y$ . Since I did not check the boxes for compactness at bent within the BRASS engine module, export program treated it as non-compact at piers. The question is whether the BRASS assumption is correct or not. For a typical continuous span steel girder bridge, this might be OK, but what we have is not a typical continuous span girder.

In this particular bridge, we have a drop in span where we have two hinges within a span, and I think, the compactness at the pier does not limit the ability of the drop-in span girder from reaching its full plastic capacity. Therefore, sections between the hinges within a span should be modeled using "section type 41."

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:bgoodrich DATE:Wednesday, October 15, 2003 11:07:46 AM

Jay and I agree that the drop-in spans should be considered in the same manner as simple spans, i.e., using the "41" code between the hinges in each span with a drop-in. The BRASS engine isn't making the assumptions regarding the "4" or "41" codes - the export is. Therefore, this issue must be addressed in the BRASS export process. I will begin the necessary modifications ASAP.

FROM:bgoodrich DATE:Wednesday, October 22, 2003 4:11:53 PM

I modified the export (BrassSteelGirderControlCmd.cpp and BrassCmd.cpp) to add a cross section change at the hinges. When two hinges are detected in a span, as in the case of a drop-in span, the export exports the "41" code instead of the "4" code. Fixed for version 5.1 service pack 1.

4/19/2016 3:17:42 PM

HRS AASHTO

1565

**Complete Issue Information**

FROM:gbarhill DATE:Tuesday, January 13, 2004 4:16:26 PM  
OK in v5.1.1 -- Using Vinac's file, I can verify the export sets STEEL-GIRDER-CONTROL command values to 41 for those spans with 2 hinges.

DO WE NEED TO ADD SOMETHING IN HELP OR MAYBE ADD A COMMENT TO THE EXPORT TO INDICATE THE ASSUMPTIONS VIRTIS IS MAKING ???

FROM:bgoodrich DATE:Thursday, January 15, 2004 4:07:53 PM  
I added the following comments to the exported data file:

COMMENT The section type for the following range is set to  
COMMENT 41 because a drop-in span was detected. The section  
COMMENT may therefore reach its full plastic flexural capacity.

I also added some new text to the "Member Alternative/Beam Definition Properties: Analysis" topic in the "Girder(LFD) Properties.hlp file". I added the following to the "Compactness at the Pier" section:

Exceptions:

1. Ranges within a simple-span will automatically be exported with Section Type 41.
2. Ranges between two hinges in the same span (i.e., a drop-in span) will automatically be exported with Section Type 41.

FROM:gbarhill DATE:Friday, January 16, 2004 4:38:02 PM  
OK 5.1.1 with Brian's new additions to EXPORT and Help.

Postscript: Does this also apply to the simple span created by a hinge in Span 1 ??

FROM:bgoodrich DATE:Friday, January 16, 2004 6:51:04 PM  
Gale made a good point regarding the case of a single hinge in an end span. Therefore, I modified the export and help accordingly. Fixed for Version 5.1.1.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:06:12 AM  
Track field marked with "gale OK". Accepted.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:06:33 AM  
Closed.

Issue ID: 4846  
Subject: Error importing bridge

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Batzer, Elaine 10/15/2003 7:05:18 PM  
Modified By: administrator 6/19/2008 4:10:09 PM

## Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

## History

| Primary Contact | Status             | Priority | Category               |
|-----------------|--------------------|----------|------------------------|
| Goodrich, Brian | Assigned           | High     | Unknown<br>Bug - BRASS |
| Goodrich, Brian | Information Needed | High     | Bug - BRASS            |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 53c1011.bbd         |             |

## Tasks

| Name       | Current State      | Summary                                                                                                                 |
|------------|--------------------|-------------------------------------------------------------------------------------------------------------------------|
| 4847.12500 | Information Needed | Possible Error: Secondary Moment reported on a PS girder bridge that is made continuous for LL using mild reinforcement |

## Description

FROM:jihnat DATE:10/15/2003 3:04:32 PM  
Submitted via email:

I have created a Virtis file for a bridge that runs fine in Virtis. I then exported that file to a disk to send to the client. There were no error messages during exporting. However, when that bbd file is imported back into Virtis the client and I both got the following error messages:

Incomplete retrieval of data  
Incomplete retrieval of data  
Cannot set cross section data if structure def's deck panel doesn't exist

I have attached a copy of the bbd file in question. The Virtis version that I'm working on is 5.0.1. The structure is a simple span built-up steel girder bridge.

4/19/2016 3:17:42 PM

HRS AASHTO

1567

**Complete Issue Information**

Joshua K. Clogston  
Structural Engineer  
VOLLMER ASSOCIATES LLP  
Tel: 617.451.0044 ext. 2014

FROM:mordoobadi DATE:3/11/2004 12:21:26 PM  
No BBD file attached.

FROM:mordoobadi DATE:2/21/2006 3:03:31 PM  
Since there is no BBD file, we are not able to reproduce this problem.

Issue ID: 4847  
Subject: Possible Error: Secondary Moment reported on a PS girder bridge that is made continuous for LL using mild reinforcement

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 10/16/2003 12:08:46 PM  
Modified By: administrator 6/19/2008 4:10:09 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:10/16/2003 8:07:45 AM  
Submitted on behalf of Vinacs via email:

Problem Statement: I noticed that the program estimated secondary moment due to prestressed forces. Typically, we don't get secondary moments due to prestressing forces in a ridge that is made

4/19/2016 3:17:42 PM

HRS AASHTO

1568

**Complete Issue Information**

continuous using mild reinforcement. Secondary moments could be developed due to creep, however, I believe BRASS does not estimate moment demand due to creep. Ca

I have send this bridge earlier

Bridge: 53C1011  
 Structure Alternative: Span 1and 2 (Model 1)  
 Girder: G2  
 Girder Alternative: Interior

I copied the BRASS output for your information:

Vinacs

**ACTIONS AND DISPLACEMENTS FOR PRESTRESS FORCE**  
 LENGTH OF SPAN NO. 1 = 100.25 FEET

| POINT NO. | MOMENT K-FT | AXIAL KIPS | SHEAR KIPS | DEFLECT.      |               | X FEET  | Y |
|-----------|-------------|------------|------------|---------------|---------------|---------|---|
|           |             |            |            | DEFLECT. FEET | DEFLECT. FEET |         |   |
| 1.000R    | 0.0         | 0.0        | -2.3       | -2.3          | 0.00000       | 0.00000 |   |
| 1.021     | 73.2        | 0.0        | 1.9        |               | 0.00000       | 0.00064 |   |
| 1.100     | 88.6        | 0.0        | 1.9        |               | 0.00000       | 0.00291 |   |
| 1.200     | 108.2       | 0.0        | 1.9        |               | 0.00000       | 0.00512 |   |
| 1.300     | 127.4       | 0.0        | -2.3       |               | 0.00000       | 0.00648 |   |
| 1.400     | 104.0       | 0.0        | -2.3       |               | 0.00000       | 0.00688 |   |
| 1.500     | 80.5        | 0.0        | -2.3       |               | 0.00000       | 0.00646 |   |
| 1.600     | 57.1        | 0.0        | -2.3       |               | 0.00000       | 0.00540 |   |
| 1.700     | 33.7        | 0.0        | -2.3       |               | 0.00000       | 0.00388 |   |
| 1.800     | -32.3       | 0.0        | -6.6       |               | 0.00000       | 0.00215 |   |
| 1.900     | -98.7       | 0.0        | -6.6       |               | 0.00000       | 0.00068 |   |
| 1.979     | -151.3      | 0.0        | -6.6       |               | 0.00000       | 0.00004 |   |
| 1.999     | -233.8      | 0.0        | -2.3       |               | 0.00000       | 0.00000 |   |
| 1.100L    | -234.1      | 0.0        | -2.3       | 4.7           | 0.00000       | 0.00000 |   |

Rotation at left end = 0.00031 Rotation at right end = 0.00000 radians

|                       | X           | Z             |
|-----------------------|-------------|---------------|
| Reaction at left end  | 0.0000 kips | 0.0000 kip ft |
| Reaction at right end | 0.0000 kips | 0.0007 kip ft |

WYOMING DEPARTMENT OF TRANSPORTATION  
 DATE 10/15/2003  
 BRIDGE DESIGN DIVISION  
 PAGE NO 28

Member: G2

\*\* GIRDER ACTIONS DUE TO APPLIED

4/19/2016 3:17:42 PM

HRS AASHTO

1569

**Complete Issue Information**

STATIC LOAD \*\*

\*\* CONSTRUCTION STAGE 2 \*\*

ACTIONS AND DISPLACEMENTS FOR PRESTRESS FORCE  
LENGTH OF SPAN NO. 2 = 100.25 FEET

| POINT NO. | MOMENT K-FT | AXIAL KIPS | SHEAR KIPS | DEFLECT.      |               | X FEET  | Y FEET |
|-----------|-------------|------------|------------|---------------|---------------|---------|--------|
|           |             |            |            | REACTION FEET | DEFLECT. FEET |         |        |
| 2.000R    | -234.1      | 0.0        | 2.3        | 4.7           | 0.00000       | 0.00000 |        |
| 2.021     | -151.3      | 0.0        | 6.6        |               | 0.00000       | 0.00004 |        |
| 2.100     | -98.7       | 0.0        | 6.6        |               | 0.00000       | 0.00068 |        |
| 2.200     | -32.3       | 0.0        | 6.6        |               | 0.00000       | 0.00215 |        |
| 2.300     | 33.7        | 0.0        | 2.3        |               | 0.00000       | 0.00388 |        |
| 2.400     | 57.1        | 0.0        | 2.3        |               | 0.00000       | 0.00540 |        |
| 2.500     | 80.5        | 0.0        | 2.3        |               | 0.00000       | 0.00646 |        |
| 2.600     | 104.0       | 0.0        | 2.3        |               | 0.00000       | 0.00688 |        |
| 2.700     | 127.4       | 0.0        | 2.3        |               | 0.00000       | 0.00648 |        |
| 2.800     | 108.2       | 0.0        | -1.9       |               | 0.00000       | 0.00512 |        |
| 2.900     | 88.6        | 0.0        | -1.9       |               | 0.00000       | 0.00291 |        |
| 2.979     | 73.2        | 0.0        | -1.9       |               | 0.00000       | 0.00064 |        |
| 2.100L    | 0.0         | 0.0        | 2.3        | -2.3          | 0.00000       | 0.00000 |        |

Rotation at left end = 0.00000 Rotation at right end = -0.00031 radians

|                       | X           | Z             |
|-----------------------|-------------|---------------|
| Reaction at left end  | 0.0000 kips | 0.0007 kip ft |
| Reaction at right end | 0.0000 kips | 0.0000 kip ft |

when it caculates the rating it reports it as secondary moment.

**Performing Rating Factor Calculations**

Analysis Point: 104.01

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

**Load Factors:**

Gamma = 1.30      Phi(flexure) = 1.00  
Beta (DL) = 1.00      Beta (LL) = 1.67

**Strength Rating Factor - Flexure (Positive Action)**

Strength based on Prestressed section  
Stage 1 Dead Load Moment = 1405.58 (ft-kips)  
Stage 2 Dead Load Moment = 100.83 (ft-kips)  
Secondary Moment = 103.95 (ft-kips)  
Dead Load M + Secondary M = 1610.36 (ft-kips)  
Live Load Moment = 759.62 (ft-kips)  
Nominal Capacity = 4877.51 (ft-kips)

$$R.F. = [(Phi(flexure) * Mn) - (Gamma * Beta(DL) * (DLM+S) )]$$

## Complete Issue Information

$$\frac{\quad}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

$$**\text{R.F.} = 1.7071$$

### Performing Rating Factor Calculations

Analysis Point: 104.01

Load Level : 1

Truck No. : 2 - Lane: AASHTO H 20-S 16 Loading, 1944 Edi

#### Load Factors:

$$\text{Gamma} = 1.30 \quad \text{Phi}(\text{flexure}) = 0.90$$

$$\text{Beta}(\text{DL}) = 1.00 \quad \text{Beta}(\text{LL}) = 1.67$$

#### Strength Rating Factor - Flexure (Positive Action)

Strength based on Non-prestressed section

$$\text{Stage 1 Dead Load Moment} = 1405.58 \text{ (ft-kips)}$$

$$\text{Stage 2 Dead Load Moment} = 100.83 \text{ (ft-kips)}$$

$$\text{Secondary Moment} = 103.95 \text{ (ft-kips)}$$

$$\text{Dead Load M} + \text{Secondary M} = 1610.36 \text{ (ft-kips)}$$

$$\text{Live Load Moment} = 599.10 \text{ (ft-kips)}$$

$$\text{Nominal Capacity} = 5419.46 \text{ (ft-kips)}$$

$$\text{R.F.} = \frac{[(\text{Phi}(\text{flexure}) * \text{Mn}) - (\text{Gamma} * \text{Beta}(\text{DL}) * (\text{DLM} + \text{S}))]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

$$**\text{R.F.} = 2.1645$$

FROM:bgoodrich DATE:Wednesday, October 22, 2003 4:21:22 PM  
I forwarded this issue to WYDOT to assign to a BRASS problem log.

FROM:bgoodrich DATE:Monday, October 27, 2003 10:59:24 PM  
WYDOT assigned this issue to BRASS Problem Log 465.

FROM:bgoodrich DATE: 01/26/2004

I have determined that the secondary moments reported by BRASS are due to prestress losses applied to the continuous structure. Input losses were specified in which 18 ksi are taken on the non-composite simple spans, and then 17 ksi were taken after the structure becomes composite and continuous. If AASHTO losses had been specified, all losses would have been considered on the simple spans and no secondary moments would have been reported. Therefore, a secondary moment does exist when input losses are specified. However, for the purposes of calculating the flexure rating factor, Jay and I agree that this secondary moment should not be considered because it is due to the prestress losses and this is an ultimate strength check. If this secondary moment were to be removed from the flexure rating factor calculation, would this address your issue?

FROM:bgoodrich DATE:Monday, March 15, 2004 10:37:02 AM  
From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]

4/19/2016 3:17:43 PM

HRS AASHTO

1571

**Complete Issue Information**

Sent: Friday, February 13, 2004 3:55 PM  
To: Vinayagamoorthy Murugesu (Murugesu\_Vinayagamoorthy@dot.ca.gov)  
Subject: Virtis Incident 4847

Vinacs,

I have been instructed to start preparations for the next release of BRASS-GIRDER, which is scheduled for mid-March. I need to complete program modifications next week, so I was going to check in with you on Incident 4847. Please forward a response soon, so I can make any necessary modifications to this release. Otherwise, it will be a few more months before this correction will be available.

Thanks,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Monday, March 15, 2004 10:41:51 AM  
I e-mailed Vinacs today requesting a response to removing the secondary moment from the flexural rating calculation.

FROM:bgoodrich DATE:Monday, August 23, 2004 10:34:52 AM  
E-mail from Vinacs (Fri 8/20/2004 1:12 PM):

Brian

I am not expert on prestress girders that are made continuous for live load. The prestress design committee is looking into this question. Although I tend to agree with you and Puckett, Caltrans do have OKd it yet.

At this point, I would say release BRASS Girder without fixing this incident.

Vinacs M Vinayagamoorthy

Issue ID: 4848  
Subject: Migration Wizard Space

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 10/16/2003 3:35:44 PM  
Modified By: administrator 6/19/2008 4:10:09 PM  
Priority: High  
Category: Enhancement

**History**

4/19/2016 3:17:43 PM

HRS AASHTO

1572



### Complete Issue Information

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Bug      |
| Duray, Jim         | New                | High     | Bug      |
| Lee, Herman        | Assigned           |          |          |
|                    | On Hold            |          |          |
| Teal, Dean         | Information Needed |          |          |
| Bhanushali, Girish | Resolved           |          |          |
|                    | Resubmit           |          |          |
| Ihnat, Joseph      |                    |          |          |
| Lee, Herman        |                    |          |          |
|                    | Resolved           |          |          |
| Lee, Herman        | Resolved           | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Design Ratio.JPG    |             |
|      | Design Ratio.bbd    |             |

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 4849.12498 | Resolved      | Design Ratio Graph |

### Description

FROM:dteal DATE:Thursday, October 16, 2003 11:35:44 AM

One every PC that Virtis is installed on a directory for the migration wizard also gets installed. This directory is 78 meg. We have it installed on 50 PC's that don't need it. Does this directory have to get installed? Shouldn't it be optional like the file bridgewareadmin.exe and only put the directory and files where needed? We can always delete the directory after installation but that's one more email with instructions sent to all users.

FROM:jduray DATE:10/23/2003 5:43:58 PM

Joe - can we make it optional during the installation?

4/19/2016 3:17:43 PM

HRS AASHTO

1573

**Complete Issue Information**

FROM:jihnna DATE:7/16/2004 11:29:31 AM  
Installation updated for 5.2.0 Alpha Build 2 and above.  
(was also in 5.1 SP1)

FROM:dteal DATE:Friday, August 13, 2004 10:06:41 AM

|                             |
|-----------------------------|
| Issue ID: 4849              |
| Subject: Design Ratio Graph |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 10/17/2003 4:37:56 PM |
| Modified By: administrator     | 6/19/2008 4:10:09 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, October 17, 2003 12:37:56 PM  
 In the attached bbd, do a HL93 Design Review for interior girder line #2 of "Design CK MEH, Let Feb 2004". The attached Results Graph shows me two problems, see attached .jpg.  
 1. I have requested Design Ratios but the left side of the graph says it's a Rating Factor??  
 2. At the 11.7 and 29.1 m distance there appears to be no value?? The text table also has no value.  
 When doing a design review and then looking at the spec. check for stage one, there are very low design ratios, like at the 3.1 point. But the graph is void of any values.

When this structure was run under version 5.0.1 there where no sub standard design ratio for stage 1. (As reported to me by the designer)

4/19/2016 3:17:43 PM

HRS AASHTO

1574

## Complete Issue Information

FROM:dteal DATE:Friday, October 17, 2003 1:29:20 PM  
Ignor the the very last sentence above!! Values are same as 5.0.1

FROM:hlee DATE:10/20/2003 8:58:31 AM

Notes:

1. For Concrete Stress | Design Ratios, the y-axis of the graph should say "Design Ratio []", not "Rating Factor []".
2. At 11.7m and 29.1m, all design rations are greater than 5 in the table. The design ratio graph will only plot values between 0 and 5. Values that are greater than 5 are indicated by the asterisks at the 5.0 mark. Help needs to be updated with this information.
3. Point of interest 301 is located at 1170mm on Span 3. The design rations are in the table and graph. There is a row between point of interest 300 and 301 in the table that has no values.

FROM:hlee DATE:10/20/2003 11:08:08 AM  
Spoke to Jim, status changed to On Hold.

FROM:gbhanushali DATE:8/16/2006 1:02:40 PM

Comments:

1. Rating Factor lable needs to be changed to Design Ratio while viewing design ratio results.
2. I reproduced your results as in attached jpeg. There are lots of points of different shapes being displayed over each other. There are also lots points at the top line which is 5.0 value which is because as herman said above that values equal or greater than 5.0 are capped to 5.0 line . Jpeg you have attached is actually a view that is showing lots of different items together. If you uncheck Top Flange or Bottom Flange under (DL + PS Only) Final you can see the values related to certain categories. When you see the Bottom Flange results alone you would see the values at 11.7 and 29.1 points at 5.0 graph line. We have to take the layers off to separate each categories on the results which get shown superimposed.

Let us know if above comments are helpful and acceptable.

FROM:dteal DATE:Friday, August 25, 2006 7:37:16 AM  
Yes - they clear things up for me - thanks

FROM:dteal DATE:Thursday, September 21, 2006 10:24:01 AM

FROM:jduray DATE:4/25/2007 2:57:51 PM

Looks to me as though we have to modify the label for Rating Factor to Design Ratio if results are for an LRFD analysis.

FROM:hlee DATE:6/10/2008 2:36:25 PM

Resolved by Mehrdad for 6.0 Release.

Issue ID: 4850

Subject: Zero Rating with Fixed Support

4/19/2016 3:17:43 PM

HRS AASHTO

1575

## Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 10/17/2003 6:04:16 PM |
| Modified By: administrator       | 6/19/2008 4:10:09 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |
|                 | Accepted |          |           |
|                 | Closed   |          |           |
| Goodrich, Brian | Closed   | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4851.12496 | Closed        | Metric rating values |

## Description

FROM:dteal DATE:Friday, October 17, 2003 2:04:17 PM

In the attached bbd. Superstructure Def. "Design JRS' with Int. Girder #2. Doing a rating with pinned abutment supports we get reasonable rating results. If the I change the abutment support to fixed I get zero's for all rating results?? Why?

FROM:dteal DATE:Monday, October 20, 2003 2:59:01 PM

- the designer started and terminated his long. slab rebar 50 mm short of centerline of bearing.

4/19/2016 3:17:43 PM

HRS AASHTO

1576

**Complete Issue Information**

Resulting in a zero rating when the abutment supports are fixed. If virtis should have acted this way please close the incidnet.

FROM: bgoodrich DATE: Friday, October 24, 2003 12:54:47 PM

As there was no rebar at the ends of the bridge, BRASS calculated the moment capacity as zero. I am closing this incident at Dean's request.

|                               |
|-------------------------------|
| Issue ID: 4851                |
| Subject: Metric rating values |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: McCaffrey, Brian   | 10/21/2003 5:57:28 PM |
| Modified By: administrator       | 6/19/2008 4:10:09 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: bmccaffrey DATE: Tuesday, October 21, 2003 1:57:29 PM

No problems, just a clarification needed:

Exactly how are metric ratings values (in metric tons) being calculated from the rating factor??? I can come close by hand but not exactly. English units are not a problem.

4/19/2016 3:17:44 PM

HRS AASHTO

1577

**Complete Issue Information**

FROM:bgoodrich DATE:Friday, October 24, 2003 12:19:30 PM  
BRASS-GIRDER only supports US units, so all SI input from Virtis is exported in US units for analysis. Once the results are returned to Virtis, the ratings are displayed in SI units. I rated a bridge with the HS20 vehicle and was able to duplicate the ratings reported in Virtis.

HS20 => 72 kips = 36 tons  
Conversion Factor: Tons to Metric Tons = 0.9072  
36 tons \* 0.9072 = 32.6592 metric tons  
Inventory Rating Factor = 1.084  
Rating = 1.084 \* 32.6592 = 35.40 metric tons

Virtis Rating = 35.41 metric tons

FROM:bgoodrich DATE:Tuesday, November 04, 2003 2:42:33 PM  
Setting status to "Accepted" based on following e-mail from Brian McCaffrey:

From: Brian McCaffrey [mailto:BMCCAFFREY@dot.state.ny.us]  
Sent: Tuesday, November 04, 2003 12:00 PM  
To: Goodrich@BridgeTech-Laramie.com  
Subject: Re: Incident 4851

Looks good Brian. Thanks.

>>> "Brian L. Goodrich" <Goodrich@BridgeTech-Laramie.com> 10/24/03 12:54PM >>>  
Brian,

I added some comments to Incident 4851. Let me know if this resolves the problem.

Thanks,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Tuesday, November 04, 2003 2:44:32 PM  
Closed.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 4852<br>Subject: Incorrectly calculates Dc. (Depth of Web in Compression) |
|-------------------------------------------------------------------------------------|

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 10/22/2003 4:36:52 PM |
| Modified By: administrator       | 6/19/2008 4:10:09 PM  |

4/19/2016 3:17:44 PM

HRS AASHTO

1578

## Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LFDReport.XML       |             |
|      | LFDReport.XSL       |             |

## Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 4857.12490 | Resolved      | LFD Report doesn't display in XP SP2 browser correctly |

## Description

FROM:dteal DATE:Wednesday, October 22, 2003 12:36:52 PM  
By: Jeffrey S. Ruby, P.E.  
KDOT Bridge Section

Bbd attached, using Structure Def: Preliminary Superstructure Small End Span and Girder 2

AASHTO LRFD Specification Article 6.10.3.1.4a in the Commentary gives the formula for determining the depth of the web in compression. It appears that Virtis/Opis is using this equation that is in the commentary to calculate the  $D_c$ . The problem comes in when the equation gives a value that is out of bounds of the total depth of the girder. If you notice scan1.jpg, you will see that the calculated  $x$ -bar using similar triangles is -351.221 inches. That value is invalid. So there needs to be some guidelines to determine what an appropriate value should be. Let's examine the last paragraph of the Commentary in Article 6.10.3.1.4a. (See scan2.jpg. Could it be any easier?) It states, "At sections in negative flexure, using  $D_c$  of the composite section consisting of the steel section plus the longitudinal reinforcement is conservative."

OK. What would the Depth to the compression flange value of the steel section plus the longitudinal reinforcement be? (See scan3.jpg) From the elastic section property calculations a conservative value of  $D_c$  is, is, is, (the suspense is killing me) way! less than the total depth of the web section!

4/19/2016 3:17:44 PM

HRS AASHTO

1579

## Complete Issue Information

Bottom Line: I propose that, instead of defaulting to the total Web depth for the Dc when the above calculations are out of bounds (See scan4.jpg and scan5.jpg), use the conservative value of the elastic Dc for the steel section plus the longitudinal reinforcement in 'Negative Flexure'

FROM: bgoodrich DATE: Friday, October 24, 2003 12:52:17 PM

This issue is a duplicate. This issue has already been addressed as described in Incident 3605.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 4857                                                  |
| Subject: LFD Report doesn't display in XP SP2 browser correctly |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: lhnat, Joseph |                       |
| Submitted By: Duray, Jim       | 10/23/2003 8:47:04 PM |
| Modified By: administrator     | 6/19/2008 4:10:08 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: jduray DATE: 10/23/2003 4:46:24 PM  
Submitted on behalf of George Khury...718-747-7575

FROM: jduray DATE: 10/23/2003 4:49:44 PM  
This report displays properly on my PC (XP sp1). We used this report during the Montana training on XP. I don't know what SP.

FROM: jduray DATE: 10/23/2003 4:55:16 PM

4/19/2016 3:17:44 PM

HRS AASHTO

1580



**Complete Issue Information**

FROM:jduray DATE:10/24/2003 11:08:01 AM

I checked with Paul Jensen. The report tool works properly on XP sp2. He suggested perhaps the msxml.dll is missing.

FROM:jihnata DATE:10/31/2003 3:10:26 PM

I had George run the msxmlfix.bat file in the Virtis directory, and his reports now appear correctly. Somehow his xml DLLs must have gotten out of sync.

|                                 |
|---------------------------------|
| Issue ID: 4862                  |
| Subject: End of Beam Stiffeners |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/28/2003 7:03:26 PM |
| Modified By: administrator        | 6/19/2008 4:10:07 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

**Contacts**

4/19/2016 3:17:45 PM

HRS AASHTO

1581

### Complete Issue Information

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | MemberLoadsUniformDlg.bmp |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4863.12484 | Resolved      | Confusing statements in MemberLoadsUniformDlg.cpp. |

### Description

FROM:dteal DATE:Tuesday, October 28, 2003 3:03:26 PM

In incident #3976 I pointed out how the schematic view was misleading at the ends of the beams. This is the same problem except I need to know how BRASS is treating the stiffeners. The schematic shows the left stiffener off the end of the beam. The actual GUI description has the stiffener on the beam. Is the stiffener being considered in BRASS?

This example (see attached jpg) has the beam bearing location 230 mm from the end of the beam. There are 2 pairs of stiffeners, 200 mm left and 200 mm right of the beam centerline of bearing.

FROM:kkennelly DATE:10/29/2003 7:43:31 AM

The export to BRASS LFD will provide the following type of message for the case of 2 stiffeners at a bearing:

INFO - The bearing stiffener thickness for Group 1 was multiplied by 2 pairs of stiffeners because BRASS does have an input for the spacing between bearing stiffeners, i.e., the offset.

Review the log file created by the export to see if such a message exists for your bridge to determine if BRASS is considering your stiffeners.

FROM:dteal DATE:Thursday, October 30, 2003 11:59:26 AM

What about the export to BRASS Girder LRFD?

FROM:kkennelly DATE:10/31/2003 3:52:00 PM

Check the "STIF-BEARING" command generated by the export. This command should contain the number of stiffeners as 2 and the distance between them.

FROM:kkennelly DATE:11/7/2003 11:49:39 AM

Closed based on "Accepted" in track field.

Issue ID: 4863

Subject: Confusing statements in MemberLoadsUniformDlg.cpp.

4/19/2016 3:17:45 PM

HRS AASHTO

1582

## Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Boukamp, Sabine |                       |
| Submitted By: Lee, Herman        | 10/28/2003 7:05:45 PM |
| Modified By: administrator       | 6/19/2008 4:10:07 PM  |
| Priority: High                   |                       |
| Category: Bug - GUI 2            |                       |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned | Urgent   | Bug - GUI 1 |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | Urgent   | Bug - GUI 1 |

## Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 4864.12483 | Resolved      | Incorrect span info for uniform floorbeam and stringer definition loads. |

## Description

FROM:hlee DATE:10/28/2003 2:49:14 PM  
See attached bitmap.

FROM:jduray DATE:4/8/2005 2:01:17 PM  
Code looks suspicious, may be a problem, need to review code.

4/19/2016 3:17:45 PM

HRS AASHTO

1583

**Complete Issue Information**

FROM:sboukamp DATE:5/16/2005 3:56:57 PM  
Fixed for 5.3.0 Service Pack 1.

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 4864<br>Subject: Incorrect span info for uniform floorbeam and stringer definition loads. |
|-----------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Lee, Herman 10/29/2003 1:29:33 PM<br>Modified By: administrator 6/19/2008 4:10:07 PM<br>Priority: Urgent<br>Category: Bug - GUI 1 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:10/29/2003 8:58:28 AM  
For uniform floorbeam definition loads:

1. Open BID 13's "Floorbeam Def 1" window.
2. Check Cantilever and enter 5 ft for both left and right cantilevers. Click OK.
3. Open Floorbeam Definition Loads window, add a uniform load on Span 3. Click OK.

4/19/2016 3:17:45 PM

HRS AASHTO

1584

**Complete Issue Information**

4. Open the window again, the uniform load is now on Span 1.

Same bug for uniform stringer definition loads. The bug is in determining span in the window.

FROM:jihnat DATE:11/3/2003 11:18:50 AM  
The "Span" column should not be visible for Floorbeams and Stringers.  
Fixed for 6.0, 5.2 and 5.1

FROM:hlee DATE:11/17/2003 10:17:27 AM  
I think there's a bug in determining whether the load is uniform or distributed.

1. Open BID 13's "Floorbeam Def 1" window.
2. Check Cantilever and enter 30 ft (just want to match the span length) for both left and right cantilevers. Click OK.
3. Open Floorbeam Definition Loads window, and
  - a. Add a uniform load.
  - b. Add the following three distributed loads.

| Start Distance | Length | Load Start | Load End |
|----------------|--------|------------|----------|
| 0              | 30     | 0.1        | 0.1      |
| 30             | 30     | 0.2        | 0.2      |
| 60             | 30     | 0.3        | 0.3      |

4. Click OK.
5. Open the window again, all loads are on the uniform load tab.

FROM:jihnat DATE:11/18/2003 9:37:41 AM  
Fixed. This should get thorough testing.

FROM:hlee DATE:11/18/2003 10:31:28 AM  
When a member load is not start at a support, the load should be on the distributed load tab.

1. Open BID 8 G2's "Girder Member Loads" window.
2. Add the following distributed load (Length of load = Span 1 length) :

| Support Number | Start Distance | Length | Load Start | Load End |
|----------------|----------------|--------|------------|----------|
| 1              | 50             | 110    | 0.2        | 0.2      |

3. Click OK.
4. Open the window again, the distributed load is on the uniform load tab.

FROM:jihnat DATE:11/18/2003 1:48:43 PM  
Fixed.

FROM:gbarnhill DATE:Monday, January 12, 2004 11:11:45 AM  
OK in 5.1.1 Checked in GFS and Girder Systems

Issue ID: 4865  
Subject: Crash when printing GFS floor-System analysis results

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Submitted By: Ordoobadi, Mehrdad | 10/29/2003 2:00:23 PM |
| Modified By: administrator       | 6/19/2008 4:10:07 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | Closed | High     | Unknown  |
| Lee, Herman     | Closed | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 4867.12480 | Closed        | Bridgeware E-mail Support. |

### Description

FROM:mordoobadi DATE:10/29/2003 9:52:04 AM

Wanley Bardell reported the following problem:

>>> "Wanley Bardell" <bardellw@michigan.gov> 10/29/2003 9:16:10 AM >>>

I successfully created a run file for girders-floorbeams-stringers system with deck but when I try to print the rating results summary for floorbeams or stringers a runtime error message appears and the program abnormally terminates. BBD file is attached.

FROM:mordoobadi DATE:1/12/2004 2:59:46 PM

Related to 4939.

FROM:gbarnhill DATE:Wednesday, January 28, 2004 10:21:23 AM

5.1.1 with jan 23 updates - I still get the same error trying to print (or print preview) the analysis results chart for stringers or floorbeams. I am able to print the chart for girder members.

The attached bbd is 5.1.1 with the updates. In GFS Str def, I analyzed Str Mem - Unit 1 Str 1 - Str 1 Alt and FB Mem - FB1 - FB1 Alt

4/19/2016 3:17:45 PM

HRS AASHTO

1586

**Complete Issue Information**

FROM:mordoobadi DATE:2/2/2004 4:34:36 PM  
I imported Gale's BBD file and I was not able to reproduce the crash for gfs/Unit 1/Stringer 1/Stringer 1 Alt and gfs/Floorbeam 1/Floorbeam 1 Alt.

I tried a few more floorbeams and stringers and I am still not able to reproduce the problem.

FROM:gbarnhill DATE:Tuesday, February 03, 2004 8:42:29 AM  
This occurs on Win2000 and XP. Have you tried it on a machine that is not loaded with development tools ???

FROM:mordoobadi DATE:2/3/2004 10:53:56 AM  
Resubmitted by Gale Barnhill.

FROM:gbarnhill DATE:Thursday, February 26, 2004 4:19:36 PM  
OK in 20 feb exe - 5.1.1

|                                     |
|-------------------------------------|
| Issue ID: 4867                      |
| Subject: Bridgeware E-mail Support. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Quintana, Osiris | 10/30/2003 3:52:45 PM |
| Modified By: administrator     | 6/19/2008 4:10:07 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:17:46 PM

HRS AASHTO

1587

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:10/30/2003 11:44:29 AM

Support: Osiris Quintana (Triangle Associates, Inc.)

Time Spent: 1 Hr

Details:

Received Bridgeware e-mail:

```

=====
=====
Attached please find virtis file for bridge 904490. When validated it has no errors. The results show
that both shear and moment rating are zero. This is not correct the bridge has been rated by other
methods to verify and the bridge is over 30 years old and shows no major deficiencies in the aashto
beams. Help! As always you quick response is great. Thanks Osiris Quintana
=====
=====

```

Reply:

```

=====
=====
Hi Osiris,

```

Please double check the total thickness of the deck concrete. Currently, the total thickness is 84 in.

Regards,

```

=====
=====

```

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4870                                        |
| Subject: Non-Composite but BRASS shows composite card |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 10/31/2003 6:50:18 PM |
| Modified By: administrator       | 6/19/2008 4:10:07 PM  |
| Priority: Urgent                 |                       |
| Category: Education              |                       |



## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Unknown     |
|                  | Assigned |          | Bug - GUI 2 |
| Kennelly, Krisha | Resolved | High     | Bug - GUI 2 |
|                  | Resolved |          | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2243510.bbd         |             |
|      | LFDReport.pdf       |             |

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 4872.12475 | Resolved      | Results don't agree |

### Description

FROM:dteal DATE:Friday, October 31, 2003 2:50:21 PM

In the attached bbd we have a non-composite bridge (no slab, rebar or studs)

When I rate the bridge and check the Input/output log for BRASS we see

# 310 ANALYSIS 1, 0, 4, , 0.000650, 1, 0

The Analysis card shows a 4 for composite instead of a 3 for non composite?? What has changed – I don't think in version 5.0 it did this??

FROM:bgoodrich DATE:Monday, November 03, 2003 12:09:03 PM

The sequence ID of 4 indicates that the structure will be analyzed in 3 stages that may or may not be composite depending on the presence of XSECT-C and XSECT-G commands. Because you have specified no slab or rebar, the structure is considered non-composite. The export looks at the stages that are defined in the Load Case Description window. The highest stage determines which sequence is exported. This is necessary because the automatic dead load distribution may be performed differently for each stage even though the structure is non-composite throughout. I deleted the stage 2 load cases, analyzed the bridge in one stage, and BRASS gave the same ratings as for three stages.

4/19/2016 3:17:46 PM

HRS AASHTO

1589

## Complete Issue Information

FROM:dteal DATE:Monday, November 03, 2003 2:19:53 PM  
Thanks

FROM:bgoodrich DATE:Tuesday, November 04, 2003 2:46:20 PM  
Track field marked as "Accepted".

FROM:bgoodrich DATE:Tuesday, November 04, 2003 2:46:40 PM  
Closed

|                              |
|------------------------------|
| Issue ID: 4872               |
| Subject: Results don't agree |

|                                    |                       |
|------------------------------------|-----------------------|
| Folder: /Virtis/Support Center     |                       |
| Primary Contact: Kennelly, Krishna |                       |
| Submitted By: Ihnat, Joseph        | 11/3/2003 12:47:31 PM |
| Modified By: administrator         | 6/19/2008 4:10:07 PM  |
| Priority: High                     |                       |
| Category: Bug - GUI 2              |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jihnat DATE:11/3/2003 7:47:04 AM

As per conversation with Joe Ihnat and George Khury of B&H. Attached please find files 2243510.bbd and LFDReport.pdf.

Virtis Rating results summary (girder results)don't agree with the results generated by the general summary report (LFDReport.xlm) for the controlling ratings.

4/19/2016 3:17:46 PM

HRS AASHTO

1590

**Complete Issue Information**

FROM:kkennelly DATE:12/23/2003 3:32:41 PM

The Report Tool is showing the minimum rating results without regards to the Lane/Impact requested by the user. Report Tool is showing min which is due to With Impact, multi-lane. The As-Requested rating results (with impact, single lane) are higher.

FROM:kkennelly DATE:12/29/2003 2:42:15 PM

Canned LFD output report in Report Tool revised to show the min As Requested rating factors for each vehicle in the Overall Summary and each min rating factor (as requested, with/without impact, single/multi lane) for the vehicle in the Individual Vehicle Rating Summary.

|                                        |
|----------------------------------------|
| Issue ID: 4873                         |
| Subject: Application Error with Oracle |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 11/3/2003 3:19:01 PM |
| Modified By: administrator          | 6/19/2008 4:10:07 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

**History**

| Primary Contact    | Status           | Priority | Category    |
|--------------------|------------------|----------|-------------|
| Duray, Jim         | New              | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned         |          | Bug - GUI 2 |
|                    | Not Reproducible |          |             |
|                    | Closed           |          |             |
| Ordoobadi, Mehrdad | Closed           | High     | Bug - GUI 2 |

4/19/2016 3:17:46 PM

HRS AASHTO

1591

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 4874.12473 | Closed        | Question re: status of VI4772 and user password |

### Description

FROM:dteal DATE:Monday, November 03, 2003 10:19:01 AM  
I get a application error that closes Virtis every time in Oracle.

Highlight a bridge in the explorer window and select Recent Rating Results from the toolbar. The window will come up without any results. As soon as you select the radio button for SI or USC you will get the application error message I attached. This happens on our oracle production and test servers. When I try this on my stand alone local Sybase database it works fine.

I have contacted our DBA that manages or oracle servers – they report no problems. As far as I can tell everything else is working fine.

FROM:mordoobadi DATE:11/10/2003 10:30:01 AM  
Dean, when you tried Sybase database were you using the same machine?

FROM:dteal DATE:Wednesday, November 12, 2003 11:54:49 AM  
Yes

FROM:dteal DATE:Tuesday, November 25, 2003 10:02:54 AM  
Could there be any relation of this problem with VI #4598?

FROM:mordoobadi DATE:3/11/2004 1:04:18 PM  
I haven't been able to duplicate this problem. I tried this on both Sybase and Oracle databases.

FROM:dteal DATE:Thursday, April 15, 2004 2:24:08 PM  
I just tried it with 5.1.1 and got the same error, message attached.

FROM:dteal DATE:Tuesday, October 26, 2004 10:39:53 AM  
I can not reproduce it either - please close

FROM:jihnmat DATE:10/26/2004 3:09:59 PM  
Deleted "Please Close" from Track field and changed Status to Closed.

4/19/2016 3:17:47 PM

HRS AASHTO

1592

## Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 4874                                           |
| Subject: Question re: status of VI4772 and user password |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 11/3/2003 3:41:04 PM |
| Modified By: administrator        | 6/19/2008 4:10:06 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

## History

| Primary Contact | Status   | Priority | Category            |
|-----------------|----------|----------|---------------------|
| Duray, Jim      | New      | High     | Documentation - API |
| Lee, Herman     | Assigned |          |                     |
|                 | Resolved |          |                     |
| Lee, Herman     | Resolved | High     | Documentation - API |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 4877.12470 | Resolved      | Update the way to get the bridge manager object. |

## Description

FROM:kkennelly DATE:11/3/2003 10:39:19 AM  
Phone call support for Aaron Lessard, Bayside Engineers. Question re: status of VI4772. Also requires new password since previous password cannot be remembered.

## Complete Issue Information

Issue ID: 4877

Subject: Update the way to get the bridge manager object.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

11/4/2003 7:42:01 PM

Modified By: administrator

6/19/2008 4:10:06 PM

Priority: High

Category: Documentation - API

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:11/4/2003 2:35:06 PM

1. The way to get the bridge manager object in Sample 7.1 of the API Guide is for Version 4.1.x and

4/19/2016 3:17:47 PM

HRS AASHTO

1594

**Complete Issue Information**

earlier. Update the way for Version 4.2 and later.

2. Take out all the defines for VERSION\_41 in all C++ examples.

FROM:hlee DATE:10/21/2004 4:37:39 PM  
Updated C++ examples (5.1.0 API).

FROM:hlee DATE:10/25/2004 1:14:02 PM  
Updated API Guide (5.1.0 API).

Issue ID: 4881  
Subject: Application Error During Installation

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 11/6/2003 5:14:35 PM  
Modified By: administrator 6/19/2008 4:10:06 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:17:47 PM

HRS AASHTO

1595

### Complete Issue Information

|                 |          |        |             |
|-----------------|----------|--------|-------------|
| Ihnat, Joseph   | Assigned |        |             |
|                 | On Hold  |        |             |
| Duray, Jim      | New      | High   | Bug         |
| Goodrich, Brian | Assigned | Urgent | Bug - BRASS |
|                 | Accepted |        |             |
|                 | Closed   |        |             |
| Goodrich, Brian | Closed   | Urgent | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | b057061.out                        |             |
|      | b057061.dat                        |             |
|      | Low Rating Shear<br>Controlled.bbd |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4883.12464 | Closed        | Shear controlled Rating |

### Description

FROM:dteal DATE:Thursday, November 06, 2003 12:14:35 PM

I have gotten the following error at the conclusion of several Virtis 5.1 installations. We have use both Compaq and HP PC's.

IKernel.exe – Application Error

The instruction at "0x771c732a" referenced memory at "0x00163818". The memory could not be "read". Click on OK to terminate the program.

I can't find anything that doesn't work properly after getting this message. I have ignored it. Should I??

FROM:dteal DATE:Wednesday, January 14, 2004 2:37:38 PM

Got same error message on a new install I did today.

4/19/2016 3:17:47 PM

HRS AASHTO

1596



**Complete Issue Information**

FROM:dteal DATE:Thursday, April 15, 2004 2:25:34 PM  
Error continues to come up on new installs

FROM:jduray DATE:4/13/2005 9:12:14 AM  
Paul Jensen says run Chkdisk...  
Paul has seen this happen if the page files occupies bad sectors.

FROM:jduray DATE:4/13/2005 9:14:50 AM

FROM:dteal DATE:Monday, April 18, 2005 12:54:34 PM

FROM:jihnate DATE:4/18/2005 2:16:09 PM  
Closed after Track field Accept by dteal.

|                                  |
|----------------------------------|
| Issue ID: 4883                   |
| Subject: Shear controlled Rating |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 11/7/2003 8:28:58 PM |
| Modified By: administrator       | 6/19/2008 4:10:06 PM |
| Priority: Urgent                 |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, November 07, 2003 3:28:58 PM  
I have a bridge (see attached bbd) that I have rated girder line #2 in Virtis. The HS20 Inventory rating

4/19/2016 3:17:48 PM

**HRS AASHTO**

1597

### Complete Issue Information

is 0.88 with shear controlling in span 4 at the 3/10th pt. First off, shear can't be the controlling factor at a 3/10 pt – shear should be low there.

I had our rating guy run this rating on BRASS. He came up with an inventory rating for an HS20 of 1.11 with flexure controlling. I have included the BRASS input and output files. This is a reasonable rating.

There are some small differences between the two input files. The BRASS file doesn't take into account the overlay and the 15% extra DL for the cross frames/diaphragms. I removed these from the Virtis file and found that it only made a small change in the rating results.

Can you tell me why we get a 23% lower rating with shear controlling in Virtis?

FROM:jduray DATE:Monday, November 10, 2003 8:48:37 PM

FROM:bgoodrich DATE:Tuesday, November 11, 2003 10:14:30 AM

The BRASS data file (b057061.dat) does not have the 403 POI specified. After adding it, the critical rating decreased and was much closer to that of the rating reported by Virtis. Next, I found that the manually created data file has a slab at the 403 POI, while the data file exported by Virtis only contains rebar. Therefore, the structural analysis results (shears) will be slightly different. The shear capacity at the 403 POI is nearly that of an unstiffened web. When compared to the factored shear, the rating is definitely less than 1.0.

FROM:dteal DATE:Wednesday, November 12, 2003 12:57:25 PM

I don't follow. You stated that the file exported by Virtis only contains rebar at the 403 point. The Deck Concrete Tab of the Deck Profile window has continuous concrete from abutment to abutment. The start and length distances were populated by the compute button.

FROM:bgoodrich DATE:Wednesday, November 12, 2003 3:46:07 PM

Dean - You are correct about the information entered into Virtis. However, BRASS-GIRDER only permits the slab OR rebar to be present in any one cross section. The composite regions on the Deck Profile window and the contraflexure locations on the engine properties window for the member alternative are used to help determine the ranges over which the slab applies and the ranges over which the rebar applies. The rebar is basically considered only over the interior piers by BRASS in this structure. Additionally, when the 403 POI is checked for flexure, shear, etc., BRASS uses the cross section (next to the node point) with the lowest moment of inertia, i.e., the cross section with the rebar in this case.

The left abutment is fixed, so the contraflexure locations for span 1 should be adjusted accordingly.

FROM:dteal DATE:Thursday, November 13, 2003 12:34:53 PM

FROM:bgoodrich DATE:Friday, November 14, 2003 12:57:30 PM

Track field marked with "Accepted".

|                |
|----------------|
| Issue ID: 4888 |
|----------------|

4/19/2016 3:17:48 PM

HRS AASHTO

1598

### Complete Issue Information

Subject: Units in floor system's Member Definition Loads.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 11/16/2003 7:13:15 PM  
Modified By: administrator 6/19/2008 4:10:05 PM  
Priority: High  
Category: Bug - GUI 2

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 4899.12449 | Suspended     | Cannot turn on intermediate output for P/S moment capacity calculations |

### Description

FROM:hlee DATE:11/16/2003 2:08:19 PM

Units in Member Definition Loads shouldn't be controlled by the structure def units.

Currently, you can change the units in Member Definition Loads by both structure def units and member def units.

FROM:jihnat DATE:6/27/2005 10:31:39 AM

Also, Fb Intermediate Supports window was not updating when Member Def sys units was changed.

Fixed for version 5.4.0

4/19/2016 3:17:48 PM

HRS AASHTO

1599

## Complete Issue Information

Issue ID: 4899

Subject: Cannot turn on intermediate output for P/S moment capacity calculations

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 11/27/2003 6:45:30 AM

Modified By: administrator 6/19/2008 4:10:05 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:Thursday, November 27, 2003 1:45:30 AM

Incident 4836 contained two separate issues, which were submitted by Vinacs via e-mail. The second issue was moved to this incident.

"Program does not show the intermediate steps that is used (such as

4/19/2016 3:17:48 PM

HRS AASHTO

1600

**Complete Issue Information**

f'c, dps, fpu) to arrive the capacity."

The lack of intermediate output for the moment capacity is due to the lack of a control option within the BRASS engine properties in the Virtis user interface. This output can be enabled using the SYSTEM-1 command. This request is for users to be able to turn on intermediate output for prestress moment capacity calculations.

|                                     |
|-------------------------------------|
| Issue ID: 4900                      |
| Subject: Cleanup utility for events |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 12/2/2003 8:56:27 PM |
| Modified By: administrator     | 6/19/2008 4:10:05 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact    | Status   | Priority | Category                 |
|--------------------|----------|----------|--------------------------|
| Ordoobadi, Mehrdad | Assigned | High     | Education<br>Maintenance |
| Duray, Jim         |          |          |                          |

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Suspended |      | Enhancement |
| Duray, Jim       | Suspended | High | Enhancement |
| Duray, Jim       | New       | High | Bug         |
| Kennelly, Krisha | Assigned  |      | Bug - GUI 2 |
|                  | Resolved  |      | Education   |
| Kennelly, Krisha | Resolved  | High | Education   |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | J0024.bbd           |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4901.12447 | Resolved      | DF's on Deck Girders |

### Description

FROM:jduray DATE:12/2/2003 3:54:29 PM

Paul Jensen called to ask about the BRIDGEWare Admin Utility and how it purges events from abw\_event. Montana is using the system quite heavily and generated 100,000 events in the past month. He ran the utility to purge them and it took more than 8 hours to run. He would like to purge on a daily basis.

FROM:mordoobadi DATE:12/3/2003 12:48:27 PM

Another alternative:

We can do the event clean-up when a user saves a bridge. We would use event clean-up settings in abw\_sys\_database table when a bridge is saved to delete the unwanted events.

We need a new column in abw\_sys\_database table: automatic bridge event clean-up indicator.

FROM:mordoobadi DATE:3/11/2004 11:36:29 AM

Jim I am assigning this to you. I was wondering if you would like the above resolution implemented.

FROM:mordoobadi DATE:6/8/2004 9:21:49 AM

Options:

- (1) Events are cleaned up when a bridge is saved.
- (2) Scheduled event clean-up

4/19/2016 3:17:49 PM

HRS AASHTO

1602

**Complete Issue Information**

FROM:mordoobadi DATE:6/8/2004 9:24:25 AM  
Estimate for option (1)

Tasks:

- 1 - Add new column auto\_bws\_event\_cleanup\_ind to the abw\_sys\_database table. 1
- 2 - Corresponding Db, De, Dm, and Do classes should be updated. 2
- 3 - Add a check box for BWS automatic event clean-up to the BridgeWare Admin program. 4
- 4 - Implement event clean-up within the modification event Dm object. 8

-----  
 Total 15 hours

FROM:hlee DATE:7/19/2006 10:19:44 AM  
Changed Project to Support Center.

|                                                 |
|-------------------------------------------------|
| Issue ID: 4901<br>Subject: DF's on Deck Girders |
|-------------------------------------------------|

|                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Kennelly, Krisha<br>Submitted By: Koenig, David 12/3/2003 4:38:06 PM<br>Modified By: administrator 6/19/2008 4:10:05 PM<br>Priority: High<br>Category: Education |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:Wednesday, December 03, 2003 11:38:06 AM  
 We have found a couple of problems on the distribution factors for deck girder (T-beam) structures. A bbd file is attached. On the first structure definition, the travelway width is 19'-10". We believe that

4/19/2016 3:17:49 PM

**HRS AASHTO**

1603

### Complete Issue Information

Virtis is assuming that only one lane will be on this structure. If you look at the shear and moment distribution factors on the interior girder (G2), you will notice that they are less than the one lane factors. This should not happen. They should always be greater than or equal to the one lane factors.

On the second structure definition, we changed the travelway width to 23'. Virtis should be picking this up as a two lane roadway. If you look at the two lane distribution factors, Virtis is using two lane formulas for the shear, moment, and deflection. The user indicates that Virtis is using a one lane factor for the multi lane shear at supports distribution factor. The user calculated a shear at supports multi lane factor of 1.3333. If this is correct, then Virtis is not being consistent.

The bbd file is attached below.

FROM:dkoenig DATE:Wednesday, December 03, 2003 11:46:00 AM

FROM:kkennelly DATE:12/31/2003 1:23:28 PM  
Service Pack 1 for Version 5.0 should fix the problem. This service pack lets the user specify on the Preferences:Bridge Workspace tab if they want to follow the AASHTO Std Spec 3.6.3 or the AASHTO Manual for Condition Evaluation of Bridges 6.7.2.2 when Virtis determines the number of lanes on the bridge when it computes the LL distribution factors.

FROM:kkennelly DATE:12/31/2003 2:11:26 PM

|                                                                                                                                           |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Issue ID: 4906                                                                                                                            |                       |
| Subject: Error message for batch rating timber deck and mbr alts not correct for inappropriate Analysis Settings: Rating Method selection |                       |
| Folder: /Virtis/Support Center                                                                                                            |                       |
| Primary Contact: Ordoobadi, Mehrdad                                                                                                       |                       |
| Submitted By: Murgoitio, Shanon                                                                                                           | 12/11/2003 1:17:20 PM |
| Modified By: administrator                                                                                                                | 6/19/2008 4:10:04 PM  |
| Priority: Urgent                                                                                                                          |                       |
| Category: Bug - GUI 2                                                                                                                     |                       |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug - GUI 2 |
| Ordoobadi, Mehrdad | Assigned |          |             |

4/19/2016 3:17:49 PM

HRS AASHTO

1604



### Complete Issue Information

|                  |          |     |        |         |
|------------------|----------|-----|--------|---------|
|                  |          |     | Urgent |         |
| Duray, Jim       | Resolved | New | High   | Unknown |
| Kennelly, Krisha | Resolved |     |        |         |
| Kennelly, Krisha | Resolved |     | High   | Unknown |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B000008.bbd         |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4912.12436 | Resolved      | Problems rating a GF bridge |

### Description

FROM:kkennelly DATE:12/11/2003 8:13:45 AM  
Email received from Steve Mample, Idaho 12/8/2003:

Hello, Krisha.

I am trying to use Virtis to analyze a simple 1 span non-composite steel girder bridge with transverse laminated timber deck. I have defined the left exterior (G01) and 1st interior girder (G02), and have linked the remainder of the girders to these two. I do not get any errors messages when I save the data. For the analysis I am just using the H15 vehicle. For the member alternatives G01 and G02, on the engine tab, I have entered BRASS LFD and entered the properties for non-composite analysis. The analysis progress display says "Data file successfully exported" and "Analysis complete".

I am getting the following System Error ;

Please open member alternative window and select an analysis module for the type of analysis you are trying to do.

Analysis Module is not selected Unable to configure event for selected analysis method!  
No rows returned from data base when expecting one row.

I have been able to successfully analyzed composite steel girder with reinforced concrete deck bridges. Can you tell me what I am doing wrong?

Thank you, Steve.

FROM:kkennelly DATE:12/11/2003 8:17:53 AM  
Email response sent back on 12/9/2003:

4/19/2016 3:17:49 PM

HRS AASHTO

1605



## Complete Issue Information

Subject: Problems rating a GF bridge

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Jones, Daniel 12/18/2003 7:49:55 PM  
Modified By: administrator 6/19/2008 4:10:03 PM  
Priority: High  
Category: Unknown

## History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Bug         |
| Kennelly, Krisha | Assigned           |          | Bug - GUI 2 |
|                  | Information Needed |          |             |
|                  | Resolved           |          | Education   |
|                  | Duplicate          |          |             |
| Kennelly, Krisha | Duplicate          | High     | Education   |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
| Richard Best  | Illinois DOT | BESTRM@nt.dot.state.il.us  | 217-785-2922 |

## Documents

| Name | Resource Identifier                                             | Description |
|------|-----------------------------------------------------------------|-------------|
|      | Effective Flange Width<br>Computation Method.pdf<br>0450082.bbd |             |

## Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 4913.12435 | Duplicate     | Calculation of effective flange width for PPC I-beams |

## Description

FROM:kkennelly DATE:12/18/2003 2:47:40 PM  
Submitted on behalf of Robert Fulton via phone call and email:

4/19/2016 3:17:50 PM

HRS AASHTO

1607

## Complete Issue Information

Attached is a Virtis model of a bridge in Bibb County. The bridge was built in 1927 but the main thru girders and floor beams were donated by the rail road. They came from a bridge built in 1898. I am still waiting on plans from the rail road on the main girders but had details on the floor beams because the angles making up the top flange were replaced. Anyway, when I rate the floor beam by LF, the HS 20(oper) = 2.5 tons but when I rate it ASD, the HS 20(oper) = 36 tons. I have done some hand calcs to verify why the ratings vary so much and I came up with HS 20 (oper) = 41 tons ASD and 42 tons LF ( this includes offset of 11.5"). When using the same lengths as Virtis I calculated the same LL moment but higher DL moments than Virtis. I then started checking the stringer shears and found that with the exception of stringer 3 the stringer dead load moments and shears were low. What is worse is that stringer one did not match stringer 5 and stringer 2 did not match stringer 4. I then made up a main girder and got the following error:

```
Error generating LFD/ASD load commands!  
Error generating load group commands!  
  Unable to compute average dead load of stringer unit!  
Error in the loads utility!
```

Anyway, attached is the file along with a couple of pictures of the bridge.

FROM:kkennelly DATE:12/18/2003 2:51:15 PM  
Reply sent via email: (note: attached bbd file is Version 5.0.1)

Problem 1: Dead load moments in stringers 1 and 5 are not the same.

Reason: There is a bug in the export from Virtis data to the BRASS input file in Virtis Version 5.0.1. (See Incident 4774 on the Technical Support website.) The export did not correctly generate the BRASS DECKC-GS command which locates the stringers under the deck. This problem was fixed for Virtis Version 5.1. I ran your bridge under Version 5.1 and the dead load moments are the same for the stringers. I don't think there is any work around to fix this problem in Version 5.0.1.

Problem 2: Error generating dead load for girder analysis.

Reason: Your superstructure span length is entered as 105.8125' on the Superstructure Definition window. Your floorbeams are entered with the following spacings: 21.875/21.1667/21.1042/21.1667/21.8175. If you add up these spacings, the last floorbeam is at 105.8126'. When Virtis tries to compute the dead load of the stringer unit, it uses the geometry of the reference lines which represent the girders and floorbeams. Virtis tries to find the intersection of the last floorbeam (at 105.8126') and the girder (which ends at 105.8125') and these lines don't intersect. If you change your span length to 105.8126' on the superstructure definition window and change the length on the Cross Section Ranges window to 105.8126', the girder can be analyzed.

(The tolerances you enter into Virtis deal with gaps or overlaps when entering data like lengths of steel flanges, etc. Those tolerances do not apply to the internal geometry of the girders, stringers, floorbeams composing the structure. Virtis requires the geometry of the system to fit together perfectly.)

Problem 3: Drastically different ratings for ASD and LFD rating of the floorbeam.

Reason: I haven't found the exact reason but I do see the following message in the BRASS LFD output:

4/19/2016 3:17:50 PM

HRS AASHTO

1608

**Complete Issue Information**

**\*\*Warning\*\*** BRASS will not analyze steel girders with yield strengths less than 33 ksi as compact sections using the Strength (LFD) method.

I suspect the large difference in ratings is due to compact/non-compact results.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 4913                                                 |
| Subject: Calculation of effective flange width for PPC I-beams |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Best, Richard       | 12/18/2003 8:23:06 PM |
| Modified By: administrator        | 6/19/2008 4:10:03 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rmbest DATE:Thursday, December 18, 2003 3:23:06 PM

From Tim Armbrecht:

Could you please verify that Virtis uses AASHTO 8.10.1.1 (referenced from 9.8.1.1) to calculate the effective flange width for PPC I-Beams? When I go to deck profile, put the cursor in effective flange width (Std) and click "Compute from typical section", it computes 90 inches for a beam with 96 in. beam spacing, 7.5 in. slab thickness, 6 in. web and 82.25 ft. beam length. If this were a steel section, 90 inches is correct, but 8.10.1.1 specifies:

"The effective flange width overhanging on each side of the web shall not exceed six times the thickness of the slab..." Therefore, the total EFW should be the smallest of 1/4 span length, 12 \* slab thickness + web thickness or beam spacing. The correct result should be 96 inches.

4/19/2016 3:17:50 PM

HRS AASHTO

1609

## Complete Issue Information

Note that when using "Compute from typical section" for effective flange width (LRFD) the result is correct - 96 in.

FROM:kkennelly DATE:12/31/2003 2:39:01 PM  
AASHTO 8.10.1.1 is used in the computation for Versions 5.0 and later. If you are running such a version, please export your bridge to a bbd file and attach it to this incident so we can investigate further.

FROM:tarmbrecht DATE:Thursday, January 08, 2004 5:00:06 PM

The file is attached

FROM:kkennelly DATE:1/9/2004 8:28:44 AM  
Virtis does not interpret 8.10.1 to say that the web thickness should be added to the effective flange width so Virtis computes the effective flange width as the min of(20.56',90",96"). The attached document contains the assumptions and interpretations Virtis makes when computing the effective flange width. We will be posting this document on the Virtis/Opis Technical Support website.

FROM:kkennelly DATE:1/20/2004 10:24:03 AM  
The PS I beams in the attached bridge have "Narrow" top flange types. If these beams had "Wide" top flange types, AASHTO 9.8.3 would be followed and the web thickness would be added to effective flange width.

FROM:kkennelly DATE:1/22/2004 10:07:13 AM  
Fixed for 5.1.1. The web thickness is now included in the std. eff. flange width for PS I beams with Narrow top flanges. It is not included for PS Box beams, steel beams or PS I beams with Wide Top flanges (Article 9.8.3 is followed for Wide Top Flanges).

|                                            |
|--------------------------------------------|
| Issue ID: 4923                             |
| Subject: Updated Examples on the Web site. |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Ihnat, Joseph   |                       |
| Submitted By: Colgrove, George   | 12/31/2003 4:39:19 PM |
| Modified By: hlee                | 5/17/2010 2:04:09 PM  |
| Priority: High                   |                       |
| Category: Maintenance - Internal |                       |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          | Maintenance |

4/19/2016 3:17:50 PM

HRS AASHTO

1610

**Complete Issue Information**

|                  |          |      |             |
|------------------|----------|------|-------------|
|                  | Resolved |      |             |
| Ihnat, Joseph    | Resolved | High | Maintenance |
| Duray, Jim       | New      | High | Bug         |
| Kennelly, Krisha | Resolved |      | Education   |
| Kennelly, Krisha | Resolved | High | Education   |

**Contacts**

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 4924.12424 | Resolved      | LRFD Distribution Factors |

**Description**

FROM:gcolgrove DATE:Wednesday, December 31, 2003 11:39:22 AM

Hi,

I am requesting that the example list in the Web Site be updated to include the many new examples that have been created in the recent past. Also please include the older ones that have been updated. There are many Floore system examples that has been made, but not included on the tutorial list for example. It is rare to see any updates on the web site, it would be nice to see more activity there.

Thanks!

George

|                                    |
|------------------------------------|
| Issue ID: 4924                     |
| Subject: LRFD Distribution Factors |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Colgrove, George    | 1/2/2004 1:07:21 PM  |
| Modified By: administrator        | 6/19/2008 4:10:02 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Kennelly, Krisha   | Closed   |          |          |
| Kennelly, Krisha   | Closed   | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 4945.12403 | Closed        | Girder mbrs data missing in Import of bbd file |

### Description

FROM:gcogrove DATE:Friday, January 02, 2004 8:07:21 AM

This question is in regards to the entry of LRFD Distribution Factors for a member. The three different cases are Deflection, Moment and Shear. Now the LRFD code does not have any provisions for distribution factors for deflection per se. It does for moment and shear. However for fatigue design, you need to look at the factors you calculate for moment and in certain circumstances divide out 1.2 for values calculated from the tables in chapter 4. Therefore from my understanding, the three cases for load distribution in LRFD are Fatigue, Moment and Shear. Is this what was intended in the LRFD tab of the Live Load Distribution Dialog box? According to some of your PCI examples, this is somewhat implied. If this is the case, is it possible to change the name of the cases to Fatigue, Moment and Shear. Thus, changing Deflection to Fatigue. Also, since Fatigue design only involves a single lane loaded, is it also possible to "grey" out the entry for multiple lanes loaded under Deflection/Fatigue case?

It is unclear as to what is expected in the Deflection case for these values otherwise. If my

4/19/2016 3:17:50 PM

HRS AASHTO

1612



**Complete Issue Information**

interpretation of this is wrong, what references in AASHTO will guide me in calculating the Deflection Load Distribution Factors?

Thanks,  
George

FROM:kkennelly DATE:1/5/2004 8:33:27 AM

The AASHTO LRFD Article C2.5.2.6.2 provides guidance on computing the LRFD Deflection distribution factors.

As for fatigue vehicles, I believe the 1.2 factor that you refer to is the multiple presence factor for 1 lane found in Table 3.6.1.1.2-1. As per Article 3.6.1.1.2, when investigating the fatigue vehicle, which is loaded for 1 lane, the distribution factors from Chapter 4 are divided by this 1.2 factor. The BRASS LRFD engine takes this requirement into account for vehicles selected as Fatigue Loads in the Opis Analysis Settings window so you do not have to enter separate Fatigue load distribution factors in Opis.

Also, the BRASS LRFD engine will compute all of your LRFD distribution factors for you if you leave them blank in Opis.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 4945                                          |
| Subject: Girder mbrs data missing in Import of bbd file |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 1/9/2004 2:01:55 PM  |
| Modified By: administrator        | 6/19/2008 4:10:01 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:kkennelly DATE:1/9/2004 8:59:38 AM

File attached to incident 4913 "0450082.bbd" is a version 5.1 file. Import into Virtis and most of the members don't have any data below the Member window in the tree. Even if mbr alts don't exist the members should have Supports, Member Loads show up in tree.

FROM:mordoobadi DATE:6/22/2004 11:48:00 AM

Nothing is shown under some members because those members are linked. GUI hides the tree items for Member Loads and Supports of linked members. I think this has always been this way.

FROM:kkennelly DATE:6/23/2004 10:39:31 AM

You are right.

Issue ID: 4946

Subject: Interpretation of AASHTO Std. Specs. 8.10.1.1 for effective flange width

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krishna

Submitted By: Armbrecht, Tim

1/9/2004 7:15:13 PM

Modified By: administrator

6/19/2008 4:10:01 PM

Priority: High

Category: Bug

### History

4/19/2016 3:17:51 PM

HRS AASHTO

1614

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 4951.12397 | Closed        | Copied FloorLine Floorbeam or Stringer POI not shown correctly |

### Description

FROM:tarmbrecht DATE:Friday, January 09, 2004 2:15:13 PM

This incident is a follow-up to incident 4913.

I request that the current Virtis interpretation for 8.10.1.1 be re-evaluated. I am only suggesting this because I believe the LRFD specifications interpreted 8.10.1.1 the same way Illinois does, which is to add the web thickness to 12 times the slab thickness as one of the limiting criteria to determine the effective flange width for a slab on beam configuration. We interpret "overhanging on each side of the web" in 8.10.1.1 as the amount of slab not over the web. Unless LRFD did some new research that confirmed the web thickness dimension should be added to 12 times the slab thickness, I'm assuming that the LRFD specs carried the criteria over from the Standard specs, and clarified the intent. In Illinois, we ignore the thickness of the web of a steel beam, but include it for the thicker PPC I-beams.

I would also be curious to know how other states interpret 8.10.1.1.

If it is determined that the interpretation remains as-is, I would request that something be added to the preferences that would allow us to calculate the effective flange width for LFD the same way that it is calculated for LRFD. Thanks,

TAA

4/19/2016 3:17:51 PM

HRS AASHTO

1615

**Complete Issue Information**

FROM:kkennelly DATE:1/16/2004 9:18:02 AM

I would like to get a consensus from some of the other states as to how they interpret these specs. Some of the other users who have submitted incidents regarding the eff. flange width computations are: Brian McCaffery, NY; Dean Teal, KS; Dave Koenig, Missouri; Robert Fulton, AL; Gale Barnhill, NE.

FROM:kkennelly DATE:1/16/2004 9:21:20 AM

FROM:kkennelly DATE:1/21/2004 8:09:21 AM

Note that for PS I Beams with "Wide" top flanges, Article 9.8.3 is followed by Virtis and the web thickness is included in the eff. flange width calcs. For PS I Beams with "Narrow" top flanges, Virtis uses Article 8.10.1.1.

FROM:kkennelly DATE:1/22/2004 10:08:58 AM

Fixed for 5.1.1. The web thickness is now included in the std. eff. flange width for PS I beams with Narrow top flanges. It is not included for PS Box beams, steel beams or PS I beams with Wide Top flanges (Article 9.8.3 is followed for Wide Top Flanges).

FROM:gbarnhill DATE:Monday, January 26, 2004 10:13:36 AM

OK in 5.1.1 with 23 Jan updates. I checked steel girders, PS I wide and narrow flanges and PS Box.

FROM:tarmbrecht DATE:Wednesday, January 28, 2004 3:39:25 PM

I checked a number of configurations for a PPC I-beam. With the update, appears to be calculating the EFW per my request. Looks good. Thanks,  
TAA

Issue ID: 4951  
Subject: Copied FloorLine Floorbeam or Stringer POI not shown correctly

Folder: /Virtis/Support Center  
Primary Contact: lhnat, Joseph  
Submitted By: lhnat, Joseph 1/12/2004 4:20:44 PM  
Modified By: administrator 6/19/2008 4:10:00 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:17:51 PM

HRS AASHTO

1616

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | No validation for -ve spacing.bmp |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 4955.12393 | Duplicate     | No validation for negative spacing. |

### Description

FROM:jihnat DATE:1/12/2004 11:12:03 AM

Found this while investigating 4944.

When a POI is copied for a FloorLine FloorbeamMemberAlt or a FloorLine StringerMemberAlt, the copied POI is not shown correctly in the BWS tree right after the copy (i.e. it's always 0.0), but it's OK after the tree is refreshed or when the BWS view is reopened.

The code in CBridgeWorkSpaceView::DoPaste() at around line 26835 needs to be changed, probably to check the type of structure definition.

We get the DoBmDefSteelAnalysisPointList from the Member Alt, but when we call the list's GetParent () function we always get the Beam Def. It doesn't look like that was what was expected when the DoPaste() code was written.

FROM:jihnat DATE:7/5/2005 11:18:25 AM

Fixed for 5.4.0

Issue ID: 4955

Subject: No validation for negative spacing.

4/19/2016 3:17:51 PM

HRS AASHTO

1617

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Best, Richard    | 1/13/2004 3:07:49 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Lee, Herman     | Assigned |          | Bug - GUI 2 |
|                 | Resolved |          |             |
| Lee, Herman     | Resolved | High     | Bug - GUI 2 |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | Range from right end of beam<br>1.bmp |             |
|      | Range from right end of beam<br>2.bmp |             |

## Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 4956.12392 | Resolved      | Span 0 for range that is defined from right end of beam. |

## Description

FROM:hlee DATE:1/13/2004 9:58:19 AM  
Submitted on behalf of Richard Best.

To duplicate:

1. Open PCITrainingBridge4's Shear Reinforcement Ranges window.
2. Enter the range as shown in the attached bitmap.
3. Click OK. No warning message for end distance that is outside the range.

FROM:hlee DATE:1/13/2004 10:46:10 AM

4/19/2016 3:17:52 PM

HRS AASHTO

1618

**Complete Issue Information**

This incident is a result of the investigation of VI 4953.

FROM:hlee DATE:1/15/2004 11:24:27 AM

Also related to VI 4962.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 4956                                                    |
| Subject: Span 0 for range that is defined from right end of beam. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Best, Richard    | 1/13/2004 3:15:21 PM |
| Modified By: administrator     | 6/19/2008 4:09:59 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:1/13/2004 10:10:37 AM

Submitted on behalf of Richard Best.

To duplicate:

1. Open PCITrainingBridge4's Shear Reinforcement Ranges window.
2. Enter the range as shown in the attached bitmap. (Range from right end of beam 1.bmp)

4/19/2016 3:17:52 PM

HRS AASHTO

1619

**Complete Issue Information**

3. Click OK and open the window again. (Range from right end of beam 2.bmp)

FROM:hlee DATE:1/13/2004 10:48:46 AM  
This incident is a result of the investigation of VI 4953.

FROM:hlee DATE:1/15/2004 11:25:54 AM  
Also related to VI 4962.

FROM:hlee DATE:1/21/2004 11:04:28 AM  
Resolved and schedule to be released with 5.1 Service Pack 1.

Issue ID: 4966  
Subject: Unable to save bridge data.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Best, Richard 1/20/2004 10:42:04 PM  
Modified By: administrator 6/19/2008 4:09:58 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact    | Status      | Priority | Category |
|--------------------|-------------|----------|----------|
| Ordoobadi, Mehrdad | Assigned    | High     | Unknown  |
| Ihnat, Joseph      |             |          |          |
|                    | System Test |          |          |
| Ihnat, Joseph      | System Test | High     | Unknown  |



**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 4972.12376 | Resolved      | Remove trailing blank spaces from user defined names |

**Description**

FROM:hlee DATE:1/20/2004 5:39:50 PM  
 Unable to save BID 1046 and BID 1047 in IDOT's RatingSubmittals database.

=====

=====  
 Unable to save Bridge data!  
 05:35:07 PM - Line 841 in source file C:\VIRTIS\_5.1\GUI\ABGBRDG\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmStructDef (SaveOrder object 69).  
 05:35:07 PM - Line 431 in source file C:\VIRTIS 5.1\data management\abmbche\DmBridgeCache.cpp.

Unable edit and update recordset.  
 05:35:07 PM - Line 1012 in source file C:\VIRTIS 5.1\data management\abmbrdg\DmStructDef.cpp.

=====

=====  
 FROM:mordoobadi DATE:2/6/2004 11:01:25 AM  
 Debugging of the code did not reveal what causes the save operation to fail.

- Here what I have done so far:
- exported bridges 1046 and 1047 to bbd files.
  - created a copy of rating submittals database then removed the 1046 and 1047 bridges and imported the bbd files from previous step into the database with BIDs 1046 and 1047.
  - compared the contents of the original and the copied databases to make sure that the databases match. As expected, the differences were in event and timestamp fields.
  - tried to reproduce the error with the copied database. I was not able to duplicate the save problem.
  - made the copied database contents to exactly match the original database.
  - tried again to reproduce the save problem with the copied database. But it did not happen again.
  - validated the original database by using Sybase's Validation Utility but it did not find any problems.

I think the problem is an internal database issue. It could be a corruption of data.

In order to verify that, Herman is going to Unload/Reload the Original database to see if that has any effect on the save problem.

4/19/2016 3:17:52 PM

HRS AASHTO

1621

## Complete Issue Information

FROM:hlee DATE:2/9/2004 8:14:56 AM

Unload/Reload the Original database has no effect on the save problem.

FROM:mordoobadi DATE:2/9/2004 11:50:42 AM

The problem is because of a special character in the description field in abw\_struct\_def for BIDs 1046 and 1047 in Rating Submittals database.

The update throws an exception because the record to be updated is not found. This is because the current cursor has a WHERE clause with every field filtered. For some reason Sybase ODBC creates a where clause that does not correspond to the original record in the database (probably because of the existence of a special character in the description field).

I think we need to make the ABxEdit control validate the text fields before attempting to set a value in the database.

This is a big issue, because after a user enters a BAD value and saves, he/she would not be able to change a part of the bridge. And I don't think that it is only limited to description field of a structure definition. It could happen to any table that has a text field.

FROM:mordoobadi DATE:2/9/2004 1:44:45 PM

SQLRowCount() returns 0, this causes an exception to be thrown. The CDBException error code is AFX\_SQL\_ERROR\_NO\_ROWS\_AFFECTED.

FROM:mordoobadi DATE:2/9/2004 1:49:07 PM

I just found the source of this problem.

As indicated in the Sybase ASA 8 documentation under change of behavior, starting from version 8 Character set translation is enabled by default. It was turned off by default in the previous versions. After turning character set translation off the save problem was resolved.

In order to turn the Character Set Translation off in an ODBC connection, the start line field in the ODBC Configuration window should be set to something like this.

"C:\Program Files\Sybase\SQL Anywhere 8\win32\dbeng8.exe" -ct-

See <http://www.sybase.com/detail?id=1027346> section 5.2.1.

We need to implement this in the installation.

FROM:mordoobadi DATE:3/11/2004 2:51:29 PM

Joe I assign it to you so that you implement it in the installation of the next release of Virtis/Opis.

FROM:jihnat DATE:7/16/2004 10:29:02 AM

Installation updated for 5.2.0 Alpha Build 2 and above.

This should be tested further for Sybase 8 and Sybase 9.

Issue ID: 4972

Subject: Remove trailing blank spaces from user defined names

Folder: /Virtis/Support Center

4/19/2016 3:17:52 PM

HRS AASHTO

1622

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 1/28/2004 1:47:35 PM |
| Modified By: administrator     | 6/19/2008 4:09:58 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Duray, Jim         | New      | High     | Bug       |
|                    | Open     |          | Education |
| Ordoobadi, Mehrdad | Assigned | Urgent   | Unknown   |
|                    | Resolved |          |           |
|                    | Accepted |          |           |
|                    | Closed   |          |           |
|                    | Closed   |          |           |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Unknown   |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 4978.12370 | Closed        | Interim Specifications |

### Description

FROM:kkennelly DATE:1/28/2004 8:43:58 AM

In response to incidents 4971, 4908, 4830, 3890, 3522, 4310 we should automatically remove any trailing blank spaces at the end of any user entered names.

FROM:jduray DATE:4/3/2006 2:46:51 PM

I thought we fixed this??

4/19/2016 3:17:52 PM

HRS AASHTO

1623

## Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 4978                  |
| Subject: Interim Specifications |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 2/2/2004 2:46:32 PM  |
| Modified By: administrator          | 6/19/2008 4:09:57 PM |
| Priority: Urgent                    |                      |
| Category: Unknown                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Monday, February 02, 2004 9:46:32 AM

Currently our office is using the 1998 Specification with 2003 Interim. Virtis 5.1.1 is using the 98 Spec with '99 Interims. When will the software be updated??

FROM:jduray DATE:2/4/2004 3:42:08 PM

There is an enhancement request submitted to Wyoming to update BRASS. I don't know when the work will be authorized or completed.

4/19/2016 3:17:53 PM

HRS AASHTO

1624

**Complete Issue Information**

FROM:kkennelly DATE:8/9/2004 8:43:08 AM

We need to add a new LRFD factor to the library for 1998 with 2003 interim even though the spec didn't change with the 2003 interim.

FROM:kkennelly DATE:9/13/2004 3:30:04 PM

Ignore what I said on 8/9. new LRFD factor in library should be 2004, 3rd edition. This spec also has a new limit state that needs to be added, Service IV.

FROM:mordoobadi DATE:10/5/2004 10:38:58 AM

Based on the discussion with Brian Goodrich, we need to create a new LRFD factor for 2004, 3rd edition.

The BRASS currently does not handle limit state Service IV.

FROM:mordoobadi DATE:10/7/2004 1:24:42 PM

Jim decided to do this for the next version (6.0).

FROM:kkennelly DATE:2/8/2005 1:23:45 PM

FROM:mordoobadi DATE:3/4/2005 3:32:11 PM

A new library LRFD factor added to the database for 3rd edition 2004 spec.

FROM:dteal DATE:Monday, April 18, 2005 12:54:04 PM

FROM:mordoobadi DATE:2/6/2006 4:41:01 PM

Accepted by Dean Teal 4/18/2005.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4979                                      |
| Subject: Rating Factor Failure not in Results Graph |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Duray, Jim    |                        |
| Submitted By: Teal, Dean       | 2/2/2004 3:49:25 PM    |
| Modified By: hlee              | 10/16/2011 10:24:47 PM |
| Priority: High                 |                        |
| Category: Enhancement          |                        |

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Lee, Herman     | Assigned           |          | Bug - GUI 2 |
|                 | Information Needed |          |             |

4/19/2016 3:17:53 PM

HRS AASHTO

1625

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Assigned  |      |             |
| Duray, Jim |           |      |             |
| Duray, Jim | Suspended | High | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |
|            | Resolved  |      |             |
|            | Duplicate |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 4986.12362 | Suspended     | Show NBI number in the Bridge explorer |

### Description

FROM:dteal DATE:Monday, February 02, 2004 10:49:27 AM

In the attached bbd, after doing a opis analysis (HL-93 design review) – the spec checker calls out 6 rating factor failures for LL deflection. When I go to the results graph, I can not find any “RED” or failures for rating factors. Shouldn’t there be??

FROM:hlee DATE:2/6/2004 5:00:51 PM

Dean, I cannot find the attached bbd.

FROM:dteal DATE:Monday, February 09, 2004 8:36:47 AM

Attached

FROM:hlee DATE:3/11/2005 2:12:35 PM

LL deflection rating factors are not stored in abw\_results\_... tables. The factors are not in tabular analysis results. They are available in the form of comments in abw\_lrfd\_spec\_check\_comment. In order to display the minimum rating factors in Results Graph, we need to make them available to the tabular analysis results first.

Attached Dean's bbd in 5.2 format.

FROM:jduray DATE:4/8/2005 2:58:58 PM

I think the analysis engine should report rating factors based on limit state. The results graph would have to be modified to display rating factors (or design ratios) based on categories such as LL deflection.

FROM:jduray DATE:4/13/2005 9:23:56 AM

4/19/2016 3:17:53 PM

HRS AASHTO

1626

### Complete Issue Information

It looks like the tabular results do not include Service II.

FROM:dteal DATE:Wednesday, November 07, 2007 10:35:50 AM  
7141, 5008, 4979 & 2737 are all related to LL Deflection problems

|                                                 |
|-------------------------------------------------|
| Issue ID: 4986                                  |
| Subject: Show NBI number in the Bridge explorer |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 2/5/2004 7:49:25 PM   |
| Modified By: hlee              | 7/17/2014 12:39:37 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:2/5/2004 2:50:50 PM  
Entered on behalf of Joeseeph Wellington of Oklahoma DOT

FROM:jduray DATE:2/5/2004 2:52:59 PM  
This would have to include adding to the Report Tool, Find Bridge, etc.

FROM:jduray DATE:2/5/2004 2:55:01 PM  
Same as 3908.

FROM: Herman Lee DATE: 7/17/2014 8:33:43 AM Eastern Daylight Time  
Resolved by the Bridge Explorer customization in version 6.6.  
Duplicate of Incident 6586.

4/19/2016 3:17:53 PM

HRS AASHTO

1627

## Complete Issue Information

Issue ID: 4994  
Subject: Incorrect P/S double tee section properties

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: McCaffrey, Brian 2/10/2004 7:35:40 PM  
Modified By: administrator 6/19/2008 4:09:56 PM  
Priority: High  
Category: Education

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-04-019(379).bbd   |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4996.12352 | Resolved      | Ultimate moment capacity of PS beams |

### Description

FROM:bmccaffrey DATE:Wednesday, February 11, 2004 9:15:32 AM

Request retracted

FROM:bmccaffrey DATE:Wednesday, February 11, 2004 9:44:18 AM

I got the section property issue resolved. However, there was one other problem on this bridge - In Superstructure Definition 1 (Loc\_001) member G1, I cannot get more than one shape on the 'Beam Shape' pull down tab, even though I have several different shapes defined.

FROM:kkennelly DATE:2/12/2004 3:54:57 PM

Your member alternative G1 is a PS Box member alt so the Beam Details window only lets you pick beam shapes that are boxes. If your member alt was an I beam, you would only be able to pick I beam shapes in the Beam Details window.

FROM:bmccaffrey DATE:Friday, February 13, 2004 8:48:47 AM

Thank you Krishna - I should have figured that one out.

|                                               |
|-----------------------------------------------|
| Issue ID: 4996                                |
| Subject: Ultimate moment capacity of PS beams |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Carney, John       | 2/12/2004 3:36:41 PM |
| Modified By: administrator       | 6/19/2008 4:09:55 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4998.12350 | Duplicate     | Need hinges in R/C structures |

### Description

FROM:jcarney DATE:Thursday, February 12, 2004 10:36:41 AM

I am back-checking a PS butted deck beam structure and am getting a different value for the ultimate moment capacity of the beam by hand calculation than is listed in the virtis output. Virtis provides a value of 602.2 ft-k and I am getting 692.4 ft-k by hand calculation. In performing the manual calculations I used a value of 229 ksi for  $F_{su}$  (using AAHSTO formula 9-17) and used AAHSTO formula 9-13 for calculation of the ultimate moment capacity. The PS strands are 270k, stress relieved strands. Attached is a copy of the exported .bdd file. Can you please look over and let me know if you see a reason for the difference in the capacity.

FROM:bgoodrich DATE:Friday, February 13, 2004 12:00:05 PM

I have investigated the ultimate moment capacity issue and I believe I have found a problem within the BRASS-GIRDER engine. I turned on the output for the ultimate moment capacity calculations to help with my investigation. Note that these calculations cannot be turned on within Virtis at the present time.

I found that BRASS is using one value for  $p^*$  (0.010405) in the calculation of  $f^*s_u$  (9-17) and a different value for  $p^*$  (0.005627) in the moment capacity calculation (9-13). The  $p^* = 0.010405$  is determined on an incremental basis for each row of strands, which appears to be the source of the difference in  $f^*s_u$ . When this  $p^*$  value is used,  $f^*s_u$  is 194 ksi instead of 229 ksi.

I will forward this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Friday, February 27, 2004 9:19:58 AM

WYDOT has assigned this issue to BRASS Problem Log 488.

4/19/2016 3:17:54 PM

HRS AASHTO

1630

**Complete Issue Information**

FROM:bgoodrich DATE:Tuesday, March 09, 2004 5:44:53 PM  
I corrected BRASS-GIRDER 5.8.9 to be consistent in its calculation of p\*. f\*su is now calculated as 229 ksi. Fixed for Virtis Version 5.2.0.

|                                        |
|----------------------------------------|
| Issue ID: 4998                         |
| Subject: Need hinges in R/C structures |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Sivakumar, Bala  | 2/12/2004 7:25:44 PM |
| Modified By: administrator     | 6/19/2008 4:09:55 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bgoodrich DATE:Thursday, February 12, 2004 2:25:44 PM  
Alkesh Parikh from Lichtenstein Consulting Engineers (774-290-1023) called with questions regarding adding hinges to reinforced concrete structures. He has a 3-span continuous structure with a drop-in section in the middle span. I informed him that this request already exists and that I would log his concern.

He also had a question on modeling a pier cap in Virtis. His superstructure was a reinforced concrete floor system. I informed him that the floor system analysis was only implemented for steel superstructures.

FROM:bgoodrich DATE:Thursday, February 12, 2004 2:59:15 PM  
This issue is a duplicate of 3273.

## Complete Issue Information

Issue ID: 4999  
Subject: Virtis 5.1 - PS Beams

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Allard, Daniel 2/16/2004 4:09:26 PM  
Modified By: administrator 6/19/2008 4:09:55 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status    | Priority | Category  |
|-----------------|-----------|----------|-----------|
| Duray, Jim      | New       | High     | Unknown   |
| Goodrich, Brian | Assigned  |          | Education |
|                 | Suspended |          |           |
| Goodrich, Brian | Suspended | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1523680.bbd         |             |
|      | 1523680 (531).bbd   |             |

### Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 5000.12348 | Resolved      | Span lengths for linked members are the same but message indicate otherwise. |

### Description

FROM:jihnat DATE:2/16/2004 11:09:49 AM  
Received via email:

Hello, I have two questions I could use your help on:

1)

I have a question about inputting mild reinforcing into a prestressed beam cross section. Our Virtis output gives a warning "Web section over-reinforced". Currently there is no mild reinforcing placed in the cross section, but I think this might eliminate the over-reinforced condition. The output file prints out the area of mild reinforcing and the vertical location of the rows, and it also refers to the BRASS xsect-g command, but we cannot figure out how to place this steel in the cross section via the Virtis input screens.

2)

Can you help me with how Virtis/BRASS computes the ultimate moment capacity of a prestressed beam for an LFD rating? The output file suggests that BRASS uses  $0.9 \times f_y^*$  for the strand stress at ultimate capacity. Why does it use this and not calculate  $f_{su}^*$ ? Is there a way to get a detailed output so I can see all the factors BRASS is using in its moment capacity equations?

Thanks for your help.

Daniel Allard, P.E.  
HDR ONE COMPANY | Many Solutions  
303 E. 17th Avenue, Suite 300 | Denver, CO | 80203  
Phone: 303.764.1579 | Fax: 303.861.1283 | Email: daniel.allard@hdrinc.com

FROM:bgoodrich DATE:Wednesday, February 25, 2004 8:29:13 PM

Issue 1:

Currently, Virtis does not support input of mild reinforcing steel along the length of a prestress beam. However, over interior supports, the support continuity reinforcement is passed to the BRASS engine. I believe this issue has already been submitted, but I cannot find the incident.

Issue 2:

BRASS performs the calculation described in the following message from the output file:

4/19/2016 3:17:54 PM

HRS AASHTO

1633

**Complete Issue Information**

\*\*Note, BRASS calculates the positive moment strength of the section based on 90% of the yield point stress in the prestressing steel nearest the extreme tension fiber of the member. However, it does not use this value, + 1113.0 k-ft in calculating the operating rating. If the user is rating a section which has widely dispersed tendons, strength based on the 90% limit may be input using the PRESTRESS-2 command and the program rerun and the value input will be used in the determination of operating rating.

However, the user must input this moment manually on the engine properties window for each point of interest. BRASS does calculate f\*su and uses it to calculate the ultimate moment capacity. Unfortunately, the output control option for turning this output on is not currently implemented in Virtis. This request has already been made in Incident 4899, which is currently suspended.

FROM:bgoodrich DATE:Thursday, February 26, 2004 3:16:42 PM  
I asked Jim Duray if this incident should be suspended. His reply follows:

From: Jim Duray [mailto:JDURAY@mbakercorp.com]  
Sent: Thursday, February 26, 2004 9:17 AM  
To: Goodrich@bridgetech-laramie.com  
Subject: RE: Incident 4999

yes

>>> "Brian L. Goodrich" <Goodrich@bridgetech-laramie.com> 02/26/04  
10:09AM >>>  
Jim,

I already looked into each of the incidents you found, but they were not what I was looking for. Maybe the issue has only been discussed but not entered until now in Incident 4999. Should the status be set to Suspended?

Brian

Issue ID: 5000  
Subject: Span lengths for linked members are the same but message indicate otherwise.

Folder: /Virtis/Support Center  
Primary Contact: lhnat, Joseph  
Submitted By: McCaffrey, Brian 2/16/2004 6:20:56 PM  
Modified By: administrator 6/19/2008 4:09:55 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:17:54 PM

HRS AASHTO

1634

**Complete Issue Information**

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Duray, Jim       | New       | High | Unknown     |
| Kennelly, Krisha | Assigned  |      |             |
| Duray, Jim       | New       | High | Unknown     |
| Goodrich, Brian  | Assigned  |      | Bug - BRASS |
|                  | Suspended |      |             |
| Goodrich, Brian  | Suspended | High | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-11-013(2TC).bbd   |             |

**Tasks**

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 5002.14338 | Suspended     | Concrete slab being rated for negative moment |

**Description**

FROM:hlee DATE:2/16/2004 1:12:49 PM

Hit Apply on the Structural Framing Plan Details window will give the following message:  
"Support skew and girder spacing result in unequal span lengths for linked members!..."

FROM:hlee DATE:2/16/2004 1:36:21 PM

Ref: VI 4989

FROM:kkennelly DATE:2/24/2004 8:52:50 AM

Framing plan window is not checking the span lengths of the actual linked girders, it is checking that all girders in the superstructure have the same length.

FROM:jduray DATE:2/26/2004 9:11:35 AM

Should be checking that the linked members have the same span lengths. Should not check unlinked members.

FROM:jihnat DATE:8/4/2005 10:57:21 AM

Fixed for 5.4.0

For testing, a version 5.3.1 BBD file is attached.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 5002                                         |
| Subject: Concrete slab being rated for negative moment |

4/19/2016 3:17:55 PM

HRS AASHTO

1635

**Complete Issue Information**

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center                      |
| Primary Contact: Goodrich, Brian                    |
| Submitted By: Kennelly, Krisha 2/16/2004 8:24:22 PM |
| Modified By: administrator 6/19/2008 4:15:30 PM     |
| Priority: High                                      |
| Category: Bug - BRASS                               |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Assigned |          | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Parameters Editing 2.doc |             |
|      | Parameters Editing.doc   |             |

**Tasks**

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 5003.14337 | Resolved      | Parameters Editing |

**Description**

FROM:kkennelly DATE:2/16/2004 3:23:08 PM  
 Submitted on behalf of Elizabeth Balcha, Bayside Engrs via email:

We are working on a bridge and the rating for the HS-20 truck governs at 50% of span 3 for beam "S2". The Brass Output report indicates a governing rating factor(1.05) which is based on the flexure composite slab limit state.  $(1200 - 28)/1112 = 1.05$   
 It seems as though the allowable concrete compressive stress of 1200 psi is being compared to the negative moment tension stress of 1112 psi at the top of the section.

Could you also tell us how virtis came up with the value (1112 psi) flexural negative moment stress at

4/19/2016 3:17:55 PM

HRS AASHTO

1636



**Complete Issue Information**

level one ?

I have attached the bbd file of the bridge (N-11-013 (2TC)) the steel structure part is the one which says span1-3.

FROM:kkennelly DATE:2/16/2004 3:24:52 PM

Reply sent via email:

It does appear that BRASS is rating the concrete slab for negative moment at the 50% of span 3 in your bridge. I've entered your problem as incident 5002 on the Virtis/Opis Technical Support website.

The 1112psi stress is computed by  $(131.kft)(12 in/ft)*(40.86in - 29.76in)/15700 in^4$

(I ran this member using the BRASS dll --> BRASS-GIRDER - Version 5.08.07 - Oct. 13, 2003 \*\* BRASS Export Version 5.1.0.3001)

FROM:bgoodrich DATE:Monday, February 16, 2004 10:41:22 PM

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Friday, February 27, 2004 9:18:02 AM

E-mail from Mike Watters (WYDOT):

Brian:

Since this is ASD we will not authorize any work on it, nor assign it a Problem Log.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

|                             |
|-----------------------------|
| Issue ID: 5003              |
| Subject: Parameters Editing |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Laughlin, Christopher | 2/17/2004 1:09:01 PM |
| Modified By: administrator          | 6/19/2008 4:15:30 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:17:55 PM

**HRS AASHTO**

1637

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LL Deflection.JPG   |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 5008.14332 | Assigned      | Filter LL Deflection in spec checker |

### Description

FROM:jhnat DATE:2/17/2004 8:09:43 AM  
Received via email:

>>> <christopher.laughlin@dot.state.fl.us> 2/11/2004 2:16:01 PM >>>  
How can I edit the Parameters Information as illustrated in the  
attached  
Word Document ? I am listed as an Administrator and the access rights  
set.  
Am I missing something simple ?

(See attached file: Parameters Editing.doc)

Christopher S. Laughlin  
FDOT State Maintenance Office  
Bridge Information Manager  
(850) 410-5757 Suncom 210-5757  
FAX (850) 410-5511  
Email: Christopher.Laughlin@dot.state.fl.us

My response:

I haven't been able to reproduce this problem.  
Please double-check that your userid appears under administrators, and  
that the Access Privileges for Parameters are set.  
A workaround would be to log in using virtis/virtis. This should  
always work.

Customer's reply:

We are using an Oracle database. Unsure if this applies, but worth  
mentioning since we have had numerous issues with Cambridge Systematics  
where they test our problems in Sybase and it works fine, but when they  
switch to Oracle, they can reproduce.

Attached is my account and group info. I am a member of the Administrators  
Group. Is there something else ? I am trying to get our virtis/virtis  
account setup in our Oracle test environment. It exist in Virtis and  
appears to have the same attributes as my account. I will let you know the

4/19/2016 3:17:55 PM

HRS AASHTO

1638

**Complete Issue Information**

results after I get it fully defined in Oracle.

(See attached file: Parameters Editing 2.doc)

FROM:jihnmat DATE:2/17/2004 8:44:28 AM

More today from the customer:

We have confirmed that all privileges are set and the virtis/virtis account produces the same results. Please advise. Thanks !

FROM:mordoobadi DATE:3/5/2004 11:32:31 AM

The reason that you cannot edit the Parameters is most likely because of the fact that you have an INTEGRATED Virtis/Opis/Pontis database.

In this case parameters can only be edited through Pontis software.

|                                               |
|-----------------------------------------------|
| Issue ID: 5008                                |
| Subject: Filter LL Deflection in spec checker |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/20/2004 4:44:39 PM |
| Modified By: administrator     | 6/19/2008 4:15:30 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Assigned |          |           |
| Duray, Jim      | Assigned | High     | Education |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:17:55 PM

HRS AASHTO

1639

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5014.14326 | Closed        | Run Time Error – Terminates Program |

**Description**

FROM:dteal DATE:Friday, February 20, 2004 11:44:40 AM  
In the Spec Checker, Design Ratio and Rating Factor computations, how can you filter out the Live Load Deflection check? See jpg for example

This may be related to VI #2737?

FROM:dteal DATE:Tuesday, June 13, 2006 1:36:08 PM  
Also see VI# 7141

FROM:dteal DATE:Wednesday, November 07, 2007 10:38:21 AM  
7141, 5008, 4979 & 2737 are all related to LL Deflection problems

|                                              |
|----------------------------------------------|
| Issue ID: 5014                               |
| Subject: Run Time Error – Terminates Program |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/24/2004 7:39:34 PM |
| Modified By: administrator     | 6/19/2008 4:15:29 PM |
| Priority: Urgent               |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned | Urgent   | Bug - GUI 2 |

4/19/2016 3:17:56 PM

HRS AASHTO

1640

**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
|               | Closed    |      |             |
| Duray, Jim    | New       | High | Unknown     |
| Ihnat, Joseph | Suspended |      | Enhancement |
| Ihnat, Joseph | Suspended | High | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                              |
|------------|---------------|--------------------------------------------------------------------------------------|
| 5025.14316 | Suspended     | Move the "Transfer This License" function from the Tools menu onto the login dialog. |

**Description**

FROM:dteal DATE:Tuesday, February 24, 2004 2:39:34 PM  
 Go to the deck profile of member #1. Select the Compute from Typ. Section Button and put 185 in the field for structural thickness. I get an abrupt program termination "Run Time Error" every time. It doesn't give me an error message – just the run time error. There are some errors showing up in the validate window that we need to reconcile, but it shouldn't terminate – should it?

.bbd attached

FROM:dteal DATE:Tuesday, November 02, 2004 10:25:56 AM  
 I can't reproduce the error in 5.2 beta 5

FROM:jihnate DATE:12/2/2004 1:50:16 PM  
 I migrated the BBD file to 5.2.0 Release, and the program doesn't crash.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 5025                                                                                |
| Subject: Move the "Transfer This License" function from the Tools menu onto the login dialog. |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 3/2/2004 2:59:36 PM  |
| Modified By: administrator     | 6/19/2008 4:15:28 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          | Help     |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Help     |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 5033.14308 | Closed        | On Line Help Needs Editing |

### Description

FROM:jihnat DATE:3/2/2004 9:57:26 AM

Move the "Transfer This License" function from the Tools menu onto the login dialog.

This would be useful on those (rare) occasions when the user cannot login to the DB to transfer their license, such as VI 5024.

We would also need to change the Help under "Program Activation Required" and adding an explanation on the Help for the login dialog.

FROM:hlee DATE:7/19/2006 10:07:45 AM

Changed Project to Support Center.

4/19/2016 3:17:56 PM

HRS AASHTO

1642

## Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 5033                      |
| Subject: On Line Help Needs Editing |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 3/9/2004 3:12:49 PM  |
| Modified By: administrator        | 6/19/2008 4:15:28 PM |
| Priority: High                    |                      |
| Category: Help                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Tuesday, March 09, 2004 10:12:49 AM

For the topic:

Superstructure Definition: Definition - Girder Line or Girder System

“Live load lanes

Specify the live load lanes as either multi-lane or single lane. This value is used by the analysis engine to determine which live load distribution factors to use in the analysis. This value can be overridden for an analysis event in the Vehicle Properties window, which is accessed by the Advanced button on the Analysis Settings: Vehicles window.”

4/19/2016 3:17:56 PM

HRS AASHTO

1643

## Complete Issue Information

You can not override multi-lane/single lane in the Analysis Settings, Advanced button any more.

FROM:kkennelly DATE:8/10/2004 1:48:54 PM  
Fixed for Beta Build 2.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 5034                                           |
| Subject: Distance to longitudinal stiffener not exported |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Goodrich, Brian    | 3/9/2004 5:18:38 PM  |
| Modified By: administrator       | 6/19/2008 4:15:28 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

## History

| Primary Contact | Status  | Priority | Category       |
|-----------------|---------|----------|----------------|
| Duray, Jim      | New     | High     | Bug - Export 2 |
| Goodrich, Brian | On Hold |          |                |
|                 | Closed  |          |                |
| Goodrich, Brian | Closed  | High     | Bug - Export 2 |

## Contacts

4/19/2016 3:17:56 PM

HRS AASHTO

1644



### Complete Issue Information

| Name           | Company                           | Email 1                             | Phone 1       |
|----------------|-----------------------------------|-------------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc.                  | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |
| Dean Teal      | Kansas Dept. of<br>Transportation | teal@ksdot.org                      | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 5035.14306 | Closed        | Multi Lane Dist. Factor for Exterior Slab Edge Beam |

### Description

FROM:bgoodrich DATE:Tuesday, March 09, 2004 12:18:38 PM  
Entered for C.J. Riley (WYDOT):

Brian:

We have been using Virtis/Opis to generate BRASS datasets for an NCHRP project. In doing so it appears that the longitudinal stiffener placement is not being placed in the GIRDER(LRFD) files (it is given a value of zero) but it is making it into the GIRDER files. Specifically, it is the 4th parameter in the STIF-LONGITUDINAL command that is not being transferred from the Opis UI. I thought you might want to initiate a Virtis/Opis incident for this.

C.J. Riley, EIT  
Engineer Analyst  
Wyoming Department of Transportation, Bridge Program  
307-777-4745  
charles.riley@dot.state.wy.us

FROM:bgoodrich DATE:Tuesday, March 09, 2004 12:20:34 PM  
I imported the BBD file and noticed that no value is entered for the distance to the longitudinal stiffeners at any of the points of interest. The default distance for BRASS-GIRDER is 20% of the web depth, which the export calculates. There is no BRASS-GIRDER(LRFD) default, so zero is exported. I added a line of code to issue an error when no distance is specified for BRASS-GIRDER(LRFD) only.

FROM:bgoodrich DATE:Tuesday, March 09, 2004 12:23:42 PM  
I checked into why a default was not implemented for BRASS-GIRDER(LRFD) and found the following. The LRFD specification suggests a distance of  $2D_c/5$  (C6.10.8.3.1). Because  $D_c$  can vary depending on the applied loads, it was determined that the user would be responsible for determining this value.

FROM:bgoodrich DATE:Tuesday, March 09, 2004 1:28:39 PM  
E-mail from C.J. Riley:

That makes sense. I've been modifying the data files produced by Virtis/Opis and have been putting

4/19/2016 3:17:56 PM

HRS AASHTO

1645

### Complete Issue Information

the longitudinal stiffener information into the data sets that I run. I haven't been dealing with Virtis/Opis directly and thought that the distance was already in the database.  
Thanks for the response.

C.J. Riley, EIT

FROM: bgoodrich DATE: Tuesday, March 09, 2004 5:43:08 PM  
This issue is resolved and accepted by the user, so I am closing the incident.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 5035                                               |
| Subject: Multi Lane Dist. Factor for Exterior Slab Edge Beam |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 3/10/2004 6:55:55 PM |
| Modified By: administrator        | 6/19/2008 4:15:28 PM |
| Priority: Urgent                  |                      |
| Category: Education               |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned | Urgent   |           |
|                  | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | Urgent   | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dteal DATE: Wednesday, March 10, 2004 1:55:55 PM

4/19/2016 3:17:57 PM

HRS AASHTO

1646

**Complete Issue Information**

In attempting to analyze an edge beam for a RC slab. I didn't enter any distribution factors for multi-lane so I could only have one lane next to the rail. Opis doesn't allow this – you must enter DF for both single and multi-lane.

So after the single lane loaded was removed from the Analysis Settings Advanced tab, how do I analysis a single lane on the edge of a deck?

Related to 4731

FROM:kkennelly DATE:4/23/2004 8:38:26 AM  
Select "Single lane" for the Live Load Lanes on the GirderLine Structure Definition window then the export will not require you to enter the multi-lane df.

FROM:dteal DATE:Friday, September 17, 2004 10:09:41 AM

FROM:kkennelly DATE:9/23/2004 7:48:51 AM  
Closed based on "Accepted" in track field.

Issue ID: 5039  
Subject: Unable to set girder member spacing in Scan utility.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Jensen, Paul 3/11/2004 9:38:59 PM  
Modified By: administrator 6/19/2008 4:15:27 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
| Lee, Herman     | Assigned | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:17:57 PM

HRS AASHTO

1647

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 072-0199.bbd        |             |

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 5054.14287 | Resolved      | Calculation of Vci for PPC I-beams |

**Description**

FROM:hlee DATE:3/11/2004 4:27:14 PM  
E-mail from Paul Jensen to Jim Duray: (Attached 5.1.0 bbd)

=====  
>>> "Jensen, Paul" <pjensen@state.mt.us> 03/11/04 02:01PM >>>  
try this one-

-----Original Message-----  
From: Jim Duray [mailto:JDURAY@mbakercorp.com]  
Sent: Thursday, March 11, 2004 11:50 AM  
To: pjensen@state.mt.us  
Subject: Re: Fwd: bbd of typical scanner problem bridge.

Paul

Can you send the 5.1.0 bbd file?

Jim

>>> Herman Lee 03/11/04 01:48PM >>>  
The bbd that Paul attached is in 5.1.1 format. There are 2 error messages when I validated the bridge. The first one complains about the framing plan and the second one about G1's girder profile. These problems can be fixed by hitting the OK button on the framing plan and typical section windows. I don't think these problems exist in 5.1.0. If we have the 5.1.0 bbd, we can tell what the real problem is.

Herman

>>> Jim Duray 3/11/04 12:35:47 PM >>>  
check this bbd file Paul is having trouble with.

>>> "Jensen, Paul" <pjensen@state.mt.us> 03/11/04 12:36PM >>>  
attached is the bbd file of the typical problem bridge.

**Complete Issue Information**

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

thanks

Paul

=====

E-mail reply to Jim Duray:

=====

I performed the following steps on Paul's 5.1.0 bbd:

1. Imported the bbd to a 5.1.0 db.
2. Validated the bridge (Validation.txt), G1 member has 2 errors.
  - ERROR: Beam shape not defined over entire length of member alternative.
  - ERROR: Haunch range not defined for entire length of member alternative.
3. Ran Scan utility (ScanAngleConversion20040311151401.log), Scan complains the following:
  - Unable to set girder member spacing.
4. Opened Framing Plan schematic (FramingPlanSchematic.bmp), G1 seems to have an extra span.
5. Opened G1 Member window (G1MemberWindow.bmp), confirmed G1 has an extra span.
6. Hit OK on both Framing Plan and Structural Typical Section windows and saved the bridge.
7. Validated the bridge again, no more error message.
8. Ran Scan utility again, Scan complains the same thing.
9. Opened the abw\_super\_struct\_mbr\_span table (abw\_super\_struct\_mbr\_span.bmp), the extra span is still there after the save.

This is related to VI 5001. The codes that update the span length table in SetGirderMbrSpacing() failed.

=====

|                                                                          |
|--------------------------------------------------------------------------|
| <p>Issue ID: 5054</p> <p>Subject: Calculation of Vci for PPC I-beams</p> |
|--------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Folder: /Virtis/Support Center</p> <p>Primary Contact: Boukamp, Sabine</p> <p>Submitted By: Armbrecht, Tim <span style="float: right;">3/23/2004 1:31:55 PM</span></p> <p>Modified By: administrator <span style="float: right;">6/19/2008 4:15:26 PM</span></p> <p>Priority: High</p> <p>Category: Bug - BRASS</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:17:57 PM

**HRS AASHTO**

1649

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C-11-033 (4YB).bbd  |             |

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 5059.14283 | Resolved      | Input modular ratio n not used by Virtis in RC Slab |

### Description

FROM:tarmbrecht DATE:Tuesday, March 23, 2004 9:31:55 AM

Please verify the calculation of  $V_{ci}$  for prestressed I-beams. It appears that for  $V_{ci} = 0.6 \cdot \text{SQRT}(f'c) \cdot b'd + V_d + V_i \cdot M_{cr}/M_{max}$ ,  $M_{cr}/M_{max}$  has an upper boundary of 1.0. If this is the case, where is the reference? I can't find it in AASHTO or ACI. File is attached. Thanks.

FROM:bgoodrich DATE:Tuesday, March 23, 2004 9:52:13 AM

The  $M_{cr}/M_{max}$  ratio is limited to 1.0 in AASHTO 9-27 ( $V_{ci}$ ) as documented in an open forum article by Dr. Puckett and Dr. Tadros. See "Design for Shear in Prestressed Concrete Bridge Members" in the PCI Journal (May-June 2001). I will request permission from WYDOT to add this reference to the intermediate output.

FROM:tarmbrecht DATE:Tuesday, March 23, 2004 10:47:29 AM

Thanks Brian,

With all due respect to Jay and Dr. Tadros, since this is not documented in AASHTO, I think there need

4/19/2016 3:17:57 PM

HRS AASHTO

1650

## Complete Issue Information

to be some sort of switch to turn this reference on if desired, defaulted to off. Illinois currently hasn't adopted this policy. Thanks again.

FROM:bgoodrich DATE:Wednesday, March 24, 2004 10:36:05 AM  
WYDOT has assigned this incident to BRASS Problem Log 436. I have already added the article reference to the intermediate output. This is all that WYDOT has authorized at this point. I forwarded Tim's latest comments to WYDOT regarding a user option for considering this article. Therefore, this incident will remain open.

FROM:bgoodrich DATE:Wednesday, March 31, 2004 11:09:43 AM  
See: Puckett, J.A., and Tadros, M.K., Design for Shear in Prestressed Concrete Bridge Members, Open Forum, PCI Journal, May-June 2001, Vol. 46, No. 3, P90-93.

FROM:bgoodrich DATE:Wednesday, March 31, 2004 11:10:25 AM  
Brian McCaffrey submitted the same issue in Incident 5065.

FROM:bgoodrich DATE:Tuesday, April 20, 2004 5:03:20 PM  
WYDOT will be replying to Tim Armbrecht and Brian McCaffrey. I will add that response to this incident when it is received.

FROM:bgoodrich DATE:Thursday, June 03, 2004 10:46:59 AM  
E-mail from WYDOT:

From: Micheal Watters [mailto:Micheal.Watters@dot.state.wy.us]  
Sent: Thursday, April 15, 2004 2:38 PM  
To: Armbrecht, Timothy A.; BMCCAFFREY@dot.state.ny.us  
Subject: Mcr/Mmax Ratio

Brian and Tim:

Yesterday, Keith Fulton, Jay Puckett, and others discussed your concerns about BRASS-GIRDER potentially computing the shear resistance incorrectly for some prestressed girders. By ignoring the  $V_{ci}$  term (Eq. 9-27) when  $M_{max}$  is less than  $M_{cr}$ , the  $V_{cw}$  term controls, which may give a higher resistance than users were getting in previous versions. The correct procedure of limiting the  $M_{cr}/M_{max}$  term to 1.0 in the  $V_{ci}$  equation is documented in an open forum article by Dr. Puckett and Dr. Tadros (University of Nebraska-Lincoln). See "Design for Shear in Prestressed Concrete Bridge Members" in the PCI Journal (May-June 2001).

Though this limitation is NOT in the AASHTO Specifications and is conservative, we at WYDOT agree with Dr. Puckett and Dr. Tadros in limiting the ratio to 1.0 and will make no changes to BRASS. You do have the option in BRASS to increase the  $\Phi$  factor to compensate for this if you desire. Also, if you want, you can bring this item forward to the user group as an enhancement request.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Thursday, June 03, 2004 10:47:23 AM  
E-mail from Tim Armbrecht:

4/19/2016 3:17:57 PM

HRS AASHTO

1651

**Complete Issue Information**

>>> "Armbrecht, Timothy A." <ARMBRECHTTA@dot.il.gov> 4/22/2004 9:06:06 AM >>>  
Mike,

Thanks for your response. I certainly appreciate the fact that BRASS is a WYDOT program and you have the right to modify it as you see fit. I also respect Jay's work, and know that his argument to limit Mcr/Mmax is based on sound engineering principles. My concern is that a program that is licensed nationally doesn't even have an option to follow the current AASHTO Specifications. Therefore, please consider this reply as a request for an enhancement to be brought before the users in July - that the user has the option to calculate Vci with no limitations on Mcr/Mmax, as specified in the AASHTO Standard Specifications. Thank you for your consideration.

Tim

FROM:bgoodrich DATE:Tuesday, October 05, 2004 6:54:56 PM  
WYDOT authorized an option to be added to BRASS-GIRDER for controlling if the Mcr/Mmax ratio is limited to 1.0 or not. This will not be ready for the upcoming 5.2 release, but it should be in the following release.

The necessary modifications have been made to BRASS-GIRDER 5.9.1, which is scheduled for release in 2005. The export needs to be modified to generate the appropriate code on Parameter 7 of the ANALYSIS command. Additionally, the engine properties need to be modified to allow the user to set whether or not the ratio is to be limited. This affects AbxBrass, AbxBrass2, and AboBrass projects.

FROM:bgoodrich DATE:Tuesday, May 31, 2005 2:13:22 PM  
AbxBrass, AbxBrass2, and AboBrass have been updated. Fixed for version 5.3 SP1.

FROM:kkennelly DATE:6/16/2005 1:02:30 PM  
We interpreted Brian' comments about the default value for this parameter. SP1 beta 1 is setting the ignore shear to true (1) when really the user hasn't checked the Ignore Shear on the Mbr Alt window.

FROM:sboukamp DATE:6/17/2005 8:51:54 AM  
Resolved for SP1 release

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 5059                                               |
| Subject: Input modular ratio n not used by Virtis in RC Slab |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 3/25/2004 6:53:01 PM |
| Modified By: administrator       | 6/19/2008 4:15:26 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

4/19/2016 3:17:58 PM

HRS AASHTO

1652



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category                      |
|-----------------|-----------|----------|-------------------------------|
| Duray, Jim      | New       | High     | Bug                           |
| Goodrich, Brian | Assigned  |          | Bug - BRASS<br>Bug - Export 1 |
|                 | Duplicate |          |                               |
| Goodrich, Brian | Duplicate | High     | Bug - Export 1                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | 60_-96__WPLG-Comp_.zip<br>082-0341a.bbd |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 5071.14271 | Duplicate     | Problem with shear capacity |

### Description

FROM:bha DATE:Thursday, March 25, 2004 2:53:02 PM

We have a RC slab bridge built 1929,  $f'c = 2$  ksi,  $f_y = 33$  ksi (reinforcement). Based on Manual for Condition Evaluation of Bridges, we input  $n = 15$  (page 66). When we get vehicles and analyze, Virtis did not use the input value of  $n$ , but it used the default value ( $n = 8$ ) for analysis, therefore the moment capacity of concrete was so small to compare to the moment capacity of concrete if we use  $n = 15$  (calculated by by hand).

We have rated a lot RC bridges, mostly tension steel or stirrup control the rating. But this bridge concrete compression controls the rating and we have involved to this problem. Please investigate and fix the problem.

Thanks,

FROM:kkennelly DATE:3/26/2004 11:59:29 AM

Member " 12" wide rc slab - 32 degree skew". The export generates Properties-RC command with 3rd parameter = 8 and the Properties-RCB command with 2nd parameter = 15 which is what user entered on Cross Section window for  $n$  value.

FROM:bgoodrich DATE:Friday, March 26, 2004 12:20:51 PM

4/19/2016 3:17:58 PM

HRS AASHTO

1653

### Complete Issue Information

BRASS-GIRDER permits a modular ratio for the top flange and another for the rest of the girder. For an R/C slab cross section, the engine is using the modular ratio of the top flange instead of that for the girder. This issue is only a problem in the BRASS-ASD engine, so WYDOT will not authorize a fix. Therefore, I modified the export to set the top flange modular ratio to that of the girder (only for an R/C slab). Then parameter 3 on the Properties-RC command and parameter 2 on the Properties-RCB command will be the same, 15 in this case. Fixed for Version 5.2.0.  
FROM:kkennelly DATE:3/26/2004 2:31:33 PM

|                                      |
|--------------------------------------|
| Issue ID: 5071                       |
| Subject: Problem with shear capacity |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 4/5/2004 8:59:25 PM  |
| Modified By: administrator       | 6/19/2008 4:15:25 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:tarmbrecht DATE:Monday, April 05, 2004 4:59:26 PM

I appear to be getting conflicting shear capacities at basically the same point at a support for a 96" plate girder structure. Please see attached, member name is A2 - 1st N Int of Unit 1 (4 span continuous), alternative name is 60" - 96" WPLG-Comp. The shear capacity  $\phi V_n$  at point 310 appears to be 331.9 kips and at point 400 appears to be 858.8 kips. Am I missing something? Thanks,

Tim

4/19/2016 3:17:58 PM

HRS AASHTO

1654

**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, April 07, 2004 4:28:07 PM

I ran your bridge with the current version of BRASS-GIRDER and some prior versions as well. However, I'm not able to reproduce your results. The shear capacity at the 310 and 400 points are consistently 858.8 kips. Please send me the BRASS input and output file (.DAT and .OUT) along with where you are finding the discrepancy in the file.

FROM:bgoodrich DATE:Wednesday, April 07, 2004 4:36:52 PM

E-mail from Tim (4/7/04):

Brian,

Here you are. In the output file, the phi\*Vn for 310 is on page 261 and for 400 on page 264. Note that this is controlling the rating which is why we're concerned. Thanks,

Tim

FROM:bgoodrich DATE:Wednesday, April 07, 2004 4:41:41 PM

This issue actually resides in the export process, so I changed the incident category accordingly. The reason I couldn't duplicate this problem is because I analyzed the bridge with Virtis 5.1.1, which contained an export modification that addressed Incident 4837. Basically, there was a small gap in the transverse stiffener schedule (exported to BRASS) at the end of the span 3, which caused the 310 POI to be considered unstiffened, thereby reducing the shear capacity. I have marked this incident as a duplicate of 4837.

|                                      |
|--------------------------------------|
| Issue ID: 5073                       |
| Subject: Ductility Error Not Correct |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/8/2004 1:16:04 PM  |
| Modified By: administrator       | 6/19/2008 4:15:25 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

## Complete Issue Information

### Contacts

| Name        | Company                          | Email 1                | Phone 1      |
|-------------|----------------------------------|------------------------|--------------|
| Greg Hutter | Om P. Popli, P.E.,<br>L.S., P.C. | ghutter@popligroup.com | 585-388-2060 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | cover plate error.doc |             |
|      | cover plate error.bbd |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 5083.14259 | Assigned      | Error when deleting cover plate with section loss. |

### Description

FROM:dteal DATE:Thursday, April 08, 2004 9:16:04 AM

For Calvin Reed, KDOT Bridge Designer

The bridge in question is 130-56-0.23 Welded Pate Girder, .bbd attached. The faulty errors come from the second alternate titled "3-Span Alternate (testing for code error)". The girder "G1 (Exterior)" has been modeled as a 64" deep Welded Plate Girder which meets the requirements for a compact section as stated in Section 6.10.4.1.2. Since it meets compact section requirements, it must pass the ductility requirements as stated in Section 6.10.4.2.2b. For the sections at Span 1 (104 ft), Span 2 (28.5 ft, 88.5 ft, and 99.75') and Span 3 (28.5 ft) a Fail flag has been triggered for this specification, as well as "Design Ratio Computations" and "Rating Factor Computations". This fail flag is triggered for the Service I, Service II, and Strength I load cases for Stage 3 construction. The flag states the following:

AASHTO REFERENCE: 6.10.4.2.2b Ductility Requirement

EQUATION NO. : 6.10.4.2.2b-1

Input Parameters:

Dp = 36.433 in D' = 7.000 in

Calculated Value:  $Dp / D' = 5.205$

AASHTO Limit : 5.000

Result Code : FAIL

After looking through the output for the 108.000 point for Stage III construction, I determined that indeed the girder does not satisfy Equation 6.10.4.2.2b-1. However, one of the criteria for the ductility requirements spec. is that "the moment due to the factored loads results in a flange stress that exceeds the yield strength for either flange." This is obviously not the case for any of these sections since they are all near the dead load inflection points, and thus the moment is relatively low. The following data cut from the output for the 108 point shows that the stresses in both flanges during Stage 3 construction are well below yield.

4/19/2016 3:17:59 PM

HRS AASHTO

1656



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned | Urgent   | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | st.francis.bbd      |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 5086.14256 | Resolved      | Deck Selfweight in Opis |

### Description

FROM:ghutter DATE:Tuesday, April 13, 2004 2:59:17 PM

I have a rolled girder member alternative with a bottom flange cover plate with section loss. I copied this alternative to another member without a bottom flange cover plate and deleted the cover plate from the girder profile. I attempted to open the deterioration window to delete the section loss and I got an error. I attempted to save the bridge an again received an error.

The first error was "Unable to initialize Top Cover Plate tab."

FROM:ghutter DATE:Tuesday, April 13, 2004 3:07:16 PM

I attached the error messages and the bbd file.

FROM:kkennelly DATE:4/14/2004 8:19:08 AM

After you copy your original mbr alt, try deleting the cover plate section loss first and then delete the cover plate.

FROM:kkennelly DATE:4/14/2004 8:30:21 AM

Should the window check if the cover plate is assigned to a deterioration range before we let the user delete the cover plate?

4/19/2016 3:17:59 PM

HRS AASHTO

1658

**Complete Issue Information**

FROM:ghutter DATE:Wednesday, April 14, 2004 2:57:09 PM

I know I could delete the section loss first and then delete the cover plate. I thought it would be beneficial to either receive a warning that you can't delete the cover plate before the section loss or allow the program to delete the cover plate and then the section loss. I just don't believe that users should be losing data they have not saved just because of this error.

FROM:kkennelly DATE:4/16/2004 7:58:19 AM

I agree that we should check if the cover plate has deterioration before we delete it. We'll need to check all steel shapes, plates, cover plates and cross sections for deterioration before we let the user delete them.

|                                  |
|----------------------------------|
| Issue ID: 5086                   |
| Subject: Deck Selfweight in Opis |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Shah, Shyam        | 4/15/2004 7:36:24 PM |
| Modified By: administrator       | 6/19/2008 4:15:24 PM |
| Priority: Urgent                 |                      |
| Category: Bug - Export 1         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:snshah DATE:Thursday, April 15, 2004 3:36:24 PM

Hello,

We are having a problem with this structure in Opis. I personally have not used Opis before and neither has anyone else in our office, but one of our engineers is trying to learn and she is having trouble with this structure. It looks like the self-weight of the deck is not included in the Opis analysis. I checked it in

4/19/2016 3:17:59 PM

HRS AASHTO

1659

**Complete Issue Information**

virtis but the deck self-weight does appeared in Virtis. Any help would be appreciated, as we are new to Opis.

Thank you  
William J. Metcalf Jr.  
Louisiana Department of Transportation and Development  
Bridge Design - Bridge Rating Unit  
1201 Capitol Access Rd.  
Baton Rouge, La. 70804  
Ph (225)-379-1741  
Fax (225)-379-1786

P.S. I have attached the .bbd file and we are running version 5.1.0

FROM:bgoodrich DATE:Monday, April 26, 2004 12:52:48 PM  
I modified BrassLrfdLoadControl.cpp to address this issue. Fixed for Version 5.2.

|                                                    |
|----------------------------------------------------|
| Issue ID: 5097                                     |
| Subject: Simple spans within multi-span structures |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 4/22/2004 7:26:25 PM |
| Modified By: administrator     | 6/19/2008 4:15:23 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

**Contacts**

4/19/2016 3:17:59 PM

HRS AASHTO

1660



### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0162797.bbd         |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 5102.14241 | Closed        | Additional dead load increases ratings |

### Description

FROM:tarmbrecht DATE:Thursday, April 22, 2004 3:26:26 PM

One of our designers entered a 2 span precast prestressed concrete deck beam (aka multiple adjacent box beam) bridge into VIRTIS (see attached bbd file). For multi-span structures, as in this case, there is no reinforcement in the top for continuity over the pier, so we analyze these structures as simple spans. When he tried to analyze, he got this message:

The loading sequence indicator is missing or invalid!  
Error setting global engine properties!  
A deck and shear reinforcement must be defined for multiple-span members to achieve continuity over interior supports!  
Error setting global engine properties!

I'm guessing that VIRTIS assumes all multiple span structures are continuous over the pier. If that is the case here, is there a way to specify continuous or simple spans that I'm not aware of? Or do we just have to enter each simple span as a separate unit? Thanks,

Tim

FROM:jduray DATE:4/23/2004 8:00:12 AM  
Each simple span must be a separate structure definition.

|                                                 |
|-------------------------------------------------|
| Issue ID: 5102                                  |
| Subject: Additional dead load increases ratings |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 4/27/2004 6:02:51 PM |

4/19/2016 3:18:00 PM

HRS AASHTO

1661

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:15:22 PM |
| Priority: High             |                      |
| Category: Education        |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FDOT_360029.bbd     |             |

**Tasks**

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 5103.14240 | Resolved      | Bridge Problem |

**Description**

FROM:tarmbrecht DATE:Tuesday, April 27, 2004 2:02:51 PM

A bit of a puzzle here (file attached):

I analyzed the West Unit (W Unit (3-Sp Cont PSI), member 3- 2nd W Int, memb alt 1219mm (48") PSI) without the 4" wearing surface by going into Structure Typical Section and "Not Assigning" a load case to the wearing surface. The result is 0.649 RF Inventory and 1.084 RF Operating. If I assign the 4" wearing surface to the load case "Wearing Surface", the results are 1.138 RF Inventory and 1.901 RF Operating. Why would more load increase the rating?

Furthermore, when I go into Superstructure Loads and change the Stage 2 DL distribution to "User-defined Dead Loads", I get rating factors of zero. Does choosing the user-defined option override something? Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, April 27, 2004 3:35:46 PM

The distance to the rebar on the Continuity Diaphragm Reinf. tab of the Beam Details window is 1905 mm, which is deeper than than the cross section. Once this input is corrected, the ratings increase as

4/19/2016 3:18:00 PM

HRS AASHTO

1662

**Complete Issue Information**

the load is reduced.

FROM:bgoodrich DATE:Thursday, April 29, 2004 12:37:53 PM  
E-mail from Tim Armbrecht:

Brian,

Thanks for your insight. It appears that we were flipping between metric and English and somehow, instead of a three inch wearing surface (75mm), a 75 inch (1905 mm) wearing surface got entered. Not sure if it was a user input error or if something didn't get translated properly in Virtis, but we're unable to duplicate it, so I would say it's probably input error and the concern is addressed. Thanks again,

Tim

FROM:bgoodrich DATE:Thursday, April 29, 2004 12:38:59 PM  
Closed.

|                         |
|-------------------------|
| Issue ID: 5103          |
| Subject: Bridge Problem |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Laughlin, Christopher | 4/28/2004 5:27:45 PM |
| Modified By: administrator          | 6/19/2008 4:15:22 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnmat DATE:4/28/2004 1:28:28 PM

4/19/2016 3:18:00 PM

HRS AASHTO

1663

## Complete Issue Information

Received from Christopher Laughlin via email to BridgeWare:

I tried to work on another bridge (360029) and ran into a new problem. Under Beam Details for G1, I had entered the beam projection for the left end and right end for the Span Detail and then tried to enter the Stress Limit range length. At this point Virtis asked if I wanted to correct the beam length so it would be consistent with the length I had entered under the Girder System Structure Definition. Realizing that I had the incorrect length entered under the Girder System Structure Definition I chose not to change the length at the Stress Limit but went back to GSSD to change the length there. Well from there on Virtis crashed several times. Each time I went back to the bridge I tried to enter the correct length but the program kept crashing without saving the new data as soon as I clicked on OK in the Stress Limit box.

Finally I somehow entered a length (length is not quite correct but close enough to keep going) without Virtis crashing but now Virtis cannot save it. The message is: Unable to save bridge data. Saving new and modified objects failed while processing CDmConcRailing (SaveOrder object 105). Error updating database record set.

It seems that Virtis has a problem with the concrete railing which as far as I can tell has nothing to do with the length problem. Perhaps I really had two problems of which one was eliminated and now only one remains. However, I would like to know how to correct an input mistake without Virtis crashing, and how to exit a bridge without losing all the data input even if some of it is incorrect.

Marianne Saunders, P.E.  
Structures and Facilities  
(386) 740-3455  
SC 373-3455  
marianne.saunders@dot.state.fl.us

FROM:jihnata DATE:4/28/2004 1:32:03 PM  
BBD file is attached.

FROM:kkennelly DATE:4/28/2004 3:58:03 PM  
I think most of the problems with this bridge are related to incorrect data entered on the Structure Typical Section window. On this window, the end width of the deck is entered as zero.

In Virtis, the geometry of the superstructure is built off of the location of the Superstructure Definition Reference line. The girders and the edges of deck are all located with respect to that reference line. This reference line is located on the Superstructure Typical Section window. This bridge has 0 entered for the distance from this reference line to the left and right edges of the deck at the end of the structure. The data presently entered on that window describes the deck as being 76.25' wide at the start of the superstructure and 0' wide at the end of the superstructure. The left overhangs are also entered as negative numbers on that window. This bad data causes the Superstructure Definition Reference line to be located incorrectly and then all of the girder locations become incorrect since they are positioned relative to this reference line.

4/19/2016 3:18:00 PM

HRS AASHTO

1664

## Complete Issue Information

Ideally Virtis should not crash when bad data is entered however there may be instances where it cannot recover this from bad data. I suggest entering the correct data on the Structure Typical Section window and using the following tools to identify any other problems that may exist.

There are several tools you can use in Virtis to locate bad data. You can select "Bridge/Validate" from the menu when the name of your superstructure definition is selected. This will open a window listing warnings and errors related to your data. You can also open schematic windows while the "Framing Plan Detail" or "Structure Typical Section" labels are selected in the Bridge Workspace tree by selecting "Bridge/Schematic" from the menu.

As for your email regarding entering the length of the stress limit range on the beam details, there is an important distinction between the span length entered on the Girder System Superstructure definition window and the length of the stress limit ranges. The span length on the Girder System Superstructure Definition window is measured to the centerline of bearings for a simple span structure and to the centerline of the pier for multi-span ps beams made continuous for live load. Open the Virtis help by selecting the F1 button when this window is open to see a description and a sketch of how the span lengths are defined.

Stress limit ranges however, are applied over the physical length of the ps beam which is not the same as the span length of the beam. Use the F1 button when the Stress Limit Range tab is open to open the Virtis help topic which describes how these stress limit ranges are described using the "beam model" and select the "Prestressed Member Modeling Methods" link in that help topic window for a sketch.

FROM:kkennelly DATE:4/28/2004 4:17:55 PM

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5115                                      |
| Subject: Girder system with different support skews |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 5/4/2004 12:41:58 PM |
| Modified By: administrator       | 6/19/2008 4:15:21 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

## History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug - Export 1 |
|                 |          |          | Bug - Export 2 |
|                 | On Hold  |          |                |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 2 |

4/19/2016 3:18:00 PM

HRS AASHTO

1665

## Complete Issue Information

---

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 5190.14153 | Suspended     | Copy Diaphragms to All Bays |

### Description

FROM:kkennelly DATE:5/4/2004 8:38:35 AM

Attached bbd file is TrainingBridge 1 with the second support skew set to zero. When you try to run BRASS-LRFD for girder G1 get the following message:  
Error generating LRFD control commands!

All support skews are not equal. Therefore, the skew angle must be overridden on the Structure Definition engine properties.

The distribution factor schedule may also be overridden.

Error generating DIST-CONTROL-LL command!

I did enter my own LRFD Dist factor range and I still get the error message. (We removed the Structure Definition engine tab a while back.)

FROM:kkennelly DATE:5/4/2004 10:11:47 AM

Attached bridge is version 6, you won't be able to import it. But you should be able to create the same bridge by changing the second support skew to zero, adjust mbr alt ranges for new mbr length and then try to analyze G1.

FROM:bgoodrich DATE:Wednesday, May 19, 2004 11:59:24 AM

I was able to duplicate the problem. The export always tries to generate the distribution factor control command (DIST-CONTROL-LL) for a girder system because there is currently no way to tell it not to. Therefore, the error message leads you to believe that entering the schedule will get rid of the error. We have a couple options to address this issue. We will need to modify the error message for both.

Option 1. When varying skew angles are detected, the export would set the skew angle (used by BRASS) to zero, so a valid DIST-CONTROL-LL command would be generated. However, the user would be required to enter the distribution factor schedules.

Option 2. Move the lanes loaded and skew engine fields (that were on the structure def engine properties window) to the member alternative engine properties window and adjust the export as necessary.

4/19/2016 3:18:00 PM

HRS AASHTO

1666

### Complete Issue Information

Option 3. Reinstate the Structure Definition engine tab.

If I were a user, I would prefer to have the capabilities in Option 2 (at a minimum) because BRASS would still calculate the distribution factors for a given skew angle as it once did prior to the removal of the Structure Definition engine tab.

FROM:bgoodrich DATE:Wednesday, May 19, 2004 12:32:16 PM

FROM:jduray DATE:4/13/2005 9:39:10 AM  
Investigate reinstating the Structure Definition engine tab.

FROM:bgoodrich DATE:Monday, December 05, 2005 11:43:41 AM  
Khalid Obeidat (Minnesota DOT) reported this same issue today. There is no work-around. His file is attached as B27v68.bbd.

FROM:bgoodrich DATE:Tuesday, February 28, 2006 7:55:45 PM  
The Structure Definition engine tab was reinstated in version 5.4.

|                                      |
|--------------------------------------|
| Issue ID: 5190                       |
| Subject: Copy Diaphragms to All Bays |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Shah, Shyam      | 6/18/2004 6:25:32 PM |
| Modified By: hlee              | 6/5/2015 2:04:54 PM  |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:18:01 PM

HRS AASHTO

1667

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 5191.14152 | Resolved      | Prestressed Girder with Multiple Strand Sizes |

### Description

FROM:snsah DATE:Friday, June 18, 2004 2:25:35 PM

A suggestion for a future enhancement would be to create a function in the framing plan window that would allow the user to copy diaphragm configurations to all bays instead of having to copy the diaphragm configurations to each bay individually.

FROM:hlee DATE:6/21/2004 11:58:02 AM  
Same as VI 4781

FROM: Herman Lee DATE: 6/5/2015 9:57:14 AM Eastern Daylight Time  
This capability has been implemented.

Issue ID: 5191

Subject: Prestressed Girder with Multiple Strand Sizes

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Shah, Shyam

6/18/2004 6:28:56 PM

Modified By: administrator

6/19/2008 4:15:16 PM

Priority: High

Category: Education

### History

4/19/2016 3:18:01 PM

HRS AASHTO

1668



### Complete Issue Information

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 2 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0820382X-TES.bbd    |             |
|      | 0820382TAA.bbd      |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5193.14150 | Resolved      | Missing contraflexure points |

### Description

FROM:snsah DATE:Friday, June 18, 2004 2:28:57 PM

Is it possible to input a girder into Virtis/Opis with multiple strand sizes (diameters) in the same cross section?

FROM:kkennelly DATE:6/21/2004 3:53:46 PM

Prestressed girders cannot handle multiple strand sizes in the same cross section if you are using the "Strands in rows" description type to enter the location of each strand in the Strand Layout window. If you want to mix strand sizes in a beam, you can try using the "P and CGS method" to enter the prestressing data in the Strand Layout window. However, since you assign a Prestress Property to your PS beam and the Prestress Property contains only one strand size, you should review the output carefully as I am not sure if this type of model will have any adverse affects on your rating.

## Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 5193                        |
| Subject: Missing contraflexure points |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 6/23/2004 2:40:39 PM |
| Modified By: administrator       | 6/19/2008 4:15:15 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 099-0063TAA.bbd     |             |
|      | 099-0062TAA.bbd     |             |

## Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 5194.14149 | Closed        | differences in Dead Load 1 moments |

## Description

FROM:tarmbrecht DATE:Wednesday, June 23, 2004 10:40:39 AM

We're getting these error messages when we try to run a beam line analysis for the attached file:

Error converting Virtis/Opis steel cross sections or schedules to 'general' cross sections!

4/19/2016 3:18:01 PM

HRS AASHTO

1670

## Complete Issue Information

Error retrieving data for generated cross section at -0.37 ft  
Unable to DoSteelWebPlateRangeSetPtr->MoveDistance in FillCrossSectionData!  
Error getting web plate from steel web plate ranges to right of -0.3750000 ft!  
Current tolerance for ft is 0.0100000.

I know we're missing something. Any ideas? Thanks,

Tim

FROM:kkennelly DATE:6/25/2004 11:35:36 AM

This error is due to a missing Point of Contraflexure on the Member Alt: Engine tab. Open the Member Alt window, select the Engine tab and then select "BRASS LFD" and the Properties button. The BRASS LFD engine properties window then opens. There is no data entered for the point of contraflexure in the first span. The export to BRASS then erroneously returns a negative number when it tries to find the point of contraflexure in Span 1.

Entering a value for the point of contraflexure in span 1 will fix your problem but we should probably issue an error message that the data was not defined before trying to run BRASS.

FROM:tarmbrecht DATE:Friday, June 25, 2004 3:29:55 PM

Thanks Krisha,

Actually, the point of contraflexure is not missing, but in fact does not exist. Span 1 is so short compared to the rest of the structure, that it is always in negative moment. We know it's unusual, but unfortunately, it is how we're trying to model a flared structure with a beam popping up between two continuous beams. If we set the contraflexure to something near the end, like 0.1, would that work?

FROM:kkennelly DATE:6/25/2004 3:57:31 PM

You can try that. If you hit F1 while the Engine Properties window is open, the Help for this BRASS Engine Properties window opens and you can see what BRASS uses this point of contraflexure for. It looks like it is used to generate the BRASS Steel-Girder-Control command which specifies if the section is composite and if it is in positive or negative bending. You can enter a small value for the point of contraflexure and then review the BRASS input file to see if the section properties are computed properly. Note that if you make the point of contraflexure too small, you might get an "Element too small" error from BRASS. If that occurs, try making the point of contraflexure a little bigger.

FROM:bgoodrich DATE:Friday, July 02, 2004 3:05:48 PM

Mehrdad produced a 5.2 BBD file (0820382X-TES.bbd), which is attached.

The AboBrass file (DoBrassStdMbrAltParser.cpp) was modified to detect two null contraflexure locations. The error no longer occurs. Fixed for version 5.2.

Issue ID: 5194

Subject: differences in Dead Load 1 moments

Folder: /Virtis/Support Center

4/19/2016 3:18:02 PM

HRS AASHTO

1671

**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Armbrecht, Tim      | 6/23/2004 3:59:13 PM |
| Modified By: administrator        | 6/19/2008 4:15:15 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
|                  | Resolved |          | Education |
| Kennelly, Krisha |          |          |           |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

**Contacts**

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 099-0056TAA.bbd     |             |

**Tasks**

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 5197.14146 | Closed        | Error message for floorbeam/stringer system |

**Description**

FROM:tarmbrecht DATE:Wednesday, June 23, 2004 11:59:13 AM

The two attached files are supposed to be similar, with one just a bit wider than the other. Our puzzle is that the stage 1 dead load moments don't match for span 1 member 3rd S int for 0990063 and span 1 member 2nd N int for 0990062. Since the beam spacing is the same around these two members and we have dead load based on tributary area for dead load 1, we expect the moments to match. We checked our beam and deck inputs, but can't find the difference. Any ideas where we might be missing it? Thanks,

Tim

FROM:kkennelly DATE:6/25/2004 12:03:16 PM

4/19/2016 3:18:02 PM

HRS AASHTO

1672

**Complete Issue Information**

I noticed the following difference in the 2 input files for these members:  
0990062 Member 2nd N Int - bottom cover plate thickness is 1.5"  
0990063 Member 3rd S Int - bottom cover plate thickness is only 1.0"

I also noticed that the "Curb (9x36)" in 0990062 has a unit weight of 0 kcf.

FROM:tarmbrecht DATE:Friday, June 25, 2004 3:38:40 PM

Doh! That fixed it - thanks!

FROM:kkennelly DATE:12/16/2005 11:30:57 AM  
Closed based on accepted in track field.

|                                                      |
|------------------------------------------------------|
| Issue ID: 5197                                       |
| Subject: Error message for floorbeam/stringer system |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Armbrecht, Tim      | 6/24/2004 2:23:59 PM |
| Modified By: administrator        | 6/19/2008 4:15:15 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Thursday, June 24, 2004 10:23:59 AM

We're getting an error message while running the attached file:

4/19/2016 3:18:02 PM

**HRS AASHTO**

1673

**Complete Issue Information**

"Error generating LFD/ASD schedule commands!"

This occurs for systems "Truss floor (L0-L26)(System)" and "Truss floor (L26-L34)(System)".

FROM:kkennelly DATE:6/24/2004 2:47:55 PM

The floorbeam definitions in each of those structures contain Transverse Stiffener Ranges but there are no Transverse Stiffener Definitions assigned to those locations. You should create Transverse Stiffener Definitions and then assign them to locations in the Transverse Stiffener Ranges window.

FROM:kkennelly DATE:12/16/2005 11:31:23 AM

Closed based on accepted in track field.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 5199                                            |
| Subject: Error Message - Stringer Floorbeam Girder System |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Thompson, Todd      | 6/29/2004 1:49:11 PM |
| Modified By: administrator        | 6/19/2008 4:15:15 PM |
| Priority: High                    |                      |
| Category: Bug - Domain 1          |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |

4/19/2016 3:18:02 PM

HRS AASHTO

1674

### Complete Issue Information

|                  |          |      |                |
|------------------|----------|------|----------------|
| Duray, Jim       |          |      | Bug - Domain 1 |
| Kennelly, Krisha |          |      |                |
| Duray, Jim       | New      | High | Unknown        |
| Goodrich, Brian  | Assigned |      | Bug - Export 1 |
|                  |          |      | Bug - Export 2 |
|                  | Resolved |      |                |
| Goodrich, Brian  | Resolved | High | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | m17022.bbd            |             |
|      | m17022_version511.bbd |             |

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 5208.14135 | Resolved      | Different rolled beams along length of member are not recognized |

### Description

FROM:ttompson DATE:Tuesday, June 29, 2004 9:49:11 AM  
I'm getting the following error:

Error generating LFD/ASD load commands!

08:53:03 AM - Line 241 in source file F:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error generating load group commands!

08:53:03 AM - Line 427 in source file F:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Unable to compute average dead load of stringer unit!

08:53:03 AM - Line 1014 in source file F:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error in the loads utility!

08:53:03 AM - Line 829 in source file F:\Virtis\gui\AbxBrass\LoadsUtility.cpp.

When I rate the system. The Stringers and Floorbeams appear to rate ok, but it errors out when it starts the Girders. (there is no brass files created (or at least saved to the hard drive).

4/19/2016 3:18:02 PM

HRS AASHTO

1675

**Complete Issue Information**

I can't seem to figure out why I'm getting this error. Not sure if there is a bug in Virtis or if I don't have something filled in correctly.

- 2 girders at 27 ft spacing (42-6 span)
- 3 stringers at 6-9 spacing (between main girders) (14-2 span)
- 4 floorbeams at 14-2 spacing (27-0 span)

I've attached the export file.

FROM:bgoodrich DATE:Tuesday, June 29, 2004 6:05:36 PM  
 The problem is associated with Stringer Unit 3. The domain appears to be the source of the error though. The export calls the CDoGfsFloorSystemStructDef::ComputeGirderStrUnitAveDeadLoad function (for unit 3), which in turn calls the CDoReferenceLine::FindIntersection function. Within that function, some conditionals are checked (in particular, t = 12.9540003048 is compared to dLength1 = 12.9540000000). A fixed tolerance is used in these comparisons. The user-defined tolerance should probably be utilized.

FROM:kkennelly DATE:7/1/2004 8:52:37 AM  
 Temporary work around is change how the floorbeam locations are entered on the Floorbeam Member Locations window. Instead of referencing the fb locations from the previous fb, enter the locations as:

|     | ref dist | offset    |
|-----|----------|-----------|
| fb1 | 0.0      | 0.0       |
| fb2 | 0.0      | 14.166667 |
| fb3 | 0.0      | 28.333333 |
| fb4 | 0.0      | 42.50     |

The problem is due to the trailing 6's and 3's cause the last fb location to be at 42.500001'. The girder length is 42.5 so the FindIntersection() fails. I can't change FindIntersection() to use user defined tolerances because we use our hardcoded tolerances when it comes to geometry (spans/girder lengths/etc.). The user defined tolerance is only to help users with gaps/overlaps when entering things like flange plates, etc. I'm afraid using the user tolerance in FindIntersection() may have very bad effects on the rest of the system.

FROM:kkennelly DATE:7/1/2004 4:26:10 PM  
 Validation is being added to alert user when this case exists. Window also being modified to show more significant digits.

FROM:tthompson DATE:Friday, July 09, 2004 10:06:40 AM  
 Temp workaround works, but when you go through creating your FB locations, it didn't seem to give you a chance to enter them that way. So you need to change them afterwards.

Issue ID: 5208  
 Subject: Different rolled beams along length of member are not recognized

Folder: /Virtis/Support Center  
 Primary Contact: Goodrich, Brian



### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 7/7/2004 1:58:18 PM  |
| Modified By: administrator     | 6/19/2008 4:15:14 PM |
| Priority: High                 |                      |
| Category: Bug - Export 2       |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
| Ihnat, Joseph      |          |          |          |
| Ordoobadi, Mehrdad | On Hold  |          |          |
| Ihnat, Joseph      | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ihnat, Joseph      | Closed   | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 5216.14127 | Closed        | MSDE userids |

### Description

FROM:kkennelly DATE:7/7/2004 10:00:10 AM  
Submitted on behalf of Stacy Weaver, FTS Inc. via email:

>>> Stacy Weaver <SWeaver@fstinc.com> 7/6/2004 11:59:10 AM >>>

Hi Krisha,

Thanks for your quick response to my train loading inquiry. I have another question about Virtis, concerning the cross section properties. I am currently rating a 4 span continuous steel stringer bridge. The stringers are rolled shapes with top and bottom cover plates.

A portion of one of the beams has reduced section properties due to collision damage. I have

4/19/2016 3:18:03 PM

HRS AASHTO

1677



## Complete Issue Information

-Stacy Weaver

FROM:bgoodrich DATE:Sunday, August 01, 2004 12:50:43 PM

I revised the export to include the web depth in the cross section comparison algorithm for rolled beams with no deterioration. Now Span 3 in the user's bridge is exported with the correct web depth. Fixed for Version 5.2.

|                       |
|-----------------------|
| Issue ID: 5216        |
| Subject: MSDE userids |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ilnat, Joseph |                      |
| Submitted By: Ilnat, Joseph    | 7/9/2004 7:55:30 PM  |
| Modified By: administrator     | 6/19/2008 4:15:14 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jihnat DATE:7/9/2004 3:52:21 PM

Section 6.2 of the Startup Guide lists six Initial Passwords, but for MSDE we only supply two (Virtis and Bridgeware).

We may want to clarify the documentation or add the remaining userids for MSDE.

FROM:jduray DATE:7/14/2004 8:53:32 AM

I think MSDE should be consistent with the other databases.

FROM:jihnat DATE:7/29/2004 10:33:06 AM

The additional users need to be configured in the installation.

4/19/2016 3:18:03 PM

HRS AASHTO

1679

**Complete Issue Information**

FROM:jihnna DATE:8/2/2004 10:53:44 AM  
Also need to configure Pontis/Pontis in the integrated databases.

FROM:jduray DATE:4/13/2005 10:03:26 AM  
Review the Startup Guide for MSDE and correct as necessary.

FROM:jihnna DATE:8/30/2005 2:35:58 PM  
For version 5.4.0, I've added the additional userids (from section 6.2 of the Startup Guide) to the installation for the standalone databases.  
My comment of 8/2/2004 no longer applies since we don't provide an integrated MSDE database.

FROM:xli DATE:9/20/2005 2:27:43 PM  
All userids (from section 6.2 of the Startup Guide) are tested.

|                                         |
|-----------------------------------------|
| Issue ID: 5219                          |
| Subject: Improve support for SQL Server |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 7/13/2004 4:07:36 PM |
| Modified By: administrator     | 6/19/2008 4:15:13 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Accepted  |          |             |
| Duray, Jim      | Accepted  | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State      | Summary                     |
|------------|--------------------|-----------------------------|
| 5229.14114 | Information Needed | thru-girder floorbeam error |

### Description

FROM:jduray DATE:7/13/2004 12:10:08 PM  
Requested by Beta TAG prio to User Group mtg.  
Need to address integration and multiuser environment.  
No more information was provided.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 5229<br>Subject: thru-girder floorbeam error |
|--------------------------------------------------------|

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Parisian, Jordi  | 7/18/2004 9:50:05 PM  |
| Modified By: hlee              | 10/26/2012 1:18:24 PM |
| Priority: Urgent               |                       |

4/19/2016 3:18:03 PM

HRS AASHTO

1681

## Complete Issue Information

Category: Unknown

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | WBardell.bbd        |             |

## Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 5232.14111 | Closed        | Question re: d distance used by BRASS for PS beam |

## Description

FROM:jparisian DATE:Sunday, July 18, 2004 5:50:06 PM

I've recently tried inputting two thru-girder floorbeam cases (either of which case is not posted under tutorials) and I have received the same error message for each bridge. Can you point me to which field I may be missing within my input?

Debug

Error generating LFD/ASD load commands!

05:55:04 PM - Line 242 in source file F:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error generating load group commands!

05:55:04 PM - Line 440 in source file F:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Unable to compute dead load of floorbeam!

05:55:04 PM - Line 1017 in source file F:\Virtis\gui\AbxBrass\EngineExport.cpp.

4/19/2016 3:18:03 PM

HRS AASHTO

1682

**Complete Issue Information**

Error in the loads utility!  
05:55:04 PM - Line 930 in source file F:\Virtis\gui\AbxBRASS\LoadsUtility.cpp.

**Summary**

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Unable to compute dead load of floorbeam!  
Error in the loads utility!

FROM:kkennelly DATE:7/19/2004 8:31:37 AM  
Please export your bridge to a \*.bbd file and attach it to this incident so we can investigate.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 5232                                             |
| Subject: Question re: d distance used by BRASS for PS beam |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Bardell, Wanley    | 7/19/2004 4:29:02 PM |
| Modified By: administrator       | 6/19/2008 4:15:12 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:7/19/2004 12:34:49 PM  
Submitted on behalf of Wanley Bardell, Michigan DOT via email:

The strands for this beam is straight and therefore the CG is the same at beam end and at mid span. I

4/19/2016 3:18:04 PM

**HRS AASHTO**

1683

**Complete Issue Information**

am getting two different d distances. See attached file.

FROM:kkennelly DATE:7/19/2004 12:35:46 PM  
I ran member G2 and get d = 46.5 at POI 100 and d = 44.5 at POI 105

FROM:bgoodrich DATE:Monday, July 26, 2004 5:43:50 PM  
The submitted bridge did not have any Beam Projections entered on the Span Detail tab of the Beam Details window, which are used as the starting point for prestress transfer lengths. The effective strand stress at the beam end was zero because this point was at the start of the transfer length. The shear depth is generally taken as: beam height + haunch thickness + deck thickness - PS distance. If I add 6 inches as the beam projections (left and right), a shear depth of 44.5 inches is calculated at the beam ends.

FROM:bgoodrich DATE:Wednesday, July 28, 2004 12:42:25 PM  
E-mail from Wanley Bardell:

From: Wanley Bardell [mailto:bardellw@michigan.gov]  
Sent: Wednesday, July 28, 2004 9:21 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: KKENNELLY@mbakercorp.com  
Subject: RE: shear analysis at beam end...d distance (PCI beam)

Hi Brian,  
The input of the beam projections addressed my concern. Thanks a lot. Wanley.

Issue ID: 5238  
Subject: RC Schedule Based Enhancement

Folder: /Virtis/Support Center  
Primary Contact: Boukamp, Sabine  
Submitted By: Thompson, Todd 7/26/2004 12:48:07 PM  
Modified By: administrator 6/19/2008 4:15:12 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          | Unknown  |
| Boukamp, Sabine    |          |          |          |

4/19/2016 3:18:04 PM

HRS AASHTO

1684



**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
|                 | Resolved  |      |             |
| Boukamp, Sabine | Resolved  | High | Unknown     |
| Lee, Herman     | Assigned  | High | Unknown     |
| Duray, Jim      |           |      |             |
| Ihnat, Joseph   |           |      | Bug - GUI 2 |
|                 | Duplicate |      |             |
| Ihnat, Joseph   | Duplicate | High | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 5262.14082 | Duplicate     | copying an LRFD factor from library crashes virtis |

**Description**

FROM:ttompson DATE:Monday, July 26, 2004 8:48:08 AM  
Need an additional bar designation - straight bar with one hook (combination of straight and Type 1)

FROM:kkennelly DATE:7/26/2004 11:43:30 AM  
Mehrdad: Add the following bool attributes to abw\_bar\_mark\_def: hook\_at\_start\_ind and hook\_at\_end\_ind.  
Then assign to Sabine to modify GUI.

FROM:mordoobadi DATE:7/27/2004 8:44:30 AM  
New attributes added to the database, Db, De, Dm and Domain classes updated. (versions 5.2 and 6.0)

FROM:sboukamp DATE:7/28/2004 10:36:46 AM  
GUI version 5.2 and 6.0 are updated

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 5262                                              |
| Subject: copying an LRFD factor from library crashes virtis |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Ihnat, Joseph |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Li, Xinmei   | 7/30/2004 8:19:44 PM |
| Modified By: administrator | 6/19/2008 4:15:10 PM |
| Priority: High             |                      |
| Category: Bug - GUI 2      |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 10-0053California.bbd          |             |
|      | Modified 10-0053California.bbd |             |

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 5270.14074 | Resolved      | Tapered loads due to varying deck width not handled by BRASS |

### Description

FROM:xli DATE:7/30/2004 3:47:14 PM

Double click LRFD factor, create a new LRFD factor, give a name and then close it, open this LRFD factor again, copy an LRFD factor from library and hit Ok, it makes virtis crash. It happens in both virtis 5.1.1 and virtis 5.2.

FROM:jihnata DATE:11/15/2004 3:50:06 PM

Duplicate of 3724.

4/19/2016 3:18:04 PM

HRS AASHTO

1686

## Complete Issue Information

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 5270                                                        |
| Subject: Tapered loads due to varying deck width not handled by BRASS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Kennelly, Krisha   | 8/4/2004 7:50:23 PM  |
| Modified By: administrator       | 6/19/2008 4:15:10 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:8/4/2004 3:53:14 PM  
Submitted on behalf of Vinacs, Caltrans via email:

I am working on a bridge that is on a radius. Though the bridge is on radius, girder are parallel. Because of this configuration, overhang changes along the girders. Initially I modelled without varying the overhang width (using average overhang width along the girder). Unfortunately the rating factor came about to very low.

As a result, I tried to vary the deck width and haunch width along the (exterior girder). BRASS engine doesn't like the input file created by the BRASS export program.

4/19/2016 3:18:04 PM

HRS AASHTO

1687

## Complete Issue Information

Please see whether you help in eliminating any data entry error.

Thanks

I attach the bbd file for you.

Super Structure definition: Span1-3  
Member: GDR-"C"  
"C" - constant overhang, deck width  
Varying deck+Haunch width "C"  
Varying Haunch width "C"

As I mention earlier, I am not able to analyze Varying deck+Haunch width "C" member alternative using ASD method.

Thanks

(See attached file: 10-0053California.bbd)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:8/4/2004 3:56:21 PM  
When I analyze "Varying deck+Haunch width "C", I get the following error:

\*\*\*\*ERROR\*\*\*\* A tapered load was input that does not start or stop at a node point. Review input instructions for the UNIFORM-DL1 command, parameter 1. The HINGE and/or TRANSFER commands may be used to add additional node points. Program stopped

BRASS requires tapered loads to start/stop at the BRASS internal node pts. The problem is we have no way of knowing in Virtis where these node points are. This problem has been previously entered in Incidents 4968 and 2631. The solution is to add points of interest in Virtis at the points where the tapered loads stop/start. In the "Modified 10-0053California.bbd", I've made a copy of the girder in question and named it "Krisha's copy of...". I first changed the Haunch Profile Range data to exactly match the Deck Profile data (there was slight differences in 3rd and 4th decimal places). Then I added points of interest at the points where the BRASS UNIFORM-DL1 commands were generated. After doing all that, I am still getting the same error message as before.

FROM:kkennelly DATE:8/4/2004 3:58:47 PM

FROM:bgoodrich DATE:Thursday, August 05, 2004 11:10:05 AM  
Vinacs,

I located the source of the problem reported in Incident 5270. BRASS generates nodes based on cross section changes, points of interest, and contraflexure locations. The second contraflexure location (for span 2) entered for the "Varying Deck+Haunch width "C"" member alternative was 85.599998%, which resulted in a node point being placed at 99.129 ft. For the deck dimension entries, a change was specified at 99.167 ft. Because the distance between these two points is less than the

4/19/2016 3:18:04 PM

HRS AASHTO

1688

**Complete Issue Information**

0.12 ft small element length permitted by BRASS, only the first point was added. After I changed the contraflexure location to 85.632744%, I was able to run the member alternative successfully. Please let me know if this solution works for you.

This was a difficult problem to solve and I could not have done it without getting into debug mode in the BRASS engine. At the very least, the BRASS error message should be revised to include the load information (distances and magnitudes), so a user has some idea where to start looking for a solution.

Regards,

Brian L. Goodrich  
BridgeTech, Inc.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 5273                                                                 |
| Subject: Let users see more significant digits in data computed by Virtis/Opis |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 8/5/2004 4:37:27 PM  |
| Modified By: administrator     | 6/19/2008 4:15:09 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | High     | Enhancement |
| Duray, Jim      | New    | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 5273.14071 | New           | Let users see more significant digits in data computed by Virtis/Opis |

## Complete Issue Information

### Description

FROM:kkennelly DATE:8/5/2004 12:39:23 PM

We have a lot of grids and read only edit controls that show items like computed end distances. The computed values are read only but the user can only see the # of significant digits in our display string. They need to see more significant digits to be able to find problems with their input. We should make all read only fields in Virtis/Opis be selectable so user can see more significant digits.

Submitted in response to following portion of email from Vinacs:

.....

We tried to match the inflection point to the hinge location in the span. Hinges are at 16.638 (14.36725 %pt) and 99.167 (85.63274 %pt). Instead of entering the data to the 4 decimals, I rounded it to 14.4 and 85.6. If I had entered the data in the Deck Concrete GUI, so that the start or end point within the data matched the location of the hinge, this error could have been prevented. Unfortunately, since the "End Distance" in the Deck Concrete GUI is reported to the second decimal only. It will be difficult to know actual end distance to compare. Is there any way I could view the exact end distance?

.....

FROM:kkennelly DATE:10/7/2004 4:42:11 PM

Email received from Richard Best, Illinois DOT about same topic:

- In "grayed-out", or non-updatable fields under the Reinforcement tab of Girder Profile for RC members, the values can be expanded to see the precise decimal value (out to 6 decimals) and copied (tho, of course, not changed). Why have not all such fields throughout the Virtis data been made to operate like this? It often would be a help when data must be revised, etc. to just copy and paste the exact value. For example: In a steel structure when the bracing is input, the start point of a range is created as exactly the same as the end of the previous range. When range lengths are revised, the following range start points are not automatically corrected and must be changed manually or the ranges must be entirely deleted and re-entered. It would sometimes be helpful to be able to just copy the end point of the previous range and paste it into the start point of the following range.

|                                                   |
|---------------------------------------------------|
| Issue ID: 5282                                    |
| Subject: Release 5.2 beta 1 - rcdg girder profile |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jones, Daniel    | 8/13/2004 1:59:51 PM |
| Modified By: administrator     | 6/19/2008 4:15:09 PM |
| Priority: Medium               |                      |
| Category: Comment              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | Medium   | Bug      |

4/19/2016 3:18:05 PM

HRS AASHTO

1690

### Complete Issue Information

|            |          |        |           |
|------------|----------|--------|-----------|
|            | Resolved |        | Comment   |
| Duray, Jim | Resolved | Medium | Comment   |
| Duray, Jim | New      | High   | Bug       |
|            | Resolved |        | Education |
| Duray, Jim | Resolved | High   | Education |

### Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5288.14056 | Resolved      | v5.2b1: I-girder vs T-girder |

### Description

FROM:rfulton DATE:Friday, August 13, 2004 9:59:51 AM

It would be good to be able to see the reinforcing in the girder profile veiw (even if the reinforcement is not dimensioned) as a way for users to check their data entry.

FROM:kkennelly DATE:8/13/2004 10:49:37 AM

We are going to add a new schematic for the reinforcement profile. It will be shown in a plan view very similar to the sample plans you sent me a few weeks ago(ic2827s3.pdf). We just got the ok to add it last week at the Task Force meeting so hopefully it will be in the next beta build.

Issue ID: 5288

Subject: v5.2b1: I-girder vs T-girder

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jones, Daniel    | 8/16/2004 8:50:05 PM |
| Modified By: administrator     | 6/19/2008 4:15:08 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | CoverPlatedRolledBeam.bbd |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 5297.14047 | Closed        | BRASS Flange Force Calculations |

### Description

FROM:rfulton DATE:Monday, August 16, 2004 4:50:07 PM

If there is a T-girder bridge, the input has to be schedule based. If you are putting in an I-girder, the input has to be cross-section based. Shouldn't there be an option for which type of input you want to use?

4/19/2016 3:18:05 PM

HRS AASHTO

1692



**Complete Issue Information**

FROM:jduray DATE:8/17/2004 7:33:13 AM

I agree, however, the scope for this enhancement is to handle Tbeam and slab bridges only.

|                                          |
|------------------------------------------|
| Issue ID: 5297                           |
| Subject: BRASS Flange Force Calculations |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 8/19/2004 11:37:00 AM |
| Modified By: administrator       | 6/19/2008 4:15:08 PM  |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Thursday, August 19, 2004 7:37:01 AM

For:Stephen G. Burnett

Dean, I have noticed what I consider an error in the BRASS calculations for the Flange Forces in steel girders at Brace Points. If the brace point is at the point of interest the calculation is correct. If however the brace point is not on a point of interest the software uses the section moduli for Stage 3 for all stages. I have shown the two calculations below. bbd is attached

4/19/2016 3:18:06 PM

HRS AASHTO

1693

**Complete Issue Information**

Computation of Flange Forces: Left Brace Point

Point of Interest : 105.00

Construction Stage: 3

Live Load No. : 1

Input Parameters:

Distance to Point = -210.000 in

| Stage | Section Moduli, in <sup>3</sup> |            |               | Stress, ksi |               |
|-------|---------------------------------|------------|---------------|-------------|---------------|
|       | Mu, in-kips                     | Top Flange | Top Cov Plate | Top Flange  | Top Cov Plate |
| 1     | 11607.53                        | -975.125   | 0.000         | -11.904     | 0.000         |
|       | 967.29 ft-kips                  |            |               |             |               |
| 2     | 3373.65                         | -975.125   | 0.000         | -3.460      | 0.000         |
|       | 281.14 ft-kips                  |            |               |             |               |
| 3     | -13822.55                       | -975.125   | 0.000         | 14.175      | 0.000         |
|       | -1151.88 ft-kips                |            |               |             |               |
| Sum   |                                 |            | -1.188        | 0.000       |               |

| Stage | Section Moduli, in <sup>3</sup> |            |               | Stress, ksi |               |
|-------|---------------------------------|------------|---------------|-------------|---------------|
|       | Mu, in-kips                     | Bot Flange | Bot Cov Plate | Bot Flange  | Bot Cov Plate |
| 1     | 11607.53                        | 1327.944   | 1250.621      | 8.741       | 9.281         |
|       | 967.29 ft-kips                  |            |               |             |               |
| 2     | 3373.65                         | 1327.944   | 1250.621      | 2.541       | 2.698         |

**Complete Issue Information**

|       |           |                  |          |         |         |
|-------|-----------|------------------|----------|---------|---------|
|       |           | 281.14 ft-kips   |          |         |         |
| 3     | -13822.55 | 1327.944         | 1250.621 | -10.409 | -11.053 |
|       |           | -1151.88 ft-kips |          |         |         |
| ----- |           |                  |          |         |         |
| Sum   |           |                  | 0.873    | 0.926   |         |

Flange Force Summary:

| Element         | Width, in | Thickness, in | Stress, ksi | Pu, kips |
|-----------------|-----------|---------------|-------------|----------|
| -----           |           |               |             |          |
| Top Flange      | 15.750    | 0.830         | -1.188      | -15.53   |
| Bottom Flange   | 15.750    | 0.830         | 0.873       | 11.41    |
| Bot Cover Plate | 18.000    | 1.000         | 0.926       | 16.68    |

Pu(Top) = -15.53 kips

Pu(Bot) = 28.08 kips

NOTES:

1. A compressive force is denoted by a negative sign.
2.  $P_u = \text{width} * \text{thickness} * \text{stress}$
3. The flange forces are used to compute the moment gradient correction factor per AASHTO LRFD 6.10.5.5.2-4 and C6.10.5.5.2-1

Computation of Flange Forces: Right Brace Point

4/19/2016 3:18:06 PM

HRS AASHTO

1695

**Complete Issue Information**

Point of Interest : 105.00

Construction Stage: 3

Live Load No. : 1

Input Parameters:

Distance to Point = 0.000 in

| Stage | Section Moduli, in <sup>3</sup> |            | Stress, ksi   |            |               |
|-------|---------------------------------|------------|---------------|------------|---------------|
|       | Mu, in-kips                     | Top Flange | Top Cov Plate | Top Flange | Top Cov Plate |
| 1     | 8635.41                         | -693.742   | 0.000         | -12.448    | 0.000         |
|       | 719.62 ft-kips                  |            |               |            |               |
| 2     | 2749.21                         | -975.125   | 0.000         | -2.819     | 0.000         |
|       | 229.10 ft-kips                  |            |               |            |               |
| 3     | -18430.05                       | -975.125   | 0.000         | 18.900     | 0.000         |
|       | -1535.84 ft-kips                |            |               |            |               |
| Sum   |                                 |            | 3.633         | 0.000      |               |

| Stage | Section Moduli, in <sup>3</sup> |            | Stress, ksi   |            |               |
|-------|---------------------------------|------------|---------------|------------|---------------|
|       | Mu, in-kips                     | Bot Flange | Bot Cov Plate | Bot Flange | Bot Cov Plate |
| 1     | 8635.41                         | 1212.278   | 1130.938      | 7.123      | 7.636         |
|       | 719.62 ft-kips                  |            |               |            |               |
| 2     | 2749.21                         | 1327.944   | 1250.621      | 2.070      | 2.198         |



## Complete Issue Information

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 5299                                                                             |
| Subject: bar mark definitions & development length - allow fully developed at one end only |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Jones, Daniel    | 8/19/2004 9:31:13 PM  |
| Modified By: hlee              | 7/17/2014 11:55:17 AM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | Medium   | Bug      |
|                 | Resolved |          |          |
|                 |          |          | Comment  |
| Duray, Jim      | Resolved | Medium   | Comment  |

## Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5302.14042 | Resolved      | Sugestion - beta testing 5.2 |

## Description

FROM:rfulton DATE:Thursday, August 19, 2004 5:31:13 PM

The type 1 definition has the option of putting a hook at the end of a bar but this is not used as a point of development. This is the best place to tell the software to consider the bar fully developed and it allows for someone to develop only one end of a bar. This same option could be applied to Type 2 and 3 definitions as well. The straight bar definition is redundant as it is covered in the type 1 definition. In a large structure definition, the POI location for development length is very difficult to know which bars you intend to be developed as it requires the user to jump to the girder profile window.

4/19/2016 3:18:06 PM

HRS AASHTO

1698

**Complete Issue Information**

A second option would be to allow the user in the girder profile window to fix the development of the left and/or the right ends verses fixing both as it is now.

Option three: have the ability to input straight bars without defining them in the bar mark definitions. Just put bar size, number of bars, weather or not to consider developed or not developed at either the left and right ends, distance from top or bottom of the girder, starting location and length. Although I am not a programmer, I believe having Option 3 should allow for an easier conversion of the database.

FROM:rfulton DATE:Friday, August 20, 2004 11:51:31 AM  
Scratch my programmer comment.

FROM:kkennelly DATE:6/28/2006 8:03:06 AM  
Also requested in incident 7470

FROM:hlee DATE:7/10/2006 8:50:51 AM  
Changed Project to Support Center.

FROM: Herman Lee DATE: 7/17/2014 7:49:47 AM Eastern Daylight Time  
Implemented in version 6.6.

|                                       |
|---------------------------------------|
| Issue ID: 5302                        |
| Subject: Sugestion - beta testing 5.2 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jones, Daniel    | 8/20/2004 4:04:35 PM |
| Modified By: administrator     | 6/19/2008 4:15:07 PM |
| Priority: Medium               |                      |
| Category: Comment              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:18:06 PM

HRS AASHTO

1699

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rfulton DATE:Friday, August 20, 2004 12:04:36 PM

It would be nice if the RCDG module was done similar to the Prestressed module in that the entire girder is defined to include the section past the center line of bearing so that the user does not have to fudge stirrup spacings and bar lengths.

FROM:kkennelly DATE:8/20/2004 1:04:20 PM

If you enter the End Bearing Locations on the Mbr Alt window, you can then enter your bars in the Girder Profile window to project into that extension. Stirrups still have to be defined from cl brg to cl brg.

You should enter a value for the End Bearing Location and then start your bars in that projection so the export will determine the bar is partially developed at the CL brg. If you don't have any bars developed at the CL of brg, 0 bars will be exported into BRASS and your shear rating at the CL brg will be zero because the d value is zero if there are no bars.

FROM:rfulton DATE:Friday, August 20, 2004 2:35:23 PM

That explains one problem, thanks. My model has been bombing for shear at the supports.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 5303                                                |
| Subject: Haunch DL Calculation incorrect for exterior girders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: vinayagamoorthy, vinacs | 8/20/2004 5:42:09 PM |
| Modified By: administrator            | 6/19/2008 4:15:07 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |



## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Unknown        |
| Kennelly, Krisha | Assigned |          | Bug - Domain 1 |
| Duray, Jim       |          |          |                |
| Kennelly, Krisha |          |          |                |
| Goodrich, Brian  | Resolved |          |                |
| Goodrich, Brian  | Resolved | High     | Bug - Domain 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10 0053Cal.bbd      |             |

### Tasks

| Name       | Current State | Summary                                                                                                             |
|------------|---------------|---------------------------------------------------------------------------------------------------------------------|
| 5304.14040 | Resolved      | Generation of steel cross sections for exterior girders should use Y1 dimension instead of average haunch thickness |

### Description

FROM:kkennelly DATE:8/20/2004 1:41:30 PM  
Submitted on behalf of Vinacs, Caltrans via email 8/9/2004:

BRASS seems to overestimate the dead load when I enter the haunch detail. In order to help investigating the issue I created two alternatives for member "GDR C - per drawing" and reduced the deck thickness as 0 and eliminated the diaphragm weights.

1. Free End deck thickness 6" Girder"C"

Deck over the girder is 13.5 inches thick (deck thickness is 8.75inch). At the Free end of the deck, deck is only 6". So I entered the value of 7.5 inches for Y2. (In other words, the deck thickness reduces from 13.5 inches to 6 inches)

When I look at the moment due to Haunch, I got a moment demand of 197.7 kip-ft. (It seems high, in order to check I created the another model described below)

2. Free End Thickness 13.5 inches "C"

4/19/2016 3:18:07 PM

HRS AASHTO

1701



**Complete Issue Information**

and how he thinks it should be changed.

FROM:kkennelly DATE:9/1/2004 12:48:01 PM

FROM:kkennelly DATE:9/10/2004 3:41:36 PM  
Revise export for Version 5.2

FROM:bgoodrich DATE:Tuesday, September 14, 2004 3:49:49 PM  
Export revisions complete. Fixed for Version 5.2.

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 5304                                                                                                               |
| Subject: Generation of steel cross sections for exterior girders should use Y1 dimension instead of average haunch thickness |

|                                                            |
|------------------------------------------------------------|
| Folder: /Virtis/Support Center                             |
| Primary Contact: Goodrich, Brian                           |
| Submitted By: vinayagamoorthy, vinacs 8/20/2004 6:10:22 PM |
| Modified By: administrator 6/19/2008 4:15:07 PM            |
| Priority: High                                             |
| Category: Bug - Domain 1                                   |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:8/20/2004 2:10:36 PM  
Submitted on behalf of Vinacs, Caltrans via email 8/5/2004:

Another question in the same bridge model

When I rate this bridge using ASD method (that is the method used to design this bridge), I am getting lower inventory rating factor than previously estimated by another program.

4/19/2016 3:18:07 PM

HRS AASHTO

1703

## Complete Issue Information

When I looked at the 2.5 pt location. "Varying Deck+Hauch width "C" Alternative, I noticed some results that were questionable.

1. At this location, Deck thickness is 8.75 inches and fillet over the flange as 4.75 inches (in the Haunch details, I entered Y1). When I calculated the distance to centroid of the concrete section from top of steel flange, it came about to be 8.218 feet. However, BRASS estimated it as 6.12 feet. This resulted in smaller composite section property - that may affects the overall rating of this bridge.

2. Same thing with the rebar location. Area of the rebar reported correct. However, the distance to the bar from top of the flange is overestimated by little.

Could you please check that for me?

Reponse from Brian Goodrich 8/16/2004 via email:

Because the girder associated with this problem is exterior, the domain is populating the haunch thickness for the steel cross section with the average haunch thickness, i.e.,  $(Y1+Y2)/2$ . This is done in the CDoGirderMbrAlt::FillCrossSectionData function. What are your thoughts here?

FROM:kkennelly DATE:9/1/2004 12:18:33 PM

The average haunch  $(y1+y2)/2$  is used as a result of Incident 3194. Making such a change now in how the haunch depth is computed will result in section property changes in existing bridges which may be undesirable (haunch depth is used to position slab above beams).

One option is to add an option on the Haunch Profile window for exterior members letting users pick if they want the haunch depth to be computed the old way (which is  $(y1+y2)/2$ ) or new way which is just  $y1$ .

Estimate about 3 days to add this option to db, dm, de, do, GUI, help, export of cross sections. Need TF direction.

FROM:kkennelly DATE:9/1/2004 12:36:28 PM

FROM:kkennelly DATE:9/10/2004 3:42:19 PM

We're not going to add the option of using old/new method. Revise domain and export to use Y1 as the haunch depth for Version 5.2.

FROM:kkennelly DATE:9/13/2004 10:00:02 AM

Domain fixed for 5.2 Beta 3 and 6.0.

Brian, I think the export code also needs changed.

FROM:bgoodrich DATE:Tuesday, September 14, 2004 3:50:44 PM

Export revisions complete. Fixed for Version 5.2.

Issue ID: 5310

Subject: Eff flange width Compute button causes crash if adjacent girder deck profile not completely defined

Folder: /Virtis/Support Center

4/19/2016 3:18:07 PM

HRS AASHTO

1704

### Complete Issue Information

|                                    |                      |
|------------------------------------|----------------------|
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Armbrecht, Tim       | 8/24/2004 8:15:25 PM |
| Modified By: administrator         | 6/19/2008 4:15:07 PM |
| Priority: High                     |                      |
| Category: Bug                      |                      |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
|                 | Suspended |          | Enhance BRASS |
| Duray, Jim      | Suspended | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 5311.14033 | Suspended     | Automatic calculation of contraflexure points |

### Description

FROM:tarmbrecht DATE:Tuesday, August 24, 2004 4:15:25 PM

Please review and verify the error message we're getting. The description and bbd file are attached. Thanks.

Tim

FROM:kkennelly DATE:9/1/2004 11:13:13 AM

Fixed for Version 5.2. The problem was the ext beam's eff flange width is a function of the adjacent beam's eff flange width. The adjacent beam's deck profile ends at about 47' but the beam was about 74' long. So the calcs tried to get the adjacent beam's deck eff thickness at 74' to compute its eff flange width and the error when the deck wasn't found wasn't being handled properly. If the adjacent beam doesn't have an effective deck thickness entered, the calcs use the eff thickness entered on the dialog that appears after you hit the Compute button.

4/19/2016 3:18:07 PM

HRS AASHTO

1705

**Complete Issue Information**

FROM:kkennelly DATE:12/16/2005 11:31:42 AM  
Closed based on accepted in track field.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 5311<br>Subject: Automatic calculation of contraflexure points |
|--------------------------------------------------------------------------|

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center                    |
| Primary Contact: Duray, Jim                       |
| Submitted By: Armbrecht, Tim 8/25/2004 6:09:59 PM |
| Modified By: administrator 6/19/2008 4:15:06 PM   |
| Priority: High                                    |
| Category: Enhance BRASS                           |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Wednesday, August 25, 2004 2:09:59 PM

I would like to pose this as an enhancement request.

For steel structures, the member alternative description / engine tab / the BRASS LFD section requires you to input the points of contraflexure for a structure. It defaults to the 0.7 and 0.3 point of the span for continuous structures. This is not correct for most structures. It can result in significant error in the calculated moment for a structure. In the extreme case where there is a relatively short span in a structure (a 1:2 span ratio, for instance) which would be in negative flexure for its whole length, the

4/19/2016 3:18:07 PM

HRS AASHTO

1706

## Complete Issue Information

reported results will show positive moment where none exists. This can easily result in unrealistically low structure ratings.

The work-around solution for this problem is to evaluate these structures with another piece of software to determine the contraflexure points and input the correct value into VIRTIS/OPIS. We would like VIRTIS/OPIS to calculate this value so that the results are technically accurate, and save the additional labor by our staff and our consultants to double check most structure output.

To be honest, I'm not completely clear as to why the contraflexure points are required input. I'm not aware of other analysis programs requiring these numbers as initial input.

Thanks, Tim

FROM:bgoodrich DATE:Monday, August 15, 2005 12:36:33 PM

Here's some background on the issue. BRASS-GIRDER only allows a composite slab or rebar in the same cross section. The contraflexure locations tell the export when to generate the section to include the composite slab in positive flexure regions or to include the rebar in negative flexure regions. Additionally, BRASS-GIRDER requires that the user define how a region or point of interest is to be analyzed, i.e., for positive or negative bending. The contraflexure locations are necessary because in Virtis, the user enters the actual bridge geometry regardless of the engine. The stand-alone BRASS user has always had to perform this translation to the mathematical model and input the appropriate commands in the data file. This requirement was revised in the BRASS-GIRDER(LRFD) engine by always generating the structural analysis model based on positive bending properties. Then, for specification checks and resistance calculations, the section properties corresponding to the factored moment were used. Finally, this issue will be automatically be addressed in the merger of the BRASS engines.

Issue ID: 5315

Subject: beta - incident 5302

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Jones, Daniel

8/26/2004 9:13:04 PM

Modified By: hlee

10/26/2012 1:17:25 PM

Priority: High

Category: Unknown

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Bug      |
| Kennelly, Krisha | Information Needed |          |          |
| Kennelly, Krisha | Information Needed | High     | Bug      |
|                  |                    |          | Unknown  |

4/19/2016 3:18:08 PM

HRS AASHTO

1707

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0820382.bbd         |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 5327.14017 | Rejected      | Allowable yield stress discrepancy |

### Description

FROM:rfulton DATE:Thursday, August 26, 2004 5:15:12 PM

I need to look at this more but when I put in bars that extend beyond the center of bearing, I get an error generating Brass cross sections when I try to run it.

FROM:kkennelly DATE:8/27/2004 1:41:32 PM

Can you attach a copy of your bbd file?

Issue ID: 5327

Subject: Allowable yield stress discrepancy

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Armbrecht, Tim

9/2/2004 4:17:26 PM

4/19/2016 3:18:08 PM

HRS AASHTO

1708



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:15:05 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 5359.13985 | Resolved      | XP SP2  |

### Description

FROM:tarmbrecht DATE:Thursday, September 02, 2004 12:17:26 PM

This is a hybrid plate girder with 70 ksi flanges. Could you please investigate why the allowable yield stress for the flanges appear to be less than 70 ksi at the piers? We input 70 ksi, but it's calculating capacity with 67.48 ksi at the 300 point and 68.03 ksi at the 400 point. I'm not aware of AASHTO requiring a reduction for this. File attached. Thanks,

Tim

FROM:bgoodrich DATE:Thursday, September 09, 2004 11:32:03 AM  
I believe the output you are referring to is:

Serviceability Rating Factor - Steel (Negative Action) - TOP OF SECTION  
Yield Stress Steel = 67.48 (ksi)  
Section Modulus = 1758.01 (in<sup>3</sup>)  
Unbraced length factor (rkr) = 1.0000  
Dead Load Moment = -3788.01 (ft-kips)  
Live Load Moment = -723.43 (ft-kips)  
Yield Moment , My = 9886.29 (ft-kips)

4/19/2016 3:18:08 PM

HRS AASHTO

1709

## Complete Issue Information

$$\text{R.F.} = \frac{[(0.80 * \text{Phi}(\text{flexure}) * \text{My}) - (\text{Gamma} * \text{Beta}(\text{DL}) * \text{DLM})]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

$$\text{**R.F.} = 3.4111$$

The rating factor equation uses moments instead of stress, so the calculation of My is necessary per Equation 10-148b. BRASS calculates the yield moment (My) as Fy\*S\*R. However, when BRASS writes the output for this calculation (shown above), it calculates an intermediate stress that includes the hybrid factor. Fy(interm) = Fy\*R = 70\*0.964 = 67.48 ksi. I reviewed BRASS and found that this intermediate stress is only used for output purposes. Do you agree with the yield moment calculation?

FROM:bgoodrich DATE:Tuesday, September 14, 2004 3:53:50 PM  
E-mail from Tim Armbrecht (9/9/2004):

AASHTO 10.53 (hybrid girders) refers to AASHTO Art. 10.57.1 (overload) which says maximum overload flange stress shall not exceed 0.8 Fy for noncomposite sections. We do not find anything in Article 10.53 to indicate that the hybrid reduction factor should be applied to Fy in making this check for the overload stress. In fact, 10.53.1 (non-composite) and 10.53.2 (composite) specifically uses the words "maximum strength" of a section when applying the hybrid reduction factor. We think that the calculation of My needed by BRASS for this overload stress check should be based on Fy\*S even for hybrid girders, and ask WYDOT to consider a switch to allow us to not include the hybrid factor in serviceability checks.

Timothy A. Armbrecht, P.E., S.E.  
Bridge Ratings Group Engineer  
Illinois Department of Transportation  
Bureau of Bridges and Structures

FROM:bgoodrich DATE:Tuesday, September 14, 2004 3:55:36 PM  
I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, October 04, 2004 12:15:37 PM  
From: Micheal Watters [mailto:Micheal.Watters@dot.state.wy.us]  
Sent: Friday, September 24, 2004 2:23 PM  
To: Goodrich@BridgeTech-Laramie.com; ARMBRECHTTA@dot.il.gov  
Cc: Charles Riley  
Subject: Re: Virtis Incident 5327

Brian and Tim:

Pul Huck, our senior engineer, and I discussed this matter in great depth. We looked at the LFD code and decided it was not clearly written and certainly open to interpretation. We decided to look at the LRFD Specifications to see if the commentaries would shed any light on the proper interpretation. The LRFD Spec states that the Service II Load Combination "corresponds to the overload provision for steel structures in past editions of the AASHTO Specifications." Thus, going to Article 6.10.4 of the LRFD Spec, Service Limit State, section 6.10.4.2.2, the equations use both 0.95/0.80 AND the hybrid reduction factor. As Tim pointed out, the use of both seems to be conservative. In fact, AASHTO notes this also in the adjacent commentary "Eqs. 1 through 3 address the increase in flange stresses caused

4/19/2016 3:18:08 PM

HRS AASHTO

1710

**Complete Issue Information**

by early web yielding in hybrid sections by including the hybrid factor R. It is recommended that the value of R applied in the strength limit state checks at the section under consideration be conservatively applied in these equations."

For this reason, we will not change BRASS-GIRDER.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

|                 |
|-----------------|
| Issue ID: 5359  |
| Subject: XP SP2 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Thompson, Todd   | 9/21/2004 1:14:34 PM |
| Modified By: administrator     | 6/19/2008 4:15:03 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:ttompson DATE:Tuesday, September 21, 2004 9:14:35 AM

Wondering the status of whether the OS of XP SP2 is supported now or which virtiopis softwar release would support XP SP2.

Thanks.

PS. Appears our IT folks won't be going to SP 2 for 3 to 6 months but they have started asking if

4/19/2016 3:18:08 PM

HRS AASHTO

1711

**Complete Issue Information**

software supports SP 2 or not. (At least they are asking first)

FROM:jduray DATE:9/28/2004 1:54:21 PM

We are doing our development and alpha testing on XP SP2. I feel comfortable supporting it with the upcoming release (5.2).

|                                           |
|-------------------------------------------|
| Issue ID: 5386                            |
| Subject: BridgeWareAdmin "Not Responding" |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 10/5/2004 1:34:09 PM |
| Modified By: administrator     | 6/19/2008 4:15:01 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | New    | High     | Bug       |
|                 | Closed |          | Education |
| Duray, Jim      | Closed | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:18:09 PM

HRS AASHTO

1712

**Complete Issue Information**

|           |                                |                |               |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|--------------------------------|----------------|---------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 5391.13953 | Suspended     | RC Slab Compute Button for LFD & LRFD Distribution Factors |

**Description**

FROM:dteal DATE:Tuesday, October 05, 2004 9:34:09 AM

I am using the BridgeWareAdmin utility for event cleanup. I can launch the utility just fine, the Microsoft hourglass is displayed indicating it's running – BUT – when I check my Microsoft task manager it indicates that it's not responding – so I have to have our DBA periodically check the oracle server to see if it's running and when I can kill the BridgeWareAdmin utility on my local pc.

So, what we need is for my local pc to indicate if it's still running. And not have the task manager state that it's not responding.

FROM:mordoobadi DATE:10/5/2004 9:50:57 AM

If you have many events in the event table. The event cleanup could take a long-long time. You should be patient.

FROM:dteal DATE:Tuesday, October 05, 2004 10:31:56 AM

I was concerned about the "Not Responding" from the task manager - but I beleive that this not responding is my local pc waiting on the completion of the utility. So, I'll just sit back and wait a long-long time, okay.

FROM:dteal DATE:Wednesday, October 06, 2004 8:33:52 AM

The utility finally responded after it got done doing it's thing some 40 hours later!! Everything worked as it's supposed to, Please close this incident.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 5391                                                      |
| Subject: RC Slab Compute Button for LFD & LRFD Distribution Factors |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 10/6/2004 4:59:06 PM |
| Modified By: administrator     | 6/19/2008 4:15:01 PM |
| Priority: High                 |                      |

4/19/2016 3:18:09 PM

HRS AASHTO

1713

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Bug         |
| Kennelly, Krisha | Assigned  |          | Enhancement |
|                  | Suspended |          |             |
| Duray, Jim       |           |          |             |
| Duray, Jim       | Suspended | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 5392.13952 | Suspended     | RC Symmetry Needed |

## Description

FROM:dteal DATE:Wednesday, October 06, 2004 12:59:06 PM

Why isn't a compute button for distribution factors provided for RC (both LFD and LRFD)?

FROM:kkennelly DATE:10/8/2004 10:22:21 AM

We do have LFD compute buttons for girder system rc members. We don't have any compute buttons for girder line members because we don't have enough info to compute the dist factors. Compute buttons aren't provided for LRFD because the BRASS engine will compute them for you.

FROM:dteal DATE:Monday, October 11, 2004 7:56:16 AM

I don't beleive that BRASS computes LRFD dist factors for RC?? BRASS only computes girder system dist factors.

It is cumbersome to have to have a spreadsheet handy to find LFR and LRFD dist factors. If we don't

4/19/2016 3:18:09 PM

HRS AASHTO

1714

**Complete Issue Information**

or can't provide a compute button then we could provide a small wizard that required the following input, for LRFD (section width, span lengths, deck width & number of loaded lanes) and LFD only requires (span length and section width).

I think this was requested in an earlier incident but I can't seem to find it right now.

In a nut shell – to do a RC slab type structure we need a spread sheet for Dist. Factors & slab surface to centroid of rebars. I would just like to help the user and give them tools they need without having to rely on tools/program outside of VirtisOpis.

FROM:hlee DATE:7/10/2006 8:51:08 AM  
Changed Project to Support Center.

FROM:dteal DATE:Wednesday, November 07, 2007 11:55:38 AM  
This hould go away with RC Slab systems

|                             |
|-----------------------------|
| Issue ID: 5392              |
| Subject: RC Symmetry Needed |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 10/6/2004 6:00:07 PM |
| Modified By: administrator     | 6/19/2008 4:15:01 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, October 06, 2004 2:00:08 PM  
A symmetry check box is needed in RC when entering both Girder Profile/Web and Girder

4/19/2016 3:18:09 PM

HRS AASHTO

1715

**Complete Issue Information**

Profile/Reinforcement. The web isn't too bad but the reinforcement is tedious. 100% of the RC slab plans we produce only show the left half of the structure. Entering both half's in a repetitive time consuming task which opens the door for input errors. BRASS utilizes symmetry in the BRASS Girder Span-Copy command.

So, help us save some time here and reduce input errors.

FROM:dteal DATE:Wednesday, October 06, 2004 2:28:59 PM

If you had a particular bar with a hook at one end and not the other or any other variance between the two ends, you have to have 2 Bar Marks to correctly enter the bar, The plans call out the bar with one bar mark but in Virtis we will have two bar marks - so now the bar list on the plans vary from what's in Virtis. A symmetry option would eliminate this.

FROM:dteal DATE:Friday, October 08, 2004 11:28:06 AM

FROM:hlee DATE:7/10/2006 8:51:22 AM  
Changed Project to Support Center.

FROM:dteal DATE:Wednesday, November 07, 2007 11:56:44 AM

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 5393                                                 |
| Subject: RC Girder Profile – Reinforcement – Distance to steel |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 10/6/2004 7:20:40 PM |
| Modified By: administrator     | 6/19/2008 4:15:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:18:10 PM

HRS AASHTO

1716



### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Suspended |      | Enhancement |
| Duray, Jim | New       | High | Enhancement |
|            | Suspended |      |             |
| Duray, Jim | Suspended | High | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 5399.13945 | Suspended     | Allow user override for schedule based reinforcement dev lengths |

### Description

FROM:dteal DATE:Wednesday, October 06, 2004 3:20:48 PM

All designers know the clear distance to there rebar like 2.5" top and 1" bottom clear. Measuring the distance to the bar centroid requires the designer to have a spreadsheet or calculator handy. This is convenient for programming but not for the designers, it's time consuming. Lets let the computer do what it does best. Crunch numbers.

This also bites us in the butt when reviewing data input. The reviewer will see some decimal inch value like:

A #10 bar has a clearance diameter of 1 7/16"(1.4375") so for a 2.5: cl we would have 1.4375 Divided by 2 + 2.5 = 2.7188", that would be the distance we would enter. Now when you see 2.5" you know you have 2 1/2" clear to the bar. When you see 2.7188" you wonder what the heck is that, and with several iterations (guesses) you calculate that to 2.5".

We already use a clearance value in the side cover on the same GUI. This I believe is measured to the bar face and not it's centroid, correct.

Lets make this easier for the designers and load raters!!

FROM:dteal DATE:Wednesday, October 06, 2004 3:36:41 PM

With entering distance to centroid of the bar, during the iterative design process, you may change a bar size. If clearance to the bar was entered you would not have to do anything else. But with distance to the centroid you have to remember to go from the Bar Mark Definitions GUI to the Girder Profile Reinforcement GUI and change the distance value due to the bar diameter change.

FROM:dteal DATE:Wednesday, October 06, 2004 3:50:06 PM

4/19/2016 3:18:10 PM

HRS AASHTO

1717

**Complete Issue Information**

Now, see how easily it can happen – I screwed up my example calculations above, I'm only human. It's not 2.7188", it should have been 3.2188". I bet the computer would do it right every time!

FROM:jduray DATE:10/8/2004 8:36:58 AM  
It is too late to implement this for 5.2. There are other places in the UI and data in the db that would have to be changed if it is decided to implement this.

FROM:dteal DATE:Friday, October 08, 2004 9:53:52 AM  
Too late!! When I first reviewed the GUI mockups I returned the same comments - my copy is dated June 9, '04.

FROM:hlee DATE:7/10/2006 8:53:13 AM  
Changed Project to Support Center.

FROM:dteal DATE:Wednesday, November 07, 2007 11:58:04 AM  
This should go away with RC Slab Systems

FROM:dteal DATE:Wednesday, November 07, 2007 11:58:48 AM  
But will still be an issue for thin slabs on girders

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 5399                                                            |
| Subject: Allow user override for schedule based reinforcement dev lengths |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Best, Richard    | 10/7/2004 8:38:11 PM |
| Modified By: administrator     | 6/19/2008 4:15:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:kkennelly DATE:10/7/2004 4:35:36 PM  
Submitted on behalf of Illinois via email from Richard Best:

- User override for development length should be included since use of current AASHTO specs. will result in extremely low ratings for concrete structures built prior to approximately the mid-70's (and not justified by experience with these structures). It should be made so that the user can specify development and lap lengths based on a bar diameter multiplier as in AASHTO specs. prior to the mid 1970's.

FROM:hlee DATE:7/10/2006 8:53:55 AM  
Changed Project to Support Center.

Issue ID: 5400

Subject: Allow Bar Mark Definitions to have more than 1 hump

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Best, Richard

10/7/2004 8:39:57 PM

Modified By: administrator

6/19/2008 4:15:00 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:18:10 PM

HRS AASHTO

1719

**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
| Jensen, Paul    | New       | High     | Unknown     |
| Duray, Jim      | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 5410.13934 | Suspended     | Input sched reinf from centerline of beam not from edge |

**Description**

FROM:kkennelly DATE:10/7/2004 4:37:58 PM  
Submitted on behalf of Illinois via email from Richard Best:

- Bent bars used in slabs and Tee-beams should be allowed to have more than one "hump" as in, for example, a slab continuous over more than one interior support.

FROM:hlee DATE:7/10/2006 8:54:10 AM  
Changed Project to Support Center.

FROM:jduray DATE:12/12/2007 4:12:45 PM  
TAG discussed changing this request to describe a bent bar that may have multiple "humps" by defining a table of x-y values for the end of each segment of the bar.

**Complete Issue Information**

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 5410                                                   |
| Subject: Input sched reinf from centerline of beam not from edge |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Duray, Jim    |                        |
| Submitted By: Jensen, Paul     | 10/13/2004 11:16:57 AM |
| Modified By: administrator     | 6/19/2008 4:14:59 PM   |
| Priority: High                 |                        |
| Category: Enhancement          |                        |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Boukamp, Sabine | Assigned |          |          |
|                 | Resolved |          |          |
| Boukamp, Sabine | Resolved | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 5412.13932 | Resolved      | RC XSec Reinforcement dialog needs default values |

**Description**

FROM:jihnmat DATE:10/13/2004 7:15:03 AM  
when putting in the bar data it would be nice to have an option to input the bar location about the center line of beam not from the edge.

FROM:hlee DATE:7/10/2006 8:54:35 AM  
Changed Project to Support Center.

## Complete Issue Information

Issue ID: 5412  
Subject: RC XSec Reinforcement dialog needs default values

Folder: /Virtis/Support Center  
Primary Contact: Boukamp, Sabine  
Submitted By: Ihnat, Joseph 10/13/2004 12:36:35 PM  
Modified By: administrator 6/19/2008 4:14:59 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jhnat DATE:10/13/2004 8:33:04 AM

When a new row is added to the RC XSec Reinforcement dialog, Row and Bar Size should get default

4/19/2016 3:18:11 PM

HRS AASHTO

1722

**Complete Issue Information**

values. Use the first item in their lists.  
Charge to Maintenance.

FROM:sboukamp DATE:10/29/2004 10:46:44 AM  
fixed in version 5.1, 5.2 and 6.0

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5416                                      |
| Subject: Stringer span input for a floorbeam member |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 10/13/2004 7:51:04 PM |
| Modified By: administrator     | 6/19/2008 4:14:59 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:18:11 PM

HRS AASHTO

1723

### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
| Goodrich, Brian  | Assigned |      |             |
| Kennelly, Krisha |          |      |             |
| Duray, Jim       | New      | High | Bug         |
| Goodrich, Brian  | Assigned |      |             |
|                  | On Hold  |      |             |
|                  |          |      | Bug - BRASS |
|                  | Resolved |      | Education   |
| Goodrich, Brian  | Resolved | High | Education   |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 0820141-52_Beta5.bbd |             |
|      | 0820141.bbd          |             |
|      | 0820141-52_Beta4.bbd |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5420.13924 | Resolved      | Low LFD rating factor for stringers |

### Description

FROM:tarmbrecht DATE:Wednesday, October 13, 2004 3:51:04 PM

Entered floorbeam spacing as 19.1198, 21.1179, 21.1179, 21.1179, 21.2, 21.2, 21.2, etc. After clicking "OK" and re-opening the Floorbeam Member dialogue, the floorbeam spacings displayed as 19.000000, 21.000000, 21.000000, 21.000000, 21.000000, 21.000000, 21.000000, etc. Is there a reason for the rounding?

Also, a floorbeam was entered with lateral restraints at each location where a stringer bears on it (as is the actual case). Each lateral restraint length was 7½" long, and spaced at 6.6042' on center. The bridge, originally designed HS20, was analyzed with the following results:

LF – RF(inv.)=0.206

AS – RF(inv.)=1.166

When lateral restraint was input as continuous for the entire length of the floorbeam the following

4/19/2016 3:18:11 PM

HRS AASHTO

1724



## Complete Issue Information

results were obtained:

LF – RF(inv.)=1.020

AS – RF(inv.)=1.166

Are these the expected results?

File attached. Use the second one and delete the first one. The second one is more current and reflects the second part of this incident. Thanks,

Tim

FROM:kkennelly DATE:10/14/2004 9:10:02 AM

Problem 1 regarding the floorbeam spacing not showing values behind the decimal point is fixed for Version 5.2, Beta 4.

Problem 2 regarding the differences in rating factors:

I ran BRASS once for the bracing ranges every 6.6' and once for the top flange braced over its entire length. When I compare the output at the 11.06' poi I notice the following:

Top flange continuously braced,  $M_y = M_u = 3081.70$  kft.

Bracing range every 6.06',  $M_y = 3081.7$  kft but then  $M_u = 761.42$  kft but there's no explanation in the output as to why there is such a large reduction. All of the output values shown up to this point are the same.

FROM:bgoodrich DATE:Monday, October 18, 2004 1:29:10 PM

For this structure, BRASS thinks the base unbraced length for any point is 52.8 ft. The lateral support ranges input override this unbraced length and indicate that any point that is located within the lateral support range has an unbraced length of zero. This is why entering a lateral support range over the entire floorbeam causes a better rating. The Lateral Support window is intended to supplement the bracing locations, but not to identify the actual unbraced lengths. But, for a floorbeam, an input window for bracing locations is not provided. The gaps in the lateral support ranges are not translated into unbraced lengths by the export or the engine.

The only work-around is to change the member alternative engine properties POI Control field to 0 - No point of interest data will be generated. Then, for each point of interest, you will need to override the Bracing information on the Point of Interest window. You will also need to override any other schedule data (stiffeners, etc.).

Jim - We need some way to identifying bracing locations for a floorbeam, which are where the stringers are located. It would be a bad idea to convert the lateral support data into bracing data because that is not the intent of that window. Can we add the Bracing window, but rename the Diaphragms tab to something applicable to floorbeams, such as Stringer Locations?

FROM:kkennelly DATE:10/23/2004 1:18:35 PM

I don't think we should make the users enter the Stringer locations again, they've already described the geometry of the bridge. Attached file contains code you can use to find where the stringers are along the floorbeam.

FROM:bgoodrich DATE:Tuesday, November 02, 2004 3:52:11 PM

I agree with Krishna that the user should only have to input the stringer locations one time. The stringer locations may be specified for a Floor System, but this issue is for a Floor Line.

4/19/2016 3:18:11 PM

HRS AASHTO

1725

**Complete Issue Information**

FROM:jduray DATE:1/20/2005 1:27:38 PM  
Do we need more data for floor line?

FROM:kkennelly DATE:1/21/2005 11:39:57 AM  
Yes we need more data for a floor LINE.

1. Change name of window from "Lateral Support' to "Bracing Ranges".
2. Add tab "Stringer Locations". This window will have a grid where user can enter the distances from the left end of the floorbeam to where stringers provide bracing to the floorbeam.
3. Put current Lateral Support on a tab on this new window.

|                                              |
|----------------------------------------------|
| Issue ID: 5420                               |
| Subject: Low LFD rating factor for stringers |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Armbrecht, Tim     | 10/14/2004 6:09:37 PM |
| Modified By: administrator       | 6/19/2008 4:14:58 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Thursday, October 14, 2004 2:09:37 PM

This may be related to part 2 in incident 5416 - it's the same bridge.

Analysis of the stringers in this Girder/Floorbeam/Stringer system returns LFD RF's of .529/.887 at the first interior pier support from the left. They were originally designed HS20. The controlling AASHTO BARS LFD RF's are .932/1.554 (I/O) at the same span location. The Virtis ASD RF's are 1.007/1.490

4/19/2016 3:18:11 PM

**HRS AASHTO**

1726

## Complete Issue Information

(I/O), also at the same span location. It would appear that the LFD rating is in error. Is this the same issue as the one I reported in 5416? Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, November 02, 2004 4:39:46 PM

This issue pertains to a stringer analysis in which the flexural capacity is reduced because the bracing criteria are not satisfied. I reviewed the output at the 205 POI and it looks reasonable given the unbraced lengths. Can you confirm the flexural capacity that BRASS is calculating?

Incident 5416 also relates to unbraced lengths, but that incident is different in that the correct unbraced lengths are not used because there is no place in the UI in which to enter the stringer locations for a Floor Line structure definition.

FROM:bgoodrich DATE:Tuesday, November 09, 2004 10:52:30 AM

E-mail from Tim Armbrecht:

Brian,

Thanks for the response. We concur that we're getting good results for the 205 point. Both BARS and Virtis/BRASS load factor produce consistent answers. The problem is the 110/200 point. It appears that Virtis/BRASS is using the entire span length for unbraced length, thus  $M1 = 0$  and  $Cb = 1.75$ . I think BARS assumes the unbraced length goes from the 110 point to the contraflexure point, thus producing higher ratings. Since the bottom flange is not in compression for the entire length of the span (from the contraflexure point to the end of span), it seems ultraconservative to consider the entire span as unbraced. Could you please verify that this is what is happening? Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, November 09, 2004 10:53:22 AM

BRASS does not calculate a shorter unbraced lengths based on the contraflexure locations. BRASS-GIRDER does not even calculate the contraflexure locations. The only work-around would be to enter "diaphragms" at the contraflexure locations. I did this for spans 1 and 2 and the rating increased at the 200 POI.

FROM:bgoodrich DATE:Wednesday, November 10, 2004 10:59:56 AM

E-mail from Tim Armbrecht:

That's exactly what we ended up doing. Thanks for the insight,

Tim

FROM:jduray DATE:1/20/2005 1:22:50 PM

Is this a bug or just a question that has been satisfactorily answered?

FROM:jduray DATE:4/13/2005 10:09:23 AM

Discuss this issue at the UG mtg.

Report to Wyoming that BRASS is not handling the unbraced length correctly (should be between

4/19/2016 3:18:11 PM

HRS AASHTO

1727

**Complete Issue Information**

points of contraflexure).

FROM:jduray DATE:5/12/2005 8:09:50 AM  
It seems Tim is satisfied. Change to Education and Resolved.

|                                |
|--------------------------------|
| Issue ID: 5424                 |
| Subject: BRASS Import for LRFD |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Teal, Dean 10/18/2004 1:12:55 PM  |
| Modified By: administrator 6/19/2008 4:14:58 PM |
| Priority: High                                  |
| Category: Enhancement                           |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 5424.13920 | Discard       | BRASS Import for LRFD |

**Description**

FROM:dteal DATE:Monday, October 18, 2004 9:12:55 AM  
BRASS Import doesn't import BRASS GIRDER LRFD. Are there plans to import BRASS data sets from LRFD BRASS in the future? There are consultants designing in LRFD and not using Opis, it

4/19/2016 3:18:12 PM

HRS AASHTO

1728

### Complete Issue Information

would be nice to import there datasets??

FROM:hlee DATE:4/30/2008 2:34:22 PM  
Discarded by TAG 12/07.

|                                                   |
|---------------------------------------------------|
| Issue ID: 5428                                    |
| Subject: Modulus for Prestressing Strands in Lib. |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/19/2004 3:50:15 PM |
| Modified By: administrator        | 6/19/2008 4:14:58 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:18:12 PM

HRS AASHTO

1729

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 5433.13911 | Closed        | Administrator needs to Check back in |

### Description

FROM:dteal DATE:Tuesday, October 19, 2004 11:50:15 AM

Why was it decided to use a modulus for the prestressing stands of 28500 ksi in the provided standard library? The BRASS default is 28000, KDOT uses 28000. Where did the 28500 ksi come from?

FROM:kkennelly DATE:10/19/2004 2:13:21 PM  
AASHTO LRFD Article 5.4.4.2.

FROM:dteal DATE:Tuesday, October 19, 2004 2:17:39 PM

Okay Thanks - I had checked with BRASS Girder (LFD) and KS Bridge manual and then LFD 17th edition where i could n't find anything.

Issue ID: 5433

Subject: Administrator needs to Check back in

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

10/20/2004 12:48:58 PM

Modified By: administrator

6/19/2008 4:14:57 PM

Priority: High

Category: Bug

### History

4/19/2016 3:18:12 PM

HRS AASHTO

1730

### Complete Issue Information

| Primary Contact       | Status             | Priority | Category    |
|-----------------------|--------------------|----------|-------------|
| Duray, Jim            | New                | High     | Bug         |
| Duray, Jim            | New                | High     | Bug         |
| Goodrich, Brian       | Information Needed |          | Unknown     |
|                       | Suspended          |          | Enhancement |
| Generated, task force |                    |          |             |
|                       | Discard            |          |             |
| Generated, task force | Discard            | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | B046232.DAT             |             |
|      | PS Import Error Msg.JPG |             |

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 5440.13904 | Discard       | BRASS Importing Error - keep import up to date with BRASS commands |

### Description

FROM:dteal DATE:Wednesday, October 20, 2004 8:48:58 AM

I don't know of any other way to do this.

A user has a bridge checked out, user leaves the state for a (higher paying job) without checking BID's back in. Computer Services disables a users login the day they leave for security reasons. How do you check the bridge back in -??

I have to call our oracle database administrator and have them reinstate a user ID/Password so I can log in as them and check the bridge back in. Then log out and call the DBA again to disable the ID/Password. To many steps.

The Virtis Opis administrator should have the power to check these bridges back in without going through all these steps. Or is it possible and I need to be enlightened?

FROM:mordoobadi DATE:10/25/2004 11:02:36 AM

4/19/2016 3:18:12 PM

HRS AASHTO

1731

### Complete Issue Information

Dean, please use BridgeWareAdmin.EXE to transfer events from the user who left to somebody else. By doing this all of the user's events including check-in/out events would be transferred to a new person.

In order to do this please follow these instructions.

- (1) Start BridgeWareAdmin.EXE and login as the owner of Virtis/Opis tables.
- (2) Locate the Transfer Events group box on the screen and select the username of the person who left your company in the From combo box. (Person 1)
- (3) Select the username of the person who you want to transfer the events to in the To combo box. (Person 2)
- (4) Click Transfer Now button.
- (5) Click Cancel to close the window.

Now you can login as Person 2 and check-in the bridge that was previously checked-out by Person 1.

FROM:dteal DATE:Monday, October 25, 2004 12:02:58 PM

FROM:mordoobadi DATE:10/28/2004 3:30:04 PM  
Accepted by Dean Teal.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 5440                                                              |
| Subject: BRASS Importing Error - keep import up to date with BRASS commands |

|                                        |                       |
|----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center         |                       |
| Primary Contact: Generated, task force |                       |
| Submitted By: Teal, Dean               | 10/21/2004 1:05:43 PM |
| Modified By: administrator             | 6/19/2008 4:14:57 PM  |
| Priority: High                         |                       |
| Category: Enhancement                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:18:13 PM

HRS AASHTO

1732



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 5442.13902 | Resolved      | Selecting New When the Window is full of Rows |

### Description

FROM:dteal DATE:Thursday, October 21, 2004 9:05:43 AM

Importing the attached BRASS dataset to Beta 4 produces the following error.

STIRRUP-SCHEDULE 1, 1, 3.0, 0.00000, 0.91667, 100, , , 1, ,

The following messages apply to the above imported command:

ERROR: Virtis requires that the schedule length divided by the spacing  
be a whole number. (parameter 3)

ERROR: Required parameter missing. (parameter 8)

WARNING: Feature described by this command not currently supported. (parameter 6)

WARNING: Feature described by this command not currently supported. (parameter 7)

WARNING: Feature described by this command not currently supported. (parameter 9)

WARNING: Feature described by this command not currently supported. (parameter 10)

WARNING: Feature described by this command not currently supported. (parameter 11)

The first error (parameter 3) – about a Virtis requirement – The BRASS dataset runs fine – so their may be a problem with the export?? There is nothing in the BRASS Version 5 command descriptions (manual) about this??

The second error – (missing parameter 8), BRASS Version 5 command description states that a 1 is entered to ignore shear. Nothing else is stated. I think Virtis is looking for a zero here but that's only a guess. Instructions don't say enter (lets say a zero) to consider shear?? But note #4 is a little bit of conflicting instructions, here it talks about the zero value to consider shear but only when ignoring shear over a range. Here again the BRASS dataset runs just fine in BRASS (I think 5.8), the export may be incorrect here also. Here

FROM:jduray DATE:10/25/2004 10:34:29 AM

Dean

Were you able to import this file into 5.1?

FROM:dteal DATE:Monday, October 25, 2004 12:00:59 PM

Nope

FROM:jduray DATE:10/26/2004 4:44:21 PM

I suspect this is an enhancement to the import. We have not maintained the import utilitie as BRASS commands have changed. The assumption is that all BRASS files have already been imported and maintenance of the utility to keep up with BRASS changes is not necessary. Perhaps this is not appropriate. Since this is not related to the 5.2 release and seems to be an enhancement I am changing the status and category to Enhancement.

FROM:dteal DATE:Friday, October 29, 2004 9:32:45 AM

If we don't maintain and support BRASS Import, then why is it included on the install CD.

4/19/2016 3:18:13 PM

HRS AASHTO

1733

**Complete Issue Information**

What about agencies or consultant firms that are currently BRASS users and just purchased the product? We would have to assume that there BRASS datasets are coming from a current version of BRASS?

FROM:jduray DATE:10/29/2004 10:31:46 AM

You make a good point...

We need to discuss this with the TF. The decision goes back several years. As I recall there are no plans to enhance the import utilities to support new or modified commands. We do fix bugs etc. as needed.

FROM:hlee DATE:7/10/2006 8:54:47 AM

Changed Project to Support Center.

FROM:hlee DATE:4/30/2008 2:34:29 PM

Discarded by TAG 12/07.

Issue ID: 5442  
Subject: Selecting New When the Window is full of Rows

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 10/21/2004 4:43:23 PM  
Modified By: mordoobadi 7/23/2008 7:59:51 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Ihnat, Joseph   | Assigned  |          | Unknown     |
| Duray, Jim      | Suspended |          | Enhancement |
| Ihnat, Joseph   | Assigned  |          | Bug - GUI 2 |
|                 | Resolved  |          |             |
| Ihnat, Joseph   | Resolved  | High     | Bug - GUI 2 |
|                 | Closed    |          |             |

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 5449.13895 | Closed        | Single Lane Loaded Button, Fatigue Truck |

### Description

FROM:dteal DATE:Thursday, October 21, 2004 12:43:26 PM

I think all the windows work this way? When the window is full of rows (things like reinforcement or stirrups), you select new, the new row is add to the bottom but it is not visible, the screen never scrolls up, you manually have to scroll the window up every time you enter a new row when the window is full of rows. Selecting New should add the row and scroll the window up one! For users that have to enter a lot of data this is a real pain in the butt.

FROM:jduray DATE:10/27/2004 9:07:14 AM

Joe - Is this how all windows work?

FROM:jihnat DATE:10/28/2004 11:14:49 AM

Yes. The new row is not automatically scrolled into view.

FROM:jduray DATE:10/29/2004 8:39:27 AM

Since all windows work this way it would be an enhancement to make the change and we should do it for all windows. Changing the Category to Enhancement and the Project to Support Center

FROM:dteal DATE:Tuesday, February 15, 2005 7:55:07 AM

I do realize that this is considered an enhancement request – I strongly feel it is a bug in the original window behavior.

For the user that is entering only one bridge very so often it's not a big deal. For the power users that are entering data for many bridges this is a real pain in the tush! Multi spanned bridges with lets say many cross frames or web stiffeners will make the user take his hands off the keyboard for every new entry just so he can scroll the window and see the bottom line – very annoying and should be fixed.

FROM:jduray DATE:4/14/2005 3:41:45 PM

Include 834

FROM:dteal DATE:Thursday, August 23, 2007 7:16:11 PM

4/19/2016 3:18:13 PM

HRS AASHTO

1735

**Complete Issue Information**

At 2007 UG meeting Jim said this would be moved to the bug list

FROM:jduray DATE:1/23/2008 8:39:38 AM  
I agree 834 is not directly related and should remain an enhancement.

FROM:jihnmat DATE:1/25/2008 3:20:34 PM  
Fixed for version 6.0.0 (in Beta Build 3).

FROM: Dean Teal DATE: 7/1/2008 3:21:01 PM Eastern Daylight Time  
Accepted in beta 4

|                                                   |
|---------------------------------------------------|
| Issue ID: 5449                                    |
| Subject: Single Lane Loaded Button, Fatigue Truck |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Lee, Herman                    |
| Submitted By: Teal, Dean 10/22/2004 12:02:29 PM |
| Modified By: administrator 6/19/2008 4:14:56 PM |
| Priority: High                                  |
| Category: Bug - GUI 2                           |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | On Hold   |          | Bug - GUI 2 |
| Lee, Herman     | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Closed    |          |             |
| Lee, Herman     | Closed    | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 5455.13889 | Closed        | Rating Events/Recent Rating Events Display |

### Description

FROM:dteal DATE:Friday, October 22, 2004 8:02:29 AM

The check box is available for the HL-93, this is good. But why have it for the Fatigue Truck. Isn't the fatigue truck always single lane? Shouldn't it be grayed out like the tandem train is for the fatigue truck?

FROM:dteal DATE:Tuesday, October 26, 2004 1:33:08 PM

The export to BRASS is by default going to be a single lane loaded and uses a scale factor of 0.833 to remove the multiple presence factor of 1.2 ( $1.2/1.0=0.8333$ ). See exert from BRASS output file below.

12-4.3 LOAD-LIVE-DEFINITION 5, FAT\_LRFD\_~30, FAT, D, 100.0000, 0.8333, ONE, NO

1. Live Load Number :5
2. Live Load Code :FAT\_LRFD\_~30
3. Live Load Type : FAT
4. Design/Rating Procedure :D
5. % of Dynamic Load Allow.:100.000
6. Scale Factor : 0.833
7. Lanes Loaded : ONE
8. Notional Load Control : NO
9. Dynamic Load Allowance :
10. Special Trk/Lane No. :
11. Variable Axle Spacing :

So what is the purpose of having a check box for single lane on the fatigue truck. This may/will confuse some users – they may enter a scale factor and check the single lane loaded box, now they would end up with a scale factor of 0.6942. They would still end up with lane loaded but with the wrong scale factor. See exert form BRASS output file below when the user did what I just explained.

12-4.3 LOAD-LIVE-DEFINITION 5, FAT\_LRFD\_~30, FAT, D, 100.0000, 0.6942, ONE, NO

1. Live Load Number : 5
2. Live Load Code : FAT\_LRFD\_~30
3. Live Load Type : FAT
4. Design/Rating Procedure : D
5. % of Dynamic Load Allow.: 100.000
6. Scale Factor : 0.694
7. Lanes Loaded : ONE
8. Notional Load Control : NO
9. Dynamic Load Allowance :
10. Special Trk/Lane No. :
11. Variable Axle Spacing :

Single land loaded needs to be grayed out for the fatigue truck just like the tandem train is!

**Complete Issue Information**

You may want to reread VI # 2754.

FROM:hlee DATE:7/10/2006 8:55:01 AM  
Changed Project to Support Center.

FROM:hlee DATE:3/15/2007 1:37:19 PM  
Updated the Vehicle Properties window to disable the Single Lane Loaded checkbox if the vehicle is in the Fatigue Loads category.  
Resolved for 5.6 Beta 2.

FROM:xli DATE:3/15/2007 2:48:49 PM  
Verified single lane loaded is greyed for fatigue truck.

FROM:dteal DATE:Tuesday, June 19, 2007 3:36:56 PM  
Accepted 5.6 beta 3

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5455                                      |
| Subject: Rating Events/Recent Rating Events Display |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 10/25/2004 2:01:50 PM |
| Modified By: administrator          | 6/19/2008 4:14:56 PM  |
| Priority: High                      |                       |
| Category: Education                 |                       |

**History**

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
|                    | On Hold  |          |             |
|                    | Resolved |          | Education   |
|                    | Accepted |          |             |
|                    | Closed   |          |             |
| Ordoobadi, Mehrdad | Closed   | High     | Education   |

**Contacts**

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:18:14 PM

HRS AASHTO

1738

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 5456.13888 | Closed        | Saving Design Events or Rating |

## Description

FROM:dteal DATE:Monday, October 25, 2004 10:01:50 AM

I am not getting any data in Rating Results or Recent Rating Results windows. Here's what I'm doing:

1. Open a bridge, perform a rating, and save the results using the Save Analysis Results button on the tool bar.
2. Close the bridge, and select Manage Analysis Events from the tool bar, a window opens with the heading Analysis Events Summary. The bridge I just rated is listed in the window.
3. At the bottom of the window is a button to View Rating Results, when I select it the Bridge Rating Results window pops up, it is blank – the bridge I just rated is not listed, nothing – it's blank
4. Closed the bridge rating results and analysis events summary windows.
5. With the same bridge selected in the bridge explorer window I selected the rating results button from the tool bar – it came up blank.
6. Selected the recent rating results button from the tool bar – this window came up blank also.
7. The View Structure Rating Results button at the bottom of the Rating Results window does nothing either.

FROM:jduray DATE:10/25/2004 10:50:43 AM

Relative to 5 through 7...the rating results button on the toolbar is for viewing ratings done from the bridge explorer.

FROM:mordoobadi DATE:2/6/2006 4:41:48 PM

Accepted by Dean Teal 4/18/2005

Issue ID: 5456

Subject: Saving Design Events or Rating

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

10/25/2004 2:02:38 PM

Modified By: administrator

6/19/2008 4:14:56 PM

Priority: High

Category: Education

4/19/2016 3:18:14 PM

HRS AASHTO

1739

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
|                 | Closed   |          |           |
| Duray, Jim      | Closed   | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 5457.13887 | Closed        | Saving Design Events |

### Description

FROM:dteal DATE:Monday, October 25, 2004 10:02:38 AM

Is there any mechanism for cleaning up old events in the database, are they there forever? Is the only way to delete them is to select and delete them from the Analysis Events Summary window

FROM:mordoobadi DATE:10/25/2004 10:52:31 AM

There are two ways that you can delete an analysis event.

- 1) Open the 'Analysis Events Summary' window and select the analysis events that you would like to delete and click Delete button
- 2) Open BWS and select the member alternative that you wish to delete its events and then select Bridge/Analysis Events in the menu. Select the events that you want to delete and click Delete button.

We do not have an automated way to delete analysis events. The analysis events can be cleaned-up manually.

FROM:dteal DATE:Monday, October 25, 2004 11:59:37 AM

FROM:mordoobadi DATE:10/28/2004 3:13:09 PM

Accepted by Dean Teal.

4/19/2016 3:18:14 PM

HRS AASHTO

1740



### Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 5457                |
| Subject: Saving Design Events |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 10/25/2004 2:03:33 PM |
| Modified By: administrator     | 6/19/2008 4:14:56 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | Assigned | Urgent   |                |
|                  | Resolved |          | Bug - Domain 1 |
|                  | Closed   |          |                |
| Kennelly, Krisha | Closed   | Urgent   | Bug - Domain 1 |

### Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0820141.bbd         |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5461.13883 | Closed        | Copied floorbeam definitions |

### Description

FROM:dteal DATE:Monday, October 25, 2004 10:03:33 AM

What is the average size file saved to the database for a design review? Lets say a girder system structure definition that is a standard 3 span, 5 girder line structure?

When a second "save design event" is executed, does it over right the first? Or is the only way to remove the first saved event by going into the Manage analysis events window and select/delete it?

4/19/2016 3:18:14 PM

HRS AASHTO

1741

**Complete Issue Information**

FROM:jduray DATE:10/25/2004 10:37:14 AM

I don't know the size except to say that for LRFD the analysis results are very large. When you save a design event previous events are not deleted. You may delete them.

FROM:dteal DATE:Monday, October 25, 2004 11:04:34 AM

|                                       |
|---------------------------------------|
| Issue ID: 5461                        |
| Subject: Copied floorbeam definitions |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Armbrecht, Tim      | 10/25/2004 8:36:20 PM |
| Modified By: administrator        | 6/19/2008 4:14:55 PM  |
| Priority: Urgent                  |                       |
| Category: Bug - Domain 1          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Monday, October 25, 2004 4:36:20 PM

Same bridge as the one in incidents 5416 & 5420. Updated file attached.

4/19/2016 3:18:14 PM

**HRS AASHTO**

1742

## Complete Issue Information

Error #1: Will not analyze main girder member "A1 – N Girder" in Superstructure Definition "Sp A5-A7 (Cont. 2-Girder System)(1)". Gives following error message...

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Unable to compute average dead load of stringer unit!  
Error in the loads utility!

Error #2: Will not analyze floorbeams in Superstructure Definition "Sp A5-A7 (Cont. 2-Girder System) (2)". Gives following error message...

Error generating LFD/ASD load commands!  
Error generating concentrated load commands!  
Review input for items included in Load Case: Stringer DL Reactions from Stage 1  
Unable to get adjusted distance of load (P/S beams)!  
Error preparing concentrated load for BRASS commands!  
Unable to compute span where load is applied!  
Error in DoBeamDef::FindSpanByDistance()!  
Distance is 480.000000000 in!  
Stringer Definition length is 384.000000000 in!  
Current tolerance for in is 0.125000000.  
Error generating BRASS span commands!  
No supports are defined!  
Error preparing supports for BRASS!

FROM:kkennelly DATE:10/28/2004 12:25:02 PM  
Your floorbeam definitions are missing information in the database table that stores where the fb supports (main girders in this case) are.

A workaround to fix your problem is to open the Floorbeam Member Definitions window for 36WF170 (Int) and 36WF150(End), re-enter the 32' span length (you have to re-type the values so Virtis recognizes that the data in the grid changed and needs to be saved) and then you can rate the floorbeams.

I can reproduce this problem when I copy a good fb member definition.

FROM:kkennelly DATE:10/29/2004 10:55:41 AM  
Fixed for 5.2 Beta 5.

FROM:kkennelly DATE:12/16/2005 11:32:14 AM  
Closed based on accepted in track field.

FROM:mordoobadi DATE:1/31/2006 9:33:06 AM  
Related incidents 6544, 7057.

Issue ID: 5486

Subject: Error messages when trying to run GFS system

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Armbrecht, Tim      | 11/8/2004 5:16:45 PM |
| Modified By: administrator        | 6/19/2008 4:14:54 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Assigned |          | Education |
| Duray, Jim      | Assigned | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 5489.13855 | Assigned      | Embedded at Abutments |

### Description

FROM:tarmbrecht DATE:Monday, November 08, 2004 12:16:45 PM

Problem with Girder-Floorbeam-Stringer System (SN 082-0141) – file is attached

For Virtis BID 0820141-TEs two attempts at coding Superstructure Definition “Sp A5-A7 (Cont. 2-Girder System)” have produced two anomalous errors:

For the first [Sp A5-A7 (Cont. 2-Girder System)(1)], the Girder Member “A1 - N Girder” gets the following error message when run...

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Unable to compute average dead load of stringer unit!

4/19/2016 3:18:15 PM

HRS AASHTO

1744

## Complete Issue Information

Error in the loads utility!

That Sup. Def. was duplicated/re-entered as "Sp A5-A7 (Cont. 2-Girder System)(2)". For this, the Girder Member runs fine but the floorbeams won't run, giving the following error message...

Error generating LFD/ASD load commands!  
Error generating concentrated load commands!  
Review input for items included in Load Case: Stringer DL Reactions from Stage 1  
Unable to get adjusted distance of load (P/S beams)!  
Error preparing concentrated load for BRASS commands!  
Unable to compute span where load is applied!  
Error in DoBeamDef::FindSpanByDistance(!  
Distance is 480.000000000 in!  
Stringer Definition length is 384.000000000 in!  
Current tolerance for in is 0.125000000.  
Error generating BRASS span commands!  
No supports are defined!  
Error preparing supports for BRASS!

In addition, after opening a Floorbeam Member Alternative (e.g., Flbm 12) and then clicking <OK> or <Apply>, a dialogue box appears, which I have attached in a Word document.

We checked and double-checked the input, and are not quite sure what we're missing as far as data entry is concerned. Thanks for your help.

Tim

FROM:kkennelly DATE:11/8/2004 3:07:22 PM

I think this may be the same problem as in Incident 5461. Copied floorbeam definitions are missing some data. Try the following workaround:

Open the Floorbeam Member Definitions window and re-enter the span length (you have to re-type the values so Virtis recognizes that the data in the grid changed and needs to be saved) click OK and then you can rate the floorbeams. (Don't forget to save this change to your db)

FROM:kkennelly DATE:11/9/2004 2:49:17 PM

Problem rating Girder Member "A1 - N Girder": This is due to a small difference in the location of the last floorbeam and the end of the girder. Due to significant digits, last fb is being placed a tiny bit beyond the end of the girder. (See Incident 5199 for related incident and warning message that will be issued in 5.2.0 to warn user of this problem.) In 5.2.0, the following messages are printed out:  
ERROR: Flbm33 at 246.323100 ft does not intersect A1 - N Girder  
ERROR: Flbm33 at 246.323100 ft does not intersect A2 - S Girder

Girder span lengths add up to 246.323'. Virtis does not use the user tolerance when checking framing plan geometry, it only uses user tolerance to check for things like overlapping or gaps in plate descriptions.

Work around is to enter the length of span 3 of the girder as 74.8439' instead of 74.8438' to resolve this small difference.

Issue ID: 5489

4/19/2016 3:18:15 PM

HRS AASHTO

1745

## Complete Issue Information

Subject: Embedded at Abutments

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 11/8/2004 8:51:59 PM  
Modified By: administrator 6/19/2008 4:14:53 PM  
Priority: High  
Category: Education

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Brg and Int Stiffeners.bbd |             |

## Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 5490.13854 | Closed        | Bearing Stiffener Area |

## Description

FROM:dteal DATE:Monday, November 08, 2004 3:51:59 PM

Is there a way to model steel or prestressed beams that are embedded into the abutment. In the case of a steel beam the only way I now is to create fictitious bearing stiffeners to eliminate spec check failures at the abutment.

If there isn't a current method/workaround then add this to the enhancement request list.

4/19/2016 3:18:15 PM

HRS AASHTO

1746

**Complete Issue Information**

FROM:kkennelly DATE:11/10/2004 12:42:15 PM

Would a filter that lets you check a box to ignore the bearing stiffener spec checks work? A previous enhancement request was made to let users check what specs they want considered when rating.

FROM:dteal DATE:Wednesday, January 19, 2005 2:13:33 PM

I think that might work – I would want to see the check box on the Bearing Stiffener Location GUI so the user can check the box when entering bearing stiffener information. If it's located as a filter elsewhere the user may miss it.

This check box is not only for Rating but it is also for Design.

FROM:dteal DATE:Thursday, February 01, 2007 10:19:10 AM

In Opis LRFD design review we can simply ignore the failure.

When we start using LRFR and rating the same structure we will have no way to ignore and more on to the next controlling point.

Right now, in preparation for implementing LRFR the only solution is to “dummy” the design and put in some heavy abutment bearing stiffeners.

|                                 |
|---------------------------------|
| Issue ID: 5490                  |
| Subject: Bearing Stiffener Area |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 11/8/2004 8:52:48 PM |
| Modified By: administrator       | 6/19/2008 4:14:53 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:dteal DATE:Monday, November 08, 2004 3:52:48 PM

The attached bbd is from 5.1.1. Looking at member 2. The bearing stiffeners for Abut #1 and Abut #2 are 16mm and 20mm respectively. Each abutment has 2 pair of stiffeners. The BRASS output file for STIF-BEAR-GROUP only indicates the area of one pair is used instead of 2 pair. ie: at Abut #1 we have 4 stiffeners, the area should be 4x16mm but only 2x16 is shown. At Abut #2 we have 4 stiffeners, the area should be 4x20mm but only 2x20mm is shown. The same is true at the piers – they have a pair of 20mm thick stiffeners but what is shown is only the area of a single pier stiffener. Below is taken from the BRASS output file in Virtis.

```
COMMENT Stiffener Group 1: Abut #1
COMMENT      + Support 1 Geometry
COMMENT BRASS clip is sum of inside clip and part of outside clip,
COMMENT which results in the correct area for bearing resistance.
STIF-BEAR-GROUP 1, 6.6929, 1.2598, 0.9843, 50.04
STIF-BEAR-SCHEDULE 100, 1
COMMENT Stiffener Group 2: Piers
COMMENT      + Support 2 Geometry
STIF-BEAR-GROUP 2, 8.0709, 0.9843, 0.9843, 50.04
STIF-BEAR-SCHEDULE 110, 2
STIF-BEAR-SCHEDULE 200, 2
STIF-BEAR-SCHEDULE 210, 2
STIF-BEAR-SCHEDULE 300, 2
STIF-BEAR-SCHEDULE 310, 2
STIF-BEAR-SCHEDULE 400, 2
COMMENT Stiffener Group 3: Abut #2
COMMENT      + Support 5 Geometry
COMMENT BRASS clip is sum of inside clip and part of outside clip,
COMMENT which results in the correct area for bearing resistance.
STIF-BEAR-GROUP 3, 6.8898, 1.5748, 0.9843, 50.04
STIF-BEAR-SCHEDULE 410, 3
```

FROM:bgoodrich DATE:Tuesday, November 09, 2004 11:57:27 AM

The STIF-BEAR-GROUP command is used to describe the bearing stiffener on one side of the web. Internally, BRASS knows there are bearing stiffeners on both sides of the web and doubles the area accordingly for the calculations.

Issue ID: 5491

Subject: Transverse Stiffener Errors

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

11/8/2004 9:23:06 PM

Modified By: administrator

6/19/2008 4:14:53 PM

Priority: Urgent

4/19/2016 3:18:16 PM

HRS AASHTO

1748



## Complete Issue Information

Category: Education

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Page Setup.JPG      |             |

## Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 5492.13852 | Suspended     | Printing Controls Needed - fit to one or more pages wide and tall |

## Description

FROM:dteal DATE:Monday, November 08, 2004 4:23:07 PM

In the attached bbd looking at member #2 – I tried to compare the input in Virtis to the BRASS data file created after the run and found some discrepancies. I also attached the output file and a pdf of the girder layout. Below is a segment of the output file text. I put a line number in front of several lines for reference.

#1 – Listed as Group #1 sh/be Group #2  
#2 - Listed as Group #2 sh/be Group #4  
#3 - Listed as Group #3 sh/be Group #4  
#4 – A double transverse stiffener is placed here where a double pier stiffener should go  
#5 thru 9 - Listed as Group #3 sh/be Group #4

COMMENT Transverse Stiffeners Schedules  
COMMENT Stiffener Group 1: Wizard Stiffener 1S  
STIF-TRAN-GROUP 1, 5.3150, 0.4724, 2.400, 50.04  
STIF-TRAN-SCHEDULE 1, 1, 74.8031, 0.0000, 6.2336  
1 STIF-TRAN-SCHEDULE 1, 1, 137.7953, 6.2336, 11.4829  
COMMENT Stiffener Group 2: Wizard Stiffener 1P  
STIF-TRAN-GROUP 2, 5.3150, 0.4724, 1.000, 50.04  
STIF-TRAN-SCHEDULE 1, 2, 212.5984, 17.7165, 53.1496

4/19/2016 3:18:16 PM

HRS AASHTO

1749

**Complete Issue Information**

2 STIF-TRAN-SCHEDULE 1, 2, 212.5984, 70.8661, 17.7165  
 COMMENT Stiffener Group 3: Wizard Stiffener 2S  
 STIF-TRAN-GROUP 3, 5.3150, 0.5512, 2.400, 50.04  
 STIF-TRAN-SCHEDULE 1, 3, 106.2992, 88.5826, 8.8584  
 3 STIF-TRAN-SCHEDULE 1, 3, 106.2992, 97.4410, 8.8582  
 COMMENT Stiffener Group 4: Wizard Stiffener 2P  
 STIF-TRAN-GROUP 4, 5.3150, 0.5512, 1.000, 50.04  
 4 STIF-TRAN-SCHEDULE 1, 4, 102.3622, 106.2992, 8.5302  
 STIF-TRAN-SCHEDULE 2, 4, 98.4252, 0.0000, 8.2021  
 STIF-TRAN-SCHEDULE 2, 3, 86.6142, 8.2021, 7.2178  
 5 STIF-TRAN-SCHEDULE 2, 3, 90.5512, 15.4199, 7.5459  
 STIF-TRAN-SCHEDULE 2, 2, 236.2205, 22.9658, 78.7403  
 STIF-TRAN-SCHEDULE 2, 2, 236.2205, 101.7061, 19.6849  
 6 STIF-TRAN-SCHEDULE 2, 3, 90.5512, 121.3910, 7.5460  
 STIF-TRAN-SCHEDULE 2, 3, 86.6142, 128.9370, 7.2178  
 4 STIF-TRAN-SCHEDULE 2, 4, 98.4252, 136.1548, 8.2022  
 STIF-TRAN-SCHEDULE 3, 4, 98.4252, 0.0000, 8.2021  
 STIF-TRAN-SCHEDULE 3, 3, 86.6142, 8.2021, 7.2178  
 7 STIF-TRAN-SCHEDULE 3, 3, 90.5512, 15.4199, 7.5459  
 STIF-TRAN-SCHEDULE 3, 2, 236.2205, 22.9658, 78.7403  
 STIF-TRAN-SCHEDULE 3, 2, 236.2205, 101.7061, 19.6849  
 8 STIF-TRAN-SCHEDULE 3, 3, 90.5512, 121.3910, 7.5460  
 STIF-TRAN-SCHEDULE 3, 3, 86.6142, 128.9370, 7.2178  
 4 STIF-TRAN-SCHEDULE 3, 4, 98.4252, 136.1548, 8.2022  
 STIF-TRAN-SCHEDULE 4, 4, 102.3622, 0.0000, 8.5302  
 STIF-TRAN-SCHEDULE 4, 3, 106.2992, 8.5302, 8.8583  
 9 STIF-TRAN-SCHEDULE 4, 3, 106.2992, 17.3885, 8.8583  
 STIF-TRAN-SCHEDULE 4, 2, 212.5984, 26.2468, 70.8660  
 STIF-TRAN-SCHEDULE 4, 1, 98.4252, 97.1128, 8.2022  
 4 STIF-TRAN-SCHEDULE 4, 1, 114.1732, 105.3150, 9.5144

FROM: bgoodrich DATE: Friday, May 13, 2005 4:57:03 PM

The BRASS transverse stiffener commands are used to specify a stiffener group and spacing over a range, not the physical locations of stiffeners as in Virtis. The export of the stiffeners is working as described in the help (Stiffener Ranges: Transverse Stiffener Ranges (BRASS LFD)), where the stiffener group with the smaller area is exported when adjacent stiffeners are different sizes.

FROM: dteal DATE: Tuesday, December 06, 2005 2:14:12 PM

Accepted

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 5492                                                             |
| Subject: Printing Controls Needed - fit to one or more pages wide and tall |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/10/2004 1:21:13 PM |
| Modified By: administrator     | 6/19/2008 4:14:53 PM  |

4/19/2016 3:18:16 PM

**HRS AASHTO**

1750

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Duray, Jim      | New       | High     | Bug            |
|                 | Suspended |          | Change Request |
|                 | Closed    |          | Enhancement    |
| Duray, Jim      | Closed    | High     | Enhancement    |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 5493.13851 | Closed        | Bridge Checkout Refreshes the Screen |

### Description

FROM:dteal DATE:Wednesday, November 10, 2004 8:21:14 AM

When selecting File: Print we have the option of selecting Portrait or Landscape. Other windows programs like Excel would allow you to condense the output and "Fit" it to one or more pages wide or one page tall. See attached jpg from Excel. This would be a very handy feature especially when printing a Rating summary report.

## Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 5493                                |
| Subject: Bridge Checkout Refreshes the Screen |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/10/2004 1:22:39 PM |
| Modified By: administrator     | 6/19/2008 4:14:53 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, November 10, 2004 8:22:39 AM

When you select a bridge to check out – select check out from the pull down, then the screen refreshes and you have to go back or resort to find the bridge you wanted to open up and edit. This is annoying behavior, can it be changed so after the bridged is checked out it stays on the screen and you don't have to go find it again?

FROM:dteal DATE:Tuesday, February 15, 2005 8:03:12 AM

I realize that this has been suspended and placed on the future enhancement list – but I believe that this is a bug and not an enhancement.

For a user that only has to search for a bridge now and again it's no big deal. But for the user that uses this software day to day finds this search and refresh behavior very annoying and time consuming. Every time the user searches for a bridge, finds it, uses the pull down to check it out – now the user will

4/19/2016 3:18:16 PM

HRS AASHTO

1752

**Complete Issue Information**

have to resort to find that same bridge in order to open it – not very user friendly here!

FROM:dteal DATE:Tuesday, February 15, 2005 2:49:49 PM

FROM:hlee DATE:7/19/2006 10:21:52 AM  
Changed Category to Enhancement to be included in the Enhancement List.

FROM:dteal DATE:Monday, February 26, 2007 11:31:13 AM  
This was taken care of as part of VI 2723 in 5.6 beta 1

|                                                |
|------------------------------------------------|
| Issue ID: 5498                                 |
| Subject: Diaphragm Wizard for Single Diaphragm |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Kennelly, Krisha               |
| Submitted By: Teal, Dean 11/12/2004 6:12:10 PM  |
| Modified By: administrator 6/19/2008 4:14:53 PM |
| Priority: High                                  |
| Category: Education                             |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

**Contacts**

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:18:16 PM

**HRS AASHTO**

1753

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS Diaphragm.bbd    |             |

## Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 5499.13845 | Closed        | Diaphragm Spacing based on Support Distance |

## Description

FROM:dteal DATE:Friday, November 12, 2004 1:12:17 PM

In the attached PS structure (70-94-70) I am placing a permanent diaphragm at the center of span #2. Using the wizard I have selected to us "equal number of spaces per span" and for span #2, the 94 foot span I enter the value 2 for 2 equal spaces and select finish. What happens is there are now 2 diaphragms placed. One at mid span and another at the end of span #2. This is verified by both the diaphragm GUI window and in the schematics view.

How I can enter only one diaphragm at mid span using the wizard? I get the same results whether I had selected equal spacing per span or equal number of spaces.

FROM:kkennelly DATE:11/15/2004 7:57:39 AM

You cannot use the wizard to enter only 1 diaphragm.

FROM:dteal DATE:Monday, November 15, 2004 9:03:16 AM

This should be doncumented in the help

Issue ID: 5499

Subject: Diaphragm Spacing based on Support Distance

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

11/12/2004 6:13:54 PM

Modified By: administrator

6/19/2008 4:14:53 PM

Priority: High

Category: Education

## History

4/19/2016 3:18:17 PM

HRS AASHTO

1754

### Complete Issue Information

| Primary Contact  | Status    | Priority | Category      |
|------------------|-----------|----------|---------------|
| Duray, Jim       | New       | High     | Bug           |
| Duray, Jim       | New       | High     | Bug           |
| Kennelly, Krisha | Resolved  |          | Education     |
| Goodrich, Brian  | Assigned  |          | Enhance BRASS |
|                  | Suspended |          |               |
| Goodrich, Brian  | Suspended | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS Stress Limit.bbd |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5500.13844 | Suspended     | PS Final Allow. Tension Set to Zero |

### Description

FROM:dteal DATE:Friday, November 12, 2004 1:13:54 PM

Don't know if this is supposed to work this way or not. When I put a single diaphragm at the center of span #2 (70-94-70) - I used 47 feet for the spacing, which is the center of span #2 - when I review the .dat input file I see that the diaphragm was placed at 46.1667' which is half the support to support distance (94' span less the 10" on each end for the support distance). Is this correct behavior or should it have used the 47 feet which is half the span distance?

FROM:kkennelly DATE:11/15/2004 8:07:30 AM

I think that since on the Mbr Alt Engine Properties tab you've chosen the CL of simple span prestress modeling method, the export is using the simple span lengths which results in 46.1667' being the cl of span and not the 47' that is the middle of the centerline of final supports span length. Maybe Brian can verify this.

FROM:bgoodrich DATE:Wednesday, April 13, 2005 11:32:04 AM

Krisha's explanation is correct.

FROM:dteal DATE:Monday, April 18, 2005 12:50:41 PM

---

**Complete Issue Information**

Issue ID: 5500

Subject: PS Final Allow. Tension Set to Zero

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

11/12/2004 7:26:53 PM

Modified By: administrator

6/19/2008 4:14:52 PM

Priority: High

Category: Enhance BRASS

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | Medium   | Education |

**Contacts**

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 5501.13843 | Resolved      | Importing bridges who's files have been deleted |

**Description**

FROM:dteal DATE:Friday, November 12, 2004 2:26:56 PM

In the attached file I have set the PS beam stress limit in LFD for Final Allowable Tension to zero ksi. After an analysis I viewed the Data File, near the end is the Inventory card. The inventory card parameter #7 is to set allowable tension. The data file is using the BRASS default of 6.0 sqr root f'c when it should be using zero as entered in the Wizard PS Stress Limit GUI.

FROM:kkennelly DATE:11/15/2004 7:58:38 AM

BRASS LFD does not use the values entered on this screen. Refer to the Engine Help for this window.

4/19/2016 3:18:17 PM

HRS AASHTO

1756



## Complete Issue Information

FROM:dteal DATE:Monday, November 15, 2004 9:37:31 AM

I read the engine help that states "BRASS doesn't use any of the data on this window" – so how does one set the stress limits for Inventory and Operating being BRASS is populating these two cards with defaults?

FROM:dteal DATE:Tuesday, November 16, 2004 7:33:00 AM

Being BRASS is the only engine for LFD ratings – don't you think that having a grand Stress Limits GUI and then not using it in the only engine available for PS in Virtis is asking too much of the user to go two clicks deep to find in the engine help that all your LFD data is ignored (not used).

Setting Final Allowable Tension in the PS Concrete to zero instead of the default of 6 square root is not unique to KS – this is used by several state agencies.

Member Alt Factors Tab for ASD – is setting the P/S Concrete Tension for INVY to zero here the proper work around? If this is so – then there is a lot of confusion built in here.

BRASS ignores all values entered in the stress limits GUI under LFD – so you enter the zero tension for LFD under the factors tab in the ASD table. This table has two rows, INVY and OPER, BRASS uses the values in the INVY column but not the OPER column. How is a simple designer supposed to keep this straight??

We only have one engine and most likely will only have one engine to handle PS LFD in Virtis – we should address user confusion here with the one engine we use.

Okay, I'll get off my soap box now!

FROM:kkennelly DATE:11/16/2004 7:53:04 AM

I guess this is an enhancement request to enhance BRASS LFD to use these values because I'm sure if it could use user input values now it would.

FROM:bgoodrich DATE:Thursday, November 18, 2004 2:51:48 PM

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, November 22, 2004 1:25:42 PM

Entered e-mail from Mike Watters (WYDOT):

From: Micheal Watters [mailto:Micheal.Watters@dot.state.wy.us]

Sent: Monday, November 22, 2004 9:24 AM

To: Teal@ksdot.org

Cc: Goodrich@BridgeTech-Laramie.com; KKENNELLY@MBAKERCORP.COM

Subject: Stress Limits for Prestress

Dean:

BRASS-GIRDER currently does not support a schedule of stress limits for prestress. Opis and BRASS-GIRDER(LRFD) both support a schedule of stress limits. We realize this is a discrepancy between the programs. We currently are in the process of merging the LFD and LRFD engines into a single engine which will take care of this problem. However, it will take a while to complete this process.

4/19/2016 3:18:17 PM

HRS AASHTO

1757

**Complete Issue Information**

The LFD export has never done anything with the stress limits. For Virtis users, the stress limits are for service and can be set on the ASD factors window, which has been the work-around since we implemented the prestress export (several years ago).

We are working on the solution and ask that you be patient.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

|                                                          |
|----------------------------------------------------------|
| Issue ID: 5501                                           |
| Subject: Importing bridges who's files have been deleted |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Duray, Jim      |                       |
| Submitted By: Generated, aabuhaw | 11/15/2004 1:01:07 PM |
| Modified By: administrator       | 6/19/2008 4:14:52 PM  |
| Priority: Medium                 |                       |
| Category: Education              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jtrizezenberg DATE:Monday, November 15, 2004 8:01:07 AM  
I deleted a bridge from the database, now I want to import a bridge with the same bridge ID but Virtis tells me that it is not a unique ID. How can I import this bridge?

FROM:kkennelly DATE:11/16/2004 7:58:00 AM  
When you delete a bridge it is placed in the "Deleted Bridges" folder as a safeguard to help users in case they really didn't mean to delete the bridge. Select the "Deleted Bridges" folder in the Bridge Explorer and then select the deleted bridge and then Edit/Delete from the menu to really delete it from your database.

4/19/2016 3:18:17 PM

HRS AASHTO

1758

## Complete Issue Information

Issue ID: 5502

Subject: Regarding the earlier file deleting problem

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Triezenberg, Jeff 11/16/2004 1:59:20 PM

Modified By: administrator 6/19/2008 4:14:52 PM

Priority: Medium

Category: Bug

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Medium   | Bug      |
| Kennelly, Krisha   | Resolved |          |          |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | Medium   | Bug      |

4/19/2016 3:18:18 PM

HRS AASHTO

1759

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 5507.13837 | Closed        | Help for Z Factor in PS Member Alt GUI |

### Description

FROM:jtriezenberg DATE:Tuesday, November 16, 2004 8:59:20 AM

Your resolution for my inability to import a file with the same bridge ID as one that was deleted was to look in the deleted folder. However I also noticed that this folder was there and deleted the bridge from the deleted folder. Here is the sequence of events:

1. I exported the bridge .bbd file
2. I deleted the bridge from the database
3. I deleted the bridge from the deleted folder
4. I want to import a bridge with the same bridge ID but I can't

FROM:kkennelly DATE:11/16/2004 3:18:17 PM

Are you also running Pontis? If this bridge is already in the database for Pontis select the "BridgeWare Association" button on the Bridge window that appears when you import the file. Then you can select the Pontis bridge that you want to associate this Virtis bridge with.

If you are not running Pontis, you should be able to import the bbd file once it is completely deleted from the database after deleting from the Deleted Bridges folder. If you are sure that your database does not have a bridge with this bridge id and your db is small in size you can send your db to our ftp server and we can investigate. Let me know if you need instructions on sending your db.

Please make your response in this incident. Thank you.

FROM:jtriezenberg DATE:Wednesday, November 17, 2004 1:28:04 PM

Pontis is not installed on this computer, so that can't be the problem. I have loaded a copy of the database into your ftp server under the Alfred Benesch folder. With it is the .bbd file that I have been trying to add.

-JT

FROM:mordoobadi DATE:11/18/2004 8:49:34 AM

We looked at your database and noticed that there are many-many (thousands) rows in the bridge table. This table is used by pontis to store bridge information. The database seems to be an integrated Pontis/Virtis/Opis database that has a few of Pontis tables (not all of them). The reason why you cannot import the bridge is that there is a bridge in the bridge table that has the same bridge\_id as the

4/19/2016 3:18:18 PM

HRS AASHTO

1760

## Complete Issue Information

imported bridged. The database is like a database that somebody did experiment with. It is not a complete Virtis/Opis/Pontis database. Did you receive this database from MDOT?

In order to resolve this issue you have two options:

(1) If you do not care about the PONTIS bridges that are stored on the database please follow these steps:

- a) Start Sybase Interactive SQL and Login as the owner of Virtis/Opis database.
- b) In the Command window type  
DELETE FROM bridge;  
COMMIT;  
and execute the command.

(2) If you want to preserve the Pontis bridges:

When you import the bridge, in the bridge description window, provide a different bridge ID and NHS Indicator.

FROM:jtrizenberg DATE:Thursday, November 18, 2004 11:50:04 AM

Yes, we did receive the database from MDOT. If we follow step 1 above, will that delete any information that we will use for Virtis? Will this step change the information we will be able to give to MDOT when we deliver our bridges to them?

FROM:mordoobadi DATE:11/19/2004 3:50:14 PM

Jeff, In your database almost all of the bridges are linked to a pontis bridge. So my suggestions above would corrupt your database. Sorry about this. I should have verified that the Virtis/Opis bridges are not linked to pontis bridges. Any way, Please do not follow my instructions above, or you lose data.

This is what you can do.

(0) Shut-down Virtis

- (1) Locate the executable file BridgeWareAdmin.EXE. (If you are at version 5.1.0 get it from 5.1.0 CD, if you applied SP1 it should be in your Virtis/Opis folder)
- (2) copy the file to the Virtis/Opis folder (i.e. C:\Program Files\AASHTOWare\VirtisOpis51) If it is not already there
- (3) double-click on the file BridgeWareAdmin.EXE.
- (4) login and connect to the database as database owner.
- (5) Check the check-box "Pontis and Virtis/Opis share this database"
- (6) Select the OK button to close the window.

Now you can link to the Pontis bridges.

Now if you want to create a new bridge, a new window (BridgeWare Association) will pop up and would let you choose the pontis bridge that you want to link to.

There is a radio button that controls whether you want to link to pontis or not. Select Yes radio button then If you find the bridge ID that you are looking for in the list of pontis bridges, then select it in the grid, otherwise select the No radio button (no link to pontis). Now Select OK to close the window. The bridge will be created.

4/19/2016 3:18:18 PM

HRS AASHTO

1761

## Complete Issue Information

If you want to import a BBD file, then do the import. Bridge Description window opens. Select the BridgeWare Association button in that window, Select Yes radio button then If you find the bridge ID that you are looking for in the list of pontis bridges, then select it in the grid, otherwise select the No radio button (no link to pontis). Now Select OK to close the window. The bridge will be created.

|                                                 |
|-------------------------------------------------|
| Issue ID: 5507                                  |
| Subject: Help for Z Factor in PS Member Alt GUI |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 11/17/2004 1:17:27 PM |
| Modified By: administrator        | 6/19/2008 4:14:52 PM  |
| Priority: High                    |                       |
| Category: Help                    |                       |

## History

| Primary Contact  | Status  | Priority | Category            |
|------------------|---------|----------|---------------------|
| Duray, Jim       | New     | High     | Bug                 |
| Kennelly, Krisha | On Hold |          | Bug - GUI 2<br>Help |
|                  | Closed  |          |                     |
| Kennelly, Krisha | Closed  | High     | Help                |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:Wednesday, November 17, 2004 8:17:27 AM

Bottom left corner of the Member Alt window for a PS member has input fields for the Z Factor for crack control for both the top and bottom of the beam. The F1 help only addresses the bottom of the beam.

4/19/2016 3:18:18 PM

HRS AASHTO

1762

### Complete Issue Information

The help text is correct for a RC member Alt because the Z for the top is input elsewhere. But for a PS member the Z value for the top is on this window.

FROM:dteal DATE:Wednesday, November 07, 2007 12:13:02 PM  
Please Close - this has been fixed

|                         |
|-------------------------|
| Issue ID: 5508          |
| Subject: Prestress Loss |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Triezenberg, Jeff  | 11/17/2004 8:39:44 PM |
| Modified By: administrator       | 6/19/2008 4:14:52 PM  |
| Priority: Medium                 |                       |
| Category: Education              |                       |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Bug       |
| Goodrich, Brian | Assigned |          |           |
|                 | Closed   |          | Education |
| Goodrich, Brian | Closed   | Medium   | Education |

### Contacts

| Name           | Company          | Email 1   | Phone 1      |
|----------------|------------------|-----------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@ | 307 222-4688 |

4/19/2016 3:18:18 PM

HRS AASHTO

1763

**Complete Issue Information**

BridgeTech-Laramie.com

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 5509.13835 | Duplicate     | Shear Reinforcement between the support and H/2 |

**Description**

FROM:jtriezenberg DATE:Wednesday, November 17, 2004 3:39:44 PM

Is there anywhere that Virtis outputs the % of prestress loss calculated? Or is there anywhere that an effective initial stress (after losses) is outputted?

FROM:jtriezenberg DATE:Thursday, November 18, 2004 11:19:58 AM

Never mind, I found it in the engine properties

FROM:bgoodrich DATE:Thursday, November 18, 2004 2:51:02 PM

Closed.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 5509                                           |
| Subject: Shear Reinforcement between the support and H/2 |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Triezenberg, Jeff  | 11/17/2004 9:14:25 PM |
| Modified By: administrator       | 6/19/2008 4:14:52 PM  |
| Priority: Medium                 |                       |
| Category: Bug                    |                       |



## Complete Issue Information

### History

| Primary Contact | Status            | Priority | Category |
|-----------------|-------------------|----------|----------|
| Duray, Jim      | New               | High     | Unknown  |
|                 | Closed - Inactive |          |          |
| Duray, Jim      | Closed - Inactive | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State     | Summary                                                    |
|------------|-------------------|------------------------------------------------------------|
| 5510.13834 | Closed - Inactive | How to get live load distribution factors from report tool |

### Description

FROM:jtrizenberg DATE:Wednesday, November 17, 2004 4:14:25 PM

AASHTO says that shear reinforcement need not be designed for shear greater than the shear at H/2 from the support. Is there any way to get Virtis to treat this point as the maximum shear? I can put a point of interest at H/2 but Virtis still thinks the most shear occurs at the support.

FROM:bgoodrich DATE:Thursday, November 18, 2004 2:50:35 PM

This is a duplicate of Incident 3143. There is currently no way to get the BRASS engine to consider the shear at H/2 as the maximum shear between the support and H/2.

**Complete Issue Information**

Issue ID: 5510

Subject: How to get live load distribution factors from report tool

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Ihnat, Joseph

11/18/2004 3:36:22 PM

Modified By: administrator

6/19/2008 4:14:52 PM

Priority: High

Category: Unknown

**History**

| Primary Contact    | Status          | Priority | Category         |
|--------------------|-----------------|----------|------------------|
| Duray, Jim         | New             | Urgent   | Bug              |
| Ordoobadi, Mehrdad | Assigned        |          | Bug - Database 2 |
|                    | On Hold         |          |                  |
|                    | Rejected by TAG |          |                  |
| Ordoobadi, Mehrdad | Rejected by TAG | Urgent   | Bug - Database 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State   | Summary                                        |
|------------|-----------------|------------------------------------------------|
| 5525.13819 | Rejected by TAG | 4.2 to 5.0 girderline timber bridge migration. |

**Description**

FROM:jhnat DATE:11/18/2004 10:33:23 AM  
received via email:

Could you please tell me how to print the live load distribution factors (Standard Specs) used in the analysis in the input report generated using the report tool. Thanks!

4/19/2016 3:18:19 PM

HRS AASHTO

1766

**Complete Issue Information**

Brian Z. Purto, P.E. - Bridge Engineer  
Washington Group International  
7800 E. Union Avenue, Suite 100  
Denver, CO 80237  
Phone: (303) 843-3574  
Fax: (303) 843-3161  
brian.purto@wgint.com

|                                                         |
|---------------------------------------------------------|
| Issue ID: 5525                                          |
| Subject: 4.2 to 5.0 girderline timber bridge migration. |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Lee, Herman           | 11/23/2004 7:28:33 PM |
| Modified By: administrator          | 6/19/2008 4:14:50 PM  |
| Priority: Urgent                    |                       |
| Category: Bug - Database 2          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:11/23/2004 2:10:57 PM  
When a 4.2 girderline timber bridge is migrated to 5.0, the deck type set in the structure definition

4/19/2016 3:18:19 PM

HRS AASHTO

1767

**Complete Issue Information**

should be timber. Currently, the deck type is set as concrete.

FROM:mordoobadi DATE:3/4/2005 9:57:47 AM

After a discussion with Krisha, we decided that we cannot write a migration script that is full-proof.

Suppose a user who created a Girder-Line Timber bridge with concrete deck, he/she wouldn't like his/her data to be changed.

We released V/O 5.0.0 in April of 2003, and the users should have noticed this problem by now (March 2005).

If they noticed the problem and wanted to fix it they probably:

- 1) called us and asked us for help (like Colorado DOT)
- 2) created another structure definition with timber deck and used it

Krisha and I think that we should address these kinds of issues on a case-by-case basis. If a user notices this problem and contacts us, we should get their database and prepare SQL scripts to fix the bridges that have problem.

FROM:mordoobadi DATE:3/7/2005 2:11:02 PM

After a discussion with Jim we concluded that there are the following solutions:

- (1) Write a utility program that allows a user to change the deck type for a girder-line structure definition from concrete to timber.
- (2) Change the GUI to allow changing deck-type from concrete to timber (not the other way around) for a Girder-Line structure def.
- (3) Investigate whether deck-type can be eliminated, or the design can be modified to resolve this issue.

FROM:jduray DATE:4/13/2005 10:52:28 AM

Users must have fixed their bridges by now...rejected by tag.

FROM:jduray DATE:4/13/2005 11:09:11 AM

Add a technical note stating this happened and user workaround.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 5564                                                             |
| Subject: no section properties reported giving an infinite moment capacity |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Triezenberg, Jeff  | 11/30/2004 5:43:15 PM |
| Modified By: administrator       | 6/19/2008 4:14:48 PM  |
| Priority: Medium                 |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:19 PM

HRS AASHTO

1768

### Complete Issue Information

|                 |          |        |             |
|-----------------|----------|--------|-------------|
| Duray, Jim      | New      | Medium | Bug         |
| Goodrich, Brian | Assigned |        | Bug - BRASS |
| Duray, Jim      | New      | High   | Bug         |
| Goodrich, Brian | Assigned |        | Education   |
|                 | Resolved |        |             |
|                 | Closed   |        |             |
| Goodrich, Brian | Closed   | High   | Education   |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 5583.13761 | Closed        | POI Data Question |

### Description

FROM:jtriezenberg DATE:Tuesday, November 30, 2004 12:43:15 PM

An analysis of the attached bridge shows a RF of 0. A review of the BRASS output file shows that all the section properties of the beam are 0 at the second tenth point and only at the second tenth point. All the other points of interest give section properties and therefore can generate a rating. Can you please tell me why this is happening?

Jeff T.

FROM:kkennelly DATE:12/1/2004 2:54:49 PM

I ran member G1. BRASS reports the Section Type as "I or Box" at all of the analysis points except for the 102 point. There it lists "Rectangular" as the type and the dimensions are all zero.

FROM:jtriezenberg DATE:Wednesday, December 01, 2004 3:44:40 PM

But why should it list "Rectangular" at point 102 and list "I or Box" for every other point? How can I make Virtis use the same section properties for the entire length of the span?

FROM:bgoodrich DATE:Monday, December 06, 2004 12:16:03 PM

This issue appears to be the same as that from Incident 5435 (BRASS Problem Log 554). The distance of debonding plus transfer length is located just to the left of the 102 POI at the 101.987 POI. The two points are too close together, so the section properties at the 102 point never get set. Until the

4/19/2016 3:18:19 PM

HRS AASHTO

1769

**Complete Issue Information**

problem can be addressed in the engine, the work-around is to increase the transfer length from 25" to 26.4", so the debonding plus transfer length coincides with the 102 POI.

FROM:jtrizeenberg DATE:Friday, December 10, 2004 10:36:28 AM  
thanks

FROM:bgoodrich DATE:Thursday, January 27, 2005 4:21:28 PM  
This issue has been addressed in the BRASS-GIRDER 5.9.1 engine to be released in May 2005.

|                            |
|----------------------------|
| Issue ID: 5583             |
| Subject: POI Data Question |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Teal, Dean 12/2/2004 2:53:30 PM   |
| Modified By: administrator 6/19/2008 4:14:46 PM |
| Priority: High                                  |
| Category: Education                             |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Thursday, December 02, 2004 9:53:30 AM  
When you enter some Poi's (not 10th points), is there anyway to view the deflection and moment/shear data at that point? I am looking for it in the view analysis report table. The only place I seem to be able to find it is in the view latest BRASS results, this is view is cumbersome and time consuming.

FROM:bgoodrich DATE:Monday, December 27, 2004 3:53:29 PM  
In the engine properties for the Analysis Settings, you need to change the Action Output Level field to turn on output at all node points. Output at tenth points is the default. When this is done, the actions

4/19/2016 3:18:19 PM

HRS AASHTO

1770

### Complete Issue Information

and deflections for all points are reported.

|                                   |
|-----------------------------------|
| Issue ID: 5599                    |
| Subject: LRFD Design Spec Version |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 12/3/2004 2:17:14 PM |
| Modified By: administrator        | 6/19/2008 4:14:45 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact  | Status    | Priority | Category  |
|------------------|-----------|----------|-----------|
| Duray, Jim       | New       | High     | Bug       |
| Kennelly, Krisha | Resolved  |          | Education |
|                  | Duplicate |          |           |
|                  | Closed    |          |           |
| Kennelly, Krisha | Closed    | High     | Education |

4/19/2016 3:18:20 PM

HRS AASHTO

1771

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Haunch_Profile.bbd  |             |

### Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 5600.13744 | Closed        | Schematic view, Typ Cross section, Haunch Profile |

### Description

FROM:dteal DATE:Friday, December 03, 2004 9:17:14 AM

How does one know what version of the LRFD Spec is being used for a design review? Where can the user verify this?

FROM:kkennelly DATE:12/6/2004 1:10:08 PM

I think if you look on the first page of the BRASS output file where it lists BRASS in really big letters it also lists the spec edition.

FROM:dteal DATE:Wednesday, December 08, 2004 11:48:25 AM

I have some major confusion here. Yes, BRASS does state in the output where you said it would be that it's using the 2004 3rd addition. For our Factors our only option is 1998 2nd edition. Why are they different? I know the purpose of the factors if I want to modify one of them, but why doesn't I modify factors in the 3rd edition, that's the one that is being used???? Can you straighten me out?

FROM:kkennelly DATE:12/9/2004 4:15:50 PM

I think this is a duplicate of 4978. As per that incident, Opis will not deliver the LRFD factors from the 3rd edition until the March 2005 release. The factors can be entered by hand until then. Isn't the default in BRASS what is in the spec? If it is, then you don't have to create any Factors in Opis at all.

FROM:kkennelly DATE:12/9/2004 4:17:19 PM

FROM:dteal DATE:Tuesday, December 06, 2005 2:35:25 PM

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 5600<br>Subject: Schematic view, Typ Cross section, Haunch Profile |
| Folder: /Virtis/Support Center                                               |

4/19/2016 3:18:20 PM

HRS AASHTO

1772



**Complete Issue Information**

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Teal, Dean    | 12/3/2004 2:37:12 PM |
| Modified By: administrator  | 6/19/2008 4:38:36 PM |
| Priority: High              |                      |
| Category: Bug - GUI 2       |                      |

**History**

| Primary Contact  | Status             | Priority | Category  |
|------------------|--------------------|----------|-----------|
| Duray, Jim       | New                | High     | Bug       |
|                  | Resolved           |          |           |
| Kennelly, Krisha | Information Needed |          |           |
|                  | Resolved           |          | Education |
| Kennelly, Krisha | Resolved           | High     | Education |

**Contacts**

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 5603.13741 | Resolved      | Compressive flange width |

**Description**

FROM:dteal DATE:Friday, December 03, 2004 9:37:18 AM

In the attached bbd – look at the schematic view of the structure typical section. For the outside girders the haunch profile width (Z1 & Z3) is much wider on the outside of the girder than on the inside. By reviewing the haunch profile input data I see that the Z1 and Z3 values are always equal – I think the schematic has generated the wrong Z3 value.

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 5603                    |
| Subject: Compressive flange width |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Triezenberg, Jeff   | 12/3/2004 4:23:17 PM |
| Modified By: administrator        | 6/19/2008 4:14:45 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jtriezenberg DATE:Friday, December 03, 2004 11:23:17 AM

I have a beam spacing of 10.47 ft with a 9 inch deck. In the Deck Profile tab, clicking the Compute button gives an Effective Flange width of 10.47 ft but I believe the width should be 6 times the slab thickness each side of the beam [AASHTO 8.10.1.1]. Is there a reason why Virtis uses the beam spacing for the flange width?

FROM:kkennelly DATE:12/3/2004 11:41:56 AM

Please refer to the "Effective Flange Width Computation Method.pdf" found on the Tutorials page of the Virtis/Opis Technical Support website for background on how Virtis computes the effective flange width.

4/19/2016 3:18:20 PM

HRS AASHTO

1774

**Complete Issue Information**

If that does not address your problem, please attach a bbd file of your bridge and tell us what member alt is in question so we can investigate.

FROM:jtriezenberg DATE:Monday, December 06, 2004 3:47:28 PM  
thanks

FROM:kkennelly DATE:12/7/2004 7:52:39 AM

Issue ID: 5608  
Subject: Haunch profile window

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Bardell, Wanley 12/6/2004 2:40:28 PM  
Modified By: administrator 6/19/2008 4:14:44 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - GUI 2 |
| Ihnat, Joseph   | Assigned |          |             |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

**Contacts**

4/19/2016 3:18:20 PM

HRS AASHTO

1775

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | shear question.bbd  |             |

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 5622.13722 | Resolved      | Shear Reinforcement definition warnings |

**Description**

FROM:mordoobadi DATE:12/6/2004 9:38:03 AM  
Requested by Wanley Bardell from Michigan DOT.

I am getting error message when I open "haunch profile". It automatically kicks me out and said " Exception: access violation (0xc0000005). address:0x5f404789. Please see attached file: 29021B01.

Thanks.  
Wanley

FROM:jihnata DATE:12/23/2004 10:31:53 AM  
BBD file is from version 5.1.0

FROM:jihnata DATE:12/23/2004 10:42:00 AM  
My email reply to Wanley:  
I imported your BBD file but I was unable to reproduce the error. I was able to open the Haunch Profile window successfully.  
Because the BBD file was from version 5.1.0, I recommend that you upgrade to a more current version and see if that fixes your problem.  
Service Pack 1 for version 5.1 is available from our web site, and version 5.2.0 was shipped last month. Keep in mind that you cannot migrate directly from 5.1.0 to 5.2.0. You must first install Service Pack 1.

|                                                  |
|--------------------------------------------------|
| Issue ID: 5622                                   |
| Subject: Shear Reinforcement definition warnings |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Triezenberg, Jeff   | 12/7/2004 9:51:29 PM |
| Modified By: administrator        | 6/19/2008 4:14:43 PM |

## Complete Issue Information

|                          |
|--------------------------|
| Priority: High           |
| Category: Bug - Domain 2 |

## History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
|                 | Information Needed |          |          |
| Duray, Jim      | Information Needed | High     | Bug      |
| Ihnat, Joseph   |                    |          |          |
|                 | Closed - Inactive  |          |          |

## Contacts

| Name           | Company          | Email 1                     | Phone 1      |
|----------------|------------------|-----------------------------|--------------|
| Gary Turnquist | Wilson & Company | gary.turnquist@wilsonco.com | 303-297-2976 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State      | Summary                                                                               |
|------------|--------------------|---------------------------------------------------------------------------------------|
| 5645.13699 | Information Needed | AASHTO Bridgeware Database version is not compatible with this version of application |

## Description

FROM:jtrizeenberg DATE:Tuesday, December 07, 2004 4:51:30 PM

I often get this message in the validation window.

Horiz Shear (Vertical Shear Reinforcement Definition)

Warning: Reinforcing steel material not defined for shear reinforcement.

Warning: Reinforcement bar size not defined for shear reinforcement.

I don't understand what it is referring to. Virtis seems to think that "Horiz Shear" is the Vertical shear definition and it seems to think there is no bars picked for this definition.

FROM:kkennelly DATE:12/8/2004 8:16:47 AM

The horizontal shear reinf def has null for the vert rebar and material in the db like it should. Virtis is validating these vertical attributes when it shouldn't be.

FROM:kkennelly DATE:2/9/2005 9:41:28 AM

Fixed for version 5.3

4/19/2016 3:18:21 PM

HRS AASHTO

1777

## Complete Issue Information

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 5645                                                                                 |
| Subject: AASHTO Bridgeware Database version is not compatible with this version of application |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Turnquist, Gary  | 12/9/2004 8:01:43 PM |
| Modified By: jihnat            | 5/17/2009 2:14:49 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:gturnquist DATE:Thursday, December 09, 2004 3:01:43 PM  
just updated to new version and when we run app we get this error message

FROM:jihnat DATE:12/9/2004 4:02:59 PM  
What version are you migrating from?  
If 5.1.1 to 5.2.0, run the db migration wizard against your 5.1.1 database.  
If 5.1.0 to 5.2.0, first install 5.1 service pack 1 to get to 5.1.1, then go to 5.2.0

**Complete Issue Information**

|                              |
|------------------------------|
| Issue ID: 5653               |
| Subject: Large ADTT problems |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: McCaffrey, Brian      | 12/10/2004 4:14:37 PM |
| Modified By: administrator          | 6/19/2008 4:14:41 PM  |
| Priority: High                      |                       |
| Category: Bug - Database 2          |                       |

**History**

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Duray, Jim         | New      | High     | Bug              |
| Ordoobadi, Mehrdad | Assigned |          | Bug - Database 2 |
|                    | Resolved |          |                  |
| Lee, Herman        | Assigned |          |                  |
| Ordoobadi, Mehrdad | Resolved |          |                  |
|                    | Accepted |          |                  |
|                    | Closed   |          |                  |

4/19/2016 3:18:21 PM

HRS AASHTO

1779

### Complete Issue Information

|                    |          |      |                  |
|--------------------|----------|------|------------------|
| Ordoobadi, Mehrdad | Closed   | High | Bug - Database 2 |
| Duray, Jim         | New      | High | Unknown          |
|                    | Assigned |      | Bug              |
| Kennelly, Krisha   |          |      | Bug - Domain 2   |
|                    | Resolved |      |                  |
| Kennelly, Krisha   | Resolved | High | Bug - Domain 2   |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                          |
|------------|---------------|----------------------------------------------------------------------------------|
| 5692.13652 | Resolved      | Unable to compute dead load of steel buildup beam def in floor system structures |

### Description

FROM:bmccaffrey DATE:Friday, December 10, 2004 11:14:37 AM

If an ADTT > 32767 is entered and saved, the value will change to a negative number. Anything less than 32767 is OK.

FROM:jduray DATE:12/14/2004 9:08:27 AM  
They need to enter a larger value for LRFD.

Mehrdad - please check the db and the dedata object...should be a long data type.

If we checge the data type we will have domain, UI, export and report tool to fix.

FROM:mordoobadi DATE:3/3/2005 5:41:04 PM  
Fixed for V/O 5.3.0. (Beta 5)

FROM:mordoobadi DATE:3/3/2005 5:42:16 PM  
Herman, Please update the reporttool for the Recent Count, Future Count and Previous ADTT. They have IDeLong data type now. (previously IDeShort)

FROM:hlee DATE:3/4/2005 8:34:31 AM  
Please update the following field in abw\_sys\_reporttool\_attribute.

class\_id          attribute\_id      <OLD> function\_return\_data\_type      <NEW>  
function\_return\_data\_type

4/19/2016 3:18:21 PM

HRS AASHTO

1780



**Complete Issue Information**

=====  
101 15 37508 37509

Note that Future Count and Previous ADTT are not in the Report Tool, no update is needed.

FROM:mordoobadi DATE:3/4/2005 9:34:06 AM  
Data updated in the Sample database.

FROM:dteal DATE:Thursday, April 07, 2005 4:06:04 PM  
This was reported in VI #4321 and never resolved????

FROM:dteal DATE:Tuesday, March 28, 2006 3:25:27 PM  
Accepted 5.4 beta 7

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
| Issue ID: 5692<br>Subject: Unable to compute dead load of steel builtup beam def in floor system structures |
|-------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Kennelly, Krisha<br>Submitted By: Kennelly, Krisha 12/20/2004 6:37:46 PM<br>Modified By: administrator 6/19/2008 4:14:39 PM<br>Priority: High<br>Category: Bug - Domain 2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:12/20/2004 1:32:42 PM  
Submitted on behalf of Anurag Upadhyay of Chas. H. Sells via email:

## Complete Issue Information

Sir/Madam,

This is the first time that we are using the GIRDER-STRINGER-FLOORBEAM utility in Virtis 5.1 at Chas. H. Sells, Inc. During the modeling of one bridge, we came across this problem related to modeling cantilever part of the floorbeams.

The span has three girders, which are supporting three floorbeams and there are stringers supported by floorbeams. Floorbeams have cantilever part on both sides of the girders. When the span is modeled in Virtis, the framing plan does not show the cantilever part of the floorbeam and error dialogue box is generated while analyzing girders which says "Unable to compute the dead load of floorbeam".

It will be very kind of you, if you can guide us, whether this is the Virtis 5.1 module problem/limitation or there is more information that is required to be inputted in the virtis bbd file. The bbd file and the word file showing the plans, that may give you clearer picture about this span is attached in the email. Please feel free to call us if you need more information regarding this matter.

Yours Sincerely,  
Anurag Upadhyay  
Chas. H. Sells, Inc.  
914-747-1120 (o)

FROM:kkennelly DATE:12/20/2004 1:37:51 PM  
Response sent via email:  
Hi Anurag,

Virtis is unable to compute the dead load of the floorbeams acting on the girder and thus you are unable to analyze the girders in your bridge due to a bug in Virtis.

The following workaround will allow you to analyze the girders:

1. In the Cross Section windows for your floorbeam definition, you have checked the box to "Enter angle descriptions in table" to describe the dimensions of the angles in your section. A bug in Virtis is preventing Virtis from being able to compute the dead load of the dimensions described in this table. Virtis is only able to compute the dead load of angles specified by picking an angle shape on this window.
2. As a workaround, create a steel angle shape in your bridge that contains the dimensions and properties of the angles that you are describing in the Cross Section window.
3. On the Cross Section window, don't check the "Enter angle descriptions" checkbox. If that box is not checked, you will be able to select the steel angle shape you created. Select that shape to describe the top and bottom flanges and be sure to specify the correct Horizontal Leg dimension on the lower right corner of the window.
4. Do that for all of your cross sections for the floorbeam definition and you will be able to analyze your girders.

(As a side note, I noticed on your Cross Section Ranges window that your last range is specified as "FB Right End" for both the start and end sections but the web is specified to vary linearly. That seems inconsistent and you may want to review.)

4/19/2016 3:18:22 PM

HRS AASHTO

1782

**Complete Issue Information**

I've entered your problem as incident 5692 on the Virtis/Opis Technical Support website. You can track resolution of this problem on that website.

Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM:kkennelly DATE:12/20/2004 2:02:58 PM  
Note to programmer: DoSteelBultupBeamDef:ComputeAveSelfLoadPerUnitLength() should check if user has specified angles by dimensions instead of just by picking a shape.

FROM:kkennelly DATE:3/3/2005 1:41:54 PM  
Fixed for 5.3 Release

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 5706                                                                                                 |
| Subject: Structure Typical Section schematic: Unable to display PS Haunch profile at the end of the structure. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Lee, Herman      | 12/21/2004 7:54:39 PM |
| Modified By: administrator     | 6/19/2008 4:14:38 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
|                 | Assigned |          | Bug         |
|                 |          |          | Bug - GUI 2 |
| Ihnat, Joseph   | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FortPitt.bbd        |             |

**Tasks**

| Name       | Current State   | Summary                                       |
|------------|-----------------|-----------------------------------------------|
| 5709.13635 | Rejected by TAG | Export uses inches when validating ft inputs. |

**Description**

FROM:hlee DATE:12/21/2004 2:44:35 PM  
To reproduce, use BID 10.

FROM:jihnata DATE:8/8/2005 2:45:27 PM  
Fixed for 5.4.0

|                                                        |
|--------------------------------------------------------|
| Issue ID: 5709                                         |
| Subject: Export uses inches when validating ft inputs. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Lee, Herman      | 12/21/2004 9:13:54 PM |
| Modified By: administrator     | 6/19/2008 4:14:38 PM  |
| Priority: High                 |                       |
| Category: Bug - Export 2       |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Assigned |          | Bug      |

4/19/2016 3:18:22 PM

HRS AASHTO

1784

### Complete Issue Information

|                 |          |      |                |
|-----------------|----------|------|----------------|
| Lee, Herman     |          |      |                |
| Duray, Jim      | New      | High | Bug            |
| Lee, Herman     | Assigned |      |                |
| Goodrich, Brian |          |      | Bug - Export 1 |
| Lee, Herman     |          |      |                |
|                 | Resolved |      |                |
|                 | Accepted |      |                |
|                 | Closed   |      |                |
| Lee, Herman     | Closed   | High | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | No DC2 Loading.bbd  |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 5753.13591 | Closed        | Rail Loading Missing |

### Description

FROM:hlee DATE:12/21/2004 3:20:43 PM

GUI inputs are in ft, the comparisons performed in export is in inches. In Configuration Browser, the default tolerance for ft does not translate to the tolerance for inch.

=====

LRFD distribution factor validation detected errors!  
The indicated errors must be corrected for the export to continue.  
03:22:06 PM - Line 1120 in source file c:\virtis\gui\abxbrass\engineexport.cpp.

Error generating DIST-BEAM-SCHEDULE command!  
03:22:06 PM - Line 218 in source file c:\virtis\gui\abxbrass\brassdistbeamschedulecmd.cpp.

Deflection distribution factor range not on member alternative.  
03:22:06 PM - Line 559 in source file c:\virtis\gui\abxbrass\brassdistbeamschedulecmd.cpp.

4/19/2016 3:18:22 PM

HRS AASHTO

1785

**Complete Issue Information**

Moment distribution factor range not on member alternative.  
03:22:06 PM - Line 559 in source file c:\virtis\gui\abxbrass\brassdistbeamschedulecmd.cpp.

Shear distribution factor range not on member alternative.  
03:22:06 PM - Line 559 in source file c:\virtis\gui\abxbrass\brassdistbeamschedulecmd.cpp.

=====  
FROM:jduray DATE:1/20/2005 12:42:49 PM  
I think we should change these to use the feet tolerance.

We also need to investigate the impact of changing the tolerance to be a single value instead of different depending on the units.

FROM:jduray DATE:4/13/2005 11:33:39 AM  
Brian M. will investigate what happens if the tolerance is set to a single value (converted to consistent units).

|                               |
|-------------------------------|
| Issue ID: 5753                |
| Subject: Rail Loading Missing |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 1/3/2005 10:18:00 PM |
| Modified By: administrator     | 6/19/2008 4:14:35 PM |
| Priority: High                 |                      |
| Category: Bug - Export 1       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Monday, January 03, 2005 5:18:00 PM

4/19/2016 3:18:23 PM

HRS AASHTO

1786

**Complete Issue Information**

Where is the Rail Load??

I used TrainBridge1 and ran Opis. When I went to the view analysis report, there is no DC2 Parapet Load. I believe there should be?? I attached TrainBridge1

FROM:dteal DATE:Tuesday, January 04, 2005 10:01:40 AM

More info:

I took this structure and removed the rail. Re-ran Opis and compared all the DL midspan moment values and found no change between the 2 runs.

FROM:hlee DATE:1/7/2005 10:45:09 AM

E-mail to Brian Goodrich:

Brian,

Please take a look at the this incident.

I compared 5.1.1 and 5.2 export data, the following lines are missing in 5.2.

```

=====
COMMENT DC2
LOAD-DEAD-DESCR 2, DC, 2, DC2
COMMENT Parapet: Jersey Barrier
DECK-LOAD-LINE 2, 0.0421, 7.8801
COMMENT Parapet: Jersey Barrier
DECK-LOAD-LINE 2, 0.0421, 562.1199
=====

```

I checked the export. The fixes in BrassLrfdLoadControl.cpp for Incident 5086 asked not to export deck loads but DoGirderMbr is included in the comparison.

```

=====
// For line members, set flag to export deck loads to FALSE.
if (
    IsInterfaceKindOf(m_lpMemberDisp, __uuidof(IDoGirderLineMbr)) ||
    IsInterfaceKindOf(m_lpMemberDisp, __uuidof(IDoGirderMbr)) ||           <=====
    IsInterfaceKindOf(m_lpMemberDisp, __uuidof(IDoFlrLineFloorbeamMbr)) ||
    IsInterfaceKindOf(m_lpMemberDisp, __uuidof(IDoFlrLineStringerMbr))
)
{
    m_bExportDeckLoads = FALSE;
}
=====

```

Please let me know whether deleting the DoGirderMbr comparison is the fix for this incident. I can make the changes to Sourcesafe after your confirmation.

Thanks,  
Herman

**Complete Issue Information**

FROM:bgoodrich DATE:Thursday, January 20, 2005 1:33:46 PM  
Herman - I agree with removing the DoGirderMbr line from the conditional.

FROM:hlee DATE:1/24/2005 11:03:34 AM  
Fixed for 5.2 service pack and 6.0.

FROM:dteal DATE:Wednesday, February 09, 2005 3:29:45 PM

FROM:dteal DATE:Monday, March 14, 2005 10:16:37 AM  
Checking for 5.2 updated BRASS dll and 5.3 beta 5  
I thought this was fixed but I think we still have a problem here. It is my understanding that rail loads in a girder type structure has it's load equally distributed over all girders across the deck. I didn't check out what Opis did prior to Version 5.2 – but in checking the updated BRASS dll provided for 5.2 and in 5.3 beta 5 I see that the total rail loading is being applied to the exterior girders and no load is being distributed to the interior girders.

To check this I used Training Bridge1 which has a barrier rail weighting .505 K/ft over a 161 foot span. Looking at DL reactions at the abutment #1 of this simple span.  
G1 – Sh/As 40.67 Kip Sh/Be 20.33 Kip  
G2 – Sh/As zero kip Sh/Be 20.33 Kip  
G3 - Sh/As zero kip Sh/Be 20.33 Kip  
G1 – Sh/As 40.67 Kip Sh/Be 20.33 Kip

FROM:dteal DATE:Monday, March 14, 2005 10:39:34 AM  
Let me clarify what I believe to be correct about rail load distribution  
Non-Composite – load carried 100% by exterior girder  
Composite – load carried equally by all girders across the deck

TrainingBridge1 Is a composite structure

FROM:dteal DATE:Monday, March 14, 2005 11:00:01 AM  
To make things even more interesting, in TrainingBridge1, the rail load (DC1) that is applied to G1 is listed as 100% non-composite load with no loading being applied to the composite section. This example bridge has the connector ID on the shear connectors tab of the deck profile GUI set to "Composite"

When checking a welded plate with studs, the loads got applied properly.

Issue ID: 5777  
Subject: BWS Report shows "1" instead of data

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: English, Kent 1/11/2005 5:50:43 PM  
Modified By: administrator 6/19/2008 4:14:33 PM  
Priority: High  
Category: Bug - GUI 2



## Complete Issue Information

### History

| Primary Contact   | Status   | Priority | Category    |
|-------------------|----------|----------|-------------|
| Duray, Jim        | New      | High     | Bug         |
| Kennelly, Krishna | Assigned |          | Bug - GUI 2 |
| Lee, Herman       | Resolved |          |             |
| Lee, Herman       | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name        | Company                          | Email 1                | Phone 1      |
|-------------|----------------------------------|------------------------|--------------|
| Greg Hutter | Om P. Popli, P.E.,<br>L.S., P.C. | ghutter@popligroup.com | 585-388-2060 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2216460.bbd         |             |

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 5816.13529 | Resolved      | Live load distribution factor |

### Description

FROM:jihnat DATE:1/11/2005 12:48:35 PM  
email from Amy Gott, Abate Associates:

In the main description screen, I input all the information (location, feature carried and feature crossed, year built, etc....). In the BWS Report, these fields always showed up, but with this new version, all the fields are "1".

FROM:jihnat DATE:1/11/2005 3:09:16 PM  
This is reproducible with our sample bridges.

FROM:hlee DATE:2/8/2005 3:09:04 PM  
I'm not able to reproduce with the mentioned attributes (Location, Feature Carried, Feature Intersected, and Year Built).

Administrative Area, County, District, Functional Class, National Highway System, and Owner/Maintainer are defined in Configuration Browser's Parameters window. Report Tool reports the ID of the parameter selected. It has been like this since the first release of Report Tool. This should be

4/19/2016 3:18:23 PM

HRS AASHTO

1789

**Complete Issue Information**

an enhancement if we modify Report Tool or add domain functions to report the description of ID. ID is unique but not Description. It will be nice to have both in the Report Tool.

FROM:hlee DATE:2/9/2005 1:41:29 PM

I'm able to reproduce with the old BWS Report, not the BWS Report in the Report Tool.

Resolved in 5.3 and 5.2 Service Pack if there is one.

|                                        |
|----------------------------------------|
| Issue ID: 5816                         |
| Subject: Live load distribution factor |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Hutter, Greg     | 1/14/2005 6:44:40 PM |
| Modified By: administrator     | 6/19/2008 4:14:31 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:ghutter DATE:Friday, January 14, 2005 1:44:40 PM

I have a question about the live load distribution factor for thru girders in a girder-floorbeam-stringer bridge.

The bridge I am working on has a travelway of 18 ft, so according to MCEB there should be two equal design lanes of 9 ft each. Virtis calculates a single-lane factor of 1.364 which I agree with. This is computed by placing the truck wheel 2 ft from the edge of the travel way.

Virtis calculates a multi-lane factor of 1.409 which I do not agree with. I compute a factor of 2.000. This

4/19/2016 3:18:23 PM

HRS AASHTO

1790

**Complete Issue Information**

is computed by centering the two trucks in the design lanes. The wheel is 1.5 ft from the edge of the travelway.

Through some checking I think Virtis may also be placing the trucks in the same location but is calculating the single-lane factor. The 1.409 factor is the factor I calculated with one truck centered in its' design lane.

I will attach the bbd file.

Thank you,  
Greg Hutter

FROM:hlee DATE:1/25/2005 3:59:41 PM

There's a logical error for placing multiple trucks in a bay for left and right exterior girders. It is not MCEB dependent.

Resolved for 5.2 service pack and 6.0.

FROM:hlee DATE:3/2/2005 10:27:32 AM

Detailed explanation of the incident:

When calculating multi-lanes distribution factor for left (or right) exterior girder, Virtis checks to see how many trucks can fit in the travelway. The checking assumes the distance from the right wheel of a truck to the left wheel of another truck is equal to the gage. This is not true when the width of the lane in the exterior bay is between 20 ft and 24 ft for Standard Spec and between 18 ft and 20 ft for MCEB. This mistake causes the second truck to be thrown out and not used in the simple beam factor calculation.

|                                      |
|--------------------------------------|
| Issue ID: 5819                       |
| Subject: Brass stops during analysis |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Triezenberg, Jeff  | 1/17/2005 2:19:30 PM |
| Modified By: administrator       | 6/19/2008 4:14:31 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

4/19/2016 3:18:23 PM

HRS AASHTO

1791

**Complete Issue Information**

|                 |          |      |             |
|-----------------|----------|------|-------------|
| Goodrich, Brian | Resolved | High | Bug - BRASS |
|-----------------|----------|------|-------------|

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 5827.13518 | Closed        | Spec Check 6.10.4.2.2 |

**Description**

FROM:jtriezenberg DATE:Monday, January 17, 2005 9:19:30 AM

I have 2 bridges with the same problem. When I run the analysis, the program stops or freezes when it is calculating the rating factors. I don't know if I'm inputing something incorrectly, but the validation doesn't show any unusual warnings or errors. Please take a look at it

-JT

FROM:kkennelly DATE:1/17/2005 1:10:07 PM

I also see the BRASS dialog pause for an extended time when computing the rating factors. BRASS does run to completion but it seems to take a very long pause.

(I did not investigate the data to determine if the input is causing this and Jeff did not indicate if he is getting results different from what he expects.)

FROM:bgoodrich DATE:Thursday, January 20, 2005 3:31:29 PM

I may have found one input error. In the generic appurtenance named "Bridge Railing Classic" has a barrier load of 429.6 kips/ft. Should this be 0.4296 kips/ft? Even after changing this load, BRASS still takes a good deal of time to complete the analysis. The inventory rating for truck 1 is zero as well. This does warrant further investigation. Therefore, I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:jtriezenberg DATE:Monday, January 24, 2005 7:36:36 AM

When I run the B03 file, it takes about 35 min. on my 500 MHz Pentium. After changing the barrier load to 0.4296 kips/ft, my operating rating factor for an HS 20-44 truck is 1.902 (Axle load). However the inventory rating factor for an axle load is 0.0. I do get a lane load inventory factor of 1.414, but I was wondering if you had any ideas about why there is no axle load inventory rating factor.

-JT

4/19/2016 3:18:23 PM

HRS AASHTO

1792

**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, February 09, 2005 11:02:38 AM  
WYDOT assigned this issue to BRASS Problem Log 564. I suspect there is a problem with calculating the moment capacity in BRASS. WYDOT recently authorized work on this issue, so I will be investigating this issue sometime in February.

FROM:bgoodrich DATE:Tuesday, February 22, 2005 5:55:11 PM  
Incident 5881 is exhibiting the same problem with the moment capacity.

FROM:bgoodrich DATE:Monday, March 14, 2005 3:29:14 PM  
I investigated the issue and found that BRASS is not obtaining a valid moment capacity for negative bending. Part of this problem was due to a bug in the BRASS engine. The other part is due to the lack of deck reinforcement over the second span. I extended the rebar range over the BRASS 2/10 point of span 2, i.e., by another 0.05 meters. BRASS was trying to calculate a negative bending moment capacity for various points in span 2, but there was no deck rebar present. All the prestressing strands are located in the bottom of the beam, so no capacity could be determined. The engine is fixed for Virtis version 5.3.1.

Also, WYDOT did not authorize any work to speed up the analysis.

|                                |
|--------------------------------|
| Issue ID: 5827                 |
| Subject: Spec Check 6.10.4.2.2 |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 1/19/2005 12:40:25 PM |
| Modified By: administrator       | 6/19/2008 4:14:30 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 5828.13517 | Closed        | Viewing rating factors of points of interest in Virtis |

**Description**

FROM:dteal DATE:Wednesday, January 19, 2005 7:40:25 AM  
For: Michael ingalls

Specification Check 6.10.4.2.2 limits the compressive stress in the web to the minimum of an equation or the yield strength of the web. The calculations do not limit the allowable stress to the yield strength of the web. So, you can have, say, an allowable stress of 737.088 MPa and a Design Ratio of 21.715. If your compressive stress happens to be 350 MPa this could lead to problems. The Design Ratio would still be greater than one and the code check would still pass, but you would have yielding in the web.

FROM:bgoodrich DATE:Thursday, January 27, 2005 4:37:20 PM  
AASHTO LRFD Article 6.10.4.2.2 applies only to the flange stresses. The flange resistances (0.8\*Rh\*Fyf or 0.95\*Rh\*Fyf) include the hybrid factor, which addresses the condition of early yielding in the web. The specification is permitting yielding in portions of the web.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 5828                                                  |
| Subject: Viewing rating factors of points of interest in Virtis |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Hutter, Greg       | 1/19/2005 9:22:24 PM |
| Modified By: administrator       | 6/19/2008 4:14:30 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Resolved |          | Bug      |
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Revised109283B.bbd<br>109283B.bbd |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 5834.13511 | Resolved      | Problem assigning stringer group definition to floor system geometry |

### Description

FROM:ghutter DATE:Wednesday, January 19, 2005 4:22:26 PM

I am performing a load rating for a client who is requesting that we report ratings for not only the critical points of the beams but also for specific points of interest. I have an example that shows print-outs from the View Analysis Report window of specific points of interest. I am unable to produce this report. I can not find anywhere in Virtis where it allows me to choose what ratings are reported.

I believe all of this information is reported in the BRASS output but I would like to produce the same report as is in the example. How do I choose what points Virtis will report ratings for?

Thank you,  
Greg Hutter

FROM:jduray DATE:1/20/2005 12:10:01 PM

Virtis reports the critical rating. You have to look at the BRASS output file to view the ratings at other locations.

FROM:ghutter DATE:Monday, January 24, 2005 8:37:42 AM

That's what I thought until I saw the example I have in front of me. The print outs are from the View Analysis Report and are of non-critical ratings. They have many points of interest printed out.

FROM:bgoodrich DATE:Tuesday, March 08, 2005 11:11:49 AM

4/19/2016 3:18:24 PM

HRS AASHTO

1795

## Complete Issue Information

This issue appears to be resolved. Incident closed.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 5834                                                                |
| Subject: Problem assigning stringer group definition to floor system geometry |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 1/21/2005 8:47:45 PM |
| Modified By: administrator        | 6/19/2008 4:14:30 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:kkennelly DATE:1/21/2005 3:45:57 PM  
Email from Glen Mullings via Bridgeware:

Attached is the ".BBD" file for a bridge that I am performing a load rating analysis on. The bridge is of the Deck Girder / Floorbeam / Stringer configuration on a 9 degree skew, and I having a problem with modeling the superstructure framing system.

Whenever I input the end stringer unit, I get an error message regarding the location of the floorbeams. Is this due to the significant figures (round-off error) in the unit spacing, or is it a more complicated problem? I am currently working with six significant figures.

Thank you for your assistance.  
Glen A. Mullings  
Design Engineer  
Prudent Engineering, LLP  
591 Main Street, Suite 205

4/19/2016 3:18:24 PM

HRS AASHTO

1796



**Complete Issue Information**

East Aurora, NY 14052  
Tel: (716) 652 - 2080  
Fax: (716) 652 - 2099  
Email: gmullings@prudenteng.com  
website: www.prudenteng.com

Email reply from Mehrdad:

Glen,

I investigated the problem that you reported. But I haven't been able to find the source of the problem. However I was able to create a similar Super Structure Definition and I was able to assign all of the Stringer Group Definitions in the Floor System Geometry window for my example. I am going to ask one of my colleagues to investigate this further.

Regards,  
Mehrdad Ordoobadi

FROM:kkennelly DATE:1/21/2005 3:49:55 PM  
reply sent:

Hi Glen,

Mehrdad asked me to look into the problem you are having with this bridge. It appears that some of the geometry stored in the database for this structure is slightly off causing you to be unable to assign a Stringer Group Definition to the end unit. This was probably caused by precision problems with the Floorbeam Member Locations window in Version 5.1. (These precision problems were fixed in Version 5.2.)

I have been unable to find a way to fix your data using the Virtis user interface so I have manually changed the location of your end floorbeam that is stored in the database. (It was a very slight change that should fix your precision problem.) I have attached a bbd file containing this corrected version of your bridge. Please review the bridge after you import it.

Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

Issue ID: 5870  
Subject: XML Generates Non-Standard Syntax

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Teal, Dean 1/25/2005 7:32:48 PM  
Modified By: administrator 6/19/2008 4:14:27 PM

4/19/2016 3:18:25 PM

HRS AASHTO

1797

## Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

## Contacts

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 5878.13467 | Resolved      | camber dead load |

## Description

FROM:dteal DATE:Tuesday, January 25, 2005 2:32:48 PM  
For Eric Anderson:

The XML output file Virtis/Opis 5.2.0 generates is not following standard syntax in its reference to its buddy xsl file.

As copied per MSDN documentation [http://msdn.microsoft.com/library/default.asp?url=/library/en-us/xmlsdk/html/xslt\\_hdi\\_reference\\_data\\_values.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/xmlsdk/html/xslt_hdi_reference_data_values.asp)  
To specify the XSLT file to use with the XML file

In your HTML or text editor, open the Sales.xml file (if not already opened).  
Locate the following code:

```
<?xml version="1.0"?>
```

After this line, add the following code:

```
<?xml-stylesheet type="text/xsl" href="transform.xsl"?>
```

-----  
The syntax of vertis/opis output for the 2nd line of the xml file is using a colon instead of a dash.I.E.:<?

4/19/2016 3:18:25 PM

HRS AASHTO

1798

**Complete Issue Information**

xml:stylesheet type="text/xsl" href="LRFDRReport.xml" ?>  
Internet explorer doesn't seem to care about using a colon instead of a dash but when programming with the .NET framework and using the XmlTextReader class it throws an error.

A pop-up box called "PreCollect" has the following message:  
'xml:stylesheet' is an invalid name for processing instruction. Line 2,position 3.

If I manually modify the xml file by substituting line 2 with...<?xml-stylesheet type="text/xsl" href="LRFDRReport.xml" ?>the .NET XmlTextReader is happy.

FROM:hlee DATE:1/25/2005 3:22:01 PM  
We should change that to xml-stylesheet. W3C specifies the use of a dash instead of a colon (<http://www.w3.org/TR/xml-stylesheet/>).

FROM:jduray DATE:Tuesday, January 25, 2005 4:54:19 PM

FROM:hlee DATE:1/26/2005 10:22:48 AM  
Resolved for 5.2 service pack and 6.0.

FROM:dteal DATE:Tuesday, December 06, 2005 2:34:11 PM

|                           |
|---------------------------|
| Issue ID: 5878            |
| Subject: camber dead load |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Triezenberg, Jeff   | 1/26/2005 7:46:39 PM |
| Modified By: administrator        | 6/19/2008 4:14:27 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 5881.13464 | Duplicate     | Prestressed girder moment capacity |

### Description

FROM:jtriezenberg DATE:Wednesday, January 26, 2005 2:46:40 PM

Does Virtis add dead load to cambered beams to account for the extra concrete that would be necessary to make the deck flat?

FROM:kkennelly DATE:3/7/2005 2:49:30 PM

Virtis does not add any dead load to the bridge description that you enter.

Issue ID: 5881

Subject: Prestressed girder moment capacity

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Kennelly, Krisha

1/27/2005 12:43:23 PM

Modified By: administrator

6/19/2008 4:14:27 PM

Priority: High

4/19/2016 3:18:25 PM

HRS AASHTO

1800

**Complete Issue Information**

Category: Unknown

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 5904.13441 | Suspended     | Vary web thickness in schedule based rc |

**Description**

FROM:kkennelly DATE:1/27/2005 7:42:30 AM  
Submitted on behalf of Francis Karyadi via email:

Currently I am rating a 4-span-continuous prestressed deck beam- (under SDL and LL). You can view the "Framing Plan Detail" and the "Structure Typ. Section" of the bridge under THE APPROACH SPANS (8 THRU 11).

When I ran the "BM 4 (TYPE A)", and checked the output (H20 truck), I noticed that the Moment Capacity at the controlling points were 36.14 ft-kips (for Inventory), and 0.0 ft-kips (for Operating). I attached also the cut and paste output (see the Word.doc attachment) at that location.

I found the results are a little bit odd, since usually the RF (Operating) is 1.67 x the RF (Inventory). I checked my input several times but could not find what I have missed or done wrong. Your help is greatly appreciated.

Thank you...

<<S-24-030(15B).bbd>>

<<Performing Rating Factor Calculations.doc>>

Sincerely

Francisca Karyadi  
Edwards and Kelcey

4/19/2016 3:18:25 PM

HRS AASHTO

1801

**Complete Issue Information**

343 Congress Street  
Boston, MA 02210  
Ph. 617.532.4254

FROM:gstefano DATE:Tuesday, February 01, 2005 10:17:36 AM

FROM:bgoodrich DATE:Tuesday, February 22, 2005 5:54:03 PM  
This issue is a duplicate to Incident 5819. See that incident for details.

|                                                  |
|--------------------------------------------------|
| Issue ID: 5904                                   |
| Subject: Vary web thickness in schedule based rc |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center                                                       |
| Primary Contact: Duray, Jim                                                          |
| Submitted By: vinayagamoorthy, vinacs                      2/1/2005 12:39:31 PM      |
| Modified By: administrator                                      6/19/2008 4:14:25 PM |
| Priority: High                                                                       |
| Category: Enhancement                                                                |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:2/1/2005 7:38:45 AM  
Submitted on behalf of Vinacs, Caltrans via email:

Our guys have done 3 span continuous tee-beam bridge rating and find the following items:

- 1. User cannot vary the thickness of web, if he chooses the scheduled based input. I am very much

4/19/2016 3:18:25 PM

**HRS AASHTO**

1802

**Complete Issue Information**

disappointed, we have several bridges with flared web.

2. In the section description, web depth is requested; Actually, here user is supposed to enter overall depth of the section--Somewhat confusing.

FROM:kkennelly DATE:2/1/2005 7:42:45 AM

FROM:jduray DATE:12/12/2007 4:27:46 PM

Robert Fulton says the Help needs to be changed for the schedule based rc web tab. Depth of web should be changed to depth of girder for both beginning and end.

|                                                      |
|------------------------------------------------------|
| Issue ID: 5905                                       |
| Subject: Schedule based rc - compute tributary width |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: vinayagamoorthy, vinacs | 2/1/2005 12:41:04 PM |
| Modified By: administrator            | 6/19/2008 4:14:25 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

## Complete Issue Information

### Contacts

| Name                   | Company  | Email 1                             | Phone 1      |
|------------------------|----------|-------------------------------------|--------------|
| vinacs vinayagamoorthy | Caltrans | Murugesu_Vinayagamoorthy@dot.ca.gov | 916-227-8657 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 5906.13439 | Discard       | Ability to copy points of interests to other mbr alts |

### Description

FROM:kkennelly DATE:2/1/2005 7:39:59 AM  
Submitted on behalf of Vinacs via email:

Our guys have done 3 span continuous tee-beam bridge rating and find the following items:

3. Tributary width, in the case of scheduled based input, should match the tributary width of section and therefore, I believe Virtis should estimate it automatically so the error will be minimized

Issue ID: 5906

Subject: Ability to copy points of interests to other mbr alts

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: vinayagamoorthy, vinacs 2/1/2005 12:46:11 PM

4/19/2016 3:18:26 PM

HRS AASHTO

1804



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:14:25 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 5935.13410 | Suspended     | Improve Wizard to Apply Different Stiffeners at Bearing Diaphragms |

### Description

FROM:kkennelly DATE:2/1/2005 7:44:26 AM  
Submitted on behalf of Vinacs, Caltrans via email:

We rate all of our bridges at every 10th points, however, when it comes to a point that falls at the support, we rate the bridge at the face of the support using demand at the face of the support. This is quite true when the structure is a framed structure.

Currently, it appears that we need to identify the face of the support as a point of interest in order to obtain rating. That is alright. However, we find it very difficult to deselect a point of interest already created in the default. When we select option 1, it rate the bridge at every 10th point, including the point over the support. We wish that this point could be deselected when there is a framed structure description is available.

We could minimize the work, if we could copy ALL the point of interest and paste them under another girder.

4/19/2016 3:18:26 PM

HRS AASHTO

1805

## Complete Issue Information

FROM:vvinayagamoorthy DATE:Tuesday, February 01, 2005 9:40:00 AM

I prefer to have an option where an option is introduced thereby Virtis automatically rates (for the moment) at the face of the support point when a point of interest falls at the support point. And rates for shear at a distance d from the support face. (BEST SOLUTION)

If this is too difficult, my next preference would be where user could deselect any 10th point, that is created in the BRASS option. This will eliminate unnecessary data entry. Image that a 4 span bridge with several girders and user has to enter point of interest for each member alternative at every 10th points--It would be 40 times number unique girders. If the deselect option is provided, it eliminate all of these entries.

Least favorite solution: Allow user to copy a batch of point of interest and paste to other member. This can be used only if girders have the same length;

FROM:hlee DATE:4/30/2008 2:34:43 PM  
Discarded by TAG 12/07.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 5935                                                              |
| Subject: Improve Wizard to Apply Different Stiffeners at Bearing Diaphragms |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/2/2005 3:04:56 PM  |
| Modified By: administrator     | 6/19/2008 4:14:23 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

4/19/2016 3:18:26 PM

HRS AASHTO

1806

**Complete Issue Information**

FROM:dteal DATE:Wednesday, February 02, 2005 10:04:56 AM

In the Trans. Stiffeners Ranges GUI we have a wizard to apply stiffeners at Diaphragms. When selected we have the options to apply "End Diaphragms and Diaphragms at Piers" and "Interior Diaphragms".

The interior diaphragms pulldown one is okay but in the Bearing stiffeners pulldown needs to be added to. We can only select one Bearing stiffener, this bearing stiffener will be added at both the abutments and the piers. It has been my experience that abutment and pier diaphragms are never the same. So the user has to select one or the other then go in and edit the Bearing Stiffeners Location window to get the correct one at abutments or piers for each unlinked member.

We should have 2 pulldowns, one for the abutment and one for the pier.

|                                              |
|----------------------------------------------|
| Issue ID: 5936                               |
| Subject: Rebar Count within Eff Flange Width |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/2/2005 3:06:32 PM  |
| Modified By: administrator     | 6/19/2008 4:14:23 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:26 PM

HRS AASHTO

1807

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Duray, Jim       | New      | High | Bug     |
| Kennelly, Krisha | Assigned |      |         |
| Duray, Jim       | New      | High | Unknown |
| Ihnat, Joseph    | Assigned |      | Bug     |
|                  | On Hold  |      |         |
|                  | Resolved |      |         |
| Ihnat, Joseph    | Resolved | High | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | (170)I465-117-8279.bbd |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 5943.13402 | Resolved      | Strand Layout window doesn't save data |

### Description

FROM:dteal DATE:Wednesday, February 02, 2005 10:06:32 AM

In the Deck Profile GUI for a steel girder system structure we have on the Deck Concrete tab the Compute button to calculate the Eff Flange width for LFD and LRFD. The values calculated may be different for each specification. When entering your rebar count on the next tab you enter the number of bars that are present within the effective width. Many times the effective width between the two specifications vary enough to account for a one bar different count.

When this happens, which count should be used, the larger or the smaller?

Should this be addressed in the help?

Should the reinforcement tab have another column to allow for more accurate input?

FROM:jduray DATE:2/2/2005 2:15:09 PM

I suppose we should add another column.

FROM:kkennelly DATE:2/8/2005 9:53:09 AM

Yes it would be more correct to have another column. Things we'll have to do to add this column:

1. Change db, dm, de, domain.
2. Change window
3. Change help
4. Change report tool
5. Change domain generation of cross sections for export
6. Change export

4/19/2016 3:18:27 PM

HRS AASHTO

1808

**Complete Issue Information**

- 7. Scripts to populate new column with old column's data for existing bridges?
- 8. Change all of the training examples to show the new column.

FROM:kkennelly DATE:Thursday, June 15, 2006 8:40:03 PM  
 This has been done in version 5.5. Change status to resolved.

FROM:dteal DATE:Monday, February 26, 2007 11:30:15 AM  
 Accepted

|                                                 |
|-------------------------------------------------|
| Issue ID: 5943                                  |
| Subject: Strand Layout window doesn't save data |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ilnat, Joseph |                      |
| Submitted By: Hart, Erich      | 2/2/2005 3:34:59 PM  |
| Modified By: administrator     | 6/19/2008 4:14:23 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:kkennelly DATE:2/2/2005 10:29:41 AM  
 Submitted on behalf of Ken Teng, RQAW via email:

Strand Layout window for SP Beam #2, span 3. Window opens with garbage numbers for harp point and radius. Try to enter 12.75 for harp point pick left end, can't pick any strands. Click symmetry check box and can then pick strands. Ok to close window, re-open, data was not saved.

FROM:jihnat DATE:2/2/2005 4:50:28 PM  
 I imported the BBD file but cannot reproduce the problem described.

4/19/2016 3:18:27 PM

HRS AASHTO

1809

## Complete Issue Information

FROM:jihnat DATE:4/6/2005 3:26:24 PM

"Garbage numbers" are probably same as 6210 and this is fixed in 5.3.0 Release.

Issue ID: 6003  
Subject: Spec Checker Filter

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 2/3/2005 8:31:21 PM  
Modified By: administrator 6/19/2008 4:20:31 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | On Hold  |          |          |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

4/19/2016 3:18:27 PM

HRS AASHTO

1810

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6025.15310 | Resolved      | Missing attributes in Report Tool. |

### Description

FROM:dteal DATE:Thursday, February 03, 2005 3:31:21 PM

With the current version (5.2) in the Spec. Checker filter – on the tab for Spec Articles I unselected all (clear all) – the window still gets filled with specification it checked. The specification numbers listed where not one of those that you can turn off?? These must have been new spec's added with the 3rd edition and the spec checker filter wasn't updated??

FROM:jihnat DATE:7/19/2005 10:26:47 AM

Fixed for 5.4.0

FROM:dteal DATE:Thursday, December 01, 2005 10:07:40 AM

Accepted in 5.4 beta 2

Issue ID: 6025

Subject: Missing attributes in Report Tool.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

2/8/2005 2:56:55 PM

Modified By: administrator

6/19/2008 4:20:29 PM

Priority: High

4/19/2016 3:18:27 PM

HRS AASHTO

1811

**Complete Issue Information**

Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 6026.15309 | Resolved      | XML tag names in Report Tool shouldn't start with Get_XXX. |

**Description**

FROM:hlee DATE:2/8/2005 9:12:29 AM

When strand layout description is "P and CGS only", Left harp pt. dist. (X1) and Right harp pt. dist. (X2) are not available to report.

FROM:hlee DATE:2/8/2005 1:46:13 PM

Resolved for 5.3 Development.



## Complete Issue Information

Issue ID: 6026  
Subject: XML tag names in Report Tool shouldn't start with Get\_XXX.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 2/8/2005 3:07:46 PM  
Modified By: administrator 6/19/2008 4:20:29 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:2/8/2005 9:57:01 AM

Get\_Harp\_Left\_End\_Row\_Position and Get\_Harp\_Left\_End\_Column\_Position.

FROM:hlee DATE:2/8/2005 1:39:46 PM

Resolved in 5.3 Development.

## Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 6030              |
| Subject: Single Lane Loaded |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 2/9/2005 2:30:26 PM  |
| Modified By: administrator     | 6/19/2008 4:20:29 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |
|                 | Closed |          |          |
| Duray, Jim      | Closed | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:18:28 PM

HRS AASHTO

1814

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 6031.15304 | Closed        | Advanced Option for Vehicle Properties |

### Description

FROM:dteal DATE:Wednesday, February 09, 2005 9:30:27 AM

We got the single lane loaded option added back to the LFRD analysis settings/vehicle properties – but it has never been added back to the LFD analysis settings/vehicle properties. Is there a reason for this?? This is needed for LFD rating of T-130 and T170 permit trucks.

FROM:dteal DATE:Wednesday, February 09, 2005 9:34:00 AM

Never Mind!! It's automatically in the rating results report.

Please close this incident.

|                                                 |
|-------------------------------------------------|
| Issue ID: 6031                                  |
| Subject: Advanced Option for Vehicle Properties |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/9/2005 3:56:09 PM  |
| Modified By: administrator     | 6/19/2008 4:20:29 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:18:29 PM

HRS AASHTO

1815

### Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph | Assigned  |      |             |
|               | Resolved  |      |             |
| Duray, Jim    | New       | High | Bug         |
| Lee, Herman   | Assigned  |      |             |
| Duray, Jim    |           |      |             |
| Lee, Herman   | On Hold   |      | Bug - GUI 2 |
|               | Suspended |      | Enhancement |
| Lee, Herman   | Suspended | High | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Missing Right Overhang.JPG |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6048.15287 | Suspended     | XML Missing Right Overhang |

### Description

FROM:dteal DATE:Wednesday, February 09, 2005 10:56:09 AM

In an Opis design review you may set in the advanced button of the vehicle properties to run a particular truck as single lane with reduced impact. Two problems exist.

1. After you do a design review you will find that the single lane loaded option you checked is no longer checked – if you need to make a second run, you will have to go back and reselect this option.
2. Sporadically, which means not every time, you have selected the single lane loaded option and changed the impact factor, after the run I looked at the BRASS LRFD data set card #5 (% of dynamic load allowance) and card #7 (lanes loaded) don't always follow what your input on the advanced vehicle properties window showed.

FROM:jihnat DATE:3/9/2005 1:34:10 PM

1) is fixed for version 5.3.0 (as of Beta Build 5)

2) I wasn't able to reproduce this, but it may have been caused by #1. Resubmit if this is still occurring.

FROM:jihnat DATE:3/15/2005 3:01:46 PM

Accepted (Track field) by dteal.

|                |
|----------------|
| Issue ID: 6048 |
|----------------|

4/19/2016 3:18:29 PM

HRS AASHTO

1816



**Complete Issue Information**

FROM:hlee DATE:2/15/2005 9:12:35 AM

Right overhang start and end are calculated values, which cannot be entered by user. Report Tool can be enhanced to output these calculated values.

FROM:jduray DATE:7/19/2006 4:45:44 PM

I don't know if this is a bug or enhancement. The database does not store the right overhang width so that is probably why the report tool does not report it. It can be handled as a special case in the report tool so that is why I think it is an enhancement.

|                                  |
|----------------------------------|
| Issue ID: 6049                   |
| Subject: Indentation of XML File |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 2/15/2005 12:26:53 PM |
| Modified By: administrator     | 6/19/2008 4:20:27 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, February 15, 2005 7:26:53 AM

From Eric Anderson:

Another small quirk. I appreciate the indentation in the xml file when viewing it in notepad it makes looking at the raw file more understandable. It looks like the child element

4/19/2016 3:18:30 PM

HRS AASHTO

1818

**Complete Issue Information**

"<Total\_Deck\_Thickness\_UNITS>" needs indented further to keep the children nodes all lined up.

Here is a section of the xml report I get that looks like the indent could be tweaked:

```
<Concrete_Deck_Gs>
  <Width_Left_Start>6.400</Width_Left_Start>
  <Width_Left_Start_UNITS>m</Width_Left_Start_UNITS>
  <Width_Left_End>6.400</Width_Left_End>
  <Width_Left_End_UNITS>m</Width_Left_End_UNITS>
  <Width_Right_Start>6.400</Width_Right_Start>
  <Width_Right_Start_UNITS>m</Width_Right_Start_UNITS>
  <Width_Right_End>6.400</Width_Right_End>
  <Width_Right_End_UNITS>m</Width_Right_End_UNITS>
  <Left_Overhang_Start>0.900</Left_Overhang_Start>
  <Left_Overhang_Start_UNITS>m</Left_Overhang_Start_UNITS>
  <Left_Overhang_End>0.900</Left_Overhang_End>
  <Left_Overhang_End_UNITS>m</Left_Overhang_End_UNITS>
  <Deck_Type>Concrete</Deck_Type>
  <Deck_Concrete_Name>Grade 30 (AE)(SW)</Deck_Concrete_Name>
  <Total_Deck_Thickness>220.0</Total_Deck_Thickness>
<Total_Deck_Thickness_UNITS>mm</Total_Deck_Thickness_UNITS>
  <Deck_Crack_Control_Parameter_Z></Deck_Crack_Control_Parameter_Z>
  <Deck_Crack_Control_Parameter_Z_UNITS>N/mm</Deck_Crack_Control_Parameter_Z_UNITS>
  <Modular_Ratio_Sustained_Factor>2.000</Modular_Ratio_Sustained_Factor>
  <Modular_Ratio_Sustained_Factor_UNITS> </Modular_Ratio_Sustained_Factor_UNITS>
</Concrete_Deck_Gs>
```

FROM:hlee DATE:2/15/2005 8:46:59 AM  
Also fixed <Total\_Deck\_Thickness\_UNITS> tag in floor system.  
Resolved in 5.3 or 5.2 service pack if there is one.

FROM:dteal DATE:Tuesday, December 06, 2005 2:32:43 PM

Issue ID: 6050  
Subject: Single Lane Loaded Option Revisited

Folder: /Virtis/Support Center  
Primary Contact: lhnat, Joseph  
Submitted By: Teal, Dean 2/15/2005 1:04:00 PM  
Modified By: administrator 6/19/2008 4:20:27 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:30 PM

HRS AASHTO

1819

### Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
| Duray, Jim      | New      | High | Bug         |
|                 | On Hold  |      |             |
| Duray, Jim      | New      | High | Bug         |
| Goodrich, Brian | Assigned |      | Bug - BRASS |
|                 | Resolved |      |             |
|                 | Accepted |      |             |
|                 | Closed   |      |             |
| Goodrich, Brian | Closed   | High | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Rolled Beam Error 061-105.bbd |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6052.15283 | Closed        | Structural Analysis Error in Opis and not Virtis |

### Description

FROM:dteal DATE:Tuesday, February 15, 2005 8:04:01 AM

As we all know the single lane loaded option was removed from the advanced tab of the analysis settings. The single lane rating value could then be found by selecting the "Detail" radio button in the Results window in Virtis and Opis was left with no option for single lane loaded.

After much lobbying the single lane option got added back into Opis in 5.1.1 or 5.2 or something like that.

You need to re-think the decision for removing the single lane loaded option in Virtis.

First off:

When you view the Results Window after a rating the last column in the report has the heading "Lane". The values in the column will always be "as requested". There is no way to REQUEST anything other than multi lane, so why doesn't it say "Multi Lane" then?

Second and most importantly:

In order to view results for single lane you have to select the detail button. We run ratings for several trucks at one time – 8 trucks every time a rating is performed – most of these trucks are multi lane but at least 2 of them are permit vehicles which are to be evaluated for single lane. The only way I know of to extract these single lane values is to select the "Detail" button and get 4 printed pages of output with each truck populating 5 lines in the report. You have to search these pages to find the correct single

4/19/2016 3:18:30 PM

HRS AASHTO

1820



## Complete Issue Information

lane value with the correct impact applied – time consuming work!

It would very prudent and usable to be able to print out a rating results that are actually “as requested”. The single lane loaded option needs to be restored to it’s original function.

FROM:dteal DATE:Tuesday, February 15, 2005 8:14:47 AM

And to add insult to injury – when you print out this “detailed” report, in order to get your inventory and operating factors (columns 6 & 7) that correspond with correct impact and lanes loaded (columns 14 & 15) you have to print out your report in landscape, lay one page over the other to line up the rows and in many cases use a straight edge to keep you on the correct line, then read across the columns. Viewing them on the screen is an option- BUT – like many agencies the bridge hard copy file requires this paper copy to be present.

FROM:dkoenig DATE:Thursday, February 24, 2005 1:28:29 PM

I would generally agree with Dean's comments. However, I would still want the option to be able to view the detailed results. Maybe it can be changed so that you can specify a lane to do what Dean wants or leave it blank to do it as it currently does.

FROM:dteal DATE:Wednesday, March 29, 2006 2:53:40 PM

This has been on hold for a long time??

Back in Aug '05 the TF discussed this - Agenda Item VO-03 - what was the outcome?

FROM:hlee DATE:1/25/2007 9:21:22 AM

This enhancement involves the following:

1. Add "Single Lane Loaded" option back to the Vehicle Properties window in Virtis.
2. Update BRASS, Madero, Virtis Std, Truss exports to check for this option.
3. Update Help.

Item 1, 2 (except Truss export), and 3 are done.

FROM:gbhanushali DATE:3/13/2007 3:02:36 PM

FROM:hlee DATE:5/16/2007 2:51:17 PM

Item 2 (Truss export) is done. Resolved for 5.6 Release.

FROM:xli DATE:6/14/2007 11:31:09 AM

Tested fine with Beta 3.

FROM:dteal DATE:Tuesday, June 19, 2007 3:31:20 PM

5.6 Beta 3

I am not able to find the Single Lane Loaded option after selecting the advanced button for the Virtis vehicle properties. It is mentioned in the help but not displayed in the GUI??

Where we sent a different version than the one tested above?

FROM:hlee DATE:6/20/2007 2:32:45 PM

The version tested above is the same version you received.

Have you uninstall Beta 2 before installing Beta 3?

4/19/2016 3:18:30 PM

HRS AASHTO

1821

## Complete Issue Information

FROM:dteal DATE:Wednesday, June 20, 2007 4:53:55 PM  
Yes I did

FROM:dteal DATE:Thursday, June 21, 2007 8:46:56 AM  
It's been so long since we had a Single lane loaded button for rating – maybe I don't know where it should be or how to get there?? Can you direct me?

FROM:hlee DATE:6/21/2007 9:14:10 AM  
The Single Lane Loaded option is located in the same window as the one you tested for Incident 5449. It's in the Advanced Vehicle Properties window (see attached VehicleProperties.bmp file).

If you couldn't find the Single Lane Loaded option in that window, it must be related to multiple Virtis/Opis installations in your machine. Please follow the instructions below to delete the grid settings for that window.

1. Select Run... in the Windows Start Menu.
2. Type in "Regedit" and click OK to open the Registry Editor.
3. Delete both Grid0 and Grid3 as shown in the attached Regedit.bmp file.

FROM:dteal DATE:Thursday, June 21, 2007 4:23:38 PM  
Question: Does this mean that I can't have multiple versions (beta and a production) and/or Opsi sub living on the same drive??

FROM:hlee DATE:6/22/2007 10:52:23 AM  
We don't support multiple versions installed in the same machine. Although switching version can be done by re-registering Virtis/Opis libraries, the registry settings is for each product (Virtis, Opis, Virtis/Opis, ...).

FROM:dteal DATE:Friday, June 22, 2007 12:08:40 PM  
Yes - I am aware of that.  
What I meant was, even with re-reigistering the product before using it - will the user have to jump through these hoops to get the single lane loaded column available?

FROM:hlee DATE:6/22/2007 12:24:54 PM  
No, user doesn't need to manually cleanup the registry. The uninstall process will cleanup Virtis/Opis registry settings.

FROM:dteal DATE:Friday, June 22, 2007 1:32:24 PM  
Accepted in 5.6 beta 3

FROM:dteal DATE:Monday, November 19, 2007 9:23:43 AM  
Did anybody else run into what I have described below??

Single Lane loaded  
Reference VI #6050, I have marked as Re-Open

As you can see – there is no Single Lane loaded column

4/19/2016 3:18:30 PM

HRS AASHTO

1822

## Complete Issue Information

(See attached Word File, Office 2007)

I reviewed VI #6050

This incident stated that being my button wasn't there in 5.6 beta3 – it must be because I have multiple versions of the software loaded. To resolve this I must go in and edit the registry

This is what Herman told me to do back then:

If you couldn't find the Single Lane Loaded option in that window, it must be related to multiple Virtis/Opis installations in your machine. Please follow the instructions below to delete the grid settings for that window.

1. Select Run... in the Windows Start Menu.
2. Type in "Regedit" and click OK to open the Registry Editor.
3. Delete both Grid0 and Grid3 as shown in the attached Regedit.bmp file.

I was assured that user would never have to do this.

Well, wrong!!

My production pc doesn't have multiple versions – each version upgrade was preceded by an uninstall, just like all the rank and file users. In fact I loaded this on my test pc which has multiple versions including Opis Substructure and the single lane loaded column was visible. So this doesn't follow the rule of multiple versions??

So to fix the problem for our now Production database, I had to run Regedit like described above. Grid0 was deleted, Grid3 was not present. I did this and restarted my pc. The single lane loaded button is now available BUT -

On two of my Vehicle Properties Templates – each one containing 8 trucks – all were all set to single lane loaded (every one of them) –

This for Girder Bridges: (See attached Word File, Office 2007)

This is for Slab Bridges: (See attached Word File, Office 2007)

Now notice that the template for slab bridges has LRFR columns?? In the Analysis setting, my templates used the LFD Rating Method. My Girder Bridges template retained this rating method but my Slab Bridges template got changed to the Member Alt. rating method – I have no idea why??

So in a nut shell, I had to go modify my templates to correct all these things got changed.

Now for the real question – being I have 2 pc's, I had to edit the registry on one and not the other – how many out there need to have this adjustment done to them?? I'm at 50% just checking my pc's.

FROM:dteal DATE:Monday, November 19, 2007 9:29:43 AM

FROM:jihnat DATE:11/21/2007 8:53:52 AM

The program should have ensured that the Single Lane column was visible instead of relying on the Uninstall to remove the Settings. I've fixed this for the next version. I've broken out the other two issues into separate incidents (8286, 8287).

FROM:hlee DATE:1/29/2008 12:43:54 PM

It will be beneficial to users if we can find out why Uninstall works on some pc but not others.

4/19/2016 3:18:30 PM

HRS AASHTO

1823

**Complete Issue Information**

FROM:dteal DATE:Tuesday, June 17, 2008 12:07:11 PM  
What beta version should this be tested with??

FROM:jihnata DATE:6/18/2008 1:24:10 PM  
Please test in the most recent (Beta 4) if not already tested.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6052                                            |
| Subject: Structural Analysis Error in Opis and not Virtis |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/15/2005 7:45:42 PM |
| Modified By: administrator       | 6/19/2008 4:20:27 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, February 15, 2005 2:45:44 PM  
I have gotten this error on more than one welded plate structure during an Opis run. It runs to completion in Virtis. I am looking at girder line #2. I don't understand the message ??? .bbd is attached

File: C:\Program Files\AASHTOWARE\VirtisOpis52\061-105\S\_B\_\_I-35\_over\_223rd\_Street\Member\_2 Wizard\_Alternative\BRASS\_LRFDWizard\_Alternative.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program Files\AASHTOWARE\VirtisOpis52\061-105\S\_B\_\_I-35\_over\_223rd\_Street\Member\_2

4/19/2016 3:18:30 PM

HRS AASHTO

1824

## Complete Issue Information

\\Wizard\_Alternative\BRASS\_LRFD\Wizard\_Alternative.DAT

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File

\*\* ERROR: The length of the element in span 4 with left end at 0.0000 (in,mm)  
from the left end of the span, is less than 30.5308 (in,mm) in length.  
Numerical instability may result. See manual.

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File

One or more elements are too small. See detailed error messages above.

----- End of Contents of BRASS Error File -----

FROM:dteal DATE:Tuesday, February 15, 2005 2:54:07 PM  
Correctin - not wleded plate - errors on rolled beam structures

FROM:dteal DATE:Thursday, February 17, 2005 7:18:25 AM  
I think we need a spell checker in VI!

FROM:bgoodrich DATE:Tuesday, March 08, 2005 12:38:05 PM  
There is a 1 mm element at the beginning of span 4, which came from the bracing schedules. This node should have been "merged" with the node at the left end of the span, but for some reason, it was not. Therefore, there is a bug in the BRASS-GIRDER(LRFD) engine that must be fixed. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Tuesday, March 08, 2005 1:19:47 PM  
WYDOT assigned this issue to BRASS Problem Log 586.

FROM:bgoodrich DATE:Tuesday, March 08, 2005 1:44:34 PM  
BRASS-GIRDER(LRFD) 1.6.1 has been revised to address this issue. Fixed for Opis 5.3 Service Pack 1.

FROM:dteal DATE:Tuesday, June 28, 2005 8:08:15 AM  
Accepted

FROM:bgoodrich DATE:Monday, July 11, 2005 9:21:31 AM  
Closed.

Issue ID: 6053

Subject: Report Tool Returning ID Number and not the Name

4/19/2016 3:18:31 PM

HRS AASHTO

1825



## Complete Issue Information

FROM:hlee DATE:3/7/2005 11:18:08 AM  
Should Bridge Explorer also display the name of the corresponding parameter id?

FROM:hlee DATE:7/19/2006 10:13:50 AM  
Changed Category to Enhancement.

FROM:dteal DATE:Wednesday, November 07, 2007 12:20:52 PM

|                               |
|-------------------------------|
| Issue ID: 6166                |
| Subject: Virtis error message |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Murgoitio, Shanon   | 3/16/2005 4:29:58 PM |
| Modified By: administrator        | 6/19/2008 4:20:18 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jihnat DATE:3/16/2005 12:28:23 PM  
>>> "Steve Mample" <Steve.Mample@itd.idaho.gov> 03/15/05 3:26 PM >>>  
I am working on a continuous three span reinforced concrete tee beam girder bridge. I am getting the following error message, "ERROR: Reinforcement profile Set 28 not on member alternative."

The distance from support 2 to support 3 is 50.00'.

4/19/2016 3:18:31 PM

HRS AASHTO

1827

### Complete Issue Information

Start distance of Set 28 from support 2 is Right 49.75'.  
Set 28 length is 12.5'.  
Therefore the distance from support 3 to the Right end of Set 28 is 12.25'. The distance from support 3 to support 4 is 12.5'.

How can there be any error, there is 3" from the Right end of Set 28 to support 4?

The beam is symmetrical. I was able to input the mirror image of the reinforcement Set 28 without error.

Span 1 & 3 are cantilevered. There is a massive end wall (diaphragm) at the abutment ends of spans 1 & 3. When I input a dummy Set 28 that the program will accept, and rate the bridge. The results show that rating trucks inv. and opr. capacity is zero Tons for shear analysis at support 4. Shear failure at the support is not physically possible. Support 1 & 4 are at the ends of the spans. Changing the location of support 4 may solve the problem. There is probably a way to adjust the location of the supports without changing the length of the girder but I can not remember how to do it.

FROM:kkennelly DATE:3/17/2005 8:39:44 AM  
Please attach a bbd file of your bridge

FROM:kkennelly DATE:3/17/2005 10:55:46 AM  
Email received from Steve:  
Hello, Krisha.

I bypassed the problem. The re-bar set that caused the problem was longitudinal steel of the reinforced concrete girders in the negative moment area at the fixed supports 2 & 3. There is a right hand pair and a left hand pair of the re-bar set at the supports 2 & 3. Each pair has a horizontal straight section 12.5' long, and one end bent down to reach the bottom of the girder. The straight section of each pair overlaps 6" at the centerline of bearing. I substituted a single straight re-bar set for the pair, that was centered on the support centerline.

Since I have changed the file, I would have to rebuild it to send you a copy. Is this problem something that is important enough for you to spend your time on? If so, I will send the file.

FROM:kkennelly DATE:3/17/2005 10:56:15 AM  
Email sent back to Steve:

If you are satisfied with the work around you found you do not have to rebuild the bridge and send it to me. Your problem was entered as incident 6166 on the Virtis/Opis technical support website. I will mark that incident as resolved. Please let me know if you need any additional help.

Issue ID: 6190

Subject: Convert four 5.1 bbd files to 5.2.



**Complete Issue Information**

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Lee, Herman                    |
| Submitted By: Lee, Herman 3/22/2005 2:49:29 PM  |
| Modified By: administrator 6/19/2008 4:20:17 PM |
| Priority: High                                  |
| Category: N/A                                   |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 6196.15139 | Resolved      | Bridge Alternative - change sign of Distance and Offset |

**Description**

FROM:hlee DATE:3/22/2005 10:38:43 AM  
 Rob McIntosh, Colorado DOT  
 Needed help converting four 5.1 bbd files to 5.2.

## Complete Issue Information

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 6196                                                   |
| Subject: Bridge Alternative - change sign of Distance and Offset |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Kennelly, Krisha    | 3/23/2005 12:57:24 PM |
| Modified By: administrator        | 6/19/2008 4:20:16 PM  |
| Priority: High                    |                       |
| Category: Unknown                 |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:3/23/2005 8:50:18 AM

Help for Bridge Alt Distance and Offset states that bridge alt distance to left of global ref point is positive and offset to left of global ref point is positive. This is opposite from standard nomenclature and what we do with the superstructure ref line positioning.

1. Change Bridge Alt help diagram so that signs for distance/offset match the superstructure ref line positioning.

4/19/2016 3:18:32 PM

HRS AASHTO

1830

**Complete Issue Information**

2. Change BridgeAlt SetReferenceLinePosition to consider distance/offset to left of global ref point as negative values instead of positive values.

3. Release notes have to tell user that we have changed the sign for the distance/offset in the Bridge Alt window so they are aware of change if they don't look at the BridgeAlt help topic.

FROM:kkennelly DATE:3/23/2005 8:57:23 AM

FROM:kkennelly DATE:3/24/2005 2:24:00 PM

Issue ID: 6201  
Subject: BRASS LRFD Error Generating Distribution Factor

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 3/23/2005 2:49:33 PM  
Modified By: administrator 6/19/2008 4:20:16 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact  | Status           | Priority | Category    |
|------------------|------------------|----------|-------------|
| Duray, Jim       | New              | High     | Bug         |
| Goodrich, Brian  | Assigned         |          |             |
| Kennelly, Krisha | Not Reproducible |          |             |
| Goodrich, Brian  | Assigned         |          | Bug - BRASS |

4/19/2016 3:18:32 PM

HRS AASHTO

1831

### Complete Issue Information

|                 |          |      |                |                |
|-----------------|----------|------|----------------|----------------|
|                 | Resolved |      |                |                |
|                 | Accepted |      |                |                |
| Duray, Jim      | New      | High | Bug            |                |
| Goodrich, Brian | Assigned |      |                | Bug - Export 1 |
|                 |          |      |                | Bug - BRASS    |
|                 |          |      |                | Bug - Export 1 |
|                 | Resolved |      |                |                |
|                 | Accepted |      |                |                |
|                 | Closed   |      |                |                |
| Goodrich, Brian | Closed   | High | Bug - Export 1 |                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Member too short.bbd |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6203.15132 | Closed        | Error Generating Member Length |

### Description

FROM:dteal DATE:Wednesday, March 23, 2005 10:49:34 AM

In the attached .bbd file, running Opis on girder line #2, I get the following error:

Internal Errors (600) – Unable to compute Kg for use in the distribution factor equations.

This particular bridge both a barrier curb and a pedestrian rail – Can you help me decipher the error message and fix my problem?

FROM:bgoodrich DATE:Wednesday, April 06, 2005 12:16:17 PM

I tried reproducing this with Member 2 (Wizard Alternative) and Member 1 (Wizard Alternative) too. Kg appears to be computed fine. Krisha - Are you able to reproduce this? This error occurs when Kg is calculated as a negative value, which can only happen if incorrect properties are used. There was a recently discovered error in BRASS where the incorrect section properties were being retrieved. I

4/19/2016 3:18:32 PM

HRS AASHTO

1832

## Complete Issue Information

suspect this is the same problem as Dean is reporting, but I cannot reproduce it with the bbd file provided.

FROM:dteal DATE:Thursday, April 07, 2005 9:03:27 AM

I can repeat it every time I run this file. I get error when doing an opis run with standard HL93 loads on the Wizard Alternative of Member #2.

I have reattached the bbd file incase that was the problem in recreating the error.

I have attached a jpeg of the error message and also copied it below for the BRASS error file and the System error message.

System Error Message:

Internal Errors (600) - Unable to compute Kg for use in the distribution factor equations  
07:55:38 AM - Line 2349 in source file .\DoMemberResults.cpp.

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\VirtisOpis52\089-190\6th\_Street\_over\_I-70\_HWY\Member\_2  
Wizard\_Alternative\BRASS\_LRFD\Wizard\_Alternative.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program  
Files\AASHTOWARE\VirtisOpis52\089-190\6th\_Street\_over\_I-70\_HWY\Member\_2  
Wizard\_Alternative\BRASS\_LRFD\Wizard\_Alternative.DAT

-----  
Error No.: 600  
Type : Programmer Error  
Location : DistControl\_LL\_2.for  
Unable to compute Kg for use in the distribution factor equations.

----- End of Contents of BRASS Error File -----

FROM:kkennelly DATE:4/7/2005 10:11:46 AM

I imported "Distribution Factor Error.bbd" into Virtis/Opis version 5.2, picked the HL93 Design Review template on the Analysis Settings window and analyzed the member alt for G2 and I was able to reproduce this error. Member 1 ran fine but Member 2 gives the error. The first time I ran was without the abxbrass service pack released in Feb, I ran again with the abxbrass service pack and still get the error.

FROM:bgoodrich DATE:Wednesday, April 13, 2005 1:04:03 PM

I still cannot reproduce with debug or release versions using the September version of BRASS-GIRDER(LRFD).

FROM:bgoodrich DATE:Friday, April 22, 2005 12:05:43 PM

I requested that Krisha send me the exported BRASS data file.

FROM:bgoodrich DATE:Friday, April 22, 2005 1:35:03 PM

The export did not generate some of the bracing commands that Krisha's and Dean's files had, which affected the nodes in the model. I suspect this is due to the tolerances. BRASS is in error and I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Friday, April 22, 2005 5:57:52 PM

BRASS-GIRDER(LRFD) 1.6.1 has been corrected to obtain the necessary section properties for the

4/19/2016 3:18:32 PM

HRS AASHTO

1833

**Complete Issue Information**

calculation of the Kg distribution factor term. Fixed for Opis 5.3 SP1.

FROM:dteal DATE:Tuesday, June 28, 2005 8:55:03 AM  
Accepted in 5.3 SP1 Beta 1

FROM:bgoodrich DATE:Monday, July 11, 2005 9:23:06 AM  
Issue was assigned to BRASS Problem Log 598. Closed.

|                                         |
|-----------------------------------------|
| Issue ID: 6203                          |
| Subject: Error Generating Member Length |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/23/2005 4:10:18 PM |
| Modified By: administrator       | 6/19/2008 4:20:16 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, March 23, 2005 12:10:18 PM  
Below is an error message generated in Opis from the attached .bbd file – looking at girder line #2. I have the feeling that there is an internal SI/USC conversion thing going on here with this heavily skewed structure. Girder line #1 runs just fine and as far as I can tell all the member lengths are identical.

----- Contents of BRASS Error File -----  
File: C:\Program Files\AASHTOWARE\VirtisOpis52\085-148\I-135\_over\_US-81B\Member\_2

**Complete Issue Information**

Wizard\_Alternative\BRASS\_LRFDWizard\_Alternative.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program Files\AASHTOWARE\VirtisOpis52\085-148\I-135\_over\_US-81B\Member\_2  
Wizard\_Alternative\BRASS\_LRFDWizard\_Alternative.DAT

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File  
\*\* ERROR: The length of the element in span 2 with left end at 0.0000 (in,mm)  
from the left end of the span, is less than 30.5308 (in,mm) in length.  
Numerical instability may result. See manual.

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File  
\*\* ERROR: The length of the element in span 3 with left end at 0.0000 (in,mm)  
from the left end of the span, is less than 30.5308 (in,mm) in length.  
Numerical instability may result. See manual.

-----  
Error No.: 2103  
Type : Structural Analysis Error  
Location : Data File

One or more elements are too small. See detailed error messages above.

----- End of Contents of BRASS Error File -----

FROM:jduray DATE:4/13/2005 12:19:40 PM  
Is there something we can do in the export to remedy this?

FROM:bgoodrich DATE:Wednesday, April 13, 2005 12:32:02 PM  
This issue has already been fixed in BRASS-GIRDER(LRFD) 1.6.1, which is scheduled for release in mid-May. This should be included in service pack 1 for Opis 5.3.

FROM:dteal DATE:Tuesday, June 28, 2005 8:59:01 AM  
Accepted in 5.3 SP1 Beta 1

FROM:bgoodrich DATE:Monday, July 11, 2005 9:25:01 AM  
Closed.

|                                                 |
|-------------------------------------------------|
| Issue ID: 6210<br>Subject: Strand Layout window |
|-------------------------------------------------|

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Li, Xinmei 3/24/2005 2:50:56 PM   |
| Modified By: administrator 6/19/2008 4:20:15 PM |

4/19/2016 3:18:32 PM

HRS AASHTO

1835

### Complete Issue Information

Priority: High  
Category: Bug

### History

| Primary Contact  | Status          | Priority | Category    |
|------------------|-----------------|----------|-------------|
| Duray, Jim       | New             | High     | Bug         |
|                  | On Hold         |          | Bug - GUI 2 |
| Kennelly, Krisha |                 | N/A      |             |
|                  | Rejected by TAG | High     |             |
| Kennelly, Krisha | Rejected by TAG | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State   | Summary                      |
|------------|-----------------|------------------------------|
| 6232.15103 | Rejected by TAG | Diaphragm Wizard Skipping PB |

### Description

FROM:xli DATE:3/24/2005 10:30:59 AM

First time open strand layout window, when "harped" radio button is selected, "harp point locations" grid appears, default values displayed as "5.674504965429e+289" in distance column, it should be "0".

FROM:jihnate DATE:4/6/2005 3:23:31 PM

Sounds similar to 5943. Fixed in 5.3.0 Release.



## Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 6232                        |
| Subject: Diaphragm Wizard Skipping PB |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 3/28/2005 5:01:52 PM |
| Modified By: administrator        | 6/19/2008 4:20:14 PM |
| Priority: High                    |                      |
| Category: Bug - GUI 2             |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Monday, March 28, 2005 1:01:53 PM

When using the diaphragm wizard on a 3 span PS structure – I used non-skewed and 2 equal spaces per span. A diaphragm got applied at the abutment and at midspan, and not at the pier. I believe it should have also put a diaphragm at the piers??

## Complete Issue Information

Issue ID: 6240

Subject: Start - Programs - AASHTOWARE

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thompson, Todd 3/29/2005 4:29:15 PM

Modified By: administrator 6/19/2008 4:20:13 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

4/19/2016 3:18:33 PM

HRS AASHTO

1838

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 6254.15081 | Duplicate     | High moments and shears |

**Description**

FROM:ttompson DATE:Tuesday, March 29, 2005 12:29:15 PM  
Enhancement Request

I would like to request a change in the way the shortcuts are located in Start, programs, AASHTOWARE, Virtis-Opis.

Currently the Virtis, Opis and VirtisOpis shortcuts are at the level under AASHTOWARE. I believe they would be better placed under Virtis-Opis.

The Pontis start is located under Start, Programs, AASHTOWARE, Pontis.

I think the only things that should be under AASHTOWARE and bridgeware integrated type items. Not the individual applications.

FROM:jduray DATE:3/31/2005 10:12:15 AM

We can make the change as you suggest. It seems there isn't a standard. We are consistent with the Microsoft placement of tools and executables.

FROM:hlee DATE:7/10/2006 10:04:10 AM

Changed Project from Beta Testing/GUI/Installation to Support Center.

|                                  |
|----------------------------------|
| Issue ID: 6254                   |
| Subject: High moments and shears |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Triezenberg, Jeff  | 3/31/2005 1:50:16 PM |
| Modified By: administrator       | 6/19/2008 4:20:12 PM |
| Priority: High                   |                      |
| Category: Enhance BRASS          |                      |

**History**

4/19/2016 3:18:33 PM

HRS AASHTO

1839

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
|                 | Closed    |          |             |
| Goodrich, Brian | Closed    | High     | Bug - BRASS |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Continuity Rein.bbd |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6271.15064 | Closed        | Continuity Reinforcement Included in Error |

### Description

FROM:jtrizenberg DATE:Thursday, March 31, 2005 9:50:16 AM

I'm analyzing this 4 span prestressed concrete bridge and I think Virits is generating higher than normal moments and shears. For example, Virits gets a live load moment in span 1 of 2352 kip-ft, but I believe that the maximum moment for a 100 ft simple span should only be 1122 kip-ft.

FROM:kkennelly DATE:4/4/2005 1:24:45 PM

FROM:kkennelly DATE:4/4/2005 1:30:06 PM

FROM:kkennelly DATE:4/4/2005 1:33:14 PM

1. Live load moment is computed based on the final 4 span continuous arrangement not the 100 ft simple span.

2. I analyzed G2 for HS20 loading and see in the BRASS output at point 104 the truck 1 moment is 2352.4 kip-ft. Is this value that you believe to be incorrect? This value is the factored HS20 truck moment, using the 2.17 factor used in the rating equation. The HS20 truck moment including

4/19/2016 3:18:33 PM

HRS AASHTO

1840

## Complete Issue Information

distribution factor and impact is listed in the BRASS output file as 1083.5 k-ft. Do you disagree with the 1083.5 k-ft?

FROM:jtriezenberg DATE:Friday, April 29, 2005 8:29:37 AM

Thank you. One more question concerning this bridge, in the brass output under the section "\*\*\*\* Summary of Actions for Calculating Shear Capacity" The shear strength calculations are computed several times "For Point 305.000 Node Point = 44" Is there any way to find the shear strength calculations for tenth points? I'm also unsure why it is calculating the shear at this particular point.

FROM:jtriezenberg DATE:Friday, April 29, 2005 11:54:16 AM

An independant check has been done on this beam which shows much higher shear capacities than Virtis. I did a hand calc for the shear capacity for span 1 at point .3L. This hand calc also shows much higher shear capacities than Virtis.

I have 3 similar bridges which are all relatively and have large prestressed concrete girders and Virtis gives all of them an IR of about .800. This seems like a low rating given the new condition of the bridges. I'm just wondering if there is a way to check the shear capacity in virtis.

FROM:kkennelly DATE:4/29/2005 12:25:12 PM

If you create a point of interest at the location where the rating factor is low, the BRASS output file will contain a detailed listing of the calcs it performed to compute the rating factor. You can review this detailed output to determine the source of the discrepancy.

FROM:jtriezenberg DATE:Tuesday, May 03, 2005 3:49:59 PM

When I create a point of interest at one of the tenth points, the shear capacity drops significantly. e.g. if a point is created at the 3/10 point of span 1, the Vn drops from 179 to 121 kips.

FROM:kkennelly DATE:5/4/2005 7:50:50 AM

That sounds very similar to incident 3911 which was resolved for Virtis 5.0.

FROM:jtriezenberg DATE:Tuesday, May 10, 2005 3:25:09 PM

It is similar to 3911, but in this case, this change in shear capacity is at the point of interest. I don't think the shear capacity drops at any Virtis generated points.

FROM:bgoodrich DATE:Thursday, May 12, 2005 10:01:30 AM

BRASS calculates the shear capacity at every point of interest entered (unless shear is to be ignored) regardless of its location along the girder. Because the shear capacity is load-dependent, several blocks of the calculations are provided. The truck number and rating level (inventory/operating) are listed at the top of each block. I am not able to see any difference in the shear capacity when the 103 POI is added. The output shows 179 kips with or without the 103 POI for Truck 1 Inventory. The 104 POI shows 121 kips for Truck 1 Operating. After reviewing the intermediate output for the 103 POI, did you determine why your hand calculations and BRASS differed? We need some more information to investigate this issue further. Please attach the two output files and note the BRASS page number on which the differences are located.

FROM:jtriezenberg DATE:Tuesday, May 17, 2005 11:16:53 AM

4/19/2016 3:18:33 PM

HRS AASHTO

1841

## Complete Issue Information

It may be that I am just not looking in the correct place for the information that I need, but I have attached the latest BRASS output which is dated today. On page 74 (a very long page) the individual calculations are shown for user-defined POI 103.02. Here  $V_u$  ranges from 120.6 to 122.5 depending on load type and load level. On the top of page 83, at Virtis-defined POI 103,  $\phi * V_u$  varies from 141 to 179 kips. I am also unsure why  $V_u$  is being multiplied by  $\phi$ . Which  $\phi$  is this?

Thanks  
-JT

FROM: bgoodrich DATE: Wednesday, May 18, 2005 11:49:29 AM  
Regarding the phi factor in the following output:

Shear Summary:

$$V_c = \text{MIN}(V_{ci}, V_{cw}) = 79.6 \text{ kip (AASHTO 9.20.2.1)}$$

$$V_n = V_c + V_s = 134.6 \text{ kip}$$

$$V_u = \phi * V_n = 121.1 \text{ kips (AASHTO 9-26)}$$

The phi factor is the strength capacity reduction factor from AASHTO 9.14. This is located on the Resistance Factors tab of the Factors - LFD window. Your bridge doesn't have any override factors set, so the LFD factors from the library are used.

You indicated that the shear capacities at the 103.02 POI and the 103.00 POI are different. These are two different points of interest. Page 84 has the summary output for the 103.02 POI. The 103.02 POI was generated based on the prestress model exported to BRASS from Virtis, which was "Centerline of simple-span bearing" as set in the member alternative engine properties. The span length exported to BRASS is shorter than that used to specify the points of interest in Virtis. To get the output for the 103 POI, enter a POI at 9.2826 meters. The reason the shear capacity differs between the two POI is because of the shear concurrent with the maximum moment ( $V_i$ ).

FROM: jtrizeenberg DATE: Thursday, May 19, 2005 9:58:17 AM  
Although I realized that there was a difference between POI 103 and POI 103.02, I didn't think this small increment in distance could produce a 58 kip difference in Shear strength.

Also, just to be clear, when  $V_u$  is shown to be multiplied by  $\phi$ , that  $\phi$  is a user defined factor and is left at 1 if no extra factors are defined by the user. Is this correct?

FROM: bgoodrich DATE: Monday, May 23, 2005 12:50:32 PM  
The default phi factor for prestressed concrete shear is 0.9. See the Factors - LFD - Standard tree item in the Library Configuration Browser, i.e., the "Library - Factors - LFD" window.

The shear capacity issue is the same as in Incident 5042. The process used by BRASS to incrementally move the truck across the bridge uses linear interpolation when an axle is between influence ordinates, which leads to this particular difference. I increased the wheel advancement denominator (as discussed in the other incident) to 300. The shear capacities at the 103.02 were much closer to those at the 103.00. WYDOT is aware of this issue and has added this issue to the enhancement list as discussed in the other incident.

I am marking this incident as a duplicate of Incident 5042.

4/19/2016 3:18:33 PM

HRS AASHTO

1842

**Complete Issue Information**

FROM:jtriezenberg DATE:Monday, May 23, 2005 2:44:33 PM  
thank you for your help

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6271                                      |
| Subject: Continuity Reinforcement Included in Error |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/5/2005 1:14:57 PM  |
| Modified By: administrator       | 6/19/2008 4:20:11 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, April 05, 2005 9:14:57 AM

For Staff engineer, Steve Burnett

A prestressed Girder analyzed in Opis 5.2.0 – reviewing output at POI's one of our designers found a possible error. (.bbd attached)

Continuity steel was entered, As part of the specification checks, the flexural resistance is calculated at each POI for both the positive and negative sense. At the POI located at each beam end at the piers, the continuity diaphragm reinforcing is included in the calculations. That is correct. However that same continuity diaphragm reinforcing is included in the calculations at the first tenth point into the span. I believe that is incorrect. The program does not include the continuity diaphragm reinforcing in the calculations at the ninth tenth point into the span. I believe that is correct.

FROM:bgoodrich DATE:Monday, April 18, 2005 5:56:21 PM

The longitudinal length of the continuity steel is never defined in Virtis/Opis, so the export process

4/19/2016 3:18:34 PM

**HRS AASHTO**

1843

**Complete Issue Information**

assumes it extends to the first tenth point. The issue with the 9/10 point not including the continuity steel and the 1/10 point including it is due to the BRASS engine choosing the section on the left side of the point when the moments of inertia are the same. Incident 5381 was recently completed, so the engine will compare the rebar area as a secondary check. The side with the smallest rebar area would be exported. For the structure in this incident, the 9/10 and 1/10 points would therefore not include continuity steel. This change was made to BRASS-GIRDER 5.9.1, which is scheduled for release with Virtis 5.3 Service Pack 1.

FROM:dteal DATE:Friday, December 02, 2005 8:10:46 AM  
Accepted in 5.3 SP1

|                                         |
|-----------------------------------------|
| Issue ID: 6272                          |
| Subject: BRASS and Rebar Yield Strength |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/5/2005 1:16:49 PM  |
| Modified By: administrator       | 6/19/2008 4:20:11 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |
|                 | Closed   |          |           |
| Goodrich, Brian | Closed   | High     | Education |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:18:34 PM

HRS AASHTO

1844



**Complete Issue Information**

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 6280.15055 | Closed        | FAQ on Support Home Page |

**Description**

FROM:dteal DATE:Tuesday, April 05, 2005 9:16:49 AM

In the past we where told that BRASS only uses one yield strength (fy) per structure. Ie: you can't have both 40 and 60 ksi bars in the same structure, it will use the fy of the first one it comes across for the entire structure.

Is this still true or did it get changed?

FROM:dteal DATE:Tuesday, April 05, 2005 9:27:24 AM

After some research – am I correct when I say that BRASS takes second yield strength rebar and converts it to an equivalent number of grade 60 bars?

FROM:bgoodrich DATE:Monday, April 18, 2005 5:05:43 PM

Yes, the export scales the number of bars by the ratio of the yield stresses for all the materials after the first detected by the export. This issue was addressed in Incident 2899.

FROM:dteal DATE:Tuesday, April 19, 2005 9:10:17 AM

Question: Does it make any difference which grade of rebar appears first in the list under Materials:Reinforcing Steel in the Virtis/Opis GUI?

FROM:dteal DATE:Thursday, November 17, 2005 2:02:09 PM

FROM:dteal DATE:Monday, February 26, 2007 12:05:14 PM

Accepted

|                                   |
|-----------------------------------|
| Issue ID: 6280                    |
| Subject: FAQ on Support Home Page |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 4/7/2005 6:58:43 PM  |
| Modified By: administrator     | 6/19/2008 4:20:10 PM |

4/19/2016 3:18:34 PM

HRS AASHTO

1845

## Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Medium   | Bug         |
|                 | On Hold   | High     |             |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

## Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 6294.15041 | Discard       | install of V/O |

## Description

FROM:dteal DATE:Thursday, April 07, 2005 2:58:43 PM

We don't have and Frequently Asked Questions on the support Home Page – This page should contain Help, Words of Wisdom, Work Arounds for special problems, Got-ya's, ect.

FROM:jduray DATE:4/14/2005 11:08:30 AM

Add the FAQ help file to the FAQ web page. Remove the username/password.

FROM:jihnata DATE:4/15/2005 1:20:45 PM

Done.

FROM:jihnata DATE:4/18/2005 2:15:27 PM

Closed after Track field Accept by dteal.

**Complete Issue Information**

Issue ID: 6294  
Subject: install of V/O

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Jensen, Paul 4/12/2005 7:25:15 PM  
Modified By: administrator 6/19/2008 4:20:09 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pjensen DATE:Tuesday, April 12, 2005 3:25:15 PM  
when installing the product, the Virtis/Opis shortcuts need to be in a sub menu like Pontis install.

FROM:hlee DATE:4/30/2008 2:34:50 PM  
Discarded by TAG 12/07.

## Complete Issue Information

Issue ID: 6295  
Subject: Improve handling of changes to ranges

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 4/12/2005 7:36:10 PM  
Modified By: administrator 6/19/2008 4:20:09 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:18:35 PM

HRS AASHTO

1848

### Complete Issue Information

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 6295.15040 | Suspended     | Improve handling of changes to ranges |
| 6299.15036 | Discard       | Wizard to change deck type            |

### Description

FROM:jduray DATE:4/12/2005 3:20:07 PM

This involves improving stirrups, shear connectors, diaphragms, stiffeners (and perhaps others) to better handle and adjust ranges if a change is made to a range.

Issue ID: 6299

Subject: Wizard to change deck type

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Duray, Jim

4/13/2005 3:19:42 PM

Modified By: administrator

6/19/2008 4:20:09 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:18:35 PM

HRS AASHTO

1849

**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | On Hold   | High     | Bug         |
| Ihnat, Joseph   | Resolved  |          |             |
| Ihnat, Joseph   | Resolved  | High     | Bug         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 6301.15034 | Resolved      | Need to remove the space at the end of names |

**Description**

FROM:jduray DATE:4/13/2005 11:15:45 AM

Investigate a wizard to change the deck type by opening a dialog that asks the user some questions and then changes the deck type. Must preserve as much of the struct def as possible.

FROM:hlee DATE:4/30/2008 2:34:56 PM

Discarded by TAG 12/07.

## Complete Issue Information

|                                                       |
|-------------------------------------------------------|
| Issue ID: 6301                                        |
| Subject: Need to remove the space at the end of names |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 4/13/2005 5:11:28 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Resolved | High     | Unknown  |
| Lee, Herman     | Resolved | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6304.15031 | Resolved      | Undo Incident 6225 and 5218. |

## Description

FROM:jduray DATE:4/13/2005 1:01:05 PM

This incident is a collection of all incidents that involve problems due to a space at the end of names.

This includes: 3182, 3890, 4908, 4972, 5114.

FROM:jihnat DATE:8/24/2005 11:04:36 AM

I've attached the incidents that seem to be related.

FROM:jihnat DATE:8/29/2005 1:30:53 PM

For 5.4.0, the GUI will trim any trailing whitespace before it gets to the domain (when the abxedit control is used).

4/19/2016 3:18:35 PM

HRS AASHTO

1851

## Complete Issue Information

Issue ID: 6304  
Subject: Undo Incident 6225 and 5218.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: McCaffrey, Brian 4/14/2005 1:18:00 PM  
Modified By: administrator 6/19/2008 4:20:08 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:4/21/2005 3:13:13 PM

The request for this incident is to undo the implementations requested in Incident 5218 and 6225.

4/19/2016 3:18:36 PM

HRS AASHTO

1852



### Complete Issue Information

Incident 5218 was implemented in Virtis/Opis 5.2 and Incident 6225 was implemented during the development of Virtis/Opis 5.3. From the stand point of the users, only Incident 5218 is undone. Please refer to Incident 5218 for the details of the implementation.

|                                           |
|-------------------------------------------|
| Issue ID: 6308                            |
| Subject: Revise the Configuration Browser |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Duray, Jim       | 4/14/2005 6:11:04 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |

4/19/2016 3:18:36 PM

HRS AASHTO

1853

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | Suspended | High | Enhancement |
|------------|-----------|------|-------------|

**Contacts**

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6327.15008 | Suspended     | Critical Design Point Missed in POI Wizard |

**Description**

FROM:jduray DATE:4/14/2005 2:05:32 PM

Revise the browser to a splitter window with the right side a function of the selected item on the left. For Users it should list the users (and data) like the bridge explorer. For privileges, parameters and system defaults the rhs should be liek the current windows for privileges.

Issue ID: 6327

Subject: Critical Design Point Missed in POI Wizard

Folder: /Virtis/Support Center

4/19/2016 3:18:36 PM

HRS AASHTO

1854

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/19/2005 7:51:24 PM |
| Modified By: administrator        | 6/19/2008 4:20:07 PM |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | On Hold  |          |          |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | POI Wizard.bbd      |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6331.15004 | Closed        | POI Wizard Generating Points Not Requested |

### Description

FROM:dteal DATE:Tuesday, April 19, 2005 3:51:24 PM

The POI wizard generates the following points based on 5.11.1.2.1 which determines where the bar is no longer required to resist flexure, max of (effective depth of member, 15db, 1/20 clear span) from start or end of the bar.

The wizard is missing, 5.11.1.2.3. Which states that 1/3 of the total tension reinforcement provided for negative moment at a support shall have an embedment length beyond the point of inflection not less than effective depth of member, 12db, 1/16 clear span.

What that is saying is that 1/3 of your top area of steel required that extends over a pier into a span has to extend beyond the DL + LL inflection point by maximum of (effective depth of member, 12db, 1/16

4/19/2016 3:18:36 PM

HRS AASHTO

1855

**Complete Issue Information**

clear span).

The point I explained above is a very important point for design – it tells you where you can terminate your top steel. This is the same criteria for LFD and LRFD.

FROM:jduray DATE:Tuesday, November 15, 2005 1:25:55 PM

This is not a bug.

Change to an enhancement...investigate handling this type of issue in the export after the analysis is complete. The export could append to the spec-check calcs.

FROM:jduray DATE:Tuesday, November 15, 2005 1:41:42 PM

FROM:dteal DATE:Thursday, November 17, 2005 2:04:12 PM

how could this not be a bug - the wizard completely misses a point that is required by code for design?

FROM:jduray DATE:11/21/2005 11:57:27 AM

An analysis is required to determine the location of the inflection point...it was not in our scope for the wizard to compute this location. The engine (BRASS) cannot compute it because it does not know about a bar schedule or embedment lengths. The export is the only place this can be computed so we (with TF approval) changed this incident to an enhancement. We would do supplemental spec-checking after the analysis (outside the analysis engine) and append the results to the engine spec-check results.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6331                                      |
| Subject: POI Wizard Generating Points Not Requested |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/20/2005 2:50:14 PM |
| Modified By: administrator        | 6/19/2008 4:20:06 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 6332.15003 | Closed        | POI Wizard Open Button |

**Description**

FROM:dteal DATE:Wednesday, April 20, 2005 10:50:14 AM  
.bbd attached

Looking at the second Superstructure Def. – I used the POI Wizard to generate points at “Location of Change of Girder Properties” only. The wizard generated POI’s at the end locations of Span 1, 2 & 3. none of these locations where a change of section depth – so I don’t think it should have created POI’s at the following

- Span 1 - 48.00 Left
- Span 2 – 64.00 Left
- Span 3 – 48.00 Left

FROM:kkennelly DATE:8/9/2006 4:06:31 PM  
Done for 5.5

FROM:dteal DATE:Monday, February 26, 2007 12:16:24 PM  
Accepted

|                                 |
|---------------------------------|
| Issue ID: 6332                  |
| Subject: POI Wizard Open Button |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 4/20/2005 2:51:20 PM |
| Modified By: administrator     | 6/19/2008 4:20:06 PM |
| Priority: High                 |                      |

## Complete Issue Information

Category: Bug

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          | Help     |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Help     |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6333.15002 | Closed        | Fully Developed or Not - Explanation |

## Description

FROM:dteal DATE:Wednesday, April 20, 2005 10:51:20 AM

I generated my POI's with the Wizard – I can see the POI's in the two columns (POI & Source) I can select a POI and use the delete button but the "Open" button is always grayed out, never available? Am I doing something wrong?

FROM:dteal DATE:Thursday, November 17, 2005 2:09:48 PM

Why did this get closed? What was the answer?

FROM:dteal DATE:Wednesday, March 08, 2006 10:51:23 AM

never mind - I got it now

**Complete Issue Information**

|                                               |
|-----------------------------------------------|
| Issue ID: 6333                                |
| Subject: Fully Developed or Not - Explanation |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 4/20/2005 3:30:35 PM |
| Modified By: administrator        | 6/19/2008 4:20:06 PM |
| Priority: High                    |                      |
| Category: Help                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, April 20, 2005 11:30:35 AM  
Below is a definition from the online help for RC:Schedule Based:Girder Profile:Reinforcement

**Fully Developed**  
Check this box to indicate that the reinforcement set as entered is fully developed. If this box is checked, the export to the analysis engine will not compute the required development length for the reinforcing steel. The export will consider the bar as entered to be fully developed.

Every time I read this I tend to get confused – I know I confuse easily but if one person doesn't understand then there surely are others being confused.

The text I would like added to the help is a simple example that states – When inputting bars from construction plans, DO NOT check the box for Fully Developed. Bars from the construction plans are not developed at their ends and checking this box would mean that they are. Leave the box unchecked and Virtis/Opis will compute the point where these bars have reached 100% development. If a cross

4/19/2016 3:18:37 PM

HRS AASHTO

1859

**Complete Issue Information**

section is generated between the end of the bar and the development length, a percentage of the bar will be exported to BRASS.

FROM:kkennelly DATE:4/21/2005 2:13:59 PM  
Added to the 5.3 help since I had to be in there anyway to update the splash screen.

FROM:dteal DATE:Tuesday, June 28, 2005 11:07:06 AM  
Accepted in 5.3

|                                                        |
|--------------------------------------------------------|
| Issue ID: 6339                                         |
| Subject: Structure Definition Copy Fails in some cases |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Ordoobadi, Mehrdad | 4/22/2005 3:11:56 PM |
| Modified By: administrator       | 6/19/2008 4:20:06 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          |          |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |



**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6340.14995 | Closed        | Tutorials Missing POI Wizard |

**Description**

FROM:mordoobadi DATE:4/22/2005 11:03:02 AM  
Copying of the structure definitions of bridges BID 12, BID 14, BID 15 fails.

**Causes:**

- BID 12 : NailDef should be copied before Deck.
- BID 14: LoadCase should be copied before BmDefConcentratedLoad
- BID 15: LoadCase should be copied before BmDefDistributedLoad

There is no problem when the bridges are copied in the bridge explorer.

FROM:jduray DATE:4/25/2005 9:19:29 AM

FROM:jihnath DATE:7/31/2006 9:02:51 AM  
In 5.2.0, the copy was successful but the save failed ("Unable to save bridge data").  
Working OK in 5.4.0

|                                       |
|---------------------------------------|
| Issue ID: 6340                        |
| Subject: Tutorials Missing POI Wizard |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lee, Herman     |                      |
| Submitted By: Teal, Dean         | 4/22/2005 3:48:50 PM |
| Modified By: hlee                | 5/17/2010 2:04:15 PM |
| Priority: High                   |                      |
| Category: Maintenance - Internal |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Complete Issue Information**

|            |               |      |                    |
|------------|---------------|------|--------------------|
| Duray, Jim | New           | High | Bug<br>Enhancement |
| Duray, Jim | New<br>Closed | High | Bug                |
| Duray, Jim | Closed        | High | Bug                |

**Contacts**

| Name      | Company                           | Email 1        | Phone 1       |
|-----------|-----------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of<br>Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6344.14991 | Closed        | FRM1 Tutorial Error/Misprint |

**Description**

FROM:dteal DATE:Friday, April 22, 2005 11:48:50 AM  
The "On Line Tutorial" for Wizards doesn't mention the POI wizard

FROM:kkennelly DATE:4/29/2005 11:48:01 AM  
The tutorial was created before the POI Wizard existed.

FROM:jduray DATE:4/29/2005 12:41:51 PM  
We should update the tutorial.

FROM:hlee DATE:5/4/2005 9:03:53 AM  
Updated the tutorial to include the POI Wizard.

FROM:dteal DATE:Wednesday, March 29, 2006 8:12:29 AM  
Accepted 5.4 beta 7

|                                       |
|---------------------------------------|
| Issue ID: 6344                        |
| Subject: FRM1 Tutorial Error/Misprint |

## Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 4/25/2005 12:33:30 PM |
| Modified By: administrator     | 6/19/2008 4:20:05 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
|                 | Closed   |          |           |
| Lee, Herman     | Closed   | High     | Education |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Missing Support.bbd |             |

## Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 6345.14990 | Closed        | T Beam Diaphragm Missing at Support |

## Description

FROM:dteal DATE:Monday, April 25, 2005 8:33:30 AM  
For the FRM1 tutorial (last modified 10/14/03), page FRM1-3, section C-C has Depthand Width reversed.

FROM:dteal DATE:Monday, April 25, 2005 4:13:52 PM  
Nevermind - it's OK  
Please Close

4/19/2016 3:18:38 PM

HRS AASHTO

1863

## Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 6345                               |
| Subject: T Beam Diaphragm Missing at Support |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 4/25/2005 12:51:43 PM |
| Modified By: administrator     | 6/19/2008 4:20:05 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Monday, April 25, 2005 8:51:44 AM

In the attached bbd I have a 5 span concrete deck girder type structure (it's only partially defined, not completed yet) I wanted to apply diaphragms at the 4 interior supports. In the process I noticed that in the Framing Plan Diaphragms tab under Support number, the pulldown contains support 1 thru 5 but is missing the support number 6 ( the right end abutment) – this doesn't seem normal??

FROM:hlee DATE:5/3/2005 4:28:29 PM

4/19/2016 3:18:38 PM

HRS AASHTO

1864

**Complete Issue Information**

Support Number 6 is not needed to define diaphragms, so it is not included in the Support Number pulldown.

FROM:dteal DATE:Wednesday, May 04, 2005 1:30:26 PM

I guess I don't understand why abutment 1 is needed and abutment 2 isn't. I would have assumed all or none??

FROM:hlee DATE:5/4/2005 3:23:51 PM

The location of a diaphragm is defined based on a reference point to the left of the diaphragm. If there is a diaphragm at abutment 2, the diaphragm can reference the support line to the left of abutment 2. That's why abutment 2 is not needed. Abutment 1 is needed to defined diaphragms that are located to the right of Abutment 1.

FROM:dteal DATE:Friday, August 19, 2005 7:20:28 AM

Accepted - please close

Issue ID: 6361  
Subject: Timber help on deck description

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Jensen, Paul 4/28/2005 7:37:24 PM  
Modified By: administrator 6/19/2008 4:20:04 PM  
Priority: High  
Category: Help

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | On Hold  |          |          |
|                  | Resolved |          | Help     |
| Kennelly, Krisha | Resolved | High     | Help     |

4/19/2016 3:18:38 PM

HRS AASHTO

1865

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 6371.14964 | Closed        | Unable to open bridges with a single quote character in the bridge id |

### Description

FROM:pjensen DATE:Thursday, April 28, 2005 3:37:25 PM

The review of the deck lam help shows something that is not consistant.

excerpt from help is:

Nominal thick

Enter the nominal thickness of the deck plank or lamination. The thickness is the measure of the smaller dimension of the board.

Nominal width

Enter the nominal width of the deck plank or lamination. The width is the measure of the larger dimension of the board.

Nominal thickness might not be the small dimension as discribed but could be the larger (ie 2X4 the nominal thickness is 4"). If you use the information on the help screen, the DF will not be the expected.

FROM:jduray DATE:10/27/2005 3:13:48 PM

Address by modifying the UI (switch labels on the bitmap) and in the help...do not mess with the db!

FROM:kkennelly DATE:8/14/2006 4:06:26 PM

Fixed for 5.5

Issue ID: 6371

Subject: Unable to open bridges with a single quote character in the bridge id

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

4/19/2016 3:18:39 PM

HRS AASHTO

1866

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 5/2/2005 9:19:53 PM  |
| Modified By: administrator | 6/19/2008 4:20:03 PM |
| Priority: High             |                      |
| Category: Bug - Warranty   |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Ihnat, Joseph   | Suspended |          | Enhancement |
| Ihnat, Joseph   | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 6376.14959 | Suspended     | Copy and paste column and row headers with the results graph data. |

### Description

FROM:mordoobadi DATE:5/2/2005 5:09:11 PM

Dean Teal reported this problem.

After Migration version 5.3.0, not able to open 7 of the bridges.

FROM:mordoobadi DATE:5/2/2005 5:20:21 PM

The problem appears to have been caused by the single quote (') characters that exist in the bridge\_id of those 7 bridges. This is what is happening.

The migration generates a DOCREFKEY to be used for MULTIMEDIA attachments. It is generated by adding bridge's bridge\_id and the current timestamp.

So generated DOCREFKEYS have single quote (') characters in them. In the Dm code when we want to retrieve multimedia records for a bridge, we use the DOCREFKEY that is stored in the abw\_overflow table (or could be in bridge table as well) to filter the records in the MULTIMEDIA table. DOCREFKEY has single quote characters in it, when bridge is retrieved we retrieve the records in MULTIMEDIA table with a filter like:

```
WHERE docrefkey = '60'-96'-60' Rolled Beam'
```

In SQL this is an illegal WHERE clause. The filter should change to:

```
WHERE docrefkey = '60"-96"-60" Rolled Beam'
```

4/19/2016 3:18:39 PM

HRS AASHTO

1867

**Complete Issue Information**

to avoid the error. This requires some minor changes to abmbrdg.DLL. This means we need to issue a patch for this and I think this is very urgent. Because in this situation the bridges that have bridge\_ids with 's cannot be opened.

FROM:jduray DATE:5/3/2005 8:12:13 AM

The single quote within the name is also problem in the Find Bridge dialog. We should probably not allow the single quote since all SQL queries will have this problem. Perhaps that is too restrictive??? For now let's just fix the DOCREFKEY. We will probably be issuing a service pack with the substructure release and also when Wyoming releases BRASS at the end of May. Wait until then to issue a service pack.

FROM:jduray DATE:5/3/2005 8:22:32 AM

The time for fixing this should be charged to CalTrans Service Unit , not Maintenance or Support.

FROM:dteal DATE:Tuesday, June 28, 2005 9:00:29 AM

Accepted in 5.3 SP1 Beta 1

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 6376                                                              |
| Subject: Copy and paste column and row headers with the results graph data. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ilnat, Joseph |                      |
| Submitted By: Lee, Herman      | 5/3/2005 2:29:18 PM  |
| Modified By: administrator     | 6/19/2008 4:20:03 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:18:39 PM

HRS AASHTO

1868



**Complete Issue Information**

FROM:hlee DATE:5/3/2005 10:14:16 AM  
From Colorado Virtis training.

Currently, the headers can be copied and pasted to other application, but only one at a time.

FROM:hlee DATE:7/19/2006 10:30:23 AM  
Changed Project to Support Center.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 6379<br>Subject: Checkbox to turn on/off analysis for batch process. |
|--------------------------------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Hasan, Mac       | 5/3/2005 5:37:14 PM  |
| Modified By: administrator     | 6/19/2008 4:20:03 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:39 PM

HRS AASHTO

1869

**Complete Issue Information**

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | New       | High | Unknown     |
|            | Suspended |      | Enhancement |
| Duray, Jim | New       | High | Enhancement |
|            | Suspended |      |             |
| Duray, Jim | Suspended | High | Enhancement |

**Contacts**

| Name      | Company                    | Email 1               | Phone 1 |
|-----------|----------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 6384.14951 | Suspended     | Need default file name during bridge export |

**Description**

FROM:hlee DATE:5/3/2005 10:53:00 AM  
Submitted on behalf of Mac Hasan, Colorado DOT:

Provide a checkbox on the Member window to indicate no rating should be performed for batch analysis.

FROM:hlee DATE:7/19/2006 10:31:21 AM  
Changed Project to Support Center.

FROM:hlee DATE:4/30/2008 2:35:04 PM  
Discarded by TAG 12/07.

|                                                      |
|------------------------------------------------------|
| Issue ID: 6384                                       |
| Subject: Need default file name during bridge export |

4/19/2016 3:18:40 PM

HRS AASHTO

1870

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ihnat, Joseph    | 5/4/2005 1:38:20 PM  |
| Modified By: administrator     | 6/19/2008 4:20:03 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 5514799.bbd         |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6411.14924 | Resolved      | Error generating LFD Analysis Output |

### Description

FROM:jihnath DATE:5/4/2005 9:34:31 AM

When doing a Bridge Export, it would be nice to use the bridge name as the default filename. Right now there is nothing.

FROM:jihnath DATE:5/13/2005 3:49:51 PM

Or maybe Bridge ID.

## Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 6411                                |
| Subject: Error generating LFD Analysis Output |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Bhagwandin, Sahadeo | 5/12/2005 12:34:48 PM |
| Modified By: administrator        | 6/19/2008 4:20:00 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:5/12/2005 8:28:44 AM

Submitted on behalf of William Conlon, Ammann & Whitney

For the attached bridge, rate the structure def SPAN03STEMP, then go into the report tool and attempt to generate LFD Analysis Output.

Error message pops up: "An invalid argument was encountered."

FROM:kkennelly DATE:5/23/2005 3:00:16 PM

4/19/2016 3:18:40 PM

HRS AASHTO

1872

## Complete Issue Information

Fixed for 5.3 Service Pack 1.

Issue ID: 6429

Subject: Resizing of 3d result view controls

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Bhanushali, Girish

5/17/2005 2:48:05 PM

Modified By: administrator

6/19/2008 4:19:59 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 |           | Medium   |             |
|                 | Suspended | High     |             |
| Ihnat, Joseph   | Assigned  |          | Bug - GUI 2 |

4/19/2016 3:18:40 PM

HRS AASHTO

1873

### Complete Issue Information

|                    |                 |      |             |  |
|--------------------|-----------------|------|-------------|--|
|                    | Resolved        |      |             |  |
| Ihnat, Joseph      | Resolved        | High | Bug - GUI 2 |  |
| Duray, Jim         | New             | High | Bug         |  |
| Ordoobadi, Mehrdad | Assigned        |      |             |  |
|                    |                 | N/A  |             |  |
|                    | Rejected by TAG | High |             |  |
| Ordoobadi, Mehrdad | Rejected by TAG | High | Bug         |  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | virtis.pdf          |             |

### Tasks

| Name       | Current State   | Summary                   |
|------------|-----------------|---------------------------|
| 6433.14902 | Rejected by TAG | SQL Server Pop Up Message |

### Description

FROM:gbhanushali DATE:5/17/2005 10:29:46 AM

This is in response to incident # 6403 part 2 shown below.

2. View Results dialog - pick Display Load Combination. Would sure be nice if we could resize the dialog so we could view the long load combination names without having to know to grab right edge of grid and resize and then use bottom horiz scroll bar.

FROM:hlee DATE:7/10/2006 9:56:25 AM

Changed Project from Beta Testing/GUI to Support Center.

FROM:jihnmat DATE:12/13/2007 1:14:51 PM

Fixed for version 6.0.0 (Beta 2)

|                                    |
|------------------------------------|
| Issue ID: 6433                     |
| Subject: SQL Server Pop Up Message |

### Complete Issue Information

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 5/18/2005 12:22:34 PM |
| Modified By: administrator          | 6/19/2008 4:19:59 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Assigned | High     | Enhancement |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6434.14901 | Resolved      | Recent BRASS enhancements requiring engine-data changes in V/O |

### Description

FROM:dteal DATE:Wednesday, May 18, 2005 8:22:34 AM

If you look at the attached PDF file you will see what the Microsoft SQL Server Desktop Engine popped up. This happened on all our pc's that have a standalone test version of opis sub installed.

The bottom information box in the PDF file states that I need to set a password??

This message will create quit a stir with a user that knows nothing about database servers??? (like myself)

I tried to cancel, pressed ok, I even tried yelling at it but the message kept popping back up, couldn't get rid of them. The only way I found to remove the message and continue was to stop the SQL Server Service by using the icon from the system tray. When I rebooted my PC the message didn't come back

4/19/2016 3:18:41 PM

HRS AASHTO

1875

**Complete Issue Information**

(yet).

FROM:mordoobadi DATE:5/20/2005 10:15:58 AM  
Dean, could you please give us some more information:  
Were you installing Opis/OpisSub when you got the error?  
If you weren't installing:  
    Did the pop-up happen by itself?  
    When did the pop-up show up? During startup? ...

If you were installing:  
    Did you have any of Virtis/Opis/OpisSub products on the PC prior to the installation?  
    Was MSDE/SQL Server software/database installed on the PC prior to the installation.

FROM:dteal DATE:Monday, May 23, 2005 12:28:58 PM  
I was not installing it nor was I running opis. It just popped up on my display when my pc was sitting idle. It happened all by itself. The SQL Server was/is running and has an icon in the system tray.

FROM:mordoobadi DATE:5/23/2005 3:45:34 PM  
Did this happen only once or does it happen frequently?  
What's the operating system of the PCs?  
If it is Windows XP, is service pack 2 installed?

FROM:dteal DATE:Monday, May 23, 2005 4:18:51 PM  
XP with service pack 2  
Has happened only one time - on each of the pc's that opis sub is installed on. But like I said every pc with opis sub running the stand alone server had it happen!

FROM:jduray DATE:5/25/2005 10:53:50 AM  
Since this seems to be unrelated to Opis substructure I am reassigning this to Virtis Support. We will continue to investigate but will not delay the release of Opis Sub.

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 6434<br>Subject: Recent BRASS enhancements requiring engine-data changes in V/O |
|-------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Duray, Jim<br>Submitted By: Duray, Jim 5/18/2005 1:55:21 PM<br>Modified By: hlee 6/24/2008 1:36:58 PM<br>Priority: High<br>Category: Enhancement |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 4033181 (v5.3.0).bbd |             |
|      | 4033181.bbd          |             |

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 6438.14897 | Resolved      | Framing Plan Schematic crashes when using Builtup Floorbeam Defs |

### Description

FROM:jduray DATE:5/18/2005 9:54:14 AM

1. Option for having no limit on Mcr/Mmax in Vci equation (Incident 5054) - LFD only

2. Option to produce a Camber Summary in the BRASS output (Incident 3295) - LRFD only

3. Option for controlling if plastic analysis is allowed or not for steel structures (Incident 4756) - LRFD only

4. Option for transverse continuous-beam dead load analysis - LRFD only (LFD already addresses this)

5. For continuous-span prestressed concrete girders, added the capability to ignore beam stresses at interior support points of interest. (Incident 6146)  
By default, this could be automatically determined based on the prestress modeling method. A user-override would be provided as well.

6. For continuous-span prestressed concrete girders, expanded the capability to ignore the flexure rating due to positive moment, negative moment, or positive and negative moment for points of interest at interior supports. Virtis/Opis currently supports ignoring the positive moment case, but BRASS now allows negative moment to be ignored as well. (Same as VI 7900).

FROM:sboukamp DATE:5/26/2005 3:10:39 PM

Option 1-5 are resolved on Virtis/Opis side. BRASS engines needs now to be updated.

FROM:jduray DATE:12/13/2007 8:38:48 AM

Item 6 is the same as 7900.

FROM:jduray DATE:4/30/2008 9:08:25 AM

4/19/2016 3:18:41 PM

HRS AASHTO

1877

**Complete Issue Information**

FROM:dteal DATE:Tuesday, June 17, 2008 12:01:28 PM  
Item #6 has not been resolved in this incident and it is referred to VI # 7900 which is marked as a duplicate and resolved there either.  
Needs to be reopened someplace??

FROM: Herman Lee DATE: 6/24/2008 9:34:13 AM Eastern Daylight Time  
Incident 7900 has been resubmitted, so this remains resolved.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 6438                                                            |
| Subject: Framing Plan Schematic crashes when using Builtup Floorbeam Defs |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 5/18/2005 7:18:10 PM |
| Modified By: administrator     | 6/19/2008 4:19:58 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Boukamp, Sabine | Assigned |          | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:jihnmat DATE:5/18/2005 3:16:09 PM  
received via email:

I am having the following problems with Virtis 5.2 for the attached ".bbd" file.

- 1. Almost every time that I try to view the framing plan, the program crashes and shuts down.
- 2. Whenever I do get to view the framing plan, the floorbeams are not present.
- 3. The software will not analyze the floorbeams.

Thank you for your help.  
Glen A. Mullings  
Design Engineer  
Prudent Engineering, LLP  
591 Main Street, Suite 205  
East Aurora, NY 14052  
Tel: (716) 652 - 2080  
Fax: (716) 652 - 2099  
Email: gmullings@prudenteng.com

FROM:sboukamp DATE:5/18/2005 3:59:37 PM  
1. It looks like (for some reason?) the IDoSteelBultupBeamDef is not covered in CSchematicFrmPlnView::ComputeTotalBeamDefLength().  
There might be other places in this file where it was forgotten...

FROM:jihnmat DATE:5/24/2005 3:57:06 PM  
#3: When I ran the bridge I noticed a message from BRASS indicating that the Wheel Advancement Denominator should be reduced to below 25. To find this value, go to the Floorbeam Def - Engine tab, select BRASS LFD then click Properties. When I changed the value from 100 to 15 the floorbeams ran.

FROM:jihnmat DATE:5/25/2005 9:15:23 AM  
I've attached a version of the BBD file that's been migrated to Virtis 5.3.0  
Fixed for Virtis/Opis 5.3 SP 1 and OpisSub 0.9 Beta 10.

Issue ID: 6455  
Subject: Library-factors grids should not allow users enter text.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Li, Xinmei 5/25/2005 6:46:40 PM  
Modified By: administrator 6/19/2008 4:19:57 PM  
Priority: High

## Complete Issue Information

Category: Bug

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 6459.14876 | Resolved      | Errors with Saving Bridges in Virtis 5.3 |

## Description

FROM:xli DATE:5/25/2005 2:41:16 PM  
Beta10.

When user creates a new (Agency) Library-factors-LRFD, we should not allow user enter text in grids on all tabs .

Same for Library-factors-LFD.

FROM:jduray DATE:5/26/2005 1:34:03 PM  
Is this a new problem?

FROM:kkennelly DATE:5/26/2005 2:56:29 PM  
No I think we've had this for a while and in other places as well.

FROM:jihnat DATE:9/1/2005 3:29:13 PM  
Fixed the Library LRFD and LFD Factors grids for 5.4.0  
I didn't find any others.

4/19/2016 3:18:42 PM

HRS AASHTO

1880

**Complete Issue Information**

|                                                   |
|---------------------------------------------------|
| Issue ID: 6459                                    |
| Subject: Errors with Saving Bridges in Virtis 5.3 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Koenig, David         | 5/26/2005 1:26:54 PM |
| Modified By: administrator          | 6/19/2008 4:19:57 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:5/26/2005 9:25:16 AM  
Requested by David Koenig: MODOT

>>> <David.Koenig@modot.mo.gov> 05/23/05 4:05 PM >>>  
Jim, we upgraded our production server to Virtis 5.3 today. We have been getting errors when we are saving a structure and are not able to successfully save a structure. This is a major issue for us, because it basically means we can't do much with structures that were in Virtis prior to Version 5.3. If this is a software issue, then it will need to be addressed ASAP because it will basically shut down any work on structures that existed in Virtis prior to Version 5.3. Below are some of the scenarios that we have encountered.

Scenario #1

4/19/2016 3:18:42 PM

HRS AASHTO

1881

## Complete Issue Information

The user took the structure below and removed one of the structure alternatives, structures, and structure definitions. When he tried to save the bridge, it gave him the first error message shown in the attached Word document. When he tried to save again, it gave him the second error message in the attached Word document.

### Scenario #2

We have been working generally in various structures and have encountered similar errors when we have tried to save the structures. The following are the instances we have encountered at this point.

Changes to any field in the structure "Description" screens could not be saved.

Changes to the name or description field in the "Bridge Alternative" screen could not be saved.

Changes to the name or description field in the "Superstructure" screen could not be saved.

Changes to the name or description field in the "Superstructure Alternative" screen can at times be saved but sometimes gives an error.

A Superstructure Definition can be copied and saved, but can't be deleted.

When you copy a structure, it appears that you can make changes and save them, but Superstructure Definitions still can't be deleted.

The error messages we get when we try to change things on the description tab are shown in the attached Word document.

If you need anything else in relation to the above problems, please let us know. Also, I had a question about an unrelated matter. We have noticed that the program now requires you to input span lengths on the

### ERROR Descriptions:

The error descriptions are shown below. The first two happen when we are trying to remove the structure definition and save the bridge. You get the first one on the first save attempt and the second one on the second save attempt. The third one is the message that we get when we make any of the changes as listed in the email and then try to save them.

### Error #1

Unable to save Bridge data!

03:59:34 PM - Line 867 in source file .\UiBWSDoc.cpp.

SpngMbrDefld not assigned to Member Alt!

4/19/2016 3:18:42 PM

HRS AASHTO

1882

### Complete Issue Information

03:59:31 PM - Line 5699 in source file .\DoGirderMbrAlt.cpp.

SpngMbrDefld not assigned to Member Alt!

03:59:31 PM - Line 5699 in source file .\DoGirderMbrAlt.cpp.

SpngMbrDefld not assigned to Member Alt!

03:59:31 PM - Line 5699 in source file .\DoGirderMbrAlt.cpp.

SpngMbrDefld not assigned to Member Alt!

03:59:31 PM - Line 5699 in source file .\DoGirderMbrAlt.cpp.

### Error #2

Unable to save Bridge data!

03:59:59 PM - Line 867 in source file .\UiBWSDoc.cpp.

### Error #3

Unable to save Bridge data!

04:00:32 PM - Line 867 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridgeRefLine (SaveOrder object 53).

04:00:31 PM - Line 431 in source file .\DmBridgeCache.cpp.

Unable edit and update recordset.

04:00:31 PM - Line 667 in source file .\DmBridgeRefLine.cpp.

No rows were affected by the update or delete operation.

FROM:mordoobadi DATE:5/26/2005 9:28:54 AM

#1, #2 happen when:

- \* A girderline member is deleted
- \* A structure definition is deleted
- \* A bridge is deleted

The issue has already been resolved for 5.3.0 service pack 1. The service pack is going to be released soon.

#3: What kind of database are you using.

If it is an Oracle database please check with your Oracle DBA to make sure that the Read/Write role (VIRTIS\_USER\_READ\_WRITE\_ROLE) is in place and has required privileges (INSERT, UPDATE, SELECT, DELETE for all tables/Views). For spot check ask him to check the privileges for abw\_bridge\_ref\_line. Please let me know what you find out.

FROM:mordoobadi DATE:5/26/2005 10:53:21 AM

Please run these scripts and send me the results.

spool C:\RolesDump.LST;

4/19/2016 3:18:42 PM

HRS AASHTO

1883

**Complete Issue Information**

```
set pagesize 0;
set linesize 200;
SELECT ROLE, OWNER, TABLE_NAME, PRIVILEGE FROM ROLE_TAB_PRIVS WHERE ROLE
LIKE 'VIRTIS%' ORDER BY ROLE, OWNER, TABLE_NAME, PRIVILEGE;
spool off;
```

FROM:mordoobadi DATE:6/3/2005 1:41:49 PM  
#3: I found what is causing the problem that you reported. Some values in the abw\_bridge\_ref\_line table have such a high precision that can not be handled in the software. It happened when bridge reference lines where adjusted in 5.3 migration. The problem is that the values in the database have more precision than the values read into recordset variables and when a record is updated the where clause that finds the record that is being updated cannot find that record. I prepared SQL scripts that trims off extra digits for values stored in the abw\_bridge\_ref\_line table. I have verified that the resolution works for BID 554 in your Oracle database

Please make a backup copy of your database before applying the scripts (just to be safe) then run the scripts and let me know if this resolves the problems.

FROM:mordoobadi DATE:6/3/2005 1:45:57 PM  
Error #3 should be addressed in Virtis/Opis 5.3 Service Pack 1.

FROM:mordoobadi DATE:6/3/2005 1:50:29 PM  
New incident created for Error #3. (Incident 6470)

Issue ID: 6467  
Subject: Wrong word in pop up message

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 6/1/2005 2:49:06 PM  
Modified By: administrator 6/19/2008 4:19:56 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |



**Complete Issue Information**

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 6478.14857 | Resolved      | Change beam shape selection |

**Description**

FROM:dteal DATE:Wednesday, June 01, 2005 10:49:06 AM

See the attached jpg. I was changing the number of girders on an existing structure in the Superstructure Definition window. The message that popped up is worded wrong, second word. It states "Number or Girders" it should state "Number of Girders". So, we need to replace the "or" with "of".

FROM:jihnat DATE:6/1/2005 11:17:06 AM

Fixed for 5.3 SP1 and 0.9 Beta 11.

FROM:dteal DATE:Tuesday, June 28, 2005 9:02:22 AM

Accepted in 5.3 SP1 Beta 1

|                                      |
|--------------------------------------|
| Issue ID: 6478                       |
| Subject: Change beam shape selection |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Li, Xinmei       | 6/7/2005 6:35:44 PM  |
| Modified By: administrator     | 6/19/2008 4:19:56 PM |
| Priority: High                 |                      |

4/19/2016 3:18:42 PM

**HRS AASHTO**

1885

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 6510.14825 | Suspended     | Add ability to rate with and without wearing surface in one analysis run |

## Description

FROM:xli DATE:6/7/2005 2:31:11 PM

For a prestressed I beam, after changing beam shape selection, not able to analyze this member alt, get errors:

Error generating BRASS prestress commands!  
02:30:16 PM - Line 113 in source file .\BrassPrestress.cpp.

Unable to create BRASS strand profile commands!  
02:30:16 PM - Line 1124 in source file .\EngineExport.cpp.

Unable to move to P/S strand grid row at left end of beam!  
02:30:16 PM - Line 1124 in source file .\EngineExport.cpp.

Unable to locate data encapsulation objects.  
02:30:16 PM - Line 850 in source file .\DoPsShapeStrandGridSet.cpp.

FROM:xli DATE:6/7/2005 2:43:05 PM  
BID7 "PCITrainingBridge4" is used for testing

FROM:bgoodrich DATE:Thursday, June 16, 2005 12:10:57 PM  
Part of the issue is that the strand layout for the original beam is retained when the beam shape is changed. I tried to remove the strands manually after changing the beam and Virtis crashed. The strand layout should probably be wiped out when the beam shape is changed. On the other hand, if

4/19/2016 3:18:42 PM

HRS AASHTO

1886

**Complete Issue Information**

the only difference in the beam shape is the web depth, it might be nice to leave the strand layout alone. However, this does not work when the strands are harped.

FROM:hlee DATE:1/9/2007 1:42:55 PM

Crash was fixed in 5.5 Release for Incident 7615.

A message to inform the user that adding or deleting rows may change strand locations and the strand layout should be reviewed for beams that use the current beam shape was added in 5.4 Release for Incident 2768.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 6510                                                                    |
| Subject: Add ability to rate with and without wearing surface in one analysis run |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Kennelly, Krisha | 6/15/2005 4:20:23 PM |
| Modified By: administrator     | 6/19/2008 4:19:53 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

## Complete Issue Information

Issue ID: 6511

Subject: LFD Shear capacity for cont. P/S Girders

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Generated, cclancy 6/15/2005 7:24:41 PM

Modified By: administrator 6/19/2008 4:19:53 PM

Priority: High

Category: Bug - BRASS

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Information Needed |          |             |
| Goodrich, Brian | Information Needed | High     | Bug - BRASS |

4/19/2016 3:18:43 PM

HRS AASHTO

1888

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S32 of 50111.bbd    |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6512.14823 | Closed        | LFD ratings for bearing stiffeners |

### Description

FROM:jihnat DATE:6/15/2005 3:23:04 PM

Submitted via email by Chad Clancy. I don't think it says which version of Virtis:

We are currently doing a Virtis LFD rating for a continuous 4-span P/S girder bridge with plans dated October 2000. Virtis computes a HS20 shear rating of approximately 0.69. As it turns out, I get a shear inventory rating factor of 1.0 by my hand (i.e, spreadsheet calculations). These hand calcs use the shear and moment envelopes (maximums) rather than concurrent values. The rating factor of 1.0 leads me to believe that my calculations are in line with what was done in the design of the shear stirrups.

The PCA Manual (Section 9.3.11: Bulb Tee Design example) says that it is conservative to use the maximum values but when you look at the equations and the way that BRASS applies them, this is not the case. If you look at the BRASS output for the controlling point to me (see below), BRASS is using a concurrent live load shear of -1.11 kips (this is the live load shear concurrent with the maximum moment at this section). The problem is that when this very low live load shear is used to calculate  $V_i$ , you end up with a very low capacity,  $V_{ci}$ . While it appears that BRASS is attempting to conservatively use the concurrent shears, doing so ends up conservatively estimating the shear capacity as compared to what the capacity is when the maximum shears and moments are used.

The value for  $V_i$  (defined as the factored shear force at a section due to externally applied loads occurring simultaneously with  $M_{max}$ ) is computed by BRASS as:

$$V_i = V_{mu} - V_d$$

4/19/2016 3:18:43 PM

HRS AASHTO

1889

## Complete Issue Information

where  $V_{mu}$  is the total factored shear and BRASS uses the live load shear that is concurrent with the maximum moment at that section

$V_d$  is the factored dead load shear

The calculation of  $V_{ci}$  per eqn. 9-27 is directly related to  $V_i$  so a lower value of  $V_i$  results in a lower concrete shear capacity. As such, using a small value for the live load shear as calculated by the above equation reduces the capacity. Equation 9-27 appears to be taking into account the amount of flexural cracking at any given section. However a brief review of the above equations shows that it is not more conservative to use the simultaneous shear. It is difficult to ascertain which is the correct approach as there is no commentary to explain the rationale behind these equations.

Chad M. Clancy, P.E.

Modjeski and Masters, Inc.

(Phone) 717-790-9565

(Fax) 717-790-9564

(Email) [CMClancy@Modjeski.com](mailto:CMClancy@Modjeski.com)

---

From: Jeff Triezenberg [mailto:[jtriezenberg@benesch.com](mailto:jtriezenberg@benesch.com)]  
Sent: Thursday, June 02, 2005 2:30 PM  
To: Clancy, Chad M.  
Subject: S15 of 41064

Chad,

Upon the advice of the Virtis people, I increased the wheel advancement denominator to 300. This should give more accurate live load moments and it does affect our rating. Virtis now shows the lowest rating to occur in span 2, 19.602 m from the pier, or 50.749m from the bearing at ref line A. I have included the shear calculations for this point.

\*\*\*\* For Point 207.834 Node Point = 29

Dead plus pos live load shear = -36.28 kips  
Calculate shear capacity based on sign of total shear which is  
neg  
Load Level 1  
Truck Number 1

4/19/2016 3:18:43 PM

HRS AASHTO

1890

## Complete Issue Information

\*\*\*\* Summary of Actions for Calculating Shear Capacity

Dead load shear = -47.67 kips  
Dead load moment = 1126.55 ft-kips  
Live load pos shear = 11.38 kips  
Shear concurrent with maximum mom. = -47.04 kips

Live load moment = 390.18 ft-kips  
LL M. concurrent with pos max V = -7.15 ft-kips  
Mmax(based on factored actions  
Minus unfactored DL mom = 1185.04 ft-kips)

Vert. force due to prestressing = 0.00 kips

At point 207.83

For pos shear,

Optional shear analysis distance = 20.308 ft

Sign of total concurrent M with shear = Pos

jd = 73.637 in

Determination of Vi:

Vd = -47.67 kips VI = -47.04 kips

Vi = Gamma \* (Beta (DL) \* Vd + Beta (LL) \* VI) - Vd  
= -116.43 kips

## PERFORMING AASHTO SPECIFICATION CHECKS - 9.20 Shear (Prestress Concrete)

Analysis Point : 207.83

Construction Stage: 2

Input Parameters:

Section Geometry:

d = 75.28 in b' = 5.905 in

h = 81.378 in

Av = 0.400 in<sup>2</sup> s = 22.913 in

% of Concrete Used in Vertical Shear = 100.000%

Section Properties:

I = 1375641.00 in<sup>4</sup> Yt = 51.816 in S =  
26548.41 in<sup>3</sup>

Material Properties:

f'c = 6962.000 psi fsy = 43511.000 psi

Lightweight Concrete Factor = 1.000

phi(shear) = 0.900

Actions and Stresses:

lbs fpc = 659.89 psi Vp = 0.0

fpe = 1857.77 psi Vd = 47.7

4/19/2016 3:18:43 PM

HRS AASHTO

1891

## Complete Issue Information

kip  
fd = 705.84 psi Vi = 116427.1  
lbs  
Mmax = 1185.04 kip ft

### Shear Computations:

$$d \geq 0.8h = 75.276 \text{ in}$$

$$\begin{aligned} M_{cr} &= (I / Y_t (6 * \text{SQRT}(f'c) + f_{pe} - f_d)) / 12000 \quad (\text{AASHTO 9-28}) \\ &= 3656.07 \text{ kip ft} \end{aligned}$$

$$\begin{aligned} V_{ci} &= 0.6 * \text{SQRT}(f'c) b'd + V_d + V_i * M_{cr} / M_{max} \quad (\text{AASHTO 9-27}) \\ &= 186.3 \text{ kip} \end{aligned}$$

$$V_{ci}(\text{min}) = 1.7 * \text{SQRT}(f'c) b'd = 63.1 \text{ kip}$$

$$V_{ci} \geq V_{ci}(\text{min}) \Rightarrow V_{ci} = 186.3 \text{ kip}$$

Note:  $M_{max} < M_{cr}$ , so  $M_{cr}/M_{max}$  limited to 1.0 as discussed in "Design for Shear in Prestressed Concrete Bridge Members" in the PCI Journal (May-June 2001).

$$\begin{aligned} V_{cw} &= (3.5 * \text{SQRT}(f'c) + 0.3f_{pc}) * b'd + V_p \quad (\text{AASHTO 9-29}) \\ &= 217.8 \text{ kip} \end{aligned}$$

$$\begin{aligned} V_s &= A_v * f_{sy} * d / s = 57163.2 \text{ lbs} \quad (\text{AASHTO 9-29}) \\ V_s(\text{max}) &= 8 * \text{SQRT}(f'c) b'd = 296735.5 \text{ lbs} \end{aligned}$$

$$V_s \leq V_s(\text{max}) \Rightarrow V_s = 57163.2 \text{ lbs}$$

### Shear Summary:

$$V_c = \text{MIN}(V_{ci}, V_{cw}) = 186.3 \text{ kip} \quad (\text{AASHTO 9.20.2.1})$$

$$V_n = V_c + V_s = 243.5 \text{ kip}$$

$$V_u = \phi * V_n = 219.2 \text{ kips} \quad (\text{AASHTO 9-26})$$

### Notes:

=> The  $\text{SQRT}(f'c)$  term has been multiplied by the Lightweight Concrete

Factor per AASHTO 9.20.2.5(b).

=> The term  $b'd$  term has been multiplied by the % of Concrete Used in Vertical Shear.

Jeff Triezenberg  
Designer

Alfred Benesch & Company  
222 N. Washington Sq., Ste. 200  
Lansing, MI 48933-1800

4/19/2016 3:18:43 PM

HRS AASHTO

1892



## Complete Issue Information

517.482.1682 (P)

517.482.7180 (F)

FROM: bgoodrich DATE: Tuesday, June 21, 2005 10:48:11 AM

Please attach the BBD file. Also, did you try increasing the wheel advancement denominator? If so, did you get a better rating?

FROM: bgoodrich DATE: Tuesday, June 21, 2005 2:58:43 PM

BBD file for version 5.2 is attached.

FROM: bgoodrich DATE: Tuesday, June 21, 2005 4:03:11 PM

Jeff Triezenberg increased the wheel advancement denominator, which resulted in a higher rating factor, but not enough to get the rating above 1.0.

FROM: bgoodrich DATE: Tuesday, June 21, 2005 4:03:26 PM

analyzed the BBD file for "S15 of 41064" with Virtis 5.2. The critical HS20 Inventory rating for shear was 0.81 (lane). This was with a wheel advancement denominator of 300. I changed it back to the default of 100 and received a critical HS20 Inventory rating for shear of 0.78 (lane). In the original issue description, Chad reported that the critical rating was 0.69, but I cannot reproduce this result with Virtis. I tried this with both the interior and exterior girders for the structure definition. Either way, the BRASS ratings are still not at or above 1.0 as was listed in the original design.

BRASS calculates the shear capacity per the current AASHTO spec, which indicates to use the concurrent shear in the Vci calculation. There is no override to use the maximum envelope shear instead. The BRASS engine does have another option for determining the shear capacity using the 1979 AASHTO specification, however, this method is not currently exposed in Virtis. We hope to have this implemented in the Virtis 5.4 release scheduled for this December.

I forwarded this issue to WYDOT.

FROM: bgoodrich DATE: Wednesday, July 20, 2005 10:20:40 AM

E-mail from C.J. Riley (WYDOT):

From: Charles Riley [mailto:Charles.Riley@dot.state.wy.us]

...BRASS conservatively follows the spec while using the maximum envelope shear provides a greater capacity and would therefore be less conservative. The Spec is very clear that the Vi term is the factored shear occurring concurrently with the maximum moment; this is what BRASS does. While his design assumptions may have used the maximum envelope shear, this is not spelled out anywhere in the spec. I don't think this necessitates a change to BRASS.

FROM: bgoodrich DATE: Wednesday, July 20, 2005 10:22:05 AM

E-mail from Jay Puckett:

I think that BRASS LFD uses the coincident moment and shear approach. This is per the specification. It is correct that using the envelope for the applied actions is conservative. A common error is to consider only the maximum shear with coincident moment, this is likely not critical. The usual critical case is max M- (most negative) with coincident shear. Note that the coincident moment with max shear is about one-half the value of the most critical moment. When the moment is critical, the shear does not drop off much. Without seeing the file, etc. I can not really comment more, however this max shear with coincident moment is a typical error that I have seen.

4/19/2016 3:18:43 PM

HRS AASHTO

1893

**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, July 20, 2005 10:22:44 AM  
 Based on the directive from WYDOT, no changes will be made to BRASS. However, I believe this issue may be related to Incident 6549, in which the concurrent shears may be incorrect in some cases. We should recheck this incident when 6549 is addressed.

FROM:bgoodrich DATE:Friday, November 11, 2005 12:39:23 PM  
 WYDOT assigned this issue to BRASS Problem Log 626. Chad indicated that he would provide more information.

|                                             |
|---------------------------------------------|
| Issue ID: 6512                              |
| Subject: LFD ratings for bearing stiffeners |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Generated, cclancy | 6/15/2005 7:26:34 PM |
| Modified By: administrator       | 6/19/2008 4:19:53 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Closed             |          |             |
| Goodrich, Brian | Closed             | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:jihnat DATE:6/15/2005 3:26:30 PM  
Submitted via email:

We have a steel girder bridge for which the bearing stiffeners are controlling the design. It appears as though Virtis is using factored loads to do the LFD ratings of these stiffeners. However, the LFD specifications on bearing design point back to the ASD allowables. The Rating Manual shows allowables (for service loads) of  $0.8F_y$  and  $0.9F_y$  for inventory and operating ratings, respectively.

Typically when the LFD spec does not have a revised equation or allowable stress for LFD we use the ASD equations with service loads. Please look into this and let me know if you concur with this assessment.

Chad M. Clancy, P.E.

Modjeski and Masters, Inc.

(Phone) 717-790-9565

(Fax) 717-790-9564

(Email) CMClancy@Modjeski.com

FROM:bgoodrich DATE:Tuesday, June 21, 2005 10:52:43 AM  
Please attach the BBD file.

FROM:bgoodrich DATE:Tuesday, June 21, 2005 2:54:55 PM  
BBD file for version 5.2 is attached.

FROM:bgoodrich DATE:Tuesday, June 21, 2005 2:56:20 PM  
From: mmahgoub [mailto:mmahgoub@benesch.com]  
Sent: Tuesday, June 21, 2005 11:38 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Mullins, K; CMClancy@modjeski.com  
Subject: End Bearing Stiffener

Brian,

Just to let you know that we do not have a problem anymore regarding the end bearing stiffener issue of 50111-S32.

Thank you.

Mohamed

4/19/2016 3:18:44 PM

HRS AASHTO

1895

**Complete Issue Information**

|                                        |
|----------------------------------------|
| Issue ID: 6513                         |
| Subject: Rating Results Summary Report |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ihnat, Joseph    | 6/15/2005 7:27:59 PM |
| Modified By: administrator     | 6/19/2008 4:19:53 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
|                    | On Hold  |          | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6517.14818 | Resolved      | Unable to save analysis results. |

**Description**

FROM:jihnat DATE:6/15/2005 3:28:05 PM  
Submitted via email:

I've noticed a slight difference in the rating values between those found in the Rating Results Summary Report in the Virtis interface and those found in the Brass output. The difference appears to be due to rounding off to difference decimal places. I typically include a printout of both the Brass output and the

4/19/2016 3:18:44 PM

HRS AASHTO

1896

### Complete Issue Information

Rating Results Summary Report table in the Rating Reports submitted to MassHighway. For consistency, I would like it if both sets of output used the same rounding criteria. I'm hoping that this is something that could be considered for future releases of Virtis.

Thanks,

Fred Cassellius  
PURCELL ASSOCIATES  
www.purcellassociates.com

FROM:bgoodrich DATE:Thursday, June 16, 2005 12:39:21 PM

I believe this was addressed in a release prior to 5.3. Let's check this with 5.3 SP1.

|                                           |
|-------------------------------------------|
| Issue ID: 6517                            |
| Subject: Unable to save analysis results. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Lee, Herman           | 6/17/2005 3:06:56 PM |
| Modified By: administrator          | 6/19/2008 4:19:53 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:6/17/2005 10:55:35 AM

5.3.1 Oracle Migration Testing. (Schema: VIRTIS531)

4/19/2016 3:18:44 PM

HRS AASHTO

1897

**Complete Issue Information**

To reproduce:

- 1. Open either BID13 or 14 BWS.
- 2. Perform HS20 rating for the whole bridge.
- 3. Save analysis results will diaplay the following.

=====  
The analysis results are not up to date and cannot be saved.  
10:57:35 AM - Line 2942 in source file .\DoMemberResults.cpp.

The Bridge properties have changed since they were last saved.  
Please Save the bridge and then save the results.  
10:57:35 AM - Line 2935 in source file .\DoMemberResults.cpp.  
=====

FROM:hlee DATE:6/17/2005 11:25:20 AM  
Same for Sybase.  
This happens in 5.3.0 also.

FROM:gbhanushali DATE:8/17/2006 11:11:29 AM  
iBridgeStatus comes back as ABW\_MODIFIED eventhough its not modified.

```
BOOL CDoMemberResults::IsOkToSave()
{
    if(GetBridgeStatus() != ABW_NOTMODIFIED)
    {
        ...error...
    }
}
short CDoMemberResults::GetBridgeStatus()
{
    // valid return values:
    //          ABW_MODIFIED           Modified
    //          ABW_NOTMODIFIED       Not Modified
    //          ABW_SYSTEMERROR       Error

    iBridgeStatus = pBridgeCom->GetModificationStatus();
```

FROM:mordoobadi DATE:8/22/2006 1:16:17 PM  
Duplicate of incident 6810.

FROM:mordoobadi DATE:8/22/2006 1:28:20 PM  
Not related to migration.

Fixed for 5.5 Beta 4.

|                                         |
|-----------------------------------------|
| Issue ID: 6518<br>Subject: 5.3.1 Beta 1 |
|-----------------------------------------|

## Complete Issue Information

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Jensen, Paul          | 6/20/2005 10:15:59 PM |
| Modified By: administrator          | 6/19/2008 4:19:53 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

## History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Bug      |
| Kennelly, Krishna | Assigned |          |          |
| Li, Xinmei        | Resolved |          |          |
| Li, Xinmei        | Resolved | High     | Bug      |

## Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N0492.bbd           |             |

## Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 6523.14812 | Resolved      | Length Mismatch Between Struct. Def, Structure, and Structure Alternative |

## Description

FROM:pjensen DATE:Monday, June 20, 2005 6:15:59 PM

I was trying to run the upgrade wizard on two different Oracle databases and got different results.

Oracle 10.1.0.4 - the wizard hung (after it validated the the data structure) it never returned with a script to run for update. the database was 5.3.0. I was able the create/update/delete bridges. I was able the run the script to migrate it forward. I did not recieve any errors from the script.

Oracle 9.2.0.4 - the wizard select the correct script and ran to completion.

With both migrated databases, I was able to create/update/delete bridges from the inventory.

4/19/2016 3:18:44 PM

HRS AASHTO

1899

**Complete Issue Information**

FROM:mordoobadi DATE:6/22/2005 8:08:59 AM

We haven't started supporting Oracle 10g yet and we haven't done any testing on it either.

FROM:hlee DATE:7/10/2006 8:55:20 AM

Changed Project to Support Center.

FROM:hlee DATE:4/30/2008 2:35:38 PM

Discarded by TAG 12/07.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 6523                                                                     |
| Subject: Length Mismatch Between Struct. Def, Structure, and Structure Alternative |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Koenig, David    | 6/22/2005 3:03:08 PM |
| Modified By: administrator     | 6/19/2008 4:19:52 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dkoenig DATE:Wednesday, June 22, 2005 11:03:09 AM

We have a structure that was copied from a previous structure. The user worked through the bridge and updated the span lengths etc.. If you look at Structure Definition 2, it has a span length of 56.17 feet. On the Structure window for Structure 2, it has the same span length. Both of these values were entered. If you go to Structure Alternative 1 for Structure 2, it shows a span length of 36.17. On this window, it is greyed out and can't be changed. This can't be correct. The bbd is attached.

4/19/2016 3:18:45 PM

HRS AASHTO

1900



**Complete Issue Information**

FROM:kkennelly DATE:6/30/2005 8:22:29 AM

The data for your structure def is ok. There is a bug in what this window is displaying, it will not affect your data or analysis.

Notes for programmer:

RefreshStructDefsCB() is looping through the list of structure defs and the ref line for the last structure def is the ref line being stored as a member variable even though it does not belong to the structure def assigned to the superstruct alt. When BuildGrid() is called, the correct reference line is used to populate the grid. At the end of AttachData(), RefreshGrid() is called again for read only status and the grid gets refreshed with the wrong reference line data.

FROM:xli DATE:7/1/2005 9:24:08 AM

Fixed.

When refresh grid, call RefreshStructDefsCB() instead of RefreshGrid() , so that correct reference is used.

|                         |
|-------------------------|
| Issue ID: 6538          |
| Subject: span 42nb_43nb |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Zeng, Cincia        | 6/27/2005 2:15:12 PM |
| Modified By: administrator        | 6/19/2008 4:19:51 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

4/19/2016 3:18:45 PM

HRS AASHTO

1901

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 6548.14787 | Suspended     | Global preferences |

## Description

FROM:jhnat DATE:6/27/2005 10:14:29 AM  
Received via email:

I am attaching the bbd file (span42nb\_43nb.bbd) for your review. This is the 2-span bridge floor stringer system model. Stringer is simply supported for each span. After I ran the analysis, all stringers went through fine. But when it's time to analyze floor beams, I got the following messages:

Unable to convert steel beam to BRASS cross sections!  
Error generating BRASS cross section commands!  
Unable to get cross section dimensions!  
A slab must be defined at all locations above a haunch!  
Unable to retrieve concrete density of slab concrete!  
Error computing haunch selfload!

I reviewed the framing plan detail and structural cross section detail and didn't find any error. What could cause above problems?

Cincia Zeng, P.E.  
Lichtenstein Consulting Engineers, Inc.  
11 Huron Drive, Natick, MA 01760  
Tel: 508-647-0500 Fax: 508-647-5609  
E-Mail: CZeng@LCE.us

FROM:kkennelly DATE:6/27/2005 10:33:40 AM  
User input error, note the error message : A slab must be defined at all locations above a haunch!

Floorbeam definition FB1 has the following data on the Deck Profile window:  
Start Distance 7.29', length 54.71'.

The Haunch Profile has the following data:  
Start Distance 0.0 length 62'.

Revise the Haunch Profile data to match the Deck Profile data.

**Complete Issue Information**

Issue ID: 6548

Subject: Global preferences

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Armbrecht, Tim

6/29/2005 6:45:52 PM

Modified By: administrator

6/19/2008 4:19:50 PM

Priority: High

Category: Enhancement

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | On Hold  |          |          |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6551.14784 | Closed        | Strand Layout window - strand configuration type |

**Description**

FROM:tarmbrecht DATE:Wednesday, June 29, 2005 2:45:52 PM

I'd like to see global preferences set up for a couple of situations

1) Currently the user can select "skip operating rating based on serviceability" form the POI properties window. I think most raters will want to use this option globally because they may not assign points of interest to a particular member and they may not know which point controls the rating, let alonw which

4/19/2016 3:18:45 PM

HRS AASHTO

1903

**Complete Issue Information**

member. This check box should apply to entire bridges, not POI.

2) I greatly appreciate the option (in 5.3.1) to not limit Mcr/Mmax to 1 for prestressed bridges. Again, I would like to see that this option apply to the entire bridge as a global preference instead of one member (and not making it so difficult to find as it is located in the engine tab/properties button for one member alternative). Also, I would prefer that the user have the option to set the default instead of making us have to select this option each time. As it stands right now, we'll have to go into each of our prestressed bridges (future or currently in the database), and select this option for each member.

FROM:jduray DATE:6/30/2005 8:23:47 AM

The UI TAG should review this and determine how we should address these two items and perhaps identify others that should have global values. I think we should consider adding an engine-data tab to the system defaults where the user can specify the engine-data default values. These values would be the default values for the new member alt, poi and analysis event engine data.

FROM:hlee DATE:7/10/2006 8:55:36 AM

Changed Project to Support Center.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6551                                            |
| Subject: Strand Layout window - strand configuration type |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 6/30/2005 6:06:23 PM |
| Modified By: administrator     | 6/19/2008 4:19:50 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:18:45 PM

HRS AASHTO

1904

**Complete Issue Information**

FROM:kkennelly DATE:6/30/2005 2:04:58 PM

Working in 5.4 debug I noticed the following: BID9, create a member alt that is a ps u beam. Assign a ubeam to the Beam Details window, open Strand Layout window. Under Strand Config Type, Straight/Debonded is selected and grayed out. Harped is grayed out. But Harped and Straight/Debonded is enabled and I can select it.

FROM:jihnata DATE:8/23/2005 12:41:37 PM

All should be disabled for U-Beam, since Straight/Debonded is the only allowable option.  
Fixed for 5.4.0

|                                          |
|------------------------------------------|
| Issue ID: 6553                           |
| Subject: Schedule Based Slab – POI Count |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Teal, Dean           | 7/7/2005 2:13:23 PM  |
| Modified By: administrator         | 6/19/2008 4:19:50 PM |
| Priority: High                     |                      |
| Category: Education                |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:46 PM

**HRS AASHTO**

1905

**Complete Issue Information**

|                    |          |      |         |
|--------------------|----------|------|---------|
| Duray, Jim         | Accepted | High |         |
|                    | New      |      | Unknown |
| Duray, Jim         | New      | High | Unknown |
| Ordoobadi, Mehrdad | Assigned |      | Bug     |
|                    | Resolved |      |         |
| Ordoobadi, Mehrdad | Resolved | High | Bug     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 3209910.bbd         |             |

**Tasks**

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6555.14780 | Resolved      | Unable to save Bridge data |

**Description**

FROM:dteal DATE:Thursday, July 07, 2005 10:13:25 AM

I know that BRASS has a limitation of 40 x-section ranges in schedule base – but when I have only entered 20 POI's and have set the engine properties to "User Defined Points Only" – why should the analysis terminate and give me a message that I have exceeded 40?? .bbd attached

FROM:kkennelly DATE:7/13/2005 2:33:03 PM

The error message that you receive states that the number of cross section ranges has exceeded 40. Entering 20 poi's doesn't mean you will get only 21 cross section ranges. Points of interest in Virtis means you will get rating factors at those points, not that you are defining cross section ranges based on these points.

I'm pretty sure BRASS is currently being changed to allow more cross section ranges.

FROM:dteal DATE:Thursday, November 17, 2005 2:19:57 PM

FROM:kkennelly DATE:11/18/2005 8:12:39 AM

Closed based on accepted in track field.

|                                     |
|-------------------------------------|
| Issue ID: 6555                      |
| Subject: Unable to save Bridge data |

## Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 7/8/2005 12:39:21 PM |
| Modified By: administrator          | 6/19/2008 4:19:50 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ductility Check.bbd |             |

## Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6561.14774 | Duplicate     | Ductility Check Not Required for Non-Composite |

## Description

FROM:jhnat DATE:7/8/2005 8:37:24 AM

>>> agott@abatepc.com 07/08/05 7:49 AM >>>

I created a new Virtis file yesterday and was able to save it. When I opened the same file this morning and input changes to finish it, I cannot save it. This is the message that I get:

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmBridgeDesignParam (SaveOrder object 393).

Error updating database record set.

4/19/2016 3:18:46 PM

HRS AASHTO

1907

## Complete Issue Information

FROM:jihnna DATE:7/8/2005 8:40:51 AM  
BBD file is attached (version 5.3.0) It can be imported but not saved.  
Service Pack 1 does not seem to resolve this problem.

FROM:mordoobadi DATE:1/31/2006 10:13:56 AM  
This was an issue that was resolved in 5.4.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6561                                          |
| Subject: Ductility Check Not Required for Non-Composite |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 7/12/2005 3:33:24 PM |
| Modified By: administrator       | 6/19/2008 4:19:50 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:Tuesday, July 12, 2005 11:33:24 AM  
Attached is a bbd for a PS structure (using the last superstructure definition.

When a design review is done on this PS structure, the Spec. checker on stage 1 is failing 5.7.3.3.1 (Ductility). This should never be checked for stage 1 (non-composite) according to Puckett and Barkers book, page 449 section 7.7.4.

4/19/2016 3:18:46 PM

HRS AASHTO

1908



**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, July 13, 2005 2:21:27 PM  
This issue is a duplicate of Incident 6147.

|                                           |
|-------------------------------------------|
| Issue ID: 6564                            |
| Subject: Error copying Stringer Group Def |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 7/13/2005 2:23:30 PM |
| Modified By: administrator     | 6/19/2008 4:19:49 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | On Hold  |          | Bug      |
| Ihnat, Joseph    | Assigned |          |          |

4/19/2016 3:18:46 PM

HRS AASHTO

1909

### Complete Issue Information

|                    |          |      |         |
|--------------------|----------|------|---------|
|                    | Resolved |      |         |
| Ihnat, Joseph      | Resolved | High | Bug     |
| Duray, Jim         | New      | High | Unknown |
| Ordoobadi, Mehrdad | Assigned |      | Bug     |
|                    | Resolved |      |         |
|                    | Accepted |      |         |
|                    | Closed   |      |         |
| Ordoobadi, Mehrdad | Closed   | High | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6566.14769 | Closed        | Database Migration Wizard appears unresponsive |

### Description

FROM:jihnath DATE:7/13/2005 10:22:47 AM

In BID 14, get the following error when trying to copy the Stringer Group Def:

Copy of Stringer Group Def failed!

10:16:57 AM - Line 174 in source file .\UiBWSTreeStringerGroupDefLabelItem.cpp.

Invalid object id assigned.

10:16:57 AM - Line 261 in source file .\DoStringerGroupDefTemplateList.cpp.

Works OK in BID 13, though.

FROM:jihnath DATE:3/6/2006 3:42:16 PM

If I create a new one I can copy it.

FROM:kkennelly DATE:5/10/2006 3:29:23 PM

I've fixed this so that you can copy the Stringer Group Def within the structure def in BID14. This problem only exists in BID14 because that Stringer Group Def has a Stringer Group Def Template. BID13 doesn't have a stringer group def template.

You will still get the same error if you try to copy the Stringer Group Def from BID14 to another structure def. I cannot fix that problem because that would require creating stringer mbrs in the structure def being copied to and we can't do that. I think we should not allow Stringer Group Def's to

4/19/2016 3:18:47 PM

HRS AASHTO

1910

**Complete Issue Information**

be copied to different structure definitions. The Stringer Group Def contains references to floorbeams and stringer mbrs that only pertain to the structure def in which it was created.

If you copy the Stringer Group Def in BID13 to BID14, the copy will work but when you open the window in the UI you will get error messages that the floorbeams aren't right.

FROM:jihnmat DATE:5/24/2006 7:19:56 AM  
The Copy/Paste is now restricted to the same structure def.  
Fixed in 5.5.0

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6566                                          |
| Subject: Database Migration Wizard appears unresponsive |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 7/14/2005 7:01:34 PM |
| Modified By: administrator          | 6/19/2008 4:19:49 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnmat DATE:7/14/2005 2:58:22 PM  
The Database Migration Wizard can go into a tight loop and appear unresponsive or locked up. Some users are killing it when this happens.  
A message (on the Wizard window itself) should alert users that this is normal and they should let the wizard run to completion.

FROM:jduray DATE:7/25/2005 9:25:21 AM  
Let's get this fixed for the 5.4 release.

4/19/2016 3:18:47 PM

HRS AASHTO

1911

**Complete Issue Information**

FROM:mordoobadi DATE:2/1/2006 3:42:26 PM  
Code added to show a warning message asking users to wait until the process is finished for time consuming steps.

FROM:jhnat DATE:2/2/2006 7:17:21 AM  
OK in 5.4.0 Beta 4.

Issue ID: 6578  
Subject: Span length limitation when creating GFS Floor System in Academic version.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 8/8/2005 1:59:27 PM  
Modified By: administrator 6/19/2008 4:19:48 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | On Hold  |          | Bug - GUI 2 |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

**Contacts**

4/19/2016 3:18:47 PM

HRS AASHTO

1912

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 6588.14747 | Closed        | Update Multi-Media Path when Archiving |

**Description**

FROM:hlee DATE:8/8/2005 9:48:57 AM  
 From 2005 UG meeting:  
 Span length is limited to 0.00 ft in Academic version.  
 Please see attached screen capture.

FROM:jihnate DATE:8/22/2005 9:58:09 AM  
 Also found that that the limits were not being checked at all for Girder Floorbeam Floor System.  
 Fixed in 5.4.0

|                                                 |
|-------------------------------------------------|
| Issue ID: 6588                                  |
| Subject: Update Multi-Media Path when Archiving |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 8/10/2005 11:19:17 AM |
| Modified By: administrator          | 6/19/2008 4:19:48 PM  |
| Priority: High                      |                       |

4/19/2016 3:18:47 PM

**HRS AASHTO**

1913

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | On Hold  |          | Help     |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Help     |

## Contacts

| Name                                     | Company                        | Email 1                         | Phone 1       |
|------------------------------------------|--------------------------------|---------------------------------|---------------|
| Dean Teal                                | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich                           | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT                      | Shanon.Murgoitio@itd.idaho.gov  | 208-334-8547  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 6589.14746 | Closed        | Crack Control Parameter Usage by BRASS for PS |

## Description

FROM:dteal DATE:Wednesday, August 10, 2005 7:19:17 AM  
REPORTED BY:Dean Teal

### DESCRIPTION:

We need a way to update the path to multi-media links when the project is completed and the plans/documentation is archived to a different drive/server/path.

Here is the scenario in KS. All plans/documentation/ect. Get put in a working directory. After the project is finalized these plans/documents/ect. Get moved to an achieved directory. Our multi-media link fails once this move happens. We need a way to update these links without too much pain.

4/19/2016 3:18:47 PM

HRS AASHTO

1914

**Complete Issue Information**

COMMENTS:

FROM:dteal DATE:Wednesday, November 07, 2007 12:41:58 PM  
Hasn't been an issue, please close

|                                                        |
|--------------------------------------------------------|
| Issue ID: 6589                                         |
| Subject: Crack Control Parameter Usage by BRASS for PS |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 8/10/2005 2:13:19 PM |
| Modified By: administrator       | 6/19/2008 4:19:47 PM |
| Priority: High                   |                      |
| Category: Help                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, August 10, 2005 10:13:19 AM  
REPORTED BY:Dean Teal

DESCRIPTION:When doing a prestressed concrete structure and filling in the Member Alt. Description GUI – In the lower left corner there is two data input fields for the Top & Bottom of beam Crack Control Parameter. Virtis Opis help tells the user to enter the required information with no mention of the Z factor.

The BRASS engine never uses a crack control parameter for PS beams (not that I know of anyway). I know that data in the GUI is not engine specific. In this case we are using BRASS LFD and LRFD. If you look at the engine related help for either engine you will NOT be told that BRASS doesn't use the

4/19/2016 3:18:48 PM

HRS AASHTO

1915

## Complete Issue Information

"Z" factor.

Shouldn't BRASS be telling us that in the engine help?

### COMMENTS:

FROM:dteal DATE:Wednesday, August 10, 2005 11:33:53 AM

I checked with LEAP, there PS program doesn't use the crack control parameters either. Does anybody? Does PennDot?

FROM:smample DATE:Thursday, August 11, 2005 11:56:38 AM

The various analysis engines have and are being built around the current and future design and load rating specifications, without regards to the actual practices of the individual state transportation organizations. The engines are not flexible enough, to allow variations from these specifications. A prime example of this lack in the current engines is the inability to control tension stresses in prestressed concrete girders and thereby insure that prestressed concrete girders are not subject to concrete cracking at the operating level. It is for this reason that Idaho still uses the old BARS program in issuing over legal truck permits

FROM:bgoodrich DATE:Friday, August 12, 2005 12:55:08 AM

BRASS LFD does not support input of the Crack Control Parameter, so the engine help should be updated accordingly. BRASS LRFD does support the beam Crack Control Parameter, however, only the value for the bottom of the beam is exported. I think the top of beam field was added after the original export work was done. Both the top and bottom Crack Control Parameters should be exported.

The output files will not contain any beam crack control checks because Opis does not allow mild reinforcement to be defined in the prestress beam itself. We might think about adding this information to the BRASS LRFD engine help.

FROM:bgoodrich DATE:Friday, November 11, 2005 5:09:30 PM

The crack control section of the LRFD specification has been reworked and the Z parameter is no longer needed. For all we know, the value could be brought back, so I don't think the fields should be removed. However, we should update the helps accordingly.

FROM:bgoodrich DATE:Thursday, March 02, 2006 7:28:56 PM

The engine help files have all been updated. Fixed for version 5.4.

FROM:dteal DATE:Tuesday, March 07, 2006 10:33:44 AM

The BRASS help files have been updated to reflect the 3rd edition, but does not include the 3rd edition w/'05 interims. I think we are supposed to be checking Opis against the '05 interims. If that's the case I think we should leave this unresolved until those interims are implemented.

FROM:kkennelly DATE:8/15/2006 7:39:03 AM

Assigned back to Brian so he can evaluate Dean's comments on 3/7/06.

FROM:bgoodrich DATE:Tuesday, September 05, 2006 1:39:10 PM

The 2005 interims were implemented for the BRASS LRFD engine released with Opis 5.4. The

4/19/2016 3:18:48 PM

HRS AASHTO

1916



**Complete Issue Information**

exposure factor is available in Opis 5.5.

FROM:dteal DATE:Monday, February 26, 2007 12:01:56 PM

Accepted

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6590                                            |
| Subject: Deck Crack Control Parameter for Pos or Neg Area |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Teal, Dean           | 8/10/2005 2:15:10 PM |
| Modified By: administrator         | 6/19/2008 4:19:47 PM |
| Priority: High                     |                      |
| Category: Help                     |                      |

**History**

| Primary Contact   | Status   | Priority | Category  |
|-------------------|----------|----------|-----------|
| Duray, Jim        | New      | High     | Unknown   |
| Kennelly, Krishna | Assigned |          | Education |
|                   | Resolved |          | Help      |
|                   | Closed   |          |           |
| Kennelly, Krishna | Closed   | High     | Help      |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6590.14745 | Closed        | Deck Crack Control Parameter for Pos or Neg Area |

**Description**

4/19/2016 3:18:48 PM

HRS AASHTO

1917

**Complete Issue Information**

FROM:dteal DATE:Wednesday, August 10, 2005 10:15:10 AM  
REPORTED BY:Dean Teal

DESCRIPTION:In the Structure Typical Section:Deck (con't) GUI we can enter the Deck Crack Control Parameter (Z). Is this for the positive or negative moment steel? I am assuming it is for negative moment (top steel)

COMMENTS:

FROM:kkennelly DATE:8/15/2005 12:44:43 PM  
It is for the top steel. If you have a concrete mbr alt, the Member Alt window has a crack control parameter for the bottom of beam or slab.

FROM:dteal DATE:Tuesday, August 16, 2005 8:46:17 AM  
I would like to this added to the help if we can.

FROM:kkennelly DATE:10/7/2005 10:06:44 AM

FROM:kkennelly DATE:10/7/2005 10:21:05 AM  
Help modified for 5.4

FROM:dteal DATE:Wednesday, October 26, 2005 9:07:27 AM  
Accepted in 5.4 Beta 1

Issue ID: 6600  
Subject: Assign or Not Assign "Future" Wearing Surface Load, Check box needed

Folder: /Virtis/Support Center  
Primary Contact: Teal, Dean  
Submitted By: Teal, Dean 8/13/2005 1:58:47 PM  
Modified By: administrator 6/19/2008 4:19:47 PM  
Priority: Urgent  
Category: Enhancement

**History**

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Unknown     |
|                    | Suspended |          | Enhancement |
| Kennelly, Krishna  | Assigned  |          |             |
| Ordoobadi, Mehrdad |           | Urgent   |             |
| Li, Xinmei         |           |          |             |

### Complete Issue Information

|                    |           |  |      |             |
|--------------------|-----------|--|------|-------------|
| Lee, Herman        |           |  |      |             |
| Ordoobadi, Mehrdad |           |  |      |             |
| Duray, Jim         | New       |  | High | Unknown     |
|                    | Suspended |  |      | Enhancement |
| Duray, Jim         | Suspended |  | High | Enhancement |

### Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 6605.14730 | Suspended     | Possible Enhancement - Mandatory Input Color Coding |

### Description

FROM:dteal DATE:Saturday, August 13, 2005 9:58:47 AM  
REPORTED BY:Dean Teal

DESCRIPTION:On the analysis tab of the superstructure definition window we have the ability to choose if the effective slab thickness is to be included in a rating or in a design. We overlooked one item that should also be here.

We should have the ability to include/exclude the Future Wearing Surface (FWS) from both design and rating just like the effective depth is done.

When a new structure is designed it will more than likely be designed to carry a FWS. But when it comes to rating that new structure it is analyzed "as built". The FWS does not get applied in most cases for many years. Right now the rating engineer has to check out the structure and navigate to the structure typical section/Wearing Surface tab and under load case select "Not Assigned".

Our work around for this involves having 2 superstructure definitions for every new structure that was designed to carry a FWS. The first structure definition is the "As Designed" which has the FWS included. The second Structure Definition is the "As Built/As Rated" with the FWS not assigned. At some point in the structures future this wearing surface will be applied and at that point the As Rated structure definition will be updated.

Do you know of any other work around for this problem? When rating our existing inventory this is never a problem – but when doing the initial ratings for new structures it is a big headache.

4/19/2016 3:18:48 PM

HRS AASHTO

1919

## Complete Issue Information

### COMMENTS:

FROM:jduray DATE:12/21/2006 8:59:10 AM  
Need and estimate of the cost for the TF before we begin dev.

FROM:jduray DATE:1/19/2007 3:56:25 PM  
TF authorized us to implement this enhancement.

FROM:kkennelly DATE:1/22/2007 8:14:09 AM  
This enhancement involves the following:  
- Add "Wearing Surface" groupbox to Superstructure Def: Analysis tab.  
- Group box will contain 2 checkboxes, "Consider wearing surface for rating", "... for design"  
- Default is for both checkboxes to be checked.  
- Migration will set both checkboxes to checked for existing data

Mehrdad:  
1. Add db, de, dm, do for 2 new attributes on the Superstructure Definition: Analysis tab (for all superstructure definition types):  
- Consider wearing surface for rating  
- Consider wearing surface for design

2. Migration to set both attributes to TRUE for existing data.

May:  
3. Add "Wearing Surface" group box to the Superstructure Definition: Analysis tab (for all superstructure definition types) with the 2 checkboxes.

Herman:  
4. Add attributes to Report Tool.  
5. Implement attributes in export to VirtisStdEngine, BRASS LFD, BRASS LRFD and Madero.  
6. Add to Virtis Help.

FROM:mordoobadi DATE:2/20/2007 9:26:34 AM  
New attributes added to the database. Db, De, Dm, and domain classes updated. Everything is in sourcesafe.

FROM:xli DATE:2/21/2007 11:26:48 AM  
#3 is done

FROM:xli DATE:2/21/2007 2:22:47 PM  
Mehrdad:  
Please make both check boxes default to be checked.

FROM:mordoobadi DATE:2/21/2007 4:43:56 PM  
Fixed. Affected project abognrl.  
Also updated the sample database to have both flags checked for all structure defs.

May, please get abognrl.dll and verify that it works. Then assign to Herman.

4/19/2016 3:18:48 PM

HRS AASHTO

1920

**Complete Issue Information**

FROM:xli DATE:2/22/2007 1:00:45 PM  
Verified.

FROM:hlee DATE:2/22/2007 2:22:55 PM  
The Analysis tab in the Superstructure Definition window is too big for the view.

FROM:hlee DATE:2/26/2007 9:27:20 AM  
#6 (Add to Virtis Help) is done.  
This enhancement should be available to system superstructure definition only. Truss system should also be included.

FROM:hlee DATE:2/26/2007 10:38:00 AM  
#4 (Add attributes to Report Tool) is done. Attached AddAttributes.SQL to be used to populate the 5.6 database. Also updated all installed system superstructure definition abr files.

FROM:hlee DATE:3/2/2007 2:57:21 PM  
Finished implementation for VirtisStdEngine, BRASS LFD, BRASS LRFD, MADERO, and VirtisTruss.

TO DO:  
May - Remove attributes from GUI line superstructure definition windows. Fix the Superstructure Definition window (See comment on 2/22).  
Mehrdad - Remove attributes from database, db, de, dm, and do line superstructure definitions. Populate Report Tool attributes (See comment on 2/26).

May, please assign to Mehrdad after you are done.

FROM:xli DATE:3/6/2007 1:49:28 PM  
Attributes are removed from GUI line superstructure definition windows. Super def window is fixed.

FROM:mordoobadi DATE:3/6/2007 3:19:03 PM  
Fixed for 5.6 Beta 2.

FROM:gbhanushali DATE:3/15/2007 11:58:39 AM  
Alpha tested Beta 2.

FROM:dteal DATE:Tuesday, June 19, 2007 1:53:48 PM  
Accepted 5.6 beta 3

Issue ID: 6605  
Subject: Possible Enhancement - Mandatory Input Color Coding

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Horton, Doug 8/15/2005 7:41:23 PM  
Modified By: administrator 6/19/2008 4:19:46 PM  
Priority: High

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

## Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 6606.14729 | Discard       | Possible Enhancement - Override Value Color Coding |

## Description

FROM:dhorton DATE:Monday, August 15, 2005 3:41:23 PM  
REPORTED BY: A. Zickler

DESCRIPTION: User suggested that all mandatory items be color coded or marked in some manner in order to help new and existing users make sure they input all necessary data.

COMMENTS: This should reduce the number of errors and trials that users, especially novice, run into when trying to get structures input. It would also be very beneficial for imported files where all of the necessary data may not be in the import file (such as stiffeners for steel girders). we are using 5.2, but this applies to all versions.

This proposed enhancement is directly related to the Override data color code enhancement.

FROM:dhorton DATE:Monday, August 15, 2005 3:43:15 PM

FROM:jduray DATE:8/16/2005 9:22:04 AM

We started to do this (the blue italic is our attempt at do this) and realized each analysis engine and each specification has different requirements for data. We have attempted to address this issue by providing the engine-related help for each help topic. That way the engine developer can provide a help file that informs the user of the data required.

4/19/2016 3:18:49 PM

HRS AASHTO

1922

**Complete Issue Information**

A more sophisticated solution would be to enhance the "blue italic" approach and drive the display with an engine-related resource file that controls the appearance of certain key static text labels.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 6606                                              |
| Subject: Possible Enhancement - Override Value Color Coding |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Horton, Doug     | 8/15/2005 7:52:55 PM |
| Modified By: administrator     | 6/19/2008 4:19:46 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dhorton DATE:Monday, August 15, 2005 3:52:55 PM  
REPORTED BY: A. Zickler

DESCRIPTION: During analysis, it is very difficult to determine what values are default and which are overrides. This is especially a problem when reviewing or using input done by another user. Color coding the overrides would make them obvious to the user.

COMMENTS: Although very difficult to program, it would be very beneficial to have some sort of marker attached to the output as well. This is separate from this somewhat, but along the same general line of thinking.

This proposed enhancement is directly related to the Mandatory Input Color coding.

FROM:dhorton DATE:Monday, August 15, 2005 3:52:55 PM

4/19/2016 3:18:49 PM

HRS AASHTO

1923

**Complete Issue Information**

FROM:hlee DATE:4/30/2008 2:35:51 PM  
Discarded by TAG 12/07.

Issue ID: 6607  
Subject: Proposed Enhancement - Warning message if all data has not been input

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Horton, Doug 8/15/2005 8:00:14 PM  
Modified By: administrator 6/19/2008 4:19:46 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

**Contacts**

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |



## Complete Issue Information

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | I-91 SP 42NB_43NB-1.bbd |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6612.14723 | Resolved      | Unable to save Bridge data |

### Description

FROM:dhorton DATE:Monday, August 15, 2005 4:00:14 PM  
REPORTED BY: A. Zickler

DESCRIPTION: When working within a wizard, if the user clicks on OK before all of the necessary input is completed, the wizard should notify the user that additional input is required (if it indeed is required). Also applies to hitting the Cancel button and losing all of the information placed on previous tabs.

COMMENTS: This may have already been addressed, as the UG meeting demonstrated warning messages for the substructure wizards.

FROM:dhorton DATE:Monday, August 15, 2005 4:00:14 PM

FROM:dhorton DATE:Monday, August 15, 2005 4:05:59 PM

FROM:hlee DATE:4/30/2008 2:35:59 PM

|                                     |
|-------------------------------------|
| Issue ID: 6612                      |
| Subject: Unable to save Bridge data |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Zeng, Cincia          | 8/16/2005 4:29:30 PM |
| Modified By: administrator          | 6/19/2008 4:19:46 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:50 PM

HRS AASHTO

1925

**Complete Issue Information**

|                    |          |      |         |
|--------------------|----------|------|---------|
| Duray, Jim         | New      | High | Unknown |
| Duray, Jim         | New      | High | Bug     |
| Bhanushali, Girish | Resolved |      |         |
|                    | Closed   |      |         |
| Bhanushali, Girish | Closed   | High | Bug     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 6614.14721 | Closed        | Modification in Truss Command Language - Help Document |

**Description**

FROM:jihnmat DATE:8/16/2005 12:22:50 PM  
 from  
 Cincia Zeng, P.E.  
 Lichtenstein Consulting Engineers, Inc.  
 11 Huron Drive, Natick, MA 01760  
 Tel: 508-647-0500 Fax: 508-647-5609  
 E-Mail: CZeng@LCE.us

Unable to save Bridge data!  
 12:14:10 PM - Line 867 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridgeDesignParam (SaveOrder object 393).  
 12:14:08 PM - Line 431 in source file .\DmBridgeCache.cpp.

Error updating database record set.  
 12:14:08 PM - Line 768 in source file .\DmBridgeDesignParam.cpp.  
 State:23000,Native:-193,Origin:[Sybase][ODBC Driver][Adaptive Server Anywhere]  
 Integrity constraint violation: Primary key for table 'abw\_bridge\_design\_param' is not unique

This imay be the same as 6555.  
 BBD file is attached (version 5.3.0) It can be imported but not saved.  
 Service Pack 1 does not seem to resolve this problem.

FROM:jihnmat DATE:8/16/2005 1:53:43 PM  
 Cincia thinks the problem may have started when she changed the Number of floorbeam supports for

4/19/2016 3:18:50 PM

HRS AASHTO

1926

### Complete Issue Information

Floorbeam Def FB1 from 3 to 2.

FROM:mordoobadi DATE:5/15/2006 1:31:25 PM

This issue (problem with abw\_bridge\_design\_param) is resolved in 5.4.0.

FROM:mordoobadi DATE:5/15/2006 2:07:37 PM

Related Incident 7113. Fixed.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 6614                                                  |
| Subject: Modification in Truss Command Language - Help Document |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Bhanushali, Girish    | 8/16/2005 8:20:00 PM |
| Modified By: administrator          | 6/19/2008 4:19:46 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:gbhanushali DATE:8/16/2005 3:26:59 PM

Page - 20 6.9 MemberCrossSection Command

ConnectionSubcommand      Connection <member\_connection\_type> <effective\_area >

Description      <member\_connection\_type> = Riveted | Bolted | Welded

<effective\_area > = Enter effective area

4/19/2016 3:18:50 PM

HRS AASHTO

1927

**Complete Issue Information**

Notes:

- 1. Sub-command name and data entries are in the same line.

-----

Effective area was intended to be effective area deduction. To remove the confusion effective\_area is changed to effective\_area\_deduction

**6.15 PanelPointLoad Command**

<load\_case\_id> will not have case LL.

User will not provide any Fx and Fy for Live load, since live load analysis will be done by influence line analysis.

**6.16 MemberLoad Command**

Whole command will not be effective. No implementation will be provided to support element level load at this time.

This command should be removed but we'll just keep there for future.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 6616                                                       |
| Subject: Harp point locations grid cells are sometimes uninitialized |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Duray, Jim       | 8/18/2005 12:38:23 PM |
| Modified By: administrator     | 6/19/2008 4:19:46 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Ihnat, Joseph   | On Hold   | High     | Bug - GUI 2 |
|                 | Duplicate |          |             |
| Ihnat, Joseph   | Duplicate | High     | Bug - GUI 2 |

**Contacts**

| Name      | Company            | Email 1               | Phone 1 |
|-----------|--------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., | jduray@mbakercorp.com |         |

**Complete Issue Information**

Inc.

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Virtis Incident 6619.doc |             |

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 6619.14716 | Resolved      | Live Load Moments Table in Results Graph Window |

**Description**

FROM:jduray DATE:Thursday, August 18, 2005 8:38:42 AM  
The cells contain a garbage number instead of 0.0.

FROM:jihnmat DATE:8/18/2005 12:36:36 PM  
Same as 6210 (fixed in 5.3.0)

|                                                          |
|----------------------------------------------------------|
| Issue ID: 6619                                           |
| Subject: Live Load Moments Table in Results Graph Window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Waheed, Amjad    | 8/18/2005 4:22:55 PM |
| Modified By: administrator     | 6/19/2008 4:19:45 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

## Complete Issue Information

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          | Bug      |
| Ordoobadi, Mehrdad | Assigned           | High     | Bug      |
|                    | Information Needed |          |          |
|                    | Closed             |          |          |

### Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Virtis-Saving Imported bridge error.doc |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6620.14715 | Assigned      | Error on saving an imported bridge after editing |

### Description

FROM:awaheed DATE:Thursday, August 18, 2005 12:22:55 PM

Live Load moments tables in the Results Graph window do not specify if the column is for truck or lane loading. One has to turn truck and lane on and off to figure it out as both column headings are same, e.g., "MLL(+)-s1 H20-44D."

FROM:jihnmat DATE:7/24/2006 1:43:38 PM

6947 is a duplicate of this incident.

The problem was that only the first letter of the vehicle type was used in the label, so "Design Truck" and "Design Lane" were indistinguishable.

Changed the code to use the entire vehicle type name.

Incident specified Moment Live Load, but also fixed Shear Live Load, Axial Live Load and Deflection Live Load.

Fixed in version 5.5.0 (Beta 3).

## Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6620                                            |
| Subject: Error on saving an imported bridge after editing |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Waheed, Amjad         | 8/18/2005 5:14:40 PM |
| Modified By: jduray                 | 10/6/2009 5:40:02 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Li, Xinmei      | Assigned |          | Education |
| Li, Xinmei      | Assigned | High     | Education |
|                 | Resolved |          |           |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 6621.14714 | Assigned      | Virginia DOT Training Issues - Aug. 2005 |

## Description

FROM:awaheed DATE:Thursday, August 18, 2005 1:14:40 PM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

4/19/2016 3:18:51 PM

HRS AASHTO

1931

**Complete Issue Information**

FROM:awaheed DATE:Thursday, August 18, 2005 1:14:40 PM

When I tried to save an imported bridge after editing county name, I got an error (see attached document).

FROM:awaheed DATE:Thursday, August 18, 2005 1:25:14 PM

This error seems to be consistent with some of the older bridges in our database.

FROM: Mehrdad Ordoobadi DATE: 9/24/2009 8:38:26 AM Eastern Daylight Time

There is not enough information in this incident to reproduce the problem.

If you still have these kinds of issues, could you please provide XML export of the bridges that you have problem with.

FROM: Jim Duray DATE: 10/6/2009 1:36:37 PM Eastern Daylight Time

Requested info from the users but no response.

Closing this incident. If the problem occurs again we can open another incident.

|                                                   |
|---------------------------------------------------|
| Issue ID: 6621                                    |
| Subject: Virginia DOT Training Issues - Aug. 2005 |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Li, Xinmei    |                       |
| Submitted By: Goodrich, Brian  | 8/18/2005 7:10:03 PM  |
| Modified By: xli               | 10/28/2008 1:25:12 PM |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bgoodrich DATE:Thursday, August 18, 2005 3:10:21 PM

4/19/2016 3:18:52 PM

HRS AASHTO

1932



## Complete Issue Information

These issues were discovered and suggested during the Virtis training for Virginia DOT in August 2005.

Example STL1:

Page 6: f'c shown as 4 ksi in screen shot but 4.5 ksi shown in Material Properties description at the beginning of the example.

Pages 13-16: Move Bridge Alternative screen shots to end of example so we don't have to say to skip these pages, which are not discussed until the second day of training.

Add reference lines to the schematics in the handouts. (JDuray - I don't think this is necessary)

Page 40: The Start Distance and Length columns show a different number of digits past the decimal. They should be consistent because we ask the users to be consistent with their input to avoid tolerance problems.

Page 48: The values shown in the End Distance columns (147.59 and 156.16) are different from those calculated during input, which are 147.58 and 156.17, respectively.

Page 33: The table lists a weight for SIP forms of 0.078 klf for the exterior girder for Example "c" and "d". This should be 0.039 klf.

The LFD ratings did not match the pages in the manual so they should be checked.

Example PS1:

Page 25: The Multi-Lane deflection distribution factor (Standard) computed as 0.9, but manual shows 1.0.

FROM:jduray DATE:8/19/2005 10:22:53 AM

To do this work we should get he bridge Jason input a few months ago and start with that data.

FROM:xli DATE:9/6/2005 9:07:37 AM

All above issues are fixed except the last one. The 1.0 is computed atomatically according to the typical cross section.

Issue ID: 6622

Subject: Virginia DOT training: control display digits for real numbers

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Goodrich, Brian

8/18/2005 7:30:34 PM

Modified By: administrator

6/19/2008 4:19:45 PM

Priority: High

Category: Enhancement

## History

4/19/2016 3:18:52 PM

HRS AASHTO

1933

**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6623.14712 | Suspended     | Virginia DOT training: Revise Girder Member Loads input format |

**Description**

FROM:bgoodrich DATE:Thursday, August 18, 2005 3:30:34 PM  
 From Virginia DOT training: Add option in Preferences to turn on/off display digits for real numbers.

## Complete Issue Information

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6623                                                          |
| Subject: Virginia DOT training: Revise Girder Member Loads input format |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 8/18/2005 7:32:52 PM |
| Modified By: hlee              | 7/17/2014 1:29:36 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 6624.14711 | Discard       | Virginia DOT training: Add another dead load distribution method for appurtenances |

## Description

FROM: bgoodrich DATE: Thursday, August 18, 2005 3:32:54 PM  
From Virginia DOT training: For Girder Member Loads, use a different input format. Instead of using the drop-down load case selection, move the load case into the grid.

FROM: Herman Lee DATE: 7/17/2014 9:28:28 AM Eastern Daylight Time  
Resolved in version 6.5.0.

4/19/2016 3:18:52 PM

HRS AASHTO

1935

## Complete Issue Information

Issue ID: 6624

Subject: Virginia DOT training: Add another dead load distribution method for appurtenances

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Goodrich, Brian

8/18/2005 7:35:04 PM

Modified By: administrator

6/19/2008 4:19:45 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:Thursday, August 18, 2005 3:35:04 PM

From Virginia DOT training: Add another dead load distribution method for appurtenances, i.e., exterior

4/19/2016 3:18:53 PM

HRS AASHTO

1936

**Complete Issue Information**

+ first two interior girders. This would mean that the DL distribution method would need to be applied on a load case basis instead of a stage basis.

FROM:hlee DATE:4/30/2008 2:36:05 PM  
Discarded by TAG 12/07.

Issue ID: 6625  
Subject: Virginia DOT training: odd behavior when template bridge rating attempted

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Goodrich, Brian 8/18/2005 7:47:41 PM  
Modified By: administrator 6/19/2008 4:19:45 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:18:53 PM

HRS AASHTO

1937

### Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad | On Hold   |      | Bug - GUI 2 |
| Duray, Jim         | New       | High | Bug         |
|                    | Suspended |      | Enhancement |
| Duray, Jim         | Suspended | High | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                      |
|------------|---------------|----------------------------------------------------------------------------------------------|
| 6626.14709 | Suspended     | Virginia DOT training: make stiffener/stirrup ranges start distance & spacing the same units |

### Description

FROM:bgoodrich DATE:Thursday, August 18, 2005 3:47:41 PM

From Virginia DOT training: If a single bridge is rated from the Bridge Explorer and it stops because it is a template bridge, the results window is shown with the recent rating results, which included results for bridges that were not requested.

FROM:mordoobadi DATE:5/15/2006 1:40:49 PM

Resolved in 5.5 pre-alpha.

Issue ID: 6626

Subject: Virginia DOT training: make stiffener/stirrup ranges start distance & spacing the same units

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 8/18/2005 7:57:04 PM |
| Modified By: administrator     | 6/19/2008 4:19:45 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status      | Priority | Category       |
|-----------------|-------------|----------|----------------|
| Duray, Jim      | New         | High     | Bug            |
|                 | System Test |          | Enhancement    |
|                 | Suspended   |          |                |
| Duray, Jim      | On Hold     | High     | Bug            |
|                 |             |          | Change Request |
|                 |             |          | Change Request |
|                 | Closed      |          |                |
|                 | Resolved    |          |                |
|                 | Closed      |          |                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 6627.14708 | On Hold       | Virginia DOT training: Bridge Explorer should require unique folde names |

### Description

FROM:bgoodrich DATE:Thursday, August 18, 2005 3:57:04 PM

From Virginia DOT training: In the Stiffener or Stirrup Ranges windows, make the Start Distance and

4/19/2016 3:18:53 PM

HRS AASHTO

1939

### Complete Issue Information

Spacing so they are entered in consistent units, i.e., both in feet or both in inches.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 6627                                                                     |
| Subject: Virginia DOT training: Bridge Explorer should require unique folder names |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 8/18/2005 7:58:41 PM |
| Modified By: hlee              | 4/8/2010 5:55:46 PM  |
| Priority: High                 |                      |
| Category: Change Request       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: bgoodrich DATE: Thursday, August 18, 2005 3:58:41 PM  
From Virginia DOT training: Bridge Explorer should require unique folder names.

FROM: Herman Lee DATE: 4/8/2010 1:54:27 PM Eastern Daylight Time  
Implemented in 6.0 Release.



## Complete Issue Information

Issue ID: 6628

Subject: Virginia DOT training: Add option to lock member alternative, i.e., make read-only

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Goodrich, Brian

8/18/2005 7:59:44 PM

Modified By: hlee

6/9/2011 6:48:09 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

4/19/2016 3:18:54 PM

HRS AASHTO

1941

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                                                                                             |
|------------|------------------|-----------------------------------------------------------------------------------------------------|
| 6630.14705 | Not Reproducible | Virginia DOT training: Error occurs when generating a report using BWS Report for steel girders.abr |

### Description

FROM: bgoodrich DATE: Thursday, August 18, 2005 3:59:44 PM

From Virginia DOT training: Add option to lock member alternative, i.e., make read-only to prevent someone from accidentally changing the data.

FROM: Herman Lee DATE: 6/9/2011 2:43:03 PM Eastern Daylight Time  
Resolved in the 6.1 Release as the Bridge Modification Protection feature.

|                                                                                                              |
|--------------------------------------------------------------------------------------------------------------|
| Issue ID: 6630                                                                                               |
| Subject: Virginia DOT training: Error occurs when generating a report using BWS Report for steel girders.abr |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 8/19/2005 2:20:23 PM |
| Modified By: administrator     | 6/19/2008 4:19:45 PM |

4/19/2016 3:18:54 PM

HRS AASHTO

1942

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - GUI 2 |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          | Enhancement |
| Duray, Jim       | Suspended |          |             |
| Duray, Jim       | Suspended | High     | Enhancement |

**Contacts**

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0840052.bbd         |             |

**Tasks**

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 6655.14680 | Suspended     | Using fill plates in bearing analysis |

**Description**

FROM:jduray DATE:8/19/2005 10:17:05 AM

FROM:hlee DATE:11/18/2005 1:29:14 PM  
 Tried all steel bridges in 5.4 Beta 2 sample database.  
 Unable to reproduce the error.

## Complete Issue Information

|                                                |
|------------------------------------------------|
| Issue ID: 6655                                 |
| Subject: Using fill plates in bearing analysis |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 8/26/2005 7:44:11 PM |
| Modified By: administrator     | 6/19/2008 4:19:43 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:tarmbrecht DATE:Friday, August 26, 2005 3:44:11 PM  
REPORTED BY:

#### DESCRIPTION:

One of our engineers is working on a built up plate girder with double angle bearing stiffeners on each side of the web. The bearing stiffeners are full depth of the section, and there is a fill plate the thickness of the flange angles between the web and the stiffener angles on each side. It seems like the section to check as a column for AASHTO 10.54.1.1 would include the stiffener angles, web, and the fill plates. Also, in this case the fill plate sandwiched a section of the web that was larger than  $18 * tw$ . We feel the entire section of the web between the fill plates to be part of the column under consideration. What is the Virtis and/or BRASS policy governing this? Could the fill plates and/or full web section between the fill plates be considered? See attached file for reference.

4/19/2016 3:18:54 PM

HRS AASHTO

1944

**Complete Issue Information**

COMMENTS:

FROM:kkennelly DATE:10/6/2005 1:49:42 PM  
This would be an enhancement to both Virtis and BRASS LFD.

- 1. Virtis does not currently have a way for user to input a fill plate between the bearing stiffeners and web. It would be an enhancement to add that data to Virtis.
- 2. BRASS LFD does not have an input for the spacing between bearing stiffeners. It would be an enhancement to add that input and then to consider it in the computations in BRASS.

|                                                      |
|------------------------------------------------------|
| Issue ID: 6664<br>Subject: FAQ does not open cleanly |
|------------------------------------------------------|

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Duray, Jim          | 9/1/2005 2:43:04 PM  |
| Modified By: administrator        | 6/19/2008 4:19:43 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Ihnat, Joseph    | Assigned           | High     | Bug      |
| Duray, Jim       | Information Needed |          |          |
|                  | Assigned           |          |          |
| Kennelly, Krisha | Resolved           |          |          |
|                  | Resubmit           |          |          |
|                  | Resolved           |          |          |
| Kennelly, Krisha | Resolved           | High     | Bug      |

**Contacts**

4/19/2016 3:18:55 PM

HRS AASHTO

1945

### Complete Issue Information

| Name            | Company                    | Email 1                  | Phone 1 |
|-----------------|----------------------------|--------------------------|---------|
| Jim Duray       | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com    |         |
| George Colgrove |                            | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 6666.14674 | Resolved      | Problem with Bearing Stiffeners with no delete privilege. |

### Description

FROM:jihnath DATE:9/1/2005 12:18:07 PM  
From the website or from Virtis? What exactly is happening?

FROM:jduray DATE:9/2/2005 2:04:09 PM  
This was submitted for Doug Horton.  
From Virtis. User is notified that s RoboHelp dll is missing, after clicking Ok the help file is opened and seems to work properly.

FROM:jihnath DATE:9/9/2005 1:33:00 PM  
I think the file is roboex32.dll. This isn't a file that we install (or ever have installed). On my system it's in the Windows\System32 directory.  
Krisha, any idea why the FAQ Help wants this file but the regular Help doesn't?

FROM:kkennelly DATE:9/12/2005 2:52:20 PM  
New FAQ help file compiled that should now work without issuing error message. Fixed for 5.4

FROM:jihnath DATE:9/13/2005 7:26:18 AM  
The latest FAQ help still complains if I remove RoboEx32.dll from my Windows\System32 directory.

FROM:kkennelly DATE:9/13/2005 10:42:49 AM  
Latest files in sourcesafe open ok without Roboex32.dll. (RoboHelp isn't the most stable product so I had to remove the links to the internet pages to get this version of the help to work. Doesn't seem like opening the internet depends on roboex32.dll but I kept getting error about technical error in help file (1024) when I tried to access the internet link.)

Issue ID: 6666

Subject: Problem with Bearing Stiffeners with no delete privilege.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:18:55 PM

HRS AASHTO

1946

**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Colgrove, George | 9/2/2005 12:13:55 PM |
| Modified By: administrator     | 6/19/2008 4:19:42 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Unknown        |
| Goodrich, Brian  | Assigned |          | Education      |
| Kennelly, Krisha |          |          |                |
| Duray, Jim       |          |          | Change Request |
| Kennelly, Krisha |          |          |                |
|                  | Resolved |          |                |
|                  | Closed   |          |                |
| Kennelly, Krisha | Closed   | High     | Change Request |

**Contacts**

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Jim Duray      | Michael Baker Jr., Inc.        | jduray@mbakercorp.com           |               |

**Documents**

| Name | Resource Identifier                                     | Description |
|------|---------------------------------------------------------|-------------|
|      | 2005 Spec Update Mockups.pdf                            |             |
|      | 2005 Update Specification Dependent Items in Virtis.pdf |             |

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6680.14660 | Closed        | AASHTO LRFD 2005 Interim Revisions |

**Description**

4/19/2016 3:18:55 PM

HRS AASHTO

1947

**Complete Issue Information**

FROM:gcolgrove DATE:Friday, September 02, 2005 8:13:55 AM  
REPORTED BY: Hiram Salls, VTrans Structures, via George W. Colgrove III, VTrans Structures

DESCRIPTION: Problem with Bearing Stiffeners with no delete privilege.

COMMENTS: Hiram did not have delete privileges under Bridge Description. This was preventing him from deleting part of the bridge - as it is supposed to do. However in his attempt to delete bearing stiffeners from the Bearing Stiffeners Location tree under support 1 and 2, more would appear in the tree. If he had 2, and deleted them, when he opened the window again, there would be 4, then 6 then 8 then 10 and so on. So not only was it not deleting the stiffeners (as it should) it was adding more by an increment of two and storing them. I changed his privileges to be able to delete parts of bridges, thus solving the problem for him. But I thought you should know of this behavior never the less.

FROM:gcolgrove DATE:Friday, September 02, 2005 8:13:55 AM

FROM:jihnata DATE:12/1/2005 8:09:38 AM  
Fixed for version 5.4.0. (This window requires Delete privileges as well as Write privileges to work correctly, or else it will be readonly.)

|                                             |
|---------------------------------------------|
| Issue ID: 6680                              |
| Subject: AASHTO LRFD 2005 Interim Revisions |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 9/9/2005 1:57:54 PM  |
| Modified By: administrator        | 6/19/2008 4:38:36 PM |
| Priority: High                    |                      |
| Category: Change Request          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



## Complete Issue Information

### Description

FROM:dteal DATE:Friday, September 09, 2005 9:57:54 AM  
REPORTED BY:Dean Teal

DESCRIPTION:When (what version) will the LRFD 2005 Interim Revisions be incorporated?  
Some, like AASHTO 5.7.3.4 (crack control) will require both GUI and engine changes.

FROM:jduray DATE:9/14/2005 1:25:26 PM  
Brian - after you respond please assign to Krisha for her to evaluate the UI changes.

FROM:bgoodrich DATE:Friday, November 11, 2005 9:45:26 AM  
We are planning on having the interim changes implemented for the upcoming BRASS-GIRDER (LRFD) release that will be included in Opis 5.4. Dean is correct about the crack control check requiring changes. The transverse spacing of the rebar in each section will be required now. Within the engine, we plan to calculate the spacing based on existing information and also provide a user override. The correct spacing may be difficult to determine because the rebar may not be evenly spaced, especially in the deck, which is why a user-defined spacing will be provided. The crack control check also requires a different modulus of rupture than other places in the spec. Other changes include two AASHTO prestress loss methods: approximate and refined. It appears that the approximate loss equations are only applicable to precast, pretensioned members.

FROM:dteal DATE:Tuesday, November 15, 2005 10:44:45 AM  
Regarding the PS loss methods - KDOT has made a policy decision on this - We use the approximate method for 99% of our PS structures. The only time we could make use of the refined method is for RC Post Tensioned slabs. We do have a handful of them through out the state. If we did any segmental, that would require the refined method - but we don't do any of those.

FROM:kkennelly DATE:12/2/2005 3:25:28 PM  
We've evaluated the entire Virtis/Opis system for changes required to bring it up to the current specs. We're waiting for feedback from Task Force on what to implement.

FROM:kkennelly DATE:12/13/2005 2:42:10 PM  
Summary of changes to update to current specs is in attached file. Task Force has authorized us to update to LRFD 3rd Edition, 2005 interims.

- |                                                                   |                      |
|-------------------------------------------------------------------|----------------------|
| 1. Superstructure Definition Wizard - LRFD Stiffeners.            | Done by KEK 12/13/05 |
| 2. LRFD Prestress Design Tool                                     |                      |
| Revise n calculations                                             | Done by KEK 12/14/05 |
| Revise equations 5.8.2.7-1 and -2                                 | Done by KEK 12/14/05 |
| Revise prestress loss equations                                   | Done by KEK May 2006 |
| 3. Crack Control Changes                                          |                      |
| Add exposure factor and rebar spacing.                            | Added to UI for 5.5  |
| 4. Export of Schedule Based RC Member Alts                        | Done by KEK 12/13/05 |
| Change in LRFD dev length modification factor (5.11.2.1.2)        |                      |
| 5. Prestress Properties                                           |                      |
| Final Age, Age at Deck Placement for refined method of loss calcs | Added to UI for 5.5  |

4/19/2016 3:18:55 PM

HRS AASHTO

1949

## Complete Issue Information

6. Concrete Material Modulus of Rupture

Help adjusted for 5.5

FROM:kkennelly DATE:12/14/2005 2:58:28 PM

FROM:kkennelly DATE:12/14/2005 2:59:24 PM

Jim to send attached "2005 Spec Update Mockups.pdf" to Superstructure TAG and Brian Goodrich for review.

Mehrdad - db, dm, de, do changes for new attributes to be added after the mockups are reviewed.

Somebody(?) to implement remaining item in number 2 above, item 3, item 5 and item 6 once attributes are added.

FROM:dteal DATE:Wednesday, March 01, 2006 10:41:04 AM

Is this all to be included in 5.4 - In beta 5 we don't have the new crack control exposure factor??

FROM:bgoodrich DATE:Wednesday, March 15, 2006 12:27:55 PM

In addition to the exposure factor, there are now two AASHTO loss methods: Approximate and Refined. For the 5.4 release, the exposure factor will be defaulted to 1.0 and the AASHTO loss method will be defaulted to the approximate method.

FROM:dteal DATE:Thursday, March 16, 2006 11:43:54 AM

Is the GUI going add the exposure factor so agencies in cold climates that use a lot of deicing salts can code in the more extreme exposure condition for corrosion?

FROM:jduray DATE:3/16/2006 12:35:52 PM

This enhancement was approved by the TF during a conference call on Dec. 12th. It is scheduled to be included in the June release.

FROM:jduray DATE:Monday, March 27, 2006 10:05:01 AM

Some of the changes accidentally made it into Beta 5 and 6. They have been removed from Beta 7 and the 5.4 release. They will be included in the alpha, beta and release builds for 5.5.

FROM:dteal DATE:Monday, March 27, 2006 12:41:33 PM

Can you itimize/list what got removed?

FROM:dteal DATE:Wednesday, March 29, 2006 10:57:52 AM

FROM:dteal DATE:Wednesday, March 29, 2006 10:57:52 AM

I am somewhat confused with pages 3, 4 & 5 of the GUI Mockups that you have attached.

I am referencing the placement of the Crack Control Parameter (Z) and the Exposure Factor.

Page 3: Member name: gline slab

GUI has Deck Z factor and Deck exposure factor. Slabs don't have decks. Slabs hve no flanges, they are slabs with a wearing surface (sacrificial wear or separate wearing surface). Girders have flanges and decks.

When it comes to a girder line slab – both Z factors and exposure factors should be on the same GUI like on page 5.

Page 4: Now we are correctly calling out the Z factor and exposure factor at the bottom of the slab

4/19/2016 3:18:55 PM

HRS AASHTO

1950

**Complete Issue Information**

instead of the deck. But – we are missing the top of the slab (being this is a gline GUI).

Page 5: This GUI is for a PS beam. But this is exactly the way it “should be” displayed for a slab girder line. The only change required to rename Top of beam: and Bottom of beam to Top and Bottom of SLAB.

Please review VI #5382, it is very related

FROM:kkennelly DATE:6/13/2006 8:22:03 AM  
Opis UI has been modified for 5.5 for the items listed on 12/13/05.

Note: Brian's comments on March 15, 2006. Virtis/Opis has always used the AASHTO Refined Method. Selecting "AASHTO" as the loss method on the Prestress Properties window means the user is selecting the AASHTO Refined Method.

Dean's comments on March 29,2006 are a duplicate of incident 5382.

FROM:dteal DATE:Tuesday, June 19, 2007 1:51:45 PM  
Accepted

|                                                      |
|------------------------------------------------------|
| Issue ID: 6688                                       |
| Subject: BRASS run-time error when reading truck.lby |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Hart, Erich        | 9/12/2005 5:03:18 PM |
| Modified By: administrator       | 6/19/2008 4:19:41 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

**History**

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - BRASS    |
|                 | Resolved |          | Bug - Export 2 |
| Goodrich, Brian | Resolved | High     | Bug - Export 2 |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 6689.14651 | Resolved      | Use of more than one prestressing strands in a beam |

### Description

FROM:hlee DATE:9/12/2005 12:45:13 PM  
Submitted on behalf of Ken Teng, RQAW Corp.

Attached error message and truck files.

Run-time error when total axle loads exceeds 2000 kips in input (999.999 kips/wheel line in truck.lby).

FROM:hlee DATE:9/12/2005 4:16:05 PM  
Attached another truck file (127.92' Long truck.xml) with total axle loads exceeds 2000 kips in input, but no run-time error for this truck.

FROM:bgoodrich DATE:Friday, November 11, 2005 12:43:46 PM  
The BRASS truck library is a fixed-format file. The axle weight is written to an f7.3 format, so the maximum wheel line weight is 999.999 kips. The solution may be to bypass the truck library all together by generating the SPECIAL-TRUCK and SPECIAL-LANE commands. This needs to be discussed by the development team.

FROM:bgoodrich DATE:Friday, December 09, 2005 11:35:58 AM  
A workaround would be to separate the 2000 kip axle into two axles in the library and position them at the same location.

FROM:bgoodrich DATE:Thursday, January 05, 2006 12:16:42 PM  
The export was revised to no longer transfer vehicles to BRASS using the truck library. The SPECIAL-TRUCK and SPECIAL-LANE commands are now used. Wheel line weights larger than 999.999 kips are now supported. Fixed for version 5.4.

Issue ID: 6689

Subject: Use of more than one prestressing strands in a beam

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Waheed, Amjad 9/12/2005 7:56:36 PM

Modified By: administrator 6/19/2008 4:19:41 PM

Priority: High

4/19/2016 3:18:56 PM

HRS AASHTO

1952

### Complete Issue Information

Category: Education

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Li, Xinmei      | Resolved | High     | Bug      |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 6694.14646 | Resolved      | VA DOT Training - Training manual suggestions/issues |

### Description

FROM:awaheed DATE:Monday, September 12, 2005 3:56:36 PM

I can not figure out how to have two different PS strands in a beam. I have come across a bridge which has different pre-tensioned and post-tensioned strands used. Both strands have different diameters. I can not assign different strands in the strand layout screen.

FROM:jduray DATE:9/14/2005 1:21:32 PM

Correct, P/S beam definition is limited to one strand type/material per beam. If you feel this is a common situation an enhancement incident can be added to the list for the User Group to consider in the balloting process.

FROM:awaheed DATE:Sunday, September 18, 2005 10:34:40 PM

It is common practice in several bridges in Ohio. Other states should be polled too.

4/19/2016 3:18:56 PM

HRS AASHTO

1953

## Complete Issue Information

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 6694                                                |
| Subject: VA DOT Training - Training manual suggestions/issues |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Li, Xinmei    |                       |
| Submitted By: Duray, Jim       | 9/16/2005 12:31:58 PM |
| Modified By: administrator     | 6/19/2008 4:19:41 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:Friday, September 16, 2005 8:31:58 AM

- 1) Add a section that demonstrates how to select a vehicle, probably should describe the primary features of the Analysis Settings dialog
- 2) PS1 page 30 - the text refers to a Modify button that no longer exists...need to update the text.
- 3) PS1 page 31 - Assigned material should be Deck Concrete instead of PS 6.5 ksi.
- 4) RC1 - page 10 - The description does not indicate that diaphragms for all bays should be input.

FROM:jduray DATE:Friday, September 16, 2005 2:28:42 PM

FROM:jduray DATE:Friday, September 16, 2005 3:11:07 PM

4/19/2016 3:18:56 PM

HRS AASHTO

1954

**Complete Issue Information**

FROM:xli DATE:9/22/2005 3:08:47 PM

2) ,3) , 4) done

FROM:xli DATE:9/22/2005 3:09:39 PM

1) Added to STL1

|                                                    |
|----------------------------------------------------|
| Issue ID: 6705                                     |
| Subject: Develop new AASHTO LRFD/LRFR Spec Checker |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jensen, Paul     | 9/19/2005 3:30:29 PM |
| Modified By: hlee              | 1/21/2013 9:07:06 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

**Contacts**

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:18:57 PM

**HRS AASHTO**

1955

**Complete Issue Information**

---

**Tasks**

| Name       | Current State | Summary                                                                                   |
|------------|---------------|-------------------------------------------------------------------------------------------|
| 6706.14634 | Resolved      | Vc Calculation going to zero due to tensile axial load - even when the axial load is zero |

**Description**

FROM:pjensen DATE:Monday, September 19, 2005 11:30:29 AM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:pjensen DATE:Monday, September 19, 2005 11:30:49 AM  
This is an enhancement request for the product.

Since the NSG project is becoming a reality, there is a need for a spec checker for the FE engine (superstructures). This would be a good time to begin this process since truss is expected to use the same FE engine for analysis. This would also eliminate the need for the use of a girder line analysis engine for NSG and when the design or rating engineer wants to use a "more refined" analysis.

FROM: Herman Lee DATE: 1/21/2013 4:03:39 PM Eastern Standard Time  
Status Changed to Resolved.

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 6706                                                                                     |
| Subject: Vc Calculation going to zero due to tensile axial load - even when the axial load is zero |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Colgrove, George   | 9/19/2005 3:41:12 PM |
| Modified By: administrator       | 6/19/2008 4:19:40 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:18:57 PM

HRS AASHTO

1956



**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Duray, Jim      | New       | High | Unknown     |
| Goodrich, Brian | Assigned  |      | Bug - BRASS |
| Duray, Jim      | New       | High | Unknown     |
|                 | Suspended |      | Enhancement |
| Duray, Jim      | Suspended | High | Enhancement |

**Contacts**

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6729.14611 | Suspended     | Prestress Design with various strand pulls |

**Description**

FROM:gcolgrove DATE:Monday, September 19, 2005 11:41:12 AM  
 REPORTED BY: George Colgrove

DESCRIPTION: 5.8.3.3 Vc Calculation going to zero due to tensile axial load - even when the axial load is zero

**COMMENTS:**

I've been having a problem with the spec check for shear resistance at the end of the beam. It reports that since there is a tensile axial load in the beam, the shear resistance of the concrete is zero. Since there should not be any axial loads in the structure, there seems to be an error in the program. I suspect this error could come about due to very small values that developed in the axial load holders or that the program sees a "positive" zero as tension. One end had negative zeros (indicating very small numbers are being calculated).

See Documents

FROM:bgoodrich DATE:Friday, November 11, 2005 12:56:50 PM  
 BRASS should consider a tolerance on axial force with respect to "zero" tension. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Monday, November 14, 2005 9:00:52 PM  
 WYDOT assigned this issue to BRASS Problem Log 640. BRASS-GIRDER(LRFD) was corrected to use a tensile axial force tolerance. Fixed for Opis version 5.4.

**Complete Issue Information**

Issue ID: 6729

Subject: Prestress Design with various strand pulls

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Colgrove, George

9/26/2005 5:50:04 PM

Modified By: administrator

6/19/2008 4:19:38 PM

Priority: High

Category: Enhancement

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ihnat, Joseph      | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier                                                        | Description                |
|------|----------------------------------------------------------------------------|----------------------------|
|      | TN0010DontConsiderEffectiveS<br>labThicknessSettingNotBeingS<br>aved_1.pdf | Effective Slab Setting.bbd |

**Tasks**

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 6737.14603 | Closed        | Effective Thickness Setting Not Being Saved |

4/19/2016 3:18:57 PM

HRS AASHTO

1958

**Complete Issue Information****Description**

FROM:gcolgrove DATE:Monday, September 26, 2005 1:50:04 PM  
 REPORTED BY: George Colgrove

DESCRIPTION: Prestress Design with Various strand pulls

**COMMENTS:**

In checking a conspan run, I've noticed that there is no way to use various strand pulls in the section. ConSpan will allow for different percent pull forces for different strands. For example, I want the top two strands to be pulled only at a tight 4 to 5 kips just enough to hang the reinforcing on. I have a row roughly 5 inched up from the bottom I want to be pulled at 25% with all the strands at the bottom layer being pulled at the specified 75%. Conspan allows for this and it makes a big difference in the camber calculations. V/O only allows for a single strand type to be used throughout the section. This should be modified to allow for multiple strand pull percentages.

|                                                      |
|------------------------------------------------------|
| Issue ID: 6737                                       |
| Subject: Effective Thickness Setting Not Being Saved |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 9/29/2005 2:58:07 PM |
| Modified By: administrator          | 6/19/2008 4:19:38 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Thursday, September 29, 2005 10:58:07 AM  
 REPORTED BY:

4/19/2016 3:18:58 PM

HRS AASHTO

1959

## Complete Issue Information

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Thursday, September 29, 2005 10:58:13 AM

In the attached bbd, using the second superstructure Def. "Schedule Based Input", selecting the Analysis Tab I have Un-checked Consider effective slab thickness for rating. Clicked OK and saved the changes. I went backing to the analysis tab and verified that the changes remained (unchecked). Then I exited the structure and reopened it. The effective slab thickness for rating was now checked again. I did this several times. It appears that I can't save this structure with this Un-checked. Is there a reason for this?

FROM:jihnat DATE:10/7/2005 10:16:12 AM

The GUI appears to be updating the Domain, but this doesn't get saved to the db when the BWS is saved. (Can reproduce in our TB1 and TB2 also)

FROM:mordoobadi DATE:10/14/2005 4:03:47 PM

This happens for both controls:

- (1) Consider effective slab thickness for rating
- (2) Consider effective slab thickness for rating

FROM:mordoobadi DATE:10/14/2005 4:14:46 PM

After saving to the database correct values go to the database.

I think somewhere in the domain we are specifically setting those values to TRUE when bridge is opened.

FROM:mordoobadi DATE:10/14/2005 4:43:32 PM

The code in DoSuperStructDef.cpp (create function) sets these values every time a bridge is created or retrieved.

FROM:mordoobadi DATE:10/14/2005 4:50:09 PM

Fixed in 5.4 Alpha 3.

FROM:dteal DATE:Wednesday, October 26, 2005 10:20:25 AM

Will I have to go back and check/verify every structure in our database or will the database migration do anything for me?

FROM:mordoobadi DATE:11/2/2005 8:05:15 AM

The code had a bug that caused this problem. It set the check-boxes to checked every time a bridge was retrieved from the database. So if you opened a bridge and saved it again, the values that go to the database may not be right. The migration will not know what's the right settings. Unfortunately, you should go back and check/verify the settings for every super structure definition after you get the next release.

FROM:dteal DATE:Tuesday, November 08, 2005 7:57:56 AM

This is an item that needs to be brought to the attention of all the users – not just buried in the release notes. I have about 1000 structures in my database that may be effected by this and will have to be verified.

4/19/2016 3:18:58 PM

HRS AASHTO

1960

**Complete Issue Information**

FROM:dteal DATE:Thursday, November 17, 2005 9:46:28 AM

FROM:dteal DATE:Thursday, November 17, 2005 9:49:08 AM

Copy of email from Jim - decide to post the attached pdf of a technical note on the support website: No need to email user, just post on the website.

Dean

Attached is a technical note we are planning to post on the web site. We will also add a note on the Home page about this. Perhaps we should also send an email to all users alerting them of this problem??? We usually do not send an email to all users for issues such as this.

Jim

FROM:kkennelly DATE:11/22/2005 1:09:38 PM  
Technical note has been posted on the website.

FROM:dteal DATE:Wednesday, November 23, 2005 9:09:46 AM

FROM:mordoobadi DATE:2/6/2006 4:42:36 PM  
Accepted by Dean Teal 11/23/2005.

Issue ID: 6749  
Subject: Wrong Spec for Devel. Length Calcs

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 9/30/2005 7:36:24 PM  
Modified By: administrator 6/19/2008 4:19:37 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Bug      |

**Contacts**

4/19/2016 3:18:58 PM

HRS AASHTO

1961

### Complete Issue Information

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | single span.bbd     |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6750.14590 | Closed        | End Distance in Schedule Based |

### Description

FROM:dteal DATE:Friday, September 30, 2005 3:36:24 PM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Friday, September 30, 2005 3:40:07 PM

I was checking the .log file for LRFD Reinf. Development Length Calcs. The top of the page states that it is using the Design Specs from 1998 with 2003 interims. This would be from the Second Edition.

Are we or are we not using the 2004 Third Edition?

Using the second edition has a large penalty when it comes to calculating modifications to the basic development length. Specifically in the second edition, 5.11.2.1.2 (second item)  
"for bars with a cover of db or less or with a clear spacing of 2db or less, mult. By 2"  
This was removed in the third edition.

FROM:kkennelly DATE:12/13/2005 1:41:45 PM

Task Force directed us to update Virtis/Opis to 3rd edition with 2005 interims.  
Fixed for 5.4.0

FROM:dteal DATE:Tuesday, March 07, 2006 10:35:06 AM  
Accepted

Issue ID: 6750

Subject: End Distance in Schedule Based

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 9/30/2005 7:57:33 PM |
| Modified By: administrator     | 6/19/2008 4:19:37 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact   | Status    | Priority | Category |
|-------------------|-----------|----------|----------|
| Duray, Jim        | New       | High     | Unknown  |
| Kennelly, Krishna | Assigned  |          | Bug      |
|                   | Duplicate |          |          |
| Kennelly, Krishna | Duplicate | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6752.14588 | Duplicate     | Direction angle of a girder reference line |

### Description

FROM:dteal DATE:Friday, September 30, 2005 3:57:33 PM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Friday, September 30, 2005 3:57:34 PM  
In the attached bbd, look at the reinforcement schedule, the end distance for the 4th and 6th lines. They are zero. I think they should be 45 ft not zero.

What we have here is a 45' single span. On the 4th line we start 13.458' left of abutment #2 (support #2) and go 13.458'. Shouldn't the end distance be 45 feet and not zero??

4/19/2016 3:18:58 PM

HRS AASHTO

1963

**Complete Issue Information**

Same on the sixth line?

FROM:kkennelly DATE:10/7/2005 8:34:46 AM

Since the bars are input as referenced from Support 2, the end distance displayed is referenced from that same support. Therefore, they end 0' from support 2. If they were input as being referenced from Support 1 with a start distance of 31.5417', then the end distance displayed would be 45' from support 1.

FROM:dteal DATE:Monday, October 10, 2005 7:30:43 AM

FROM:kkennelly DATE:10/11/2005 8:04:12 AM  
Closed based on accepted in track field.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6752                                      |
| Subject: Direction angle of a girder reference line |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 10/4/2005 8:30:21 PM |
| Modified By: administrator        | 6/19/2008 4:38:36 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:10/4/2005 4:26:07 PM

email from Jon Lea, Leapsoft:

I changed the Start Left Overhang of BID #9 from 4.25 to 2.0 and took a look at the direction angles for the reference line for G1. The Z direction angle went from PI/2 to 1.56 (which looked correct) but the X

4/19/2016 3:18:59 PM

HRS AASHTO

1964



**Complete Issue Information**

direction angle went from 0 to 0.0066. I'd expect it to be -0.0066 since angles are positive counter clockwise.

FROM:kkennelly DATE:12/6/2005 1:39:03 PM  
Duplicate of 6441

Issue ID: 6753  
Subject: Standard Gage Wheel Lines

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 10/6/2005 6:05:27 PM  
Modified By: administrator 6/19/2008 4:19:36 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
| Ihnat, Joseph   |          |          | Bug         |

### Complete Issue Information

|            |          |      |         |
|------------|----------|------|---------|
|            | Resolved |      |         |
|            | Closed   |      |         |
| Duray, Jim | New      | High | Unknown |
|            | Resolved |      |         |
| Duray, Jim | Resolved | High | Unknown |

### Contacts

| Name    | Company                                | Email 1                 | Phone 1      |
|---------|----------------------------------------|-------------------------|--------------|
| Binh Ha | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us | 617-973-7561 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | error.doc           |             |

### Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 6754.14586 | Resolved      | the error message "Unable to create instance of system" and cannot open Virtis |

### Description

FROM:dteal DATE:Thursday, October 06, 2005 2:05:27 PM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

In Library-Vehicle, Truck Tab we can enter the wheel gage in feet. I can not find it anyplace where it tells the user that no matter what value you enter, BRASS will use 6' (AASHTO standard gage).

FROM:bgoodrich DATE:Friday, December 09, 2005 11:42:06 AM

I'm not sure if the request is to simply add a description to the help. I doubt it. This sounds more like a BRASS-LRFD issue with the distribution factor calculations. Would you please clarify your request?

FROM:dteal DATE:Friday, December 09, 2005 12:14:30 PM

The whole point here is that Virtis has a field in the GUI to allow the user to enter a wheel gage. The user is lead to believe that the value they entered for wheel gage is going to be used. The user is never told that no matter what value they enter in this field - it is never used. They are never told that this GUI is for Standard Gage only. We need to populate this field with 6' and grayed it out. I'm not to sure why this got assigned to BRASS? I thought it was a GUI issue?

4/19/2016 3:18:59 PM

HRS AASHTO

1966

**Complete Issue Information**

FROM:jihnat DATE:12/9/2005 12:29:58 PM  
This incident is probably a moot point after 6832 is completed.

FROM:bgoodrich DATE:Monday, February 13, 2006 11:49:24 AM  
I am assigning this to Joe as this is not a BRASS issue. Also, FYI - I cannot view Incident 6832.

FROM:jihnat DATE:2/13/2006 12:48:18 PM  
6832 was to enforce 6' in the GUI for standard gage vehicles. Use NSG for anything else.

FROM:dteal DATE:Wednesday, March 08, 2006 3:53:44 PM  
Accepted

FROM:jihnat DATE:3/9/2006 8:17:08 AM

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 6754                                                                          |
| Subject: the error message "Unable to create instance of system" and cannot open Virtis |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Ha, Binh         | 10/7/2005 3:16:24 PM |
| Modified By: administrator     | 6/19/2008 4:19:36 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bha DATE:Friday, October 07, 2005 11:16:24 AM  
REPORTED BY:

DESCRIPTION:

4/19/2016 3:18:59 PM

HRS AASHTO

1967

**Complete Issue Information**

COMMENTS:

FROM:bha DATE:Friday, October 07, 2005 11:16:25 AM  
Hello Michael Baker,

I asked our Virtis contact person, Binh Ha, to forward this to you.

I work in IT and we recently began having problems running Virtis/Opis 5.3.1. We upgraded to this version in July without any problems. Now some of the users are beginning to get the error message "unable to create instance of system" and cannot open Virtis. I have attached a screen shot of this error. We have upgraded some other applications on these user's PC's but Virtis is running off a network drive, not the C drive. However, another random user can log onto this same PC and run Virtis successfully. Can you tell us what this error means

Thank you,  
Carole Donovan  
Mass. Highway  
617-973-8027

FROM:jihnat DATE:10/7/2005 1:39:44 PM  
Go to the directory where Virtis is installed and run the Register.bat file. (I called Carole and left this info on her voice mail).

|                            |
|----------------------------|
| Issue ID: 6760             |
| Subject: Input File Report |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Duray, Jim     |                       |
| Submitted By: Huckabee, Preston | 10/12/2005 2:44:12 PM |
| Modified By: administrator      | 6/19/2008 4:19:36 PM  |
| Priority: High                  |                       |
| Category: Education             |                       |

**History**

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Duray, Jim      | New                | High     | Unknown   |
|                 | Information Needed |          | Education |
| Duray, Jim      | Information Needed | High     | Education |

4/19/2016 3:18:59 PM

HRS AASHTO

1968

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2206050.bbd         |             |

### Tasks

| Name       | Current State     | Summary                                      |
|------------|-------------------|----------------------------------------------|
| 6788.14552 | Closed - Inactive | Error preparing stringer dead load reactions |

### Description

FROM:pahuckabee DATE:Wednesday, October 12, 2005 10:44:12 AM  
REPORTED BY: Kristin Roberge

DESCRIPTION: There does not appear to be a coherent way to obtain a report on the input file which displays the loading for the various cases of deadload and other load cases.

#### COMMENTS:

FROM:pahuckabee DATE:Wednesday, October 12, 2005 10:44:12 AM

FROM:jduray DATE:10/13/2005 10:40:16 AM  
Have you looked at using the Report Tool?

FROM:pahuckabee DATE:Friday, October 21, 2005 3:03:17 PM  
Yes, there are no selections for load cases, all other input aspects are available but not loads.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6788<br>Subject: Error preparing stringer dead load reactions |
|-------------------------------------------------------------------------|

|                                                               |
|---------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Duray, Jim |
|---------------------------------------------------------------|

4/19/2016 3:19:00 PM

HRS AASHTO

1969

**Complete Issue Information**

|                             |                       |
|-----------------------------|-----------------------|
| Submitted By: Ihnat, Joseph | 10/18/2005 2:38:49 PM |
| Modified By: administrator  | 6/19/2008 4:19:34 PM  |
| Priority: High              |                       |
| Category: Education         |                       |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
|                    | Resolved |          |          |
|                    | Resubmit |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 6798.14542 | Closed        | Unable to save bridge after copying Structure Def |

**Description**

FROM:jihnat DATE:10/18/2005 10:33:35 AM

This looks the same as 6543, but customer requests explanation.

Reported by Chris Jackman, Fisher Associates

I am running a different bridge with the same style-thru girder-floorbeam stringer and I am getting the following error:

Error generating LFD/ASD load commands!

04:21:34 PM - Line 243 in source file .\BrassStdLoadControl.cpp.

4/19/2016 3:19:00 PM

HRS AASHTO

1970

**Complete Issue Information**

Error generating load group commands!  
04:21:34 PM - Line 445 in source file .\BrassLoadControl.cpp.

Error in the loads utility!  
04:21:34 PM - Line 741 in source file .\LoadsUtility.cpp.

Error getting stringer dead load reaction!  
04:21:34 PM - Line 1124 in source file .\EngineExport.cpp.

Error preparing stringer dead load reactions!  
04:21:34 PM - Line 3438 in source file .\LoadsUtility.cpp.

Is it something specific to this bridge? The other skewed-end girder floorbeam bridge that I input last week ran ok.

FROM:jhnat DATE:8/10/2006 2:01:47 PM  
Closed due to inactivity and customer has migrated to 5.4

|                                                            |
|------------------------------------------------------------|
| Issue ID: 6798                                             |
| Subject: Unable to save bridge after copying Structure Def |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 10/19/2005 6:27:45 PM |
| Modified By: administrator          | 6/19/2008 4:19:33 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:19:00 PM

HRS AASHTO

1971

**Complete Issue Information**

**Description**

FROM:jihnat DATE:10/19/2005 2:24:34 PM  
Alpha 3: Open BID12 TimberTrainingBridge1, copy the structure def, try to save, get error.

FROM:jihnat DATE:10/19/2005 2:33:49 PM  
Same in 5.3.1

FROM:mordoobadi DATE:11/10/2005 10:25:22 AM  
Changed the version from 5.4 Alpha to 5.3 Release.

FROM:mordoobadi DATE:1/31/2006 10:15:09 AM  
The nail def should be copied before copying the DeckPanelRangeSet.

FROM:mordoobadi DATE:1/31/2006 10:27:11 AM  
Fixed for 5.4 Beta 5.

FROM:jihnat DATE:2/15/2006 7:56:00 AM  
Still not working in Beta 5.

FROM:mordoobadi DATE:2/15/2006 8:36:19 AM  
there were some files that were not checked into sourcesafe.

FROM:jihnat DATE:2/15/2006 10:44:24 AM  
OK in Beta 5 with updated abobrdg.dll

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6810                                      |
| Subject: Can't save Stringer Mbr Alt rating results |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Kennelly, Krisha      | 10/24/2005 5:04:57 PM |
| Modified By: administrator          | 6/19/2008 4:19:32 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

4/19/2016 3:19:00 PM

HRS AASHTO

1972



### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Unknown     |
|                 | On Hold   |          | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company                 | Email 1                     | Phone 1      |
|----------------|-------------------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT            | tim.armbrrecht@illinois.gov | 217-782-6266 |
| Jim Duray      | Michael Baker Jr., Inc. | jduray@mbakercorp.com       |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6819.14521 | Suspended     | NSG enhancement: copy wheel set from each axle to another axle |

### Description

FROM:kkennelly DATE:10/24/2005 1:01:01 PM  
Open BID 13, analyze Stringer Mbr Alt 1 in Stringer Unit 1 Layout. Try to save results get message:  
The analysis results are not up to date and cannot be saved.  
01:02:38 PM - Line 3011 in source file .\DoMemberResults.cpp.

The Bridge properties have changed since they were last saved.  
Please Save the bridge and then save the results.  
01:02:38 PM - Line 3004 in source file .\DoMemberResults.cpp.

But the Save button is not activated on the toolbar.

FROM:mordoobadi DATE:11/1/2005 10:12:30 AM  
This means that domain has changed something when it retrieved the bridge.

FROM:kkennelly DATE:11/7/2005 12:38:30 PM  
The domain is not changing anything when the bridge is retrieved.

In CUiAnalysisProgressDlg::PopulateDeadLoadReactionObjects() we add to the

**Complete Issue Information**

IDoFlrSystemStringerDLCaseListPtr the first time the stringer is analyzed. Adding to this list is what causes the bridge to be marked as modified.

Can we enable the Save button on the toolbar after we add to this list in the Analysis Progress dialog?

FROM:mordoobadi DATE:11/10/2005 10:27:12 AM  
Happens in 5.3.1 as well.  
Changed the version to Support/5.3 Release

FROM:jihnmat DATE:7/11/2006 9:26:48 AM  
Support Center is the project for bugs.

FROM:mordoobadi DATE:8/22/2006 1:15:16 PM  
Fixed for 5.5 Beta 4. and 5.6.

FROM:mordoobadi DATE:8/22/2006 1:18:30 PM  
Duplicate of incident 6517.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6819                                                          |
| Subject: NSG enhancement: copy wheel set from each axle to another axle |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 10/25/2005 5:50:21 PM |
| Modified By: administrator     | 6/19/2008 4:19:32 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:19:01 PM

HRS AASHTO

1974

**Complete Issue Information**

FROM:tarmbrecht DATE:Tuesday, October 25, 2005 1:50:21 PM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

There should be an obvious way to copy the wheel configuration from an axle to another (new) axle, similar to copying diaphragms from one bay to another.

FROM:jduray DATE:Monday, March 27, 2006 9:32:30 AM

FROM:hlee DATE:7/10/2006 9:18:15 AM  
Changed Project to Support Center.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 6827<br>Subject: Allow different vehicles for Inv/Op rating in NSG analysis |
|---------------------------------------------------------------------------------------|

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 10/25/2005 7:08:23 PM |
| Modified By: administrator     | 6/19/2008 4:19:31 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:01 PM

**HRS AASHTO**

1975

**Complete Issue Information**

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Duray, Jim       | New       | High | Unknown     |
| Kennelly, Krisha | Assigned  |      | Bug         |
| Duray, Jim       | New       | High | Unknown     |
|                  | Suspended |      | Enhancement |
| Duray, Jim       | Suspended | High | Enhancement |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6834.14506 | Suspended     | NSG Tracks instead of wheels |

**Description**

FROM:tarmbrecht DATE:Tuesday, October 25, 2005 3:08:23 PM  
 REPORTED BY:

DESCRIPTION:

COMMENTS:

I wanted to run a permit truck for a NSG analysis, no inventory rating, operating rating only. In analysis settings, vehicle summary, I select operating rating so that the command button says "add to operating". I then select my vehicle and click the "add to operating" command button. It adds the vehicle to both inventory and operating.

FROM:tarmbrecht DATE:Tuesday, October 25, 2005 3:18:20 PM  
 Also when I try to remove the truck from inventory by selecting the truck in inventory and "remove from analysis" command button, it removes the trucks from both inventory and operating.

FROM:jduray DATE:10/31/2005 12:42:21 PM

FROM:kkennelly DATE:11/2/2005 7:59:05 AM  
 We need to change the functionality of this window since it seems reasonable that users will want to only do an Operating rating for the NSG vehicle.

Allow user to select/unselect the vehicles for Operating or Inventory only. Still need to restrict user to 1

4/19/2016 3:19:01 PM

HRS AASHTO

1976

**Complete Issue Information**

NSG vehicle (can't have vehicle A for inventory and vehicle B for operating).

FROM:sboukamp DATE:11/2/2005 10:12:23 AM  
Resolved for Beta 2.

FROM:tarmbrecht DATE:Wednesday, December 21, 2005 3:05:42 PM

It now allows me to select a vehicle to add to operating. Could you please verify that the "Adjacent Lane Vehicle" branch shown is for the user to add another vehicle to accompany the NSG on the bridge? However, it adds that branch for an adjacent lane vehicle even if I specified no accompanying vehicle with my NSG in the vehicle path tab under bridge alternatives/superstructure. Is that a conflict? I tested a little further and added an HS20 from the standard vehicles and it added an adjacent vehicle branch. It also won't let me add a HS20 to inventory and a different standard vehicle to operating like it does when I select the standard analysis type instead of the advanced. I agree with Krisha above that we wouldn't use two different NSG, but I think we should still be allowed to select two different standard vehicles for inventory and operating, therefore I'm resubmitting this incident for consideration.

FROM:jduray DATE:1/3/2006 9:57:24 AM

Item 1) The "Adjacent Lane Vehicle" branch should be independent of what you specify for the bridge. No conflict - behavior is as designed.

Item 2) Tim states the following: "I tested a little further and added an HS20 from the standard vehicles and it added an adjacent vehicle branch." - this is as designed.

Item 3) Tim states the following: "It also won't let me add a HS20 to inventory and a different standard vehicle to operating like it does when I select the standard analysis type instead of the advanced." - this is as designed (refer to mockups page 8 "Only one Non-Standard Gage vehicle and one adjacent lane vehicle can be selected for an analysis.")

Tim is correct - this is a design flaw...changing Category to "Enhancement".

FROM:hlee DATE:7/10/2006 9:19:25 AM  
Changed Project to Support Center.

|                                       |
|---------------------------------------|
| Issue ID: 6834                        |
| Subject: NSG Tracks instead of wheels |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 10/26/2005 1:38:05 PM |
| Modified By: administrator     | 6/19/2008 4:19:31 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:01 PM

HRS AASHTO

1977

## Complete Issue Information

### Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 6847.14493 | Resolved      | Activate copy toolbar button from Analysis Settings dialog |

### Description

FROM:dteal DATE:Wednesday, October 26, 2005 9:38:05 AM  
REPORTED BY:

DESCRIPTION:It is common to evaluate a bridge before allowing a vehicle with tracks to pass over. Crane, paving machines, etc. We need to be able to enter a track (length and width of contact area) instead of just a point load for a wheel. Currently I believe that contact width isn't used right now – correct?

FROM:hlee DATE:7/10/2006 9:19:54 AM  
Changed Project to Support Center.

Issue ID: 6847

Subject: Activate copy toolbar button from Analysis Settings dialog

4/19/2016 3:19:02 PM

HRS AASHTO

1978

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Jones, Daniel    | 10/26/2005 6:53:30 PM |
| Modified By: administrator     | 6/19/2008 4:19:30 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | On Hold   |          | Enhancement |
|                 | Duplicate |          |             |
|                 | Suspended |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |
|                 | Resolved  |          |             |
|                 | Closed    |          |             |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                    |
|------------|---------------|--------------------------------------------------------------------------------------------|
| 6861.14479 | Resolved      | Output both Lane and Axle Loading in Virtis Std Engine instead of just the controlling one |

### Description

FROM:rfulton DATE:Wednesday, October 26, 2005 2:53:30 PM

4/19/2016 3:19:02 PM

HRS AASHTO

1979

**Complete Issue Information**

REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:rfulton DATE:Wednesday, October 26, 2005 2:53:30 PM  
Tried to define a vehicle (both std and NSG) from bridge explorer and copy button was not activated. The button is activated if the vehicle is defined in the vehicle library.

FROM:jduray DATE:10/27/2005 9:26:34 AM  
This is when creating a vehicle from the Analysis Settings dialog. The previous release behaved this way.

FROM:jihnat DATE:11/3/2005 8:34:37 AM  
User wants Copy toolbar button to be enabled. But the button would not be reachable because the active dialog is modal.  
Program has always had the current behavior.  
The grid cells can still be copied/pasted using ctrl+c, ctrl+v.  
As an enhancement, a handler could probably be added to the dialog to enable the buttons, but they still could not be clicked.

FROM:hlee DATE:7/10/2006 9:20:21 AM  
Changed Project to Support Center.

Issue ID: 6861  
Subject: Output both Lane and Axle Loading in Virtis Std Engine instead of just the controlling one

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 10/27/2005 4:54:28 PM  
Modified By: mordoobadi 7/23/2008 7:51:21 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:19:02 PM

HRS AASHTO

1980



### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6906.14434 | Suspended     | Add engine warnings/messages to results object; Display in GUI |

### Description

FROM:dteal DATE:Thursday, October 27, 2005 12:54:28 PM  
REPORTED BY:

DESCRIPTION:It is my understanding that Virtis Std Engine checks both axle and lane rating but it never reports which controls. Us along with many other states don't rate for lane – we need to know which is controlling. We need these broken out as axle rating and lane rating.

Or better yet – the “as requested” to actually be “as requested” - let us request what we actually want.

FROM:jduray DATE:Monday, March 27, 2006 9:33:36 AM  
This requires modifications to the StdEngine. Our current task is to implement BAR7 "as is". This request should be added to the list of StdEngine enhancements.

FROM:hlee DATE:7/10/2006 10:07:39 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:1/26/2007 9:14:30 AM  
Related to Incident 6917 (Virtis Engine As Requested/Detailed Results).

FROM:hlee DATE:2/5/2008 10:56:04 AM  
Resolved in Virtis Std Engine for 6.0 Release.

FROM:dteal DATE:Tuesday, June 17, 2008 12:05:20 PM  
Should this be tested under beta 4??

FROM: Dean Teal DATE: 7/1/2008 3:22:49 PM Eastern Daylight Time  
Accepted in beta 4

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6906                                                          |
| Subject: Add engine warnings/messages to results object; Display in GUI |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Goodrich, Brian  | 11/11/2005 6:25:46 PM |

4/19/2016 3:19:02 PM

HRS AASHTO

1981

**Complete Issue Information**

Modified By: administrator

6/19/2008 4:19:25 PM

Priority: High

Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lathia, Hasmukh | Resolved  |          |             |
| Lee, Herman     |           |          |             |
| Lathia, Hasmukh | Assigned  |          | Bug         |
|                 | Suspended |          | Enhancement |
| Lathia, Hasmukh | Suspended | High     | Enhancement |

**Contacts**

| Name           | Company                        | Email 1                | Phone 1       |
|----------------|--------------------------------|------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org         | (785)291-3001 |
| Hasmukh Lathia |                                | HLathia@mbakercorp.com |               |
| Jim Duray      | Michael Baker Jr., Inc.        | jduray@mbakercorp.com  |               |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 6911.14429 | Suspended     | Enhance Std Engine to apply varying selfweight for haunched girders |

**Description**

FROM:bgoodrich DATE:Friday, November 11, 2005 1:26:26 PM

Based on the discussion from Incident 6239, there needs to be a way for the engine to communicate information back to the GUI. My thinking here is for a messages object to be added to the results object. The engine could write any number of warnings or informational messages to this object, which would then be available once the analysis is complete for the user to review. There would have to be some mechanism for conveying to the user that warnings/messages exist, especially for rating several

4/19/2016 3:19:02 PM

HRS AASHTO

1982

**Complete Issue Information**

bridges at once. For example, if a bridge has not been analyzed since a specification change was made; a previously "clean" run could contain warnings that should be reviewed. Varying levels of importance could be assigned to each warning (like in the export), so low level warnings do not trigger the flag indicating that the user should review the warnings. Maybe the user could have some control over which warning levels should trigger a review.

FROM:jduray DATE:11/14/2005 12:48:15 PM  
Do these differ from the messages we send to the Analysis Progress Dialog during the export?

It seems to me that a log file is required but to me that is the same as the log that is created during the export.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 6911                                                               |
| Subject: Enhance Std Engine to apply varying selfweight for haunched girders |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Lathia, Hasmukh |                       |
| Submitted By: Teal, Dean         | 11/15/2005 7:36:09 PM |
| Modified By: administrator       | 6/19/2008 4:19:25 PM  |
| Priority: High                   |                       |
| Category: Enhancement            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, November 15, 2005 2:36:09 PM  
Beta 2  
For a simple comparison I took RCTrainingBridge1, schedule based definition (4 span), used an HS20 truck for analysis. The rating factors where not even close. The controlling points for the rating where in different spans and at different % locations.  
So I wanted to see what did compare favorably so I started with Dead Loads. The reactions at the

4/19/2016 3:19:03 PM

HRS AASHTO

1983

## Complete Issue Information

abutments and the piers did not match up. I summed up all the reactions, for the BRASS run and got 444.2 kips and for the Virtis run I got 375.6 kips. Either the virtis run is 69 kips light or the BRASS run is 24 kips heavy. In either case the most simple check, total dead load from the girder doesn't match up. BRASS had 3 separate load cases and Virtis had only 1. Nothing else on it compares favorably either.

I checked the single span definition in RCTrainingBridge1 and found that when checking the dead loads there were oddities also.

The BRASS DL output consisted of 3 separate DL cases that summed up to 74 kips. The Virtis DL consisted of one DL case called DL1 and it totaled up to 61 kips.

FROM:kkennelly DATE:11/16/2005 10:27:52 AM

I've entered incident 6916 which is probably the cause of these discrepancies. BRASS and Virtis Std used to produce the same output for RCTrainingBridge1 so something must have gotten broken recently.

FROM:kkennelly DATE:11/17/2005 1:01:05 PM

Please revisit this problem with the new Virtis Std Engine dll's being sent out today.

FROM:dteal DATE:Friday, November 18, 2005 9:00:03 AM

Using the beta2update2 dll that was sent on 11/18/05

The DL reactions for the Virtis engine balanced but –

The summation of the DL's in virtis = 513 k and the summation of the DL's in BRASS = 444 k – so the static summation of the DL's still don't add up.

With the DL comparison being non-equal, the ratings don't compare either, with the HS20 Inv. Truck rating factor in Virtis = 0.499 and BRASS = 1.411.

Referring to VI#6921 – with the virtis engine in viewing the analysis output all DL's are lumped into one value making it difficult to see which particular DL's don't compare.

FROM:xli DATE:11/18/2005 5:36:48 PM

I created a Staad model for BID 11, the dead load reactions match Brass output.

I also noticed that Brass is using 72" as top flange width while computing girder self weight, VirtisStd is using OVERHANG OR SPACING 8.5'.

FROM:kkennelly DATE:11/21/2005 8:32:59 AM

Virtis has user enter "Tributary width" for top flange for rc tee beam. This is similar to 6926, discuss with Jim.

FROM:xli DATE:11/22/2005 5:09:02 PM

This bridge has parabolic girder profile, Virtis Std is using uniform load instead of parabolic load for girder selfweight, it makes 10% difference. Do we accept this difference?

If we use a couple linear distributed loads to simulate parabolic loads, we can get very accurate results.

FROM:hlathia DATE:Tuesday, January 31, 2006 8:42:38 PM

StdEngine is calculating and applying average uniform load due the weight of parabolic haunched girder. This is how it has always been done by BAR7. The dead load (DL1) results will be different for the uniform and trapezoidal loads..

Until StdEngine is revised to calculate and apply non-uniform loads for girder weight for haunched

4/19/2016 3:19:03 PM

HRS AASHTO

1984

**Complete Issue Information**

girders, Virtis Export can calculate average unifrom load due to hauched girder and pass it on as a negative unifrom load and also pass on a series of trapezoidal loads for actual girder weight, both as user defined Girder Dead Loads. This should produce accurate results.

My recommendation is to wait unit Virtis StdEngine is revised for calculating and applying trapezoidal loads due to the weight of a haunched girder.

FROM:hlee DATE:2/2/2006 7:32:40 AM  
This is in the Enhancement Estimates submitted to Task Force.

FROM:jduray DATE:Monday, March 27, 2006 9:58:28 AM

FROM:hlee DATE:7/10/2006 9:20:34 AM  
Changed Project to Support Center.

|                                                      |
|------------------------------------------------------|
| Issue ID: 6917                                       |
| Subject: Virtis Engine As Requested/Detailed Results |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/16/2005 5:12:48 PM |
| Modified By: administrator     | 6/19/2008 4:19:24 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category           |
|-----------------|-----------|----------|--------------------|
| Duray, Jim      | New       | High     | Unknown            |
|                 | On Hold   |          | Enhancement        |
|                 | Suspended |          | Bug<br>Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement        |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 6921.14419 | Suspended     | Separate Display of Dead Loads in Virtis Std Engine |

**Description**

FROM:dteal DATE:Wednesday, November 16, 2005 12:12:49 PM  
Beta 2

At the top of the rating results window we have "As Requested and Detailed". In the Virtis Std Engine you get the same results for each button. I am not able to find a way to view with/without impact or single lane loaded.

Related to this is VI #6050 – returning the single lane loaded option to virtis that the TF removed.

FROM:jduray DATE:11/21/2005 10:19:39 AM  
The StdEngine does not report that info. Will add this to the enhancement list.

FROM:jduray DATE:11/22/2005 8:09:17 AM  
We are to estimate the cost for this enhancement and review with the TF.

FROM:hlee DATE:7/10/2006 10:08:35 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 6921                                               |
| Subject: Separate Display of Dead Loads in Virtis Std Engine |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/16/2005 8:22:04 PM |
| Modified By: administrator     | 6/19/2008 4:19:24 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Lathia, Hasmukh  | Assigned |      |         |
| Duray, Jim       | New      |      |         |
| Duray, Jim       | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      | Bug     |
|                  | Resolved |      |         |
| Kennelly, Krisha | Resolved | High | Bug     |

### Contacts

| Name          | Company                 | Email 1                    | Phone 1      |
|---------------|-------------------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT            | tim.armbrecht@illinois.gov | 217-782-6266 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com      |              |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | WontElimErrFlbms.bbd |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6929.14411 | Resolved      | Won't eliminate erroneous floorbeams |

### Description

FROM:dteal DATE:Wednesday, November 16, 2005 3:22:05 PM  
Beta 2

In the Virtis Std Engine, when viewing Analysis results for dead loads. All loads are lumped into one value. In BRASS we can view the Dead Load contribution from the Girder, slab, haunches, rail, overlay all in separate tables. Now in the Virtis Std engine all these loads are lumped in to one value – can we get them in separate tables or is this it?

When trying to compare output from one engine to the other, when the DL's don't match up, you know where to look first being they aren't broken apart?

FROM:kkennelly DATE:11/16/2005 3:42:57 PM

FROM:kkennelly DATE:11/16/2005 3:43:43 PM

FROM:kkennelly DATE:11/16/2005 3:44:06 PM

We are currently unable to split up the dead loads as reported by the Virtis Std Engine. You can review the log file for comments to see the amount of railing load applied to the girder.

FROM:jduray DATE:11/22/2005 8:08:22 AM

4/19/2016 3:19:03 PM

HRS AASHTO

1987

**Complete Issue Information**

We are to estimate the cost for this enhancement and review with the TF.

FROM:hlee DATE:7/10/2006 10:08:44 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

|                                               |
|-----------------------------------------------|
| Issue ID: 6929                                |
| Subject: Won't eliminate erroneous floorbeams |

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center                     |
| Primary Contact: Kennelly, Krisha                  |
| Submitted By: Armbrecht, Tim 11/18/2005 7:47:42 PM |
| Modified By: administrator 6/19/2008 4:19:23 PM    |
| Priority: High                                     |
| Category: Bug                                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Friday, November 18, 2005 2:47:42 PM

In the attached Girder Floorbeam system and error message occurs after using the wizard to enter the floorbeams, stating, "Floorbeam 77 at 153.718200 ft does not intersect Girder 2." After it, as well as Floorbeams 78 & 79 are deleted, and "Apply" is clicked, the same message occurs. After clicking "Cancel" and then returning, the "deleted" floorbeams appear again.

FROM:kkennelly DATE:12/5/2005 2:09:03 PM  
Fixed for 5.4.0



## Complete Issue Information

Issue ID: 6942

Subject: Unable to add point of interest to RC I beam

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Li, Xinmei

11/22/2005 7:25:23 PM

Modified By: administrator

6/19/2008 4:19:21 PM

Priority: High

Category: Bug - GUI 1

### History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Duray, Jim      | New              | High     | Bug         |
| Ihnat, Joseph   | Assigned         |          |             |
|                 | Not Reproducible |          |             |
|                 | Resolved         |          |             |
|                 | Accepted         |          |             |
|                 | Closed           |          |             |
|                 |                  |          | Bug - GUI 1 |
| Ihnat, Joseph   | Closed           | High     | Bug - GUI 1 |

4/19/2016 3:19:04 PM

HRS AASHTO

1989

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 6949.14391 | On Hold       | Inconsistency in Virtis data entry. |

**Description**

FROM:xli DATE:11/22/2005 2:21:27 PM

See attached bridge, I was trying to add point of interest to Structure Definition #1, Member G2, Alt Verify-Single Span RC I beam, virtis broke.

FROM:jihnata DATE:11/28/2005 10:27:40 AM

I'm unable to make Virtis "break". However, in the debug build there is an assertion which is harmless and can be ignored.

FROM:jihnata DATE:11/28/2005 2:37:30 PM

Release build crashed. Fixed for 5.4.0 Beta 3.

FROM:jihnata DATE:11/30/2005 2:04:18 PM

This bug had been present since version 5.2. Changed project to Support Center.

|                                              |
|----------------------------------------------|
| Issue ID: 6949                               |
| Subject: Inconsistency in Virtis data entry. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Lee, Herman      | 11/29/2005 3:36:11 PM |
| Modified By: administrator     | 6/19/2008 4:19:21 PM  |
| Priority: High                 |                       |
| Category: Change Request       |                       |

**History**

4/19/2016 3:19:04 PM

HRS AASHTO

1990

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Unknown     |
| Goodrich, Brian | Assigned  |          | Bug         |
| Duray, Jim      |           |          | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description    |
|------|---------------------|----------------|
|      | Rating.xls          |                |
|      | Document.tif        | CONSPAN output |
|      | I-17-NJ.bbd         |                |
|      | Document.pdf        |                |
|      | Document2.pdf       |                |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 6950.14390 | Suspended     | Revise haunch geometry for PS U beams |

### Description

FROM:hlee DATE:11/29/2005 10:27:09 AM

1. For girder line steel member alternative, both schedule and cross section based total slab thickness is entered in the member alternative level. For girder system steel member alternative, schedule based total slab thickness entered in the typical section only; and cross section based total slab thickness can be entered in both typical section and member alternative level. For reinforced concrete member alternative, total slab thickness is entered in the member alternative level.
2. For girder line cross section based rc slab member alternative, integral wearing surface cannot be entered or calculated. For girder line schedule based rc slab member alternative, integral wearing surface is entered. For steel member alternative, integral wearing surface can be calculated.
3. Typical section has deck concrete materials. Member alternative profile (or cross section) also has deck concrete material.

4/19/2016 3:19:04 PM

HRS AASHTO

1991

**Complete Issue Information**

FROM:jduray DATE:12/2/2005 9:14:36 AM

Comments on (1):

For girder-line steel - both schedule and cross section based is as it should be.

For girder system steel - schedule based is as it should be.

For girder system steel - cross section based total slab thickness should not be on the member alt window.

For girder line r/c - total slab thickness should be on the member alt window.

For girder system r/c - total slab thickness should not be on the member alt window.

Comments on (3):

Probably should not have the material on the member alt windows for girder system.

It is good to be aware of these inconsistencies...but I'm not sure we should change anything. We should discuss this with the TAG. Maybe we could investigate the databases we have received for support and see how these values are being input by the users.

|                                                |
|------------------------------------------------|
| Issue ID: 6950                                 |
| Subject: Revise haunch geometry for PS U beams |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Ihnat, Joseph    | 11/29/2005 6:08:12 PM |
| Modified By: administrator     | 6/19/2008 4:19:21 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:jihnat DATE:11/29/2005 1:05:19 PM  
Entered on behalf of John Rohner:

I'm having problems getting a newly designed bridge to rate. The bridge was designed in Conspan. Conspan only accommodates skews up to 60 degrees (rotation amount from a line perpendicular to layout line) but Virtis will accommodate larger skews which are actually present in this bridge. This may be one reason for a lesser rating.

One other problem, if the sketch indicates what is being applied, is the haunch on the tub girders. It looks as if the haunch thickness is being applied across the outside-to-outside width from flange tip to flange tip. There is no haunch in the middle section. I've attached a picture to clarify this. But, in deleting the haunch completely, it only raised the rating factor from 0.365 to 0.89 for the inventory concrete tension condition. I did a hand check of the stresses output by Virtis and verified Virtis' rating factor. I then took the Conspan stresses and rated the bridge by hand for concrete tension and got a rating factor of around 1.148.

I'm not sure what the difference is. The superimposed dead loads applied to each model are similar but the Virtis model has slightly less which should help, not hurt. Another thing which should help not hurt is the fact that the LL stresses at bottom are calculated to be less in Virtis than in Conspan. I'm just trying to see if I'm missing anything here.

Thanks for all the help.

John Rohner, P.E.  
Bridge Engineer  
9193 South Jamaica Street  
Englewood, CO 80112-5946  
720-286-5444 direct  
720-286-9706 fax  
jrohner@ch2m.com

FROM:jduray DATE:12/2/2005 9:28:17 AM

FROM:bgoodrich DATE:Wednesday, December 07, 2005 8:41:21 PM  
Some of the differences in the stresses are due to differences in section properties and possibly the moments calculated by BRASS and CONSPAN. The stresses reported by BRASS appear to be correct given the moments and section properties. Even if I use the Virtis section properties, the rating still does not get above 1.0. Do you or any of your engineers have any ideas?

The user's issue with the haunch may need to be added as an enhancement. The haunch is applied over the entire top flange width regardless of the beam type. For a tub, an upward uniform load should be added to the Member Loads window to counteract any unwanted haunch load between the top

4/19/2016 3:19:04 PM

HRS AASHTO

1993

## Complete Issue Information

flanges on each wall. Should more geometry be added to the haunch window for a tub, so the user can customize the haunch as needed by the user?

FROM:bgoodrich DATE:Thursday, December 08, 2005 5:27:39 PM

E-mail from John Rohner:

As far as the tubs go, in my opinion, the Virtis software needs to be corrected. Yes, you can apply an upward force to alleviate the improper loading situation resulting from the haunch but there is still the composite section properties affected. I should have taken a little more time to review and compare the section properties of Conspan with that of Virtis as well as the DL moments but I had a deadline and I've now moved on from the project. I would like to take a glance at the comparisons but have another deadline and won't have a chance for a while to look at this. I have included the Conspan section properties and loads for your review. Hopefully, you'll be able to take a look at this. According to CDOT, other consultants are running into problems with Virtis and tub ratings so hopefully this information will help in resolving issues with my project as well as any agencies using tubs. Thanks a lot.

FROM:bgoodrich DATE:Monday, December 12, 2005 11:46:03 AM

I found an error in the cross section export that occurs for the CDOT U72 U-beam. The top fillet was not being exported due to a negative fillet height being determined. Note that this error does not occur for the Texas U-beams on which the cross section conversion was based. The export has been corrected. These changes still did not increase the rating significantly.

FROM:bgoodrich DATE:Friday, March 03, 2006 6:16:15 PM

The difference between the CONSPAN and BRASS ratings for concrete tension is due to differences between the various stresses used to calculate the rating factor. After correcting the export to generate more accurate section dimensions, the moment of inertia and c.g. depth were much closer to the CONSPAN properties. This leaves the moments as the reason why the stresses are different. The BRASS stress and rating factor calculations are sound. The moments may be different because due to assumptions made by CONSPAN and BRASS on span lengths, i.e., centerline of bearing, centerline of final supports, etc.

The request for enhancing the haunch geometry for a box beam remains.

Issue ID: 6953

Subject: Virtis Std Engine: Allow different concrete strengths (F'c) for slab and beam of RC Bridge

Folder: /Virtis/Support Center

Primary Contact: Lathia, Hasmukh

Submitted By: Kennelly, Krisha

11/30/2005 2:09:25 PM

Modified By: administrator

6/19/2008 4:19:20 PM

Priority: High

Category: Enhancement

## History

4/19/2016 3:19:05 PM

HRS AASHTO

1994

**Complete Issue Information**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lathia, Has Mukh | New       | High     | Bug         |
| Duray, Jim       | New       | High     | Bug         |
|                  | Suspended |          | Enhancement |
|                  | Resolved  |          |             |
| Duray, Jim       | Resolved  | High     | Enhancement |

**Contacts**

| Name            | Company | Email 1                | Phone 1 |
|-----------------|---------|------------------------|---------|
| Has Mukh Lathia |         | HLathia@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 6954.14386 | Resolved      | Allow user to enter live load distribution factors and effective slab widths |

**Description**

FROM:hlathia DATE:Wednesday, November 30, 2005 9:10:07 AM  
 BAR7 allowed only one concrete strength for the reinforced concrete section and the same capability was carried to BAR8. Some RC bridges can have different concrete strengths for the slab and the beam. Adding this feature to BAR8 will allow the user to rate a RC bridge more accurately.

FROM:hlee DATE:7/10/2006 9:20:50 AM  
 Changed Project to Support Center.

|                |
|----------------|
| Issue ID: 6954 |
|----------------|

### Complete Issue Information

|                                                                                       |                       |
|---------------------------------------------------------------------------------------|-----------------------|
| Subject: Allow user to enter live load distribution factors and effective slab widths |                       |
| Folder: /Virtis/Support Center                                                        |                       |
| Primary Contact: Duray, Jim                                                           |                       |
| Submitted By: Duray, Jim                                                              | 11/30/2005 2:23:34 PM |
| Modified By: administrator                                                            | 6/19/2008 4:19:20 PM  |
| Priority: High                                                                        |                       |
| Category: Enhancement                                                                 |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                           |
|------------|---------------|-----------------------------------------------------------------------------------|
| 6956.14384 | Suspended     | Allow Std Engine to use Non-standard gage analysis results instead of CBA results |

### Description

FROM:hlathia DATE:Wednesday, November 30, 2005 9:23:59 AM  
BAR8 analyzes a line girder assuming girders to be parallel. Allowing user to enter live load distributions factors and effective slab widths along the length of girder by ranges will allow the user to rate splayed girder bridges.

FROM:hlee DATE:7/10/2006 10:08:55 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:1/25/2007 1:56:20 PM

4/19/2016 3:19:05 PM

HRS AASHTO

1996



**Complete Issue Information**

Enter live load distribution factors along the length of girder by ranges had been implemented in the 5.5 Release.

FROM:hlee DATE:2/5/2008 10:56:35 AM  
Resolved in Virtis Std Engine for 6.0 Release.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 6956                                                                             |
| Subject: Allow Std Engine to use Non-standard gage analysis results instead of CBA results |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Duray, Jim       | 11/30/2005 3:15:40 PM |
| Modified By: administrator     | 6/19/2008 4:19:20 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlathia DATE:Wednesday, November 30, 2005 10:15:40 AM  
Currently BAR8 uses the line girder analysis results produced by PENNDOT's Continuous Beam Analysis (CBA) program. If BAR8 can use externally supplied results from a 3-D model instead of CBA results, BAR8 can be used to rate bridges for a Non-standard gage vehicles. Provide an option within

4/19/2016 3:19:05 PM

HRS AASHTO

1997

**Complete Issue Information**

BAR8 to use CBA results or externally supplied results (moments, shears, reactions etc.).

FROM:hlee DATE:7/10/2006 10:09:18 AM

Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

Issue ID: 6957  
Subject: Allow user to enter different impact factor for each live load

Folder: /Virtis/Support Center  
Primary Contact: Lathia, Hasmukh  
Submitted By: Duray, Jim 11/30/2005 4:06:53 PM  
Modified By: administrator 6/19/2008 4:19:20 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Lathia, Hasmukh | Suspended |          | Enhancement |

4/19/2016 3:19:05 PM

HRS AASHTO

1998

**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Lathia, Hasmukh | Suspended | High | Enhancement |
|-----------------|-----------|------|-------------|

**Contacts**

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 6958.14382 | Resolved      | Change the modular ratio from integer to float. |

**Description**

FROM:hlathia DATE:Wednesday, November 30, 2005 11:06:53 AM

Currently impact factor is either calculated by BAR8 as per AASHTO or it can be entered by the user on the Project Identification line. This impact factor is applied to all live loads. Add Impact Factor input item on the Lane Loading line. If the user has entered a value on the Lane Loading line, use that as the impact factor otherwise use the calculated impact factor or the Impact Factor entered on the Project Identification line.

FROM:jduray DATE:12/2/2005 10:17:00 AM  
Is the lane loading line for a vehicle?

FROM:hlee DATE:7/10/2006 10:09:27 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 6958                                           |
| Subject: Change the modular ratio from integer to float. |

|                                  |
|----------------------------------|
| Folder: /Virtis/Support Center   |
| Primary Contact: Lathia, Hasmukh |

4/19/2016 3:19:06 PM

HRS AASHTO

1999

### Complete Issue Information

|                            |                       |
|----------------------------|-----------------------|
| Submitted By: Duray, Jim   | 11/30/2005 4:13:17 PM |
| Modified By: administrator | 6/19/2008 4:19:20 PM  |
| Priority: High             |                       |
| Category: Enhancement      |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 6959.14381 | Suspended     | Add an option to perform Fatigue Life Analysis as per AASHTO instead of DM4 |

### Description

FROM:hlathia DATE:Wednesday, November 30, 2005 11:13:17 AM

Add a new input item on the Control and Criteria line for the user to enter modular ratio with a decimal value.

FROM:hlee DATE:7/10/2006 10:09:39 AM

Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:10/10/2006 1:40:22 PM

Updated export for the new input data item in Control and Criteria.

FROM:hlee DATE:1/26/2007 9:33:06 AM

Resolved in 5.6 Release.

4/19/2016 3:19:06 PM

HRS AASHTO

2000

**Complete Issue Information**

Issue ID: 6959  
Subject: Add an option to perform Fatigue Life Analysis as per AASHTO instead of DM4

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 11/30/2005 5:04:02 PM  
Modified By: administrator 6/19/2008 4:19:20 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlathia DATE:Wednesday, November 30, 2005 12:04:02 PM  
Currently BAR7 and the StdEngine performs Fatigue Life Analysis per PENNDOT's Design Manual Part 4 (DM4). Add an option to BAR8 to perform Fatigue Life Analysis per AASHTO 1996.

FROM:jduray DATE:12/7/2005 10:06:45 AM

FROM:hlee DATE:7/10/2006 10:09:48 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

## Complete Issue Information

Issue ID: 6960

Subject: Add user defined analysis points to pass on to Std Engine as ranges

Folder: /Virtis/Support Center

Primary Contact: Lathia, Hasmukh

Submitted By: Kennelly, Krisha

12/1/2005 2:35:57 PM

Modified By: administrator

6/19/2008 4:19:20 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Lathia, Hasmukh | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
| Lathia, Hasmukh | Resolved  | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:19:06 PM

HRS AASHTO

2002

## Complete Issue Information

|                |                        |
|----------------|------------------------|
| Hasmukh Lathia | HLathia@mbakercorp.com |
| Hasmukh Lathia | HLathia@mbakercorp.com |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                         |
|------------|---------------|---------------------------------------------------------------------------------|
| 6961.14379 | Suspended     | Revise Std Engine to conform to 17th Edition of AASHTO for ASD and LFD ratings. |

## Description

FROM:hlathia DATE:Thursday, December 01, 2005 9:35:58 AM

Add user defined analysis points to report results in BAR8. Currently there is no provision in BAR8 for separate input of user defined analysis points. BAR8 reports results at 10th points and range points for which the user has entered ranges for the cross section properties. If the user wants to see the results at points other than defined above, Virtis can pass these points as additional ranges so BAR8 will report results at these points also.

Alternately, a new input line can be added in BAR8 where the user can define these additional points of interest.

FROM:kkennelly DATE:12/8/2005 10:53:19 AM

Estimate given to the Task Force for the Dec 12 conference call is for the following work in the export:

After the export calls ResetChangePointGeneration(), call AddChangePoint() and pass in the location of the user defined point of interests. Then when the export calls GenerateCrossSectionInfo(), the additional ranges will automatically be generated. Comment out the section of code where we check for duplicate cross sections and delete those cross sections in VirtisStdSteelCmd.cpp.

The text output file for Virtis Std Engine will contain the output for the user defined points of interest. Incident 6965 deals with the problem of results at change points not being sent back to Virtis Analysis Results.

FROM:hlee DATE:12/28/2005 9:46:56 AM

Related to Incident 6965.

FROM:hlee DATE:7/10/2006 10:04:58 AM

Changed Project from Beta Testing/Export/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:1/26/2007 9:33:20 AM

This incident is for steel and rc girders only.  
Resolved in 5.6 Release.

Issue ID: 6961

Subject: Revise Std Engine to conform to 17th Edition of AASHTO for ASD and LFD ratings.

4/19/2016 3:19:06 PM

HRS AASHTO

2003

## Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lathia, Hasmukh |                      |
| Submitted By: Duray, Jim         | 12/1/2005 3:31:22 PM |
| Modified By: administrator       | 6/19/2008 4:19:20 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

## History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |
| Goodrich, Brian | Resolved           | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | I-17-NP.bbd         |             |

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 6963.14377 | Resolved      | Prestressed Shear Capacity calculation |

## Description

FROM:hlathia DATE:Thursday, December 01, 2005 10:31:23 AM  
Revise BAR8 to conform to the 17th Edition of AASHTO Standard Specifications for ASD and LFD ratings of steel girder, reinforced concrete and prestressed concrete bridges. Revisions will be limited to specifications conformance for calculating rating factors only.

FROM:hlee DATE:7/10/2006 10:09:59 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

4/19/2016 3:19:06 PM

HRS AASHTO

2004



**Complete Issue Information**

FROM:hlee DATE:9/14/2006 3:39:33 PM  
Ref Incident 7598.

|                                                 |
|-------------------------------------------------|
| Issue ID: 6963                                  |
| Subject: Prestressed Shear Capacity calculation |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 12/2/2005 12:22:19 PM |
| Modified By: administrator       | 6/19/2008 4:19:20 PM  |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:12/2/2005 7:20:03 AM  
Received via email:

Once again, I am running into getting Virtis produce rating results for a new bridge. This one is for a bulb-tee girder bridge. It is an LRFD designed bridge. The shear stirrup arrangement meets the LRFD design

4/19/2016 3:19:07 PM

HRS AASHTO

2005

**Complete Issue Information**

but does not get over a 1.0 rating factor for the inventory results.  
Does Virtis take into account the vertical uplift from draped strands?  
This is the only thing I can think of as to why it is not working.  
Thanks.

If it does, I guess we're just going to have to find a shear arrangement  
Virtis approves of and use this in the design.

John Rohner, P.E.  
Bridge Engineer  
9193 South Jamaica Street  
Englewood, CO 80112-5946  
720-286-5444 direct  
720-286-9706 fax  
jrohner@ch2m.com

FROM:bgoodrich DATE:Wednesday, December 07, 2005 8:42:07 PM  
BRASS does consider the uplift caused by harping the strands. Also, note that BRASS calculates the factored shear at the support and then uses that shear for rating calculations at that support. Please attach the BBD file and indicate the method that CONSPAN used to calculate the shear resistance.

FROM:bgoodrich DATE:Thursday, December 08, 2005 5:26:38 PM  
E-mail from John Rohner:  
Thanks for getting back to me. I'm attaching the BBD file for the bulb-tee incident. The controlling point is at the 0.29L distance of the span which is kind of weird. If BRASS doesn't take into account the prestressing uplift, it's going to affect the rating. CONSPAN calculates the capacity as  $\phi(V_c + V_s + V_p)$ . Without  $V_p$ , not including the vertical uplift of the draped strands decreases the shear capacity as well as the rating.

FROM:bgoodrich DATE:Sunday, March 05, 2006 2:18:46 AM  
Incident 6549 was addressed, which impacted the shear capacity. The critical rating is still shear, but it is now greater than 1.0. BRASS-GIRDER 5.9.2 will be released with Virtis 5.4.

Issue ID: 6965  
Subject: Results at change points not visible in Virtis Analysis Results window for VirtisStdEngine

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Kennelly, Krisha 12/2/2005 3:47:26 PM  
Modified By: administrator 6/19/2008 4:19:19 PM  
Priority: High  
Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Ihnat, Joseph   | Assigned  |          | Bug - GUI 2 |
|                 | On Hold   |          |             |
|                 | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Assigned  |          |             |
|                 | Accepted  |          |             |
|                 | Assigned  |          |             |
| Ihnat, Joseph   | Assigned  | High     | Bug - GUI 2 |
|                 | Suspended |          |             |

### Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 6969.14371 | Assigned      | Right-clicking a bridge in the Bridge Explorer should select that bridge |

### Description

FROM:kkennelly DATE:12/2/2005 10:42:35 AM

Run G1 in Training Bridge1 using the Virtis Std Engine. This member has cross section change points at 36.67' and 124.33'. Text output file for VirtisStdEngine shows section properties, DL and LL forces and rating factors at these change points. But the Analysis Results window in Virtis doesn't show these points, it only shows tenth points.

FROM:mordoobadi DATE:12/5/2005 10:18:35 AM

Hasmukh, while investigating this incident, I noticed that VirtisStdEngine does not create nodes (analysis points) at cutoff points (change points). It only creates nodes at 10th points. The engine reports dead and live load moments and shear forces at cutoff points by using interpolation.

I was wondering what it would take to make the cutoff points as analysis points in VirtisStdEngine. By doing this the results will be more accurate and we can report the results to Virtis much more easily.

4/19/2016 3:19:07 PM

HRS AASHTO

2007

## Complete Issue Information

FROM:mordoobadi DATE:12/5/2005 11:32:51 AM

Deflections are not reported at cutoff points in the text output file.

FROM:jduray DATE:12/7/2005 9:59:29 AM

Changing to an enhancement since modifications to StdEngine are required.

FROM:hlee DATE:12/28/2005 9:46:30 AM

In "Virtis StdEngine Enhancement Estimates 12-08-05.xls", Hasmukh estimated 224+ hrs to:

Revise CBA to calculate influence lines and load effects at cutoff (section property range) points in addition to the 20th points and do not use interpolation to calculate effects at non-twentieth analysis points. Also, revise Virtis StdEngine to report deflections at cutoff points in addition to the 10th points.

"This revision will require major overhaul of PENNDOT's CBA program that is used as an engine in Virtis StdEngine. Currently CBA generates influence lines at 20th points along the span of a continuous beam and calculates load effects at these points. It interpolates between 20th points to obtain results at other desired points such as points where section properties change, brace points or other locations. It uses parabolic interpolation for calculating moments, deflections and rotations at non-twentieth points and uses straight line interpolation for calculating reactions and shears. It also uses interpolation to get concurrent effects at non-twentieth points. Virtis StdEngine reports deflections only at 10th points. For these revisions the following will have to be done.

Introduce an option in CBA to use interpolation (as it is currently being done) to calculate effects at cutoff points or to generate influence lines for all analysis points including cutoff and other points.

Let CBA use the 20th points as nodal points for solving the flexibility equations as it is currently being done. Generate influence lines for all effects at 20th points, cutoff points and other points as required. Each influence line will consist of an effect at a given analysis point with ordinates at every 20th point of the span. This will require generating and storing more influence lines (influence line for every effect at every analysis point) and then analyzing each influence line for a given loading (static dead loads or moving live loads). The influence lines for deflections will only be generated at 20th points. The deflections at cutoff points will be calculated using interpolation between 20th points. This will also require either eliminating or by-passing the calculations of interpolated results. Virtis StdEngine uses concurrent effects to calculate moment-shear interaction ratings. These concurrent effects are also obtained by interpolation. It will also require calculating the concurrent effects at non-twentieth points by analyzing the influence lines at these points.

These modifications will also require major testing efforts since the method of obtaining results will be changed. It will also require a thorough review of CBA source code.

These revisions will give more accurate results at cutoff points, but the difference in results may not be significant. The deflections at cutoff points will still have to be calculated by interpolation as deflection influence lines are generated at 20th points since the influence lines for deflections are the byproduct of flexibility method of analysis.

If influence lines are to be generated at non-twentieth points, it will require complete revision of the flexibility method solution (additional 80 hrs effort).

(200 hrs for CBA routine revisions as suggested above for coding , unit and alpha testing; 24 hrs to calculate and report deflections at cutoff points.)

If PENNDOT agrees to make these revisions, the cost for Virtis StdEngine can be cut by 2/3rd.

PENNDOT seems to be agreeable to make these revisions, but the schedule will

4/19/2016 3:19:07 PM

HRS AASHTO

2008

**Complete Issue Information**

have to be negotiated.

FROM:hlee DATE:12/28/2005 10:06:00 AM

Option 2 (56 hrs): From Hasmukh - Currently in BAR7 and Virtis StdEngine, the deflections are calculated and reported at the 10th points only. The deflections at cutoff points will be calculated from the 10th point deflections using the parabolic interpolation as it is done for calculating the moments at cutoff points. If we make only the above revision for incident 6965, it will take 24 hours to revise Virtis StdEngine.

Mehrdad estimated additional 32 hrs to collect and pass back change points results.

FROM:hlee DATE:7/10/2006 10:10:06 AM

Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 6969                                                                    |
| Subject: Right-clicking a bridge in the Bridge Explorer should select that bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 12/5/2005 2:19:49 PM |
| Modified By: hlee              | 4/6/2010 4:08:08 PM  |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:12/6/2005 7:17:50 AM

Rogue Wave Support Request #1162113

FROM:jihnat DATE:1/11/2007 7:28:51 AM

4/19/2016 3:19:07 PM

HRS AASHTO

2009

### Complete Issue Information

The above support incident provided no help, but I found an Objective Grid knowledge base document (000710-060) that was helpful. I had to move the context menu code from OnRButtonDown() to OnRButtonUp() to get this to work correctly (but this is how Windows XP works anyway). Fixed for version 5.6

FROM:xli DATE:2/5/2007 3:13:52 PM  
Works fine for 5.6 beta 1.

FROM:tambrecht DATE:Thursday, March 15, 2007 10:18:51 AM

Right-clicking now selects a bridge in Bridge Explorer. However, after selecting multiple bridges (by holding the Shift or Ctrl keys while selecting), right-clicking to bring up the menu (for Checking Out, Checking In, Rate, etc.) now de-selects all but the record over which the cursor is located. This is not how it worked previous to v. 5.6 Beta 1 where after selecting a group of bridges, right clicking with the cursor over one of the selected files brings up the menu to be applied to the entire group of bridges that was previously selected. Note: A temporary workaround to enable application of the right button menu commands to a group of selected bridges is to hold the Ctrl key down while right clicking one of the bridges in the group.

FROM:jihnati DATE:3/20/2007 1:28:31 PM  
Backed this out in Beta 2.

FROM:tambrecht DATE:Tuesday, June 26, 2007 10:53:44 AM  
Tested in beta 3 - Accept

FROM:jihnati DATE:11/14/2007 8:11:02 AM  
Tim accepted that the change was backed-out. The original issue is still open.

|                                      |
|--------------------------------------|
| Issue ID: 6970                       |
| Subject: Problem in TrainingBridge2? |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnati, Joseph        | 12/5/2005 2:45:43 PM |
| Modified By: administrator          | 6/19/2008 4:19:18 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Unknown     |
| Ihnati, Joseph     | Assigned |          | Bug - GUI 2 |
| Ordoobadi, Mehrdad |          |          |             |

4/19/2016 3:19:08 PM

HRS AASHTO

2010

### Complete Issue Information

|                  |           |      |                |
|------------------|-----------|------|----------------|
|                  | Resolved  |      |                |
| Duray, Jim       | New       | High | Unknown        |
| Kennelly, Krisha | Assigned  |      | Bug            |
| Goodrich, Brian  |           |      | Export 1       |
|                  |           |      | Bug - Export 1 |
|                  | Duplicate |      | Enhancement    |
| Goodrich, Brian  | Duplicate | High | Enhancement    |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6971.14369 | Duplicate     | Uniformly distributing Stage 2 loads for non-composite members |

### Description

FROM:jihnat DATE:12/5/2005 9:41:05 AM

Open any of the buildup cross sections in TrainingBridge2 and click OK. Get error message on slab: "Distance is greater than deck actual thickness!"

FROM:jihnat DATE:2/10/2006 11:02:14 AM

Mehrdad, please enter 8" in the database for the actual slab thickness for the three cross sections.

FROM:mordoobadi DATE:2/15/2006 2:56:03 PM

Fixed for 5.4 Beta 6 (or Acceptance build)

FROM:jihnat DATE:3/3/2006 8:19:44 AM

OK in Beta 6

Issue ID: 6971

Subject: Uniformly distributing Stage 2 loads for non-composite members

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:19:08 PM

HRS AASHTO

2011

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Armbrecht, Tim | 12/5/2005 3:28:18 PM |
| Modified By: administrator   | 6/19/2008 4:19:18 PM |
| Priority: High               |                      |
| Category: Enhancement        |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Closed    |          | Bug         |
| Duray, Jim      | Closed    | High     | Bug         |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 6976.14364 | Closed        | Imported BRASS Datasets for RC have no Shear Dist. Factors |

### Description

FROM:tarmbrecht DATE:Monday, December 05, 2005 10:28:20 AM

Could I get clarification on how Virtis handles stage 2 dead load for non-composite members?

For non-composite steel superstructures, loads that should be distributed equally to all beams must be manually computed and input as a Member Load for each member. Virtis applies Stage 2 loads as Stage 1 stating, "A load is being applied to Stage 2, which does not exist in BRASS for this structure type! The load(s) will be applied to the last allowable stage (Stage 1)", which means that the load is applied using its tributary area even though it was intended to be applied uniformly to all girders.

If this is the intent, could Virtis be modified so that, when "Uniformly to all girders" is selected, Stage 2 dead loads such as parapets, medians, wearing surface, etc. are handled in such a way that the analysis engine uses them as intended, just like it does for composite type structures?

4/19/2016 3:19:08 PM

HRS AASHTO

2012



**Complete Issue Information**

FROM:kkennelly DATE:12/6/2005 9:48:51 AM

For this case, the export to the BRASS program needs to compute the Stage 2 loads based on how the user has specified them on the Virtis Superstructure Loads window and then apply those loads to the girder in the Stage 1 load case in the BRASS input file.

Brian, DoGirderSystemStructDef has some new functions that you can use to compute the appurtenance loads on a girder:

```
ComputeAppurtLoadOnGirder(long IRailLocObjectId, long IGirderMbrId, double FAR*
pdLoadPerUnitLength, short FAR* piStageld, const VARIANT FAR& vaLoadUnit)
ComputeWearSurfLoadOnGirder()
ComputeSidewalkLoadOnGirder()
```

These are only available for Girder Systems, not floor systems.

FROM:jduray DATE:1/8/2007 1:51:23 PM  
Same as 7280.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 6976                                                      |
| Subject: Imported BRASS Datasets for RC have no Shear Dist. Factors |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 12/7/2005 5:05:25 PM |
| Modified By: administrator     | 6/19/2008 4:19:18 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:19:08 PM

HRS AASHTO

2013

## Complete Issue Information

FROM:dteal DATE:Wednesday, December 07, 2005 12:05:28 PM

Beta 2

Every RC slab bridge that has been imported from a BRASS dataset – flat slabs and parabolic haunched slabs – as many as 2,000 imported structures are effected by this.

The above mentioned RC structures never had a Distribution Factor entered for shear. We NEVER check shear in a slab bridge. Therefore the imported datasets leaves the 2 Dist. Factors for Shear and Shear at Supports blank. The checkbox for "Ignore Shear" has NOT been checked either, VI #6913. The end result is that none of these 2,000 structures that can be analyzed by the BRASS engine can not be analyzed by the Virtis Standard engine without modifying the input.

FROM:jduray DATE:12/7/2005 3:47:31 PM

Hopefully the TF will approve the enhancement request to add an "ignore shear" option to the StdEngine.

There are some things we may be able to do to address the problem descibed regarding imported BRASS files. First, if the utility is still being used we should fix it so the checkbox is checked. As far as the data that has already been imported we may be able to address that in the StdEngine export:

Option 1) automatically set the ignore shear to true (after that enhancement is made to the StdEngine) if the shear distribution factors are NULL and if it is a slab bridge.

Option 2) another option that might work is to check the member alternative to see if it was imported. Do option 1.

Option 3) perhaps we could write a script to be run against the db that would set the ignore shear to true for all slab member definitions.

I believe this problem has occured because the BRASS import utility was written before the Ignore shear option existed and was not updated when the option was added. Looks like ignore shear was added for version 4.0.

Each of the options concerns me for the following reasons:

Options 1 and 2 assume that you do not want to rate for shear. Is that valid for everyone using Virtis? Option 3 is less of a concern if you are sure you know your bridges and do not want to rate for shear. This is the best approach since we are not forcing anything on the users and each agency can choose to run the script or not.

FROM:dteal DATE:Thursday, December 08, 2005 10:26:29 AM

FROM:dteal DATE:Tuesday, March 28, 2006 11:41:29 AM

Why can't this work with the Ignore Shear check box? If the box is checked there is no need for shear distribution factors.

FROM:hlee DATE:7/10/2006 9:21:15 AM

Changed Project to Support Center.

FROM:jduray DATE:12/13/2007 10:24:24 AM

Accepted by TAG.

Issue ID: 6978

4/19/2016 3:19:08 PM

HRS AASHTO

2014

## Complete Issue Information

Subject: Is there a way to input floorbeams on a skew

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Ihnat, Joseph 12/8/2005 12:41:25 PM  
Modified By: administrator 6/19/2008 4:19:18 PM  
Priority: High  
Category: Education

## History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Duray, Jim         | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          | Bug      |
|                    | Not Reproducible |          |          |
| Ordoobadi, Mehrdad | Not Reproducible | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | test.bbd            |             |

## Tasks

| Name       | Current State    | Summary               |
|------------|------------------|-----------------------|
| 6979.14361 | Not Reproducible | Unable to save bridge |

## Description

FROM:jhnat DATE:12/8/2005 7:38:52 AM  
Received via email:

Is there a way to input floorbeams on a skew? Currently, I am only able to skew the floorbeams that are located at the supports.

Thank you for your assistance.  
Glen A. Mullings  
Design Engineer  
Prudent Engineering, LLP

4/19/2016 3:19:09 PM

HRS AASHTO

2015

**Complete Issue Information**

1111 West DeKalb Pike  
Wayne, PA 19087  
Tel: (610) 265 - 4870  
Fax: (610) 265 - 4879  
Email: gmullings@prudenteng.com

FROM:kkennelly DATE:12/8/2005 10:21:00 AM  
Virtis currently restricts floorbeams to be perpendicular to the superstructure definition reference line. The Help for the Floorbeam Member Locations window lists the following:

**Skew**

Displays the skew angle of the floorbeam member. If a floorbeam intersects the superstructure definition reference line at the same location as a support line for the main members, the floorbeam is assumed to be at the same skew angle as the support line. Otherwise, all floorbeams are assumed to be perpendicular to the superstructure definition reference line. If your structure has floorbeams that are skewed and are not located at a support line, you should use a floor line superstructure definition to describe your structure.

|                                |
|--------------------------------|
| Issue ID: 6979                 |
| Subject: Unable to save bridge |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 12/8/2005 1:47:27 PM |
| Modified By: administrator          | 6/19/2008 4:19:18 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:19:09 PM

HRS AASHTO

2016

**Complete Issue Information**

FROM:jihnna DATE:12/8/2005 8:45:06 AM  
Received via email:

Virtis will not allow me to save the attached file. Is there something wrong with the file?

Glen A. Mullings  
Design Engineer  
Prudent Engineering, LLP  
1111 West DeKalb Pike  
Wayne, PA 19087  
Tel: (610) 265 - 4870  
Fax: (610) 265 - 4879  
Email: gmullings@prudenteng.com

FROM:mordoobadi DATE:2/1/2006 5:03:19 PM

I am not able to determine what exactly caused save to fail. It is probably because copying of a Floor System structure definition had problems in 5.3.

Issue ID: 6983  
Subject: skip servicability for operating rating box doesn't appear to work

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 12/12/2005 7:50:01 PM  
Modified By: administrator 6/19/2008 4:19:17 PM  
Priority: High  
Category: Education

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:09 PM

HRS AASHTO

2017

### Complete Issue Information

|                 |                    |      |           |
|-----------------|--------------------|------|-----------|
| Duray, Jim      | New                | High | Unknown   |
| Goodrich, Brian | Assigned           |      | Bug       |
| Duray, Jim      | New                | High | Unknown   |
| Goodrich, Brian | Assigned           |      | Education |
|                 | Information Needed |      |           |
|                 | Assigned           |      |           |
|                 | Closed             |      |           |
| Goodrich, Brian | Closed             | High | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 12315.bbd           |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6986.14354 | Closed        | Shear Capacity appears low |

### Description

FROM:tambrecht DATE:Monday, December 12, 2005 2:50:29 PM

The check box "Skip operating rating based on serviceability" under a Point of Interest's Engine tab/BRASS LFD/Properties (Miscellaneous tab) does not appear to work. When selected along with POI Control selection "5 – Generate user defined points of interest only" for a steel Member Alternative for which serviceability otherwise would control for operating rating, the result still is that serviceability controls. Attached file.

FROM:bgoodrich DATE:Wednesday, January 04, 2006 12:04:22 PM

The engine properties are not exported when a "generate" option is selected. The engine-related help topic for the Points of Interest window states:

"BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows.

4/19/2016 3:19:09 PM

HRS AASHTO

2018

**Complete Issue Information**

The export will not generate any data from other windows for items left blank on the Point of Interest windows."

Note that in the new engine merger, this option is being moved to the member alternative level, so it can be set once for each analysis.

|                                     |
|-------------------------------------|
| Issue ID: 6986                      |
| Subject: Shear Capacity appears low |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 12/13/2005 6:06:51 PM |
| Modified By: administrator       | 6/19/2008 4:19:17 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:12/13/2005 1:04:14 PM  
Received via email from Steve.Mample@itd.idaho.gov

I am load rating a simple three span composite steel and concrete girder bridge. BRASS may be using the wrong shear equations for this particular bridge. The shear capacity of the girders appears to be too low. The shear analysis is controlling the load rating. I think the moment analysis should control. Is there a way to turn off the shear analysis? Attached is the ddb file.

FROM:bgoodrich DATE:Wednesday, January 04, 2006 1:51:53 PM  
I did run some of the members in the file and the shear rating is controlling, but it is not significantly

4/19/2016 3:19:09 PM

HRS AASHTO

2019

**Complete Issue Information**

lower than 1.0. Some shear ratings are even above 1.0. The BBD file you sent only has 1-span structure definitions. Your description mentioned a 3-span girder. Is the 12315.bbd file the correct file?

Please let me know which structure definition and member to specifically investigate. Also, please attach any additional information that lists what you calculate the shear capacity to be.

Finally, there is currently no way to turn off the shear rating for steel.

FROM:bgoodrich DATE:Friday, January 06, 2006 3:50:05 PM

E-mail from Steve Mample:

We can close this incident. The problem was with my input data on the stiffener spacing window. Which we did not notice until Mary Walker happened to take a real close look at the G10 member girder schematic, and noticed that the first transverse stiffener was not shown. I had failed to put in the first stiffener at 0.00" spacing. Having corrected that data input error, BRASS correctly computes the shear capacity of the girders at the point of bearing. Another crash landing due to pilot error.

One thing, I was only concerned about shear at the point of bearing and I knew that Virtis would automatically give a load analysis at that point, I assumed that the program would give all output data. I did not realize until yesterday that I need to enter a point of interest to get all the output data at the point of bearing.

I tried increasing the shear resistance factor in the factor window. I did not see any change to the shear load capacity. I may not be doing it correctly.

FROM:bgoodrich DATE:Friday, January 06, 2006 3:50:55 PM

Make sure you assign factors you modified to the structure definition. See the Analysis tab of the Superstructure Definition window.

Closed incident.

|                                |
|--------------------------------|
| Issue ID: 6987                 |
| Subject: Floor System Question |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Bhanushali, Girish |                       |
| Submitted By: lhnat, Joseph         | 12/13/2005 7:52:00 PM |
| Modified By: administrator          | 6/19/2008 4:19:17 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:19:10 PM

HRS AASHTO

2020



### Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Kennelly, Krisha   | Assigned  |      | Education   |
| Bhanushali, Girish |           |      | Bug         |
| Duray, Jim         | New       | High | Unknown     |
| Goodrich, Brian    | Assigned  |      | Education   |
|                    | Suspended |      | Enhancement |
| Goodrich, Brian    | Suspended | High | Enhancement |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6988.14352 | Suspended     | Setting Allowable Fatigue Stress |

### Description

FROM:jihnat DATE:12/13/2005 2:49:23 PM  
Received via email from KMilligan@ammann-whitney.com

Hello, I'm working on NYS Thruway load ratings, and have a problem you may be able to help.

The bridge is 3 span continuous, with four main girders and floorbeams framed into the girders in each bay with multiple stringers resting on top of the floorbeams. I'm inputting the info as a floor system definition structure.

Because the Piers are skewed and the FB's are at right angles to the girders, I cannot locate the floorbeams in the framing plan. The FML tab gives an error saying the FB does not intersect G1. The FB's at the beginning of the bridge are only in the first bay, not across the whole bridge because of the skew. Can a floorbeam be input only between girders (say G1 and G2) and not across the whole bridge? Also, if I use the floobeam wizard, it won't allow me to change the start distance, it is always 0.00'.

4/19/2016 3:19:10 PM

HRS AASHTO

2021

**Complete Issue Information**

Thanks for your help if possible.

If this is not clear, please call me at 212-627-7158.

FROM:kkennelly DATE:12/16/2005 10:55:43 AM  
Floorbeams must span across the whole bridge, they cannot span partially across between just a couple of the girders.

FROM:kkennelly DATE:12/16/2005 1:25:41 PM  
The problem with the Floorbeam Wizard forcing the start distance to be zero appears to be a bug in the UI.

|                                           |
|-------------------------------------------|
| Issue ID: 6988                            |
| Subject: Setting Allowable Fatigue Stress |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Teal, Dean         | 12/13/2005 10:13:27 PM |
| Modified By: hlee                | 6/9/2011 6:56:22 PM    |
| Priority: High                   |                        |
| Category: Enhancement            |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, December 13, 2005 5:13:51 PM  
In all of our BRASS datasets for steel bridges we have set the allowable fatigue stress to 16 or 21 KSI using the STEEL-4 command in BRASS. Those original old datasets have just a handful of POI's analyzed. Now when we enter this bridge in Virtis we don't set any specific POI's, we tell it to do all the 10th points. The BRASS default for the 6th parameter of the STEEL-GIRDER-CONTROL command is 1x10E10 ksi.

4/19/2016 3:19:10 PM

HRS AASHTO

2022

**Complete Issue Information**

How do we set the allowable fatigue stress to 16 or 21 KSI for all these points.

FROM: bgoodrich DATE: Wednesday, January 04, 2006 12:14:48 PM

I don't know of any way to set the allowable fatigue stress globally. For now, you will have to set the POI control option to 0, enter all desired points of interest, and manually set the allowable fatigue stress at each point of interest. I know this will be an unacceptable work-around even in the short-term.

I don't see anywhere in the Virtis/Opis that we can even enter the allowable fatigue stress globally or on a schedule basis. Therefore, we have no way of exporting anything to BRASS. This issue could be addressed in a couple ways:

- 1. Add an allowable fatigue stress schedule to Virtis/Opis and revise the export accordingly.
- 2. Add a default allowable fatigue stress to the member alternative engine properties and use this on the STEEL-GIRDER-CONTROL command.

Option 2 could be implemented more quickly and with less funds than Option 1.

FROM: Herman Lee DATE: 6/9/2011 2:54:08 PM Eastern Daylight Time

As requested by the TAG (April 2011), change this request from BRASS Engine to AASHTO Engine.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 6990                                                        |
| Subject: Save analysis settings template & lose the temporary vehicle |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Li, Xinmei       | 12/15/2005 9:36:19 PM |
| Modified By: administrator     | 6/19/2008 4:19:17 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |

4/19/2016 3:19:10 PM

**HRS AASHTO**

2023

**Complete Issue Information**

|            |         |      |             |
|------------|---------|------|-------------|
| Duray, Jim | Discard | High | Enhancement |
|------------|---------|------|-------------|

**Contacts**

| Name            | Company         | Email 1                   | Phone 1      |
|-----------------|-----------------|---------------------------|--------------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |              |
| Shirish Patel   | New Jersey DOT  | unknown@unknown.com       | 609-530-5656 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Rt22Bridge.bbd      |             |

**Tasks**

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 6996.14344 | Resolved      | St. Venant Torsional Inertia (J) for Live Load Distribution Calculation |

**Description**

FROM:xli DATE:12/15/2005 4:08:21 PM

When I save an analysis settings template, I lose the temporary vehicle. It would be nice to pop a message to let user know and give user an option to save the temporary vehicle as an agency.

FROM:hlee DATE:7/19/2006 11:09:09 AM

Changed Project to Support Center.

FROM:hlee DATE:4/30/2008 2:36:23 PM

Discarded by TAG 12/07.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 6996                                                                   |
| Subject: St. Venant Torsional Inertia (J) for Live Load Distribution Calculation |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Patel, Shirish   | 12/20/2005 2:36:09 PM |

4/19/2016 3:19:10 PM

HRS AASHTO

2024

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:19:16 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | On Hold            |          | Bug - GUI 2 |
| Lee, Herman     | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Closed             |          |             |
| Lee, Herman     | Closed             | High     | Bug - GUI 2 |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 6998.14342 | Closed        | Non- Composite Stage 1 Live Load for a Slab |

### Description

FROM:spatel DATE:Tuesday, December 20, 2005 9:36:09 AM

I am using 48 x 33 in. box beams on the adjacent box beam arrangement for a bridge superstructure (Deck Superstructure type "g") . The J value listed in the properties tab of the beam is 209,955 in<sup>4</sup>. The Live Load Distribution output uses J value of 39620 in<sup>4</sup>. This results into a distribution factor for moment in interior beam for one lane = 0.316 vs. 0.214 (calculated using actual J of 209,955 in<sup>4</sup> in the AASHTO LRFD formula from Table 4.6.2.2.1-1) and a distribution factor for moment in interior beam for two lanes = 0.315 vs. 0.295

FROM:jduray DATE:12/21/2005 4:39:46 PM

BRASS does not use the section properties from the cross section definition.

4/19/2016 3:19:10 PM

HRS AASHTO

2025

## Complete Issue Information

FROM:bmccaffrey DATE:Thursday, February 23, 2006 3:39:59 PM

What does it use then???

|                                                      |
|------------------------------------------------------|
| Issue ID: 6998                                       |
| Subject: Non- Composite Stage 1 Live Load for a Slab |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 12/20/2005 3:44:28 PM |
| Modified By: administrator     | 6/19/2008 4:19:16 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dteal DATE:Tuesday, December 20, 2005 10:44:37 AM

After analyzing a RC slab, go to the analysis results window and select the report type for Live Load Actions. In the Stage pulldown it only list "Non-Composite (Stage 1)".

RC Slabs don't have composite and non-composite – it should only state "Stage 1". I have had several outside consultants call and inquire about it's meaning (or should I say meaningless).

FROM:hlee DATE:1/4/2006 2:18:16 PM

This incident is for both BRASS and Virtis Std engines.

FROM:hlee DATE:6/21/2006 2:56:08 PM

The list in the Stage pulldown contains "generic" stage names used in Virtis. The selections "

4/19/2016 3:19:11 PM

HRS AASHTO

2026

**Complete Issue Information**

Non-composite (Stage 1)", "Composite (long term) (Stage 2)", and "Composite (short term) (Stage 3)" are not related to the beam type. They are used in the Load Case Description windows also. It will be difficult to relate the names to the beam type since different member alternatives can have different beam types but they use the same load case descriptions. May be we should put a statement in the help to clarify this. Dean, do you agree with the resolution?

FROM:dteal DATE:Thursday, June 22, 2006 7:07:58 AM

I understand the problem and see that there isn't a fix - so I guess I will have to live with it. Mark it Resolved/Closed

Tell Jim that RC was an after thought AGAIN

FROM:hlee DATE:6/22/2006 8:03:50 AM

Changed Status to Closed.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 7005                                                                     |
| Subject: Enhancement request: Make "yes" default for "Floorbeams perpendicular..." |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 12/21/2005 4:38:26 PM |
| Modified By: hlee              | 10/13/2009 5:15:51 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

|               |              |                            |              |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
|---------------|--------------|----------------------------|--------------|

**Documents**

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 0820142z(531).bbd         |             |
|      | GFS-SDCopyProb(540B6).xml |             |
|      | 0820142x(540).xml         |             |

**Tasks**

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 7006.16326 | Closed        | Won't save after Virtis crash and restore |

**Description**

FROM:tarmbrecht DATE:Wednesday, December 21, 2005 11:38:29 AM

Tiny enhancement request: For G-F-S system structures, under Stringer Group Definition Geometry, Stringer Span Lengths tab, for "All floorbeams are perpendicular to the structure definition line:", we'd like to see the "Yes" button be the default instead of the "No" button as it currently is.

We feel this is justified because in a very large majority of cases, the floorbeams are perpendicular to the structure definition line.

FROM: Tim Armbrecht DATE: 6/4/2009 3:00:17 PM Eastern Daylight Time  
Fixed at June 2009 Beta TAG. Thanks.

FROM: Herman Lee DATE: 10/13/2009 1:14:27 PM Eastern Daylight Time  
Resolved in 6.1 Release.

|                                                    |
|----------------------------------------------------|
| Issue ID: 7006                                     |
| Subject: Won't save after Virtis crash and restore |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Armbrecht, Tim        | 12/21/2005 4:44:53 PM |
| Modified By: administrator          | 6/19/2008 4:28:16 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Goodrich, Brian | Assigned  |          | Bug      |
|                 | Duplicate |          |          |
|                 | Closed    |          |          |
| Goodrich, Brian | Closed    | High     | Bug      |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Stages Turned Off.bbd |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7008.16324 | Closed        | Output –Stage Command Not Consistent |

### Description

FROM:tarmbrecht DATE:Wednesday, December 21, 2005 11:44:55 AM

Virtis will not do a save of the attached model (a 4-Span cont. Girder-Floorbeam-Stringer system). When performing an analysis of Flbm 16 Virtis crashed. After starting Virtis again and then doing a Restore of the model, the save was attempted with the following result...

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmBridgeDesignParam (SaveOrder object 393).

Record found in database for data marked as new.

If it's possible to recover the attached file and email it back to me, I'd really appreciate it. Thanks, Tim

FROM:jduray DATE:12/21/2005 4:50:01 PM  
Investigate why Virtis crashed.

FROM:hlee DATE:12/28/2005 1:26:07 PM

4/19/2016 3:19:11 PM

HRS AASHTO

2029

## Complete Issue Information

When I tried to import the attached bbd, I got the following message.

```
=====
Incomplete retrieval of data.
01:39:20 PM - Line 1117 in source file .\DoSuperStructDefList.cpp.

Data management object unavailable.
01:39:20 PM - Line 2492 in source file .\DoGirderMbr.cpp.
=====
```

Mehrdad, is there anything we can do to recover the attached bbd?

FROM:mordoobadi DATE:12/28/2005 4:09:24 PM  
No. I get the same errors.

FROM:mordoobadi DATE:12/28/2005 4:32:28 PM  
The error indicates that there is something wrong with the reference lines.

FROM:hlee DATE:12/29/2005 8:02:31 AM  
I entered and analyzed a 4-span continuous girder-floorbeam-stringer system. I was not able to reproduce the problems.  
Since we are not able to reproduce the crash or the saving problem, I changed the status to "Not Reproducible".

FROM:tarmbrecht DATE:Friday, December 30, 2005 12:23:26 PM  
Herman, the saving problem seems to happen when we copy a superstructure and then do a paste in order to create an identical superstructure definition. This is also happening in 5.4 beta 2. When we save the model, Virtis returns an error message...

Unable to save bridge data!  
03:00:43 PM - Line 867 in source file .\UiBWSDoc.cpp.

I've attached another file (beta 2 xml) for the same structure where we're having this save problem and resubmitting for review.

FROM:hlee DATE:12/30/2005 3:38:38 PM  
I changed the status to "Resubmit" since Tim provided more information to reproduce the problem.

FROM:hlee DATE:1/4/2006 8:55:51 AM  
The Computed Stringer Reactions and Floorbeam Stringer Reactions are not completely copied to the new superstructure definition.  
I don't think there's a work around since user cannot clear the computed reactions.

FROM:mordoobadi DATE:1/31/2006 9:36:31 AM  
The save problem is related to incidents 6544, 5461, 7057. The problem is now fixed. (5.4 Beta 5)

FROM:mordoobadi DATE:1/31/2006 9:56:46 AM  
I verified that the computed stringer reactions are copied correctly when copying a bridge and a structure definition.

4/19/2016 3:19:11 PM

HRS AASHTO

2030

## Complete Issue Information

FROM:mordoobadi DATE:3/20/2006 8:58:53 AM

Comments From Tim Ambrecht:

-----  
3. Incident 7006: (See GFS-SDCopyProb.xml.) Problem w/saving seems to be fixed, but a copy of a Superstr. Def. (SD) does not function properly.

1) First, CSR do not copy from the source SD to the new SD copy (contrary to mordoobadi, 1/31/06).

2) Second, when analyzing from the SD, an error occurs w/the stringer analysis, "Unknown error initiating member analysis!" (same error happens when analyzing from the STRINGER MEMBER ALTERNATIVES). Correct results seem to be produced for the stringer, but analysis stops before getting to the floorbeams & main girder.

3) Third, while the FSR are copied correctly, the Up To Date boxes are not checked and an attempt to analyze the floorbeams (fr/FLOORBEAM MEMBER ALTERNATIVES) generates an error,

Error generating LFD/ASD load commands!

Error generating load group commands!

Error in the loads utility!

Error getting stringer dead load reaction!

Error preparing stringer dead load reactions!

New Feature that is supposed to compute Recent ADTT does not work., and no results are generated. To get the floorbeams to properly analyze, the Override Computed boxes must be checked and the correct User Defined Reactions must be recorded. This may be tested by copying the SD, "Spans S1-S3 (GFS)".

FROM:mordoobadi DATE:3/21/2006 1:31:17 PM

The issues (3/20/2006 8:58:53 AM) are reproducible when you copy a structure definition and don't save it to the database and use the SD. If the bridge is saved and reopened, the above issues are not reproducible.

FROM:mordoobadi DATE:3/27/2006 9:35:24 AM

The problems with copied stringer dead load reactions while the bridge is still open are now resolved. (5.4 Beta 7)

FROM:jduray DATE:Monday, March 27, 2006 10:29:25 AM

FROM:tarmbrecht DATE:Tuesday, March 28, 2006 4:46:51 PM

Mehrdad, in our beta 7 testing, we note that what you mention in your 3/21 comments is usually true, but not always. If you save, close and reopen, it runs. If you save and then run it, it doesn't consistently work. If you don't save and then run it, it doesn't consistently work. We don't necessarily feel you should have to save after copying it to get it to work. Note though, that in every case, the program will not use the system-computed floorbeam stringer reactions. We note that you have to check the "override computed" box to get the floorbeams to analyze.

4/19/2016 3:19:11 PM

HRS AASHTO

2031

**Complete Issue Information**

FROM:mordoobadi DATE:3/30/2006 9:59:03 AM

Tim, I suggested the saving of the bridge and reopening it (3/21/2006) just as a work around until the issue is addressed.

Please note that in beta 7 you should be able to see stringer dead load reactions after an analysis and without saving.

FROM:tarmbrecht DATE:Monday, April 24, 2006 10:22:30 AM

In 5.4.0 Beta 8, a copy of the superstructure definition now appears to function properly. We can make a copy and when analyzing from the SD, the error no longer occurs for stringer analysis. However, the floorbeam issue still seems to be there, i.e. "that in every case, the program will not use the system-computed floorbeam stringer reactions. We note that you (still) have to check the "override computed" box to get the floorbeams to analyze."

We could close this incident and start a new one that addresses the floorbeam situation specifically. If that is agreeable, then I can "accept" the resolution of this incident.

FROM:mordoobadi DATE:5/12/2006 2:41:51 PM

Tim, yes you can accept the incident and enter a new one for the up-to-date flag issue.

FROM:mordoobadi DATE:8/17/2006 9:04:24 AM

Accepted by Tim 4/24/2006

|                                               |
|-----------------------------------------------|
| Issue ID: 7008                                |
| Subject: Output –Stage Command Not Consistent |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 12/21/2005 4:55:28 PM |
| Modified By: administrator       | 6/19/2008 4:28:16 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 7020.16312 | Duplicate     | Low Prestress Shear Rating due to using shear at CL brg? |

### Description

FROM:dteal DATE:Wednesday, December 21, 2005 11:55:49 AM

This week the following has happened on our production side using 5.3.1

An engineer was analyzing a welded plate structure in Opis. Could only get stage 3 DL output. The Analysis Progress window had the following command line

Output-Stage Off, Off, On

At first I thought it had something to do with the Analysis Event Properties not using "select all". But that wasn't the case. I reinstalled virtis on that PC and everything was fine – now the OutPut-Stage command is On, On, On like it should be.

2 days later another engineer came to me with a PS structure. Yesterday he got stage 1 & stage 3, today he gets stage 3 only. I reviewed his input to see if he had selected stage 3 only but all 3 stages had been requested. I ran the analysis on my PC to verify what he was saying – my PC only gave stage 3 also. (OutPut-Stage Off, Off, On)

I went to his PC, reinstalled Virtis like I did 2 days earlier on another PC, then it worked correctly with stage 1 & 3 (OutPut-Stage On, On, On)

When I returned to my PC, his bridge was still in my workspace, I ran it again so I could make a hard copy of the Analysis Progress window – I hadn't changed a thing – remember the bridge was still in my workspace. – now it gave stage 1 & 3 like it should have and I didn't change anything??

Any idea what's going on?

I attached a .bbd of a bridge that didn't give stage 1 & 3 and now it does??

FROM:bgoodrich DATE:Wednesday, January 04, 2006 1:47:14 PM

This appears to be a duplicate of 6693 (and 6784). Got resolved for the next 5.3 Service Pack.

FROM:dteal DATE:Thursday, March 09, 2006 9:09:22 AM

Accepted

Issue ID: 7020

Subject: Low Prestress Shear Rating due to using shear at CL brg?

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Szustak, Peter

12/28/2005 4:57:30 PM

Modified By: administrator

6/19/2008 4:28:15 PM

4/19/2016 3:19:12 PM

HRS AASHTO

2033

## Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          | Bug      |
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 0820201x(531).bbd       |             |
|      | FbmStartWontCorrect.doc |             |

## Tasks

| Name       | Current State | Summary                                                                                     |
|------------|---------------|---------------------------------------------------------------------------------------------|
| 7024.16308 | Resolved      | floorbeam location wizard keeps start distance from discarded floorbeam spacing description |

## Description

FROM:pszustak DATE:Wednesday, December 28, 2005 11:57:31 AM

In a similar situation to that reported by Mr. Islam in incident 6972, I have just run into a similar problem comparing BRASS's prestress shear rating with PENNDOT's PS3.

In looking into it, I found differences in the way BRASS and PS3 rate the member at the ends. PS3 assumes that you can follow AASHTO 9.20.1.4 and rate for the shear at a distance h/2 from the support, rather than using the shear at CL brg. It seems to me that BRASS is rating the bridge using the forces at the 100 POI, which seems unnecessarily conservative. Is there a way to force BRASS to rate the ends of the girder using the shear at a distance of h/2 away from the support, consistent with AASHTO 9.20.1.4?

Peter Szustak  
BSC Group

4/19/2016 3:19:12 PM

HRS AASHTO

2034

## Complete Issue Information

pszustak@bscgroup.com

FROM: bgoodrich DATE: Sunday, March 05, 2006 1:38:14 AM

A decision by WYDOT regarding prestress shear is posted in Incident 3143. Therefore, I am marking this incident as a duplicate.

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 7024                                                                                       |
| Subject: floorbeam location wizard keeps start distance from discarded floorbeam spacing description |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Armbrecht, Tim   | 12/30/2005 5:08:42 PM |
| Modified By: administrator     | 6/19/2008 4:28:15 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: tarmbrecht DATE: Friday, December 30, 2005 12:08:43 PM

File (0820201x(531).bbd) attached. In the Floorbeam Location Wizard entry of floorbeam spacing, Virtis retains a discarded start distance and will not even allow it to be corrected manually. (Note: Also checked in v. 5.4.0 (Beta2) w/same result.)

Example: A new line is added by using "Duplicate", then is noticed that "Number of Spaces" for the previous line is incorrect, so, the new line is deleted and the correction is made. Now, the correct "End Distance" is displayed for the corrected line. But, when this line is duplicated, or the "New" button is clicked, "Start Distance" for the new line is not the same as "End Distance" for the corrected line. Further, if the same procedure is repeated, the new Start distance is even greater.

4/19/2016 3:19:12 PM

HRS AASHTO

2035

**Complete Issue Information**

Also, when the "New" button is clicked instead of "Duplicate", "Start Distance" is greyed out. However, in either case "Start Distance" cannot be permanently changed manually.

This can be tried in any GFS superstructure definition w/in the subject model.

I also attached a word document that contains this description and a screen print from the floorbeam location wizard.

FROM:jihnat DATE:5/9/2006 2:12:19 PM  
Fixed for version 5.5.0

|                                  |
|----------------------------------|
| Issue ID: 7027                   |
| Subject: Shear Connector Overlap |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 1/5/2006 2:37:29 PM  |
| Modified By: administrator        | 6/19/2008 4:28:15 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
|                  | Assigned |          | Bug       |
| Kennelly, Krisha |          |          |           |
| Goodrich, Brian  |          |          | Education |
| Kennelly, Krisha |          |          |           |
|                  | Resolved |          |           |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

4/19/2016 3:19:13 PM

HRS AASHTO

2036



## Complete Issue Information

---

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Jim Duray      | Michael Baker Jr., Inc.        | jduray@mbakercorp.com           |               |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Shear Stud Issues.bbd |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7028.16304 | Closed        | Shear Connector File Blank |

### Description

FROM:dteal DATE:Thursday, January 05, 2006 9:37:39 AM

In the attached bridge, (member 2), I have defined all the shear studs. In order to avoid failure of specification 6.10.10.4 in the spec checker I have coded the range over the top flange splice plates as composite with the studs in between these splice plates. Two problems have arisen.

1. When I apply the studs GUI I get a message that my end distance and my beam length are not equal – As near as I can tell they are equal and opis is generating an erroneous message.
2. When I save and validate this structure I am given a message that I have 5 overlapping shear stud ranges. When I simply use the validate button (without saving) I get 8 overlapping shear ranges. These should give me the same number of error messages shouldn't it?? I don't believe this is true, the ranges appear to be ok anyway??

These may be related to each other to the way I entered shear studs over ranges with composite sections over the splice plates.

When you have splice plates, these areas do not have shear studs for obvious reasons. Do you know of any other way to enter shear studs leaving no studs over the splices plates and not get spec failure flags?

FROM:dteal DATE:Thursday, January 12, 2006 2:53:17 PM

On the two jpg's I attached – No Overlapping Ranges .jpg and Overlapping Ranges.jpg. there is no difference as far as I can tell with the stud locations. The No Overlapping Ranges one starts row two with start distance of zero with the length of 0.400 for one space. The Overlapping Ranges one starts row two with start distance of 0.400 for zero length and 1 space. They say the same thing.

4/19/2016 3:19:13 PM

HRS AASHTO

2037

## Complete Issue Information

When you validate – the returns overlapping ranges and the other doesn't.

FROM:dteal DATE:Thursday, January 12, 2006 4:20:58 PM

In the attached .bbd (Overlapping Ranges.bbd)

Go to unit #2, Girder D, Wizard alternative. With the wizard alternative highlighted select the button to Validate – No overlapping ranges, close the validation window and do it again, you will (I do) get overlapping ranges – nothing has changed. Sometimes if you open and close the shear stud tab on the deck profile, and then go to validate – you may 0,1,or 2 overlapping ranges ????

FROM:jduray DATE:Monday, January 16, 2006 6:06:34 PM

FROM:kkennelly DATE:5/3/2006 1:55:56 PM

Problem 1. "When I apply the studs GUI I get a message that my end distance and my beam length are not equal – As near as I can tell they are equal and opis is generating an erroneous message."

Answer:

You are getting this message for the following row:

| Support | Start Dist | Length | End Dist |
|---------|------------|--------|----------|
| 5       | 20.5       | 2.0    | 22.5     |

Virtis is reporting that the end distance of 22.5 m is not quite the end of the beam at 22.55m.

Duplicate of 3017. In the grids in the gui, if the end distance for an item is within 1' or 300 mm of the end of the beam, we issue a message to ask the user if they want the gui to change the length or spacing for them so the end distance matches the end of the beam. We did that because users previously requested help entering data particularly for skewed members that might have slightly different beam lengths. Since items can be entered in the grid in inconsecutive order, we do this check on every row in the grid, not just the last row.

Incident 3017 is an enhancement request to scan the grid for the rightmost data and check that only that rightmost data is on the beam. In order to be consistent, we have to make this change to a lot of windows in the UI not just this window.

Problem 2. "When I save and validate this structure I am given a message that I have 5 overlapping shear stud ranges. When I simply use the validate button (without saving) I get 8 overlapping shear ranges. These should give me the same number of error messages shouldn't it?? I don't believe this is true, the ranges appear to be ok anyway??"

Answer:

There is 1 overlapping range in your member due to the following last 2 rows:

| Support | Start Dist | Length | End Dist |
|---------|------------|--------|----------|
| 5       | 20.5       | 2.0    | 22.5     |
| 5       | 22.25      | 0.3    | 22.55    |

The last row starts at 22.25 but the previous row goes from 20.5 to 22.5 so this is where the overlap occurs.

Duplicate of 4327. This problem of inconsistent validation messages was fixed for 5.4. In version

4/19/2016 3:19:13 PM

HRS AASHTO

2038

**Complete Issue Information**

5.4.0 I consistently get the 1 validation message.

Problem 3. "When you have splice plates, these areas do not have shear studs for obvious reasons. Do you know of any other way to enter shear studs leaving no studs over the splices plates and not get spec failure flags?"

Answer: I don't know. Maybe Brian knows.

FROM:kkennelly DATE:5/3/2006 2:27:08 PM  
Brian, can you answer #3?

FROM:bgoodrich DATE:Thursday, May 18, 2006 2:15:02 PM  
If studs are entered, BRASS LRFD will perform the checks. The only way around that is to specify the region as composite. The side effect this this is that the stud checks are turned off within BRASS. The only way for BRASS do not

FROM:dteal DATE:Wednesday, September 06, 2006 10:08:01 AM  
Accepted in 5.5 beta 4

|                                     |
|-------------------------------------|
| Issue ID: 7028                      |
| Subject: Shear Connector File Blank |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/5/2006 2:39:26 PM  |
| Modified By: administrator       | 6/19/2008 4:28:15 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug         |
|                 | Resolved |          | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:19:13 PM

HRS AASHTO

2039

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 7029.16303 | Closed        | Parabolic Haunch Errors |

**Description**

FROM:dteal DATE:Thursday, January 05, 2006 9:39:26 AM  
In the attached bridge, (member 2), after an Opis analysis, View Latest Analysis Output/  
BRASS\_LRFD/Shear Connector File – it has no data, this shouldn't be blank – is this related to VI  
#7027

FROM:bgoodrich DATE:Tuesday, January 31, 2006 12:03:49 PM  
The shear connector file is blank because the AASHTO 6.10.10.4 calculations could not be performed.  
Several regions in the shear connector schedule were marked as "Composite." Therefore, BRASS  
could not count the number of shear connectors in those regions. If any region along the length of the  
girder is marked as "Composite," BRASS will not perform these calculations.

I will check with WYDOT about adding a message to the intermediate output file.

FROM:dteal DATE:Wednesday, February 01, 2006 10:34:53 AM  
this may be related to VI 7027

FROM:bgoodrich DATE:Monday, February 13, 2006 11:33:30 AM  
WYDOT assigned this issue to BRASS Problem Log 653. A note has been added to the shear  
connector file to explain why it is empty. Fixed for version 5.4.

FROM:dteal DATE:Thursday, March 09, 2006 9:12:10 AM  
Accepted

|                                  |
|----------------------------------|
| Issue ID: 7029                   |
| Subject: Parabolic Haunch Errors |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 1/9/2006 8:42:30 PM  |
| Modified By: administrator     | 6/19/2008 4:28:14 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

4/19/2016 3:19:13 PM

HRS AASHTO

2040

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Duray, Jim      | New      | High     | Unknown     |
|                 |          |          | Bug         |
|                 | On Hold  |          | Bug - GUI 2 |
| Ihnat, Joseph   | Assigned |          |             |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0810011y(531).bbd   |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 7030.16302 | Resolved      | Longitudinal Stiffner Errors |

### Description

FROM:tarmbrecht DATE:Monday, January 09, 2006 3:42:31 PM

In the attached model (Superstructure Definition "Sp. 13-15 (Double Girders)", a 3-span parabolic haunch, the graphic of the beam shows the middle span with the haunch reversed from what it should be. i.e., its curvature is convex rather than concave. The 1st & 3rd spans appear to be normal.

Also, when clicking <Apply> or <OK>, a warning message appears (shown in attached ParabolicHaunchErrors.doc).

Upon checking and rechecking the web input, no discontinuity can be found.

FROM:hlee DATE:1/12/2006 9:20:36 AM

Please see whether the attached screen capture (WebProfile.bmp) and calculation (AdjacentParabolicWeb.bmp) answer your questions.

FROM:tarmbrecht DATE:Tuesday, January 17, 2006 10:58:45 AM

Herman, the calculations appear to be correct, though the screen capture had very poor resolution - I'll

4/19/2016 3:19:13 PM

HRS AASHTO

2041

**Complete Issue Information**

take your word for it that there were no discontinuities. Does this require a fix or is the program already doing this?

FROM:hlee DATE:1/19/2006 8:54:40 AM  
For the screen capture, I tried to illustrate that the haunch is not reversed.

FROM:tarmbrecht DATE:Thursday, January 19, 2006 12:45:56 PM

OK, we reviewed our input, and the problem is on our end. Please close this incident. Thanks.

|                                       |
|---------------------------------------|
| Issue ID: 7030                        |
| Subject: Longitudinal Stiffner Errors |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 1/9/2006 8:46:38 PM  |
| Modified By: administrator     | 6/19/2008 4:28:14 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Monday, January 09, 2006 3:46:38 PM

1. In the attached mode, a 3-span parabolic haunch (center span approximated as linear due do parabolic haunch error previously submitted), the profile view graphic shows the longitudinal stiffeners as discontinuous, which they are not.

2. The "Y" dimension for the location of the longitudinal stiffeners on the web is to be based on a %

4/19/2016 3:19:13 PM

HRS AASHTO

2042

**Complete Issue Information**

from top or bottom flange. For this model, when 20 is coded as the % value the longitudinal stiffeners are placed off of the beam. In the Longitudinal Stiffener Ranges Help, Virtis directs the user to enter this value in "% units" ("% of Web – Bottom(Top) Flange – the Y distance is measured from the top of the bottom flange and is entered as a percentage of the web depth (with units of percent)). In reality the value must be entered as a decimal to get the desired result.

FROM:hlee DATE:1/12/2006 10:59:27 AM

#1 is entered in Incident 7029.

#2 is a bug. Virtis Help states that Y should be entered as a percentage when "% of Web ..." is selected, but the value must be entered as a decimal (0.2) to get the effect of percentage (20%).

FROM:tambrecht DATE:Tuesday, January 17, 2006 10:54:54 AM

Herman, #1 uses the same file as incident 7029, but here we're indicating discontinuities in the longitudinal stiffeners, not the haunch as in 7030. Are the discontinuities in the stiffeners (7030) related to the discontinuities in the haunch (7029)?

FROM:hlee DATE:1/19/2006 9:08:39 AM

#1 need to be reconfirmed once it is assigned.

FROM:jihnata DATE:5/3/2006 7:55:19 AM

#1 is fixed in version 5.4.0

FROM:jihnata DATE:5/10/2006 9:41:09 AM

#2: Schematic is fixed for version 5.5.0. The percentage should be entered as a number between 0 and 100.

Issue ID: 7032  
Subject: Load rating with VIRTIS - precast box girders

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Turnquist, Gary 1/11/2006 12:33:39 PM  
Modified By: administrator 6/19/2008 4:28:14 PM  
Priority: High  
Category: Education

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 7033.16299 | Closed        | Export From the Explorer |

### Description

FROM:jihnat DATE:1/11/2006 7:31:10 AM  
email from Gary Turnquist, Hedrick & Assoc.

I am trying to load-rate a three-span precast, prestressed concrete box girder bridge. The center span has 7 side-by-side box girders (6'-2" centers), while the end spans have 4 spread box girders (12'-4" centers-picture the 7-girder section minus girders 2, 4, and 6).

Should I code this as a bridge alternative with 3 separate structures (4-girder system, 7-girder system, 4-girder system)? Does each "structure" (ref. Help Figure 1) have to be the same for a particular bridge alternative? Is there a way to first code 7 girders for all three spans, then eliminate 3 of the girders in the 2 end spans?

Thanks in advance for any directions or suggestions.

Gary R. Turnquist, P.E.  
Hedrick & Associates, LLC  
2455 West Main Street  
Littleton, CO 80120  
Tel: (303) 798-9445

FROM:hlee DATE:1/12/2006 8:48:58 AM

Each "structure" (ref. Help Figure 1) doesn't have to be the same for a particular bridge alternative. For example, the first bridge alternative from the top in Figure 1 has 4 structures (3 unique structure definitions). The bridge alternative has 2 one-span structure, 1 two-span structure, and 1 three-span structure. Virts requires a girder to span the whole length of the structure, so first codes 7 girders for all three spans and eliminates 3 of the girders in the 2 end spans will not work. If the spans are not made continuous for live load, you may create a bridge alternative with 3 structures (2 unique structure definitions). The first one represents the mid-span, and the second one represents the end span.

4/19/2016 3:19:14 PM

HRS AASHTO

2044



## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 7033                    |
| Subject: Export From the Explorer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 1/11/2006 4:57:06 PM |
| Modified By: administrator     | 6/19/2008 4:28:14 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Unknown     |
|                    | On Hold   |          | Bug         |
| Bhanushali, Girish | Duplicate |          | Bug - BRASS |
| Bhanushali, Girish | Duplicate | High     | Bug - BRASS |

## Contacts

| Name               | Company                         | Email 1                        | Phone 1      |
|--------------------|---------------------------------|--------------------------------|--------------|
| Jim Duray          | Michael Baker Jr., Inc.         | jduray@mbakercorp.com          |              |
| Sahadeo Bhagwandin | Ammann & Whitney Consulting Eng | sbhagwandin@ammann-whitney.com | 212-462-8596 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 5513329.bbd         |             |

## Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 7035.16297 | Duplicate     | Girder/FB system analysis problem |

## Description

FROM:dteal DATE:Wednesday, January 11, 2006 11:57:17 AM

It would be nice if we could add the capability of being able to export a bbd (xml) from the Bridge

4/19/2016 3:19:14 PM

HRS AASHTO

2045

**Complete Issue Information**

Explorer window - instead of having to open the workspace.

FROM:jduray DATE:Monday, January 16, 2006 6:04:20 PM

We have implemented the batch import and export that will allow for this. This enhancement will be in beta 4.

FROM:dteal DATE:Tuesday, March 07, 2006 12:05:01 PM

Accepted

|                                            |
|--------------------------------------------|
| Issue ID: 7035                             |
| Subject: Girder/FB system analysis problem |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Bhagwandin, Sahadeo   | 1/12/2006 2:52:12 PM |
| Modified By: administrator          | 6/19/2008 4:28:14 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:sbhagwandin DATE:Thursday, January 12, 2006 9:52:13 AM

Its a two girder system with transverse FB's. 3 span continous. Girders spaced at 33'. FB's spaced at

4/19/2016 3:19:14 PM

HRS AASHTO

2046

**Complete Issue Information**

8' and cantilever 10' outside. No stringers. For some reason, when the "include in analysis" box is checked for the FB members, the program takes an unusually long time to analyze. After 30 mins. we stopped it! If I uncheck those boxes it runs but results give extremely low ratings for the girders. Do you know why this is happening?

FROM:sbhagwandin DATE:Thursday, January 12, 2006 10:20:14 AM  
Attached is bbd file.

FROM:gbhanushali DATE:7/20/2006 10:30:13 AM  
This is a problem related to floorbeam analysis.  
Same as VI 6690. BRASS takes long time during floorbeam analysis with very wide travelway.

Issue ID: 7037  
Subject: NSG Truck: Add total truck weight,total axle spacing & duplicate an axle

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Thompson, Todd 1/12/2006 6:18:55 PM  
Modified By: administrator 6/19/2008 4:28:14 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:19:14 PM

HRS AASHTO

2047

### Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph | Assigned  |      |             |
|               | Suspended |      | Enhancement |
| Duray, Jim    | New       | High | Unknown     |
|               | Resolved  |      | Education   |
| Duray, Jim    | Resolved  | High | Education   |

### Contacts

| Name          | Company                 | Email 1               | Phone 1      |
|---------------|-------------------------|-----------------------|--------------|
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com |              |
| Peter Szustak | BSC Group, Inc.         | unknown@unknown.com   | 617-896-4358 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7045.16287 | Resolved      | Different PS initial tension in the same cross-section |

### Description

FROM:ttompson DATE:Thursday, January 12, 2006 1:18:55 PM

It seems like we are missing some important information for NSG Trucks.

We aren't providing the total weight of the vehicle like we do in Std Gage Trucks.

We aren't providing the total length of axle spacing (longitudinally) like we do in Std Gage Trucks.

And since we don't provide a graphic view of what the truck looks like from any direction, it's almost impossible to see if one has entered one's truck correctly. To check if one has the total weight correctly, one needs to manually add each WHEEL load. We should provide a summary for each axle weight by summing up the wheel loads. And we should sum up all the axle loads.

I don't see any easy way to verify that one has entered the truck correctly. Not sure how we missed this during the GUI mockup review, but we did.

Another item would be on the wheels side of the screen, is the ability to copy/duplicate entire axles. Typically on these large NSG trucks, the axle loads are all the same (or extremely similiar). Currently it is very tedious entering the same data over 10 times instead of just duplicate. The GUI screen mockups had a duplicate, but at the time I thought it would duplicate the entire axle. I now see it just duplicates a wheel.

FROM:ttompson DATE:Thursday, January 12, 2006 1:24:15 PM

4/19/2016 3:19:15 PM

HRS AASHTO

2048

**Complete Issue Information**

FROM:ttompson DATE:Thursday, January 12, 2006 1:26:19 PM

FROM:jduray DATE:1/16/2006 9:34:11 AM  
You can duplicate an axle if you have axles that are the same or similar.

As far as the total length and total weight go I agree that would be useful. I will check how much effort is required to do that. If an hour or so we will go ahead and do it, otherwise it will have to be an enhancement.

The influence loading output files contains a description of the vehicle.

FROM:jduray DATE:1/16/2006 10:42:20 AM  
Joe's estimate is 12 hours. Change to an enhancement request.

FROM:hlee DATE:7/10/2006 9:21:30 AM  
Changed Project to Support Center.

FROM:ttompson DATE:Wednesday, July 19, 2006 1:16:16 PM  
Duplicate axles is VI 6819.

FROM:jduray DATE:7/27/2006 11:24:14 AM

FROM:jduray DATE:1/19/2007 4:17:29 PM  
TF authorized us to implement this enhancement.

FROM:jihnatt DATE:1/25/2007 10:00:50 AM  
Done for version 5.6

FROM:xli DATE:2/5/2007 3:17:53 PM  
Total load of each axle, total load of truck, total length of axle spacing, duplicate wheel button are added and works fine for 5.6 beta1.

FROM:ttompson DATE:Wednesday, February 28, 2007 9:22:32 AM  
Checked - total weight per axle, total weight of truck, and total axle length

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 7045<br>Subject: Different PS initial tension in the same cross-section |
|-----------------------------------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Szustak, Peter   | 1/15/2006 3:28:22 PM |
| Modified By: administrator     | 6/19/2008 4:28:13 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Lee, Herman        |          |          |          |
| Duray, Jim         |          |          |          |
| Lee, Herman        |          |          |          |
| Kennelly, Krisha   |          |          |          |
|                    | Resolved |          |          |
| Kennelly, Krisha   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 7046.16286 | Resolved      | Two different crashes when generating "LFD Analysis Output". |

### Description

FROM:pszustak DATE:Sunday, January 15, 2006 10:28:22 AM

I am trying to analyze a 3-span, continuous for LL, PS voided slab bridge. Is it possible to enter a different PS initial tension for different strands within the same cross-section? It appears that you can only define one set of PS properties per span.

Peter Szustak  
BSC Group  
pszustak@bscgroup.com

FROM:jduray DATE:Monday, January 16, 2006 6:00:57 PM  
Correct, one set of properties for all strands within the beam.

## Complete Issue Information

Issue ID: 7046

Subject: Two different crashes when generating "LFD Analysis Output".

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Lee, Herman

1/17/2006 3:42:29 PM

Modified By: administrator

6/19/2008 4:28:13 PM

Priority: High

Category: Bug

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 7050.16282 | Duplicate     | No "Hinge Locations" Entry for Main Girders of Floor System Superstructure |

## Description

FROM:hlee DATE:1/17/2006 10:05:02 AM

To reproduce:

1. Open TrainingBridge1 BWS, select G1 member alternative (Plate Girder).
2. Open Analysis Setting, use "HS20 Rating" template.
3. Select Output tab, only has "Rating Report" checked.
4. Rate the member alternative.
5. Open the Report Tool, select "LFD Analysis Output".
6. Hit "Generate", Virtis will crash.

4/19/2016 3:19:15 PM

HRS AASHTO

2051

### Complete Issue Information

7. CUiAnalysisOutputReport::SetUnitDisplayStrings Line 3155 shouldn't assume GetPointInformation always has 1 point.

To reproduce:

1. Open TrainingBridge1 BWS, select G1 member alternative (Plate Girder).
2. Open Analysis Setting, use "HS20 Rating" template.
3. Select Output tab, only has "Live Load Action Report" checked.
4. Rate the member alternative.
5. Open the Report Tool, select "LFD Analysis Output".
6. Hit "Generate", Virtis will crash.
7. CUiLFDOutputReport::CreateOverallSummaryList Line 695 shouldn't assume DoMbrRatingSummaryPtr always filled.

FROM:mordoobadi DATE:1/17/2006 5:33:50 PM

This should be fixed in the Report Tool window.

The code assumes that some specific data exists and if it doesn't it crashes.

FROM:kkennelly DATE:5/24/2006 2:40:26 PM

Fixed for version 5.5

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 7050                                                                      |
| Subject: No "Hinge Locations" Entry for Main Girders of Floor System Superstructure |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 1/19/2006 5:47:30 PM |
| Modified By: administrator     | 6/19/2008 4:28:13 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:19:15 PM

HRS AASHTO

2052



## Complete Issue Information

### Description

FROM:tarmbrecht DATE:Thursday, January 19, 2006 12:47:31 PM

Enhancement request or bug? There needs to be a way to enter hinge location for the main girders of a Floor System Superstructure just like there is for the beams of a Girder System Superstructure. Pretty critical for "suspended spans" of truss systems.

FROM:hlee DATE:1/19/2006 1:15:46 PM  
Duplicate of Incident 4840.

FROM:tarmbrecht DATE:Thursday, January 19, 2006 3:24:50 PM  
Herman, could you please send me (armbrechta@dot.il.gov) a copy of incident 4840? I can't find it among the incidents here. Thanks.

FROM:hlee DATE:1/20/2006 9:43:36 AM  
Incident 4840 send to Tim on 1/20. Also switched Incident 4840's project to Support Center.

Issue ID: 7060

Subject: Error opening Framing Plan Detail schematic

Folder: /Virtis/Support Center

Primary Contact: lhnat, Joseph

Submitted By: lhnat, Joseph

1/30/2006 3:17:46 PM

Modified By: administrator

6/19/2008 4:28:12 PM

Priority: High

Category: Bug

### History

4/19/2016 3:19:16 PM

HRS AASHTO

2053

**Complete Issue Information**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          | Education |
| Kennelly, Krisha | Assigned | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 7068.16264 | Assigned      | Opis question |

**Description**

FROM:jihnat DATE:1/30/2006 10:14:08 AM

5.4.0 Beta 4: For BID 11, Schedule Based RC Structure, try to open Framing Plan Detail schematic, get error: "An invalid argument was encountered"

FROM:jihnat DATE:1/30/2006 1:37:14 PM

Same behavior in 5.3.x Changed project to Support Center.

FROM:jihnat DATE:1/31/2006 3:09:10 PM

Problem was in 5.3 database migrated to 5.4. Works OK with a 5.4 database.

It was decided not to fix the 5.3 data. See also 6701, 6814.

## Complete Issue Information

|                        |
|------------------------|
| Issue ID: 7068         |
| Subject: Opis question |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 1/31/2006 1:03:07 PM |
| Modified By: administrator        | 6/19/2008 4:28:11 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

## History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Ihnat, Joseph   | Assigned | High     | Unknown        |
|                 | Resolved |          | Change Request |
|                 | Closed   |          |                |
| Ihnat, Joseph   | Closed   | High     | Change Request |

## Contacts

| Name       | Company                        | Email 1             | Phone 1       |
|------------|--------------------------------|---------------------|---------------|
| Dean Teal  | Kansas Dept. of Transportation | teal@ksdot.org      | (785)291-3001 |
| Herman Lee | Michael Baker Jr., Inc.        | hlee@mbakercorp.com |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 7075.16257 | Closed        | Register.bat |

## Description

FROM:jihnat DATE:1/31/2006 8:01:19 AM  
Received via email:

**Complete Issue Information**

When I print an LRFD Report for my girder, everything seems fine until I get to the "Final Stress Under Dead Load and Prestress". Here the Allowable and Actual Stresses are all zero. This also occurs for "Final Compressive Stresses-Design Loads", "Final Tensile Stresses-Design Loads", and "Final Stresses in Slab". Is there a button that I do not have checked causing these values to not be tabulated?

Holly Boomsma  
George Butler Associates, Inc.  
T. 913.577.8335  
hboomsma@gbutler.com

|                       |
|-----------------------|
| Issue ID: 7075        |
| Subject: Register.bat |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Mullins, Randall | 2/2/2006 8:14:14 PM  |
| Modified By: administrator     | 6/19/2008 4:28:10 PM |
| Priority: High                 |                      |
| Category: Change Request       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:2/2/2006 3:11:49 PM  
Would like to not to have to click OK after each DLL is registered.

4/19/2016 3:19:16 PM

HRS AASHTO

2056

**Complete Issue Information**

FROM:dteal DATE:Monday, February 06, 2006 2:33:45 PM  
Randall,  
This is what I do  
Use find and replace of any text editor  
Find: regsvr32  
Replace All: regsvr32 -s  
There is a space between the 2 and the -

FROM:jduray DATE:2/8/2006 10:10:49 AM  
I think we should modify the register.bat.

FROM:jihnata DATE:2/23/2006 2:06:30 PM  
I've added the option to run in silent mode from the command line, i.e. "register /s". This is the option that I discussed originally with Randall.  
I didn't want to register silently by default because we sometimes use this as a diagnostic tool, to ensure that Virtis is installed correctly.  
To hardcode silent mode (in Beta 5 and later) replace all "%1" with "/s".  
Fixed for Beta 5, and changed project to Support Center.

FROM:dteal DATE:Monday, March 27, 2006 3:29:44 PM  
In Beta 7  
"%1" does not appear in the Register.bat file  
Did I misunderstand when you said:

(in Beta 5 and later) replace all "%1" with "/s".  
Fixed for Beta 5

FROM:dteal DATE:Monday, March 27, 2006 3:32:39 PM  
Nevermind - I was looking at a 5.3 register.bat file  
The 5.4 beta 7 has the %1 like you stated

FROM:dteal DATE:Wednesday, April 19, 2006 3:19:54 PM  
Works for me

FROM:dteal DATE:Wednesday, September 06, 2006 10:06:57 AM  
Accepted in 5.4

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 7080<br>Subject: Impact / Dynamic Load Allowance dialog |
|-------------------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Colgrove, George | 2/3/2006 2:54:15 PM  |
| Modified By: administrator     | 6/19/2008 4:28:10 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

4/19/2016 3:19:17 PM

HRS AASHTO

2057

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

### Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 7081.16251 | Discard       | Structure Typ Section: Add Sidewalk/Curb Definition & Compute Pedestrian Load |

### Description

FROM:gcolgrove DATE:Friday, February 03, 2006 9:54:16 AM

1.If the units are not set in the "Bridge Description" dialog for a bridge, then the program freezes when opening the "Impact / Dynamic Load Allowance" dialog. Any subsequent dialog requiring the units to be previously defined should check to see if it has been done. If it hasn't it should direct the user back to the description dialog to get it done.

2.We would like to see the sections of the "Impact / Dynamic Load Allowance" dialog changed to read:

- a. "Standard Impact Factor (LFD/ASD)" rather than "Standard Impact Factor"
- b. "Dynamic Load Allowance (LRFD)" rather than "LRFD Dynamic Load Allowance"
- c. This change should be made to both the Bridge and member dialogs.

FROM:jduray DATE:2/6/2006 9:50:33 AM

Joe - please resolve 1. Then mark as enhancement with status of suspended for 2.

FROM:jihnata DATE:2/6/2006 10:35:34 AM

It shouldn't be possible to create a new bridge without the system of units being set. I haven't been able to reproduce that. How did you create the bridge?

FROM:hlee DATE:4/30/2008 2:36:29 PM

Discarded by TAG 12/07.

4/19/2016 3:19:17 PM

HRS AASHTO

2058

## Complete Issue Information

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 7081                                                                         |
| Subject: Structure Typ Section: Add Sidewalk/Curb Definition & Compute Pedestrian Load |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Colgrove, George | 2/3/2006 2:58:54 PM  |
| Modified By: administrator     | 6/19/2008 4:28:10 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:gcolgrove DATE:Friday, February 03, 2006 9:58:55 AM

1. With regards to sidewalks and curbs:

a. We would like the tab in the "Structure Typical Section" that currently reads "Sidewalk" be changed to "Sidewalk/Curb".

i. This would give a clear place to enter curb data. It would allow us to define curbs as we do with sidewalks. V/O would place the railings on top of either the sidewalks or curbs. This gives a visual confirmation that data was entered correctly.

ii. This will eliminate the need to include the curb with the railing load/configuration. The benefit being the rail definitions could be calculated easier.

iii. This should not change how people historically entered this information. People who choose to enter the rail definition with the curb should continue as they always have.

b. We offer this suggestion as a stepping stone to a feature that would calculate sidewalk loads automatically. With a separated definition of a curb/sidewalk and a rail we feel the software could then intelligently determine if the element is a sidewalk, thereby determining the necessity of a pedestrian load. If the software determines a sidewalk is necessary, then it would apply the load as prescribed by the LRFD manual

4/19/2016 3:19:17 PM

HRS AASHTO

2059

**Complete Issue Information**

i. 3.6.1.6 PEDESTRIAN LOAD states that a pedestrian load of 0.075 KSF shall be applied on sidewalks greater than 2.0 FT (or 0.085 KSF for pedestrian/bike bridges)

FROM:jduray DATE:2/6/2006 9:52:05 AM  
This enhancement request will be added to the list for review by the UI TAG.

FROM:gcolgrove DATE:Thursday, December 21, 2006 7:43:28 AM

FROM:hlee DATE:4/30/2008 2:36:37 PM  
Discarded by TAG 12/07.

|                             |
|-----------------------------|
| Issue ID: 7102              |
| Subject: Library Bolt entry |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 2/15/2006 2:48:21 PM |
| Modified By: administrator          | 6/19/2008 4:28:08 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



**Complete Issue Information**

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | 0450082<br>(PSAnalysisProblems).bbd |             |

**Tasks**

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7105.16227 | Closed        | Computation of prestress forces/losses |

**Description**

FROM:jihnat DATE:2/15/2006 9:43:59 AM

- 1) Create an agency bolt
- 2) Enter data on the ASD Slip Critical and LFD Slip Critical tabs.
- 3) Save then reopen the window.
- 4) Repeat step 3. Data changes each time.

FROM:jihnat DATE:2/15/2006 11:18:38 AM

5.2.0, 5.3.0, 5.3.1 all have this same behavior. Changed project to Support Center.

FROM:jduray DATE:2/16/2006 8:44:10 AM

Looks like for US units we are dividing by 6.897 and for SI we are multiplying by 6.897. Need ot look at the code to understand why.

FROM:mordoobadi DATE:2/20/2006 10:00:00 AM

The window called SetUnits in both ASD and LFD Slip critical Tabs after the grid was populated. This caused the values to be converted two times once when grid was populated first and once when SetUnits was called. So the conversion factors were applied two times.

GUI code fixed for 5.4 Beta 6.

FROM:jihnat DATE:3/3/2006 8:19:29 AM

OK in Beta 6

|                                                 |
|-------------------------------------------------|
| Issue ID: 7105                                  |
| Subject: Computation of prestress forces/losses |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 2/15/2006 7:50:06 PM |
| Modified By: administrator       | 6/19/2008 4:28:08 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category       |
|-----------------|--------------------|----------|----------------|
| Duray, Jim      | New                | High     | Unknown        |
| Goodrich, Brian | Assigned           |          | Bug - BRASS    |
|                 | Information Needed |          |                |
|                 | Resolved           |          |                |
|                 | Closed             |          | Bug - Export 2 |
| Goodrich, Brian | Closed             | High     | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary     |
|------------|---------------|-------------|
| 7106.16226 | Closed        | POI problem |

### Description

FROM:tarmbrecht DATE:Wednesday, February 15, 2006 2:50:06 PM

The attached model contains a 2-Span continuous superstructure w/48" PS concrete I-beams having LR strands & 7ksi concrete and a simple-span superstructure w/36" PS concrete I-beams having SR strands & 5ksi concrete. In both cases, BRASS determines that the ratings are controlled by "Concrete Tension". Based on the AASHTO Std. Specs., we don't believe this to be the case.

The difference between the two analyses appears to be due to a significantly lower final bottom fiber compression stress from the prestressing strands computed by BRASS. Unfortunately, all that can be gleaned from the BRASS output is the final (after losses) stress due to prestress. These values for the bottom fiber follow:

|                  | Initial (psi) | Loss  | Final (psi) |
|------------------|---------------|-------|-------------|
| 2-Span Cont. 48" | BRASS ?       | ?     | 2,471       |
| IL DOT           | 3,365         | 19.4% | 2,712       |
| 1-Span 36"       | BRASS         | ?     | ?           |
| IL DOT           | 1,428         | 11.1% | 1,269       |

4/19/2016 3:19:17 PM

HRS AASHTO

2062

**Complete Issue Information**

This difference for the 2-Span 48" beams is partially explained by the fact that BRASS appears to be using .7 f's for the initial strand stress instead of .75 f's as specified by AASHTO for low relaxation strands (9.15.1). The Initial stress should be  $.75 * 270 \text{ksi} = 202.5 \text{ksi}$ , not 189ksi as indicated by the BRASS output (below). 189ksi would be the value if the strands were stress-relieved.

PRESTRESSING STRAND PROPERTIES (2-Span Continuous 48" beams)

| Strand Code | Strand Type                   | Yield Point Stress (ksi) | Ultimate Strength (ksi) | Modulus of Elasticity (ksi) | Initial Stress (ksi) |
|-------------|-------------------------------|--------------------------|-------------------------|-----------------------------|----------------------|
| 1           | LOW RELAXATION - PRETENSIONED | 243.0                    | 270.0                   | 28500.                      | 189.0                |

By increasing f's to 289ksi, in order to obtain the desired initial stress, the final bottom fiber compressive stress from the prestress is increased to 2637psi, which is still 75psi less. It is assumed that there are also some differences in loss computation. (When this is done, the Strength rating for positive moment is also affected. Therefore this is not a suitable workaround, unless the strength rating has also been adversely affected by the erroneous Initial Stress value.)

The strand properties for the 36" beams w/stress-relieved strands printed in the output is correct.

The question is what accounts for the differences between BRASS & AASHTO?

FROM: bgoodrich DATE: Friday, March 03, 2006 2:15:51 PM

For both structure definitions, the jacking stress is set to 0.7 in the Prestress Properties. BRASS is just using the value that was input. I believe this explains why the initial stress is lower than expected for the 2-span structure.

To determine the concrete tension rating factor, you can use the intermediate output for the 9.15.2.2(b) and 9.15.2.2(c) checks. For the 1-span structure "N. Vault Appr. Span PSI", member "2A - 2nd W Int", member alt "36" PS I-Beam", BRASS provides the following output:

\* At point 105.000

AASHTO Serviceability Check 9.15.2.2(b)

Stage 1 DL stress in top of beam = -1077. psi  
 Stage 2 DL stress in top of beam = -6. psi  
 Stage 3 DL stress in top of beam = 0. psi  
 Stage 1 DL stress in bot of beam = 802. psi  
 Stage 2 DL stress in bot of beam = 30. psi  
 Stage 3 DL stress in bot of beam = 0. psi  
 For Stage 2,  
 Stress in top of beam due to prestress = 16. psi  
 Stress in bot of beam due to prestress = -1149. psi  
 0.4 fc prime = 2000. psi  
 sqrt fc prime = 71.  
 End Serviceability Check 9.15.2.2(b)

AASHTO Serviceability Check 9.15.2.2(c)

**Complete Issue Information**

Factor for fc prime = fct = 0.40  
 Live Load stress in top of beam = -143. psi  
 Live Load stress in bot of beam = 760. psi  
 1/2 dead load & prestress stress in top = -533. psi  
 1/2 dead load & prestress stress in bot = -158. psi  
 fct \* fc prime = 2000. psi

Using 6\*SQRT(f'c) for the tension limit with f'c = 5000 psi and the stresses in the bottom of the beam from the above output, the rating factor is calculated as:

$$RF = [6 * \text{SQRT}(5000) - (802 + 30 - 1149)] / 760 = 0.975$$

FROM:bgoodrich DATE:Tuesday, March 07, 2006 3:33:41 PM  
 E-mail from user:

Yep, it looks like when we changed from low-relaxation to stress-relieved strands, the jacking stress didn't automatically change and we weren't aware of it. That appears to be the cause of our problem. Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, March 07, 2006 3:34:57 PM  
 Changed category to Education because this issue was not related to the engine.

|                      |
|----------------------|
| Issue ID: 7106       |
| Subject: POI problem |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 2/15/2006 7:52:20 PM |
| Modified By: administrator       | 6/19/2008 4:28:08 PM |
| Priority: High                   |                      |
| Category: Bug - Export 2         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 7107.16225 | Closed        | Invalid argument error for view schematic of a member alternative |

### Description

FROM:tarmbrecht DATE:Wednesday, February 15, 2006 2:52:21 PM

Use file for incident 7105

When a POI between .992 & 1.008 of Span 1 is specified, Virtis/BRASS does not recognize it. If other POI's &/or tenth points are specified, there is simply no detailed output for it in the BRASS Output file. If analysis is requested to be restricted to only between .992 & 1.008 of Span1, the analysis is halted and an error message produced.

FROM:bgoodrich DATE:Friday, March 03, 2006 2:22:55 PM

I entered a POI at 81.75 ft and received the following message in the Analysis Progress dialog. This message can also be reviewed in the LOG file.

WARNING (Medium):

The point of interest specified at a distance of 81.750 (in,mm) is being IGNORED because it is located outside the span lengths used in the BRASS P/S model. This is a restriction of the 'Centerline of Bearing' P/S modeling method.

I corrected the units in the note which should be in feet.

FROM:bgoodrich DATE:Tuesday, March 07, 2006 3:35:58 PM

E-mail from user:

Brian, sorry for the delay in getting back to you. Yes, it appears that this is more of an inconvenience than a bug. Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, March 07, 2006 3:37:18 PM

Changed category to Bug - Export 2 because this is not an engine issue.

Issue ID: 7107

Subject: Invalid argument error for view schematic of a member alternative

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Armbrecht, Tim

2/15/2006 7:55:21 PM

Modified By: administrator

6/19/2008 4:28:08 PM

4/19/2016 3:19:18 PM

HRS AASHTO

2065

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - GUI 2 |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Unknown  |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | DeckConc-LineGirder-NoSpan.bbd |             |
|      | DeckConc-LineGirder-NoSpan.doc |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7108.16224 | Closed        | No span column in deck concrete table for line girders |

### Description

FROM:tarmbrecht DATE:Wednesday, February 15, 2006 2:55:22 PM

In the attached model for Superstructure Definitions, "Spans 16-17 - 17-18" & "Spans 23-24 - 25-C", when attempting to bring up the View Schematic for the Member Alternative, an error message is returned (Invalid Argument) and the schematic does not appear except for a few marks. However, when a new view magnification is selected, the graphic of the girder appears but w/o the labeling and dimensions. For the other Superstructure Definition, "Spans 18-19 - 19-20", this function works properly. All of the Superstructure Definitions were copied from other ones and modified.

Same thing for 0810114x.bbd except that the results are also in error. The 3-Span continuous welded plate-girder structure (3-Sp Cont WPG(Bad)) is nearly symmetrical, yet, the dead-load moments vary widely from the 1st span to the 3rd span. At corresponding locations, e.g., supports 2 & 3; .4 of Sp. 1

4/19/2016 3:19:18 PM

HRS AASHTO

2066

**Complete Issue Information**

& .6 of Sp. 3, where moments should be close to the same, they are not. The same configuration was assembled from scratch w/o copying from another superstructure definition and the results were as one would expect (see 3-Sp Cont WPG(Good)).

FROM:jihnat DATE:2/16/2006 1:10:24 PM

The problem with the schematic looks like the same as 6138.

It appears that the members at one time had two additional spans. When the spans were decreased the Bearing Stiffener Locations were not deleted.

The workaround for the schematic problem is the same as for 6138:

1. Increase number of spans by two on the Member window. Enter span lengths. Hit OK.
2. Open the new Bearing Stiffener Location windows. Enter 0 for "Pairs of bearing stiffeners at this support". Hit OK.
3. Decrease number of spans by 2.
4. You should be able to see the girder profile now.

FROM:jihnat DATE:2/16/2006 1:41:56 PM

For 0810114x, I rated both bridges then diff'ed the DAT files.

I noticed that Bad had a hinge that Good did not have.

When I removed the hinge from Bad, the dead load moments came out more symmetric(al).

FROM:mordoobadi DATE:3/20/2006 9:23:13 AM

Accepted by Tim Armbrecht:

2. Incident 7107: Appears to no longer retain unwanted data from source of copied Superstructure. (e.g., Bearing stiffeners that had been specified for Support #5 of a 4-span superstructure in what is made into a 3-span superstructure.)

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7108                                                  |
| Subject: No span column in deck concrete table for line girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 2/15/2006 7:58:05 PM |
| Modified By: administrator     | 6/19/2008 4:28:08 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PSConcrEntry.doc    |             |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 7109.16223 | Suspended     | Remove Girder Concrete entry from Beam Details window |

### Description

FROM:tarmbrecht DATE:Wednesday, February 15, 2006 2:58:07 PM

In the input table for Deck Concrete under Deck Profile for steel line girder models there is no column to indicate the Span. (In this table, the Start Distance entry is the location within a subject span, not the distance from the beginning of the structure.) It is essential that the Span number be listed. See attached Word document for graphic. I also attached the bbd file for reference.

FROM:jduray DATE:2/16/2006 8:19:49 AM

Joe - please investigate.

Based on Tim's description I agree the span column should be there like it is for GS. Any idea why it isn't?

FROM:jihnat DATE:2/16/2006 11:00:41 AM

The attached bridge is a Girder System structure def and the Support Number (column 2) is visible when I open the Deck Profile window.

Regardless, it sounds like the saved column width in the registry has gotten set to zero.

Try deleting the entry from the registry: "HKEY\_CURRENT\_USER\Software\AASHTOWare Virtis\Opis\Virtis\Opis\Settings\UiDeckConcreteDlg\_Grid0" (and \_Grid1)

It would probably be a better idea to delete "HKEY\_CURRENT\_USER\Software\AASHTOWare Virtis\Opis\Virtis\Opis\Settings"

Be aware that deleting all the Settings will remove all of your saved Virtis window positions, window sizes and grid column widths.

FROM:jihnat DATE:2/16/2006 11:39:57 AM

I think I found the cause of the problem.

After opening this window for a Floor Line floorbeam or stringer member (which hide the Support Number column), the column was no longer visible for Girder Line members.

Fixed for 5.4.0

FROM:mordoobadi DATE:3/20/2006 9:24:23 AM

Accepted By Tim Armbrecht:

3. Incident7108: Support column now visible for steel Line-Girder superstructures.

FROM:jihnat DATE:3/20/2006 9:46:14 AM

Since this was a bug in the previous release, I've added this to the 5.4.0 release notes.

4/19/2016 3:19:19 PM

HRS AASHTO

2068



**Complete Issue Information**

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 7109                                                 |
| Subject: Remove Girder Concrete entry from Beam Details window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 2/15/2006 8:14:57 PM |
| Modified By: administrator     | 6/19/2008 4:28:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | hboomsma.bbd        |             |

**Tasks**

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 7113.16219 | Resolved      | Unable to save attached bridge |

**Description**

FROM:tarmbrecht DATE:Wednesday, February 15, 2006 3:14:58 PM

Please see attached Word document for illustration.

Is it necessary to require entry of the PS concrete being used in two separate places for a Member alternative? First it is specified under Stress Limits for the Superstructure Definition, then it is entered in two separate places under Member Alternatives/Beam Detail.

## Complete Issue Information

Since the Girder Material (under the Span Detail tab) and the Name (under the Stress Limit Ranges tab) should always be the same, it seems that only one entry, say under the Span Detail tab, should be necessary.

Apart from the inconvenience of redundant entry, a problem that can occur (and has) is that the Concrete Material can be changed in the item under Stress Limits w/o changing the Girder Material (as should be done). This can result in unexpected and erroneous results.

FROM:jduray DATE:2/16/2006 8:25:51 AM

The stress limits are a function of the concrete material so that is why it must be specified on the Stress Limit Set window. I think it is ok to specify the concrete material on the Span Detail tab so we know what the material is for the entire beam. We filter the stress limits on the Stress Limit Ranges tab so only the stress limits for the concrete material specified on the Span Detail tab are available. We don't allow the window to be closed if the concrete material is changed on the Span Detail tab without correcting the assignment of stress limits on the Stress Limit Ranges tab. It doesn't seem possible to have a mismatch between the stress limits and the concrete material. I don't see it as duplicate data entry. The concrete material for the beam is only specified once - on the Span Detail tab. Stress limits that correspond to the concrete material are selected on the Stress Limit Ranges tab.

FROM:tarmbrecht DATE:Thursday, February 16, 2006 12:53:45 PM

Jim, it is possible to get different values between the "Girder Material" under the Span Details tab and the "Name" under the Stress Limit Ranges tab. My consultant was able to do it:

1. Set up your model, e.g. - 0450082(PSAnalysisProblems).bbd (see incident 7105).
2. Changing nothing, select the Member Alternative under one of the Members (say, 48" PS I-Beam under 3 - 2nd W Int/) and analyze it.
3. In the BRASS Output File, under AASHTO Serviceability Check 9.15.2.2(b) find/check the values for 0.4 fc prime (2800. psi) and sqrt fc prime (84.), which are as they should be for  $f'c = 7000$  as specified in the Stress Limit Set for the Superstructure Definition.
4. Close the output file, go back to the model, call up the defined Stress Limit Set and change the Concrete Material from its current concrete material reference ( $f'c = 7000$  psi in the referenced model) to a different one (say,  $f'c = 6000$  psi).
5. Changing nothing else, analyze the same Member Alternative again and check the same values in the output. You will find that they are the same as before. For  $f'c = 6000$  psi, the values should be, respectively, 2400. psi & 77.

So, effectively, the values for  $f'c$  under the Span Details & Stress Limit Ranges tabs are different. This should not be possible.

The duplicate entry/redundancy is not so much with having to enter a Stress Limit Set and also to specify it under the Member Alternative. We understand the necessity of that. It is, however, duplicate entry when, under the Beam Details, we must enter the Girder Material (w/reference to Materials/Concrete) in addition to the Name of the Stress Limit Set, which already must contain a reference to the same Concrete Material for the applicable span of the Beam. If the Girder Material and the Concrete Material for the named Stress Limit Set must always match, why do we have to manually enter the Girder Material? The system should automatically use the Concrete Material specified for the applicable Stress Limit Set. If this were done, there would obviously be no need for the Girder Material field under the Span Details tab to be editable, tho', if desired, it could still be displayed as a non-editable field. If the Girder Material was automatically generated according to the "Name" entered under the Stress Limit Ranges tab, this probably wouldn't be an issue.

FROM:kkennelly DATE:5/1/2006 11:44:01 AM

4/19/2016 3:19:19 PM

HRS AASHTO

2070

**Complete Issue Information**

Removal of Girder Material selection from window is an enhancement request to change the UI. Incident 7197 deals with some validation to help with this problem.

FROM:kkennelly DATE:5/2/2006 9:23:23 AM

Also note that BRASS LFD does not use the allowable concrete stresses on the Stress Limit window, it computes them based on the concrete material assigned to the girder.

|                                         |
|-----------------------------------------|
| Issue ID: 7113                          |
| Subject: Unable to save attached bridge |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 2/16/2006 2:03:13 PM |
| Modified By: administrator          | 6/19/2008 4:28:07 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnmat DATE:2/16/2006 9:00:03 AM

Unable to save Bridge data!

08:58:44 AM - Line 867 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridgeDesignParam (SaveOrder object 393).

08:58:43 AM - Line 431 in source file .\DmBridgeCache.cpp.

Error updating database record set.

08:58:43 AM - Line 768 in source file .\DmBridgeDesignParam.cpp.

State:23000,Native:-193,Origin:[Sybase][ODBC Driver][Adaptive Server Anywhere]

4/19/2016 3:19:19 PM

HRS AASHTO

2071

**Complete Issue Information**

Integrity constraint violation: Primary key for table 'abw\_bridge\_design\_param' is not unique

FROM:mordoobadi DATE:2/16/2006 3:11:40 PM

This problem should be resolved in 5.4.

|                                             |
|---------------------------------------------|
| Issue ID: 7156                              |
| Subject: Virtis crashes in Stiffener Ranges |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 3/7/2006 5:46:51 PM  |
| Modified By: administrator     | 6/19/2008 4:28:03 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:19:19 PM

HRS AASHTO

2072

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7160.16172 | Resolved      | Problem copying Floorbeam Member Def |

### Description

FROM:jihnata DATE:3/7/2006 12:42:57 PM

1) Open BID 16, FLine GFS TrainingBridge1

2) Open Stiffener Ranges for S1 Stringer Member

3) Click either "Apply at Diaphragms" or "Stiffeners between Diaphragms", Virtis crashes

FROM:jihnata DATE:3/13/2006 10:08:22 AM

Fixed in version 5.5.0

Issue ID: 7160

Subject: Problem copying Floorbeam Member Def

Folder: /Virtis/Support Center

Primary Contact: Ihnata, Joseph

Submitted By: Ihnata, Joseph

3/9/2006 6:15:25 PM

Modified By: administrator

6/19/2008 4:28:03 PM

Priority: High

Category: Unknown

4/19/2016 3:19:20 PM

HRS AASHTO

2073

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 226771C-2005.bbd    |             |
|      | 3300750.bbd         |             |
|      | 1077030-2005.bbd    |             |

### Tasks

| Name       | Current State | Summary                                                                                                                |
|------------|---------------|------------------------------------------------------------------------------------------------------------------------|
| 7169.16163 | Resolved      | If you have multiple superstructure definitions, the span length for the last SD gets entered into the Bridge Alt. ... |

### Description

FROM:jihnat DATE:3/9/2006 1:11:03 PM

Copy a Floorbeam Member Def from BID 15 to BID 14, and the Materials and Shapes don't get copied also as they should.

Probably same problem copying Stringer Member Def.

FROM:jihnat DATE:3/9/2006 3:20:13 PM

Fixed for version 5.5.0

**Complete Issue Information**

Issue ID: 7169  
 Subject: If you have multiple superstructure definitions, the span length for the last SD gets entered into the Bridge Alt. ...

Folder: /Virtis/Support Center  
 Primary Contact: Ihnat, Joseph  
 Submitted By: McCaffrey, Brian 3/15/2006 1:07:03 PM  
 Modified By: administrator 6/19/2008 4:28:02 PM  
 Priority: High  
 Category: Bug

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |
| Goodrich, Brian | Resolved           | High     | Bug - BRASS |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Shyam Shah     | Louisiana DOTD   | sshah@dotdmail.dotd.state.la.<br>us | 225-379-1329 |

**Documents**

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Exterior_Girder.dat          |             |
|      | Exterior_Girder(105.000).OUT |             |
|      | Output.jpg                   |             |
|      | Steel Plate Girder.bbd       |             |
|      | Exterior_Girder.OUT          |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

|            |          |                                  |
|------------|----------|----------------------------------|
| 7174.16158 | Resolved | Web Bend Buckling Capacity Error |
|------------|----------|----------------------------------|

**Description**

FROM:jduray DATE:3/15/2006 9:05:31 AM

If you have multiple superstructure definitions, the span length for the last SD gets entered into the Bridge Alt. area for every SD on the bridge.

FROM:bmccaffrey DATE:Wednesday, March 15, 2006 11:46:53 AM

See attached 5.3.1 .bbd files. This is difficult to recreate in 5.4

FROM:jihnmat DATE:3/15/2006 2:02:23 PM

I was only able to save one of the attached bridges (3300750), but I was able to reproduce this in version 5.3.1

I then migrated 3300750 to 5.4.0 (Beta 6) and was not able to reproduce.

I'm changing project to Support Center and status to Resolved.

You may resubmit if you are able to reproduce in 5.4.0.

|                                           |
|-------------------------------------------|
| Issue ID: 7174                            |
| Subject: Web Bend Buckling Capacity Error |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Shah, Shyam        | 3/15/2006 6:21:06 PM |
| Modified By: administrator       | 6/19/2008 4:28:02 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:19:20 PM

HRS AASHTO

2076



**Complete Issue Information**

**Description**

FROM:snshah DATE:Wednesday, March 15, 2006 2:21:07 PM

I entered a steel plate girder into Virtis/Opis and it doesn't seem to be analyzing the web bend buckling correctly.

In LRFD code, AASHTO 6.10.1.9.2 Webs with Longitudinal Stiffeners the term ds is the distance from the longitudinal stiffener to the compression flange. However, in the positive moment region of my girder (amongst other locations), BRASS is calculating ds from the longitudinal stiffener to the bottom flange.

In the LFD code, AASHTO 10.48.6 Longitudinally Stiffened Girders it specifies that the longitudinal stiffener shall be placed at a distance of D/5 from the compression flange. However, in the positive moment region, it is again calculating depth of the longitudinal stiffener to the bottom flange.

I have attached the bbd file. Am I doing something wrong?

FROM:bgoodrich DATE:Monday, April 24, 2006 1:38:19 PM

Your longitudinal stiffener input looks fine. I am not able to exactly duplicate the results shown in the Output.jpg file. I was able to run the exterior girder, and some places in the output show the distance to the longitudinal stiffener as 120.375 inches. Please attach the following files to this incident:

- Exterior\_Girder.DAT
- Exterior\_Girder.OUT
- Exterior\_Girder(105.000).OUT

On a side note, F-Shape Barrier (PL-2) is defined as having a unit weight of 150 kcf instead of 0.15 kcf.

FROM:snshah DATE:Tuesday, April 25, 2006 2:59:02 PM

I updated the parapet unit weight to 0.15 kcf and re-ran the girder. I am still getting the errors. I have attached the files you have requested for your review. Thanks for your help.

FROM:bgoodrich DATE:Friday, June 16, 2006 11:21:04 AM

After reviewing the output files, it was determined that the issue of the longitudinal stiffener distance was corrected in a previous release of BRASS. Your GUI input is fine. Upgrading to Opis 5.3.1 or 5.4 will correct the problem.

Issue ID: 7175  
 Subject: Longitudinal Stiffener Schematic Error

Folder: /Virtis/Support Center  
 Primary Contact: Ihnat, Joseph  
 Submitted By: Shah, Shyam 3/15/2006 6:38:57 PM  
 Modified By: administrator 6/19/2008 4:28:01 PM

4/19/2016 3:19:21 PM

**HRS AASHTO**

2077

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | New     | High     | Bug         |
|                 | On Hold |          | Enhancement |
| Duray, Jim      | On Hold | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                               |
|------------|---------------|---------------------------------------------------------------------------------------|
| 7193.16139 | On Hold       | LFD Factors-allow blank values to considered as unchanged from AASHTO instead of as 0 |

### Description

FROM:snsah DATE:Wednesday, March 15, 2006 2:38:57 PM

I entered a steel plate girder into Virtis/Opis and the longitudinal stiffeners are not shown correctly on the schematic.

Over the second support, the longitudinal stiffener should extend along the bottom of the girder as specified in the longitudinal stiffener tab.

I have attached the bbd file and a few screen shots.

FROM:jhnat DATE:3/16/2006 9:14:21 AM

The screen shot shows plate stiffeners, but there are also angle stiffeners defined. Is this the intent?

FROM:snsah DATE:Thursday, March 16, 2006 10:52:46 AM

There are both plate stiffeners and angle stiffeners along the length of the girder, however over the second support there should be a plate stiffener which goes from the termination of the two angle stiffeners at the point of contraflexure in the second span to the start of the two angle stiffeners at the point of contraflexure in the third span. In the schematic, however, it shows the plate stiffener

4/19/2016 3:19:21 PM

HRS AASHTO

2078

**Complete Issue Information**

terminating at approximately 35 feet from the end of the two angle stiffeners located in the second span.

FROM:jihnmat DATE:4/4/2006 8:40:02 AM

This has already been fixed for version 5.4.0. Probably the same as incident 6430, item #2.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 7193                                                                                 |
| Subject: LFD Factors-allow blank values to considered as unchanged from AASHTO instead of as 0 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 3/20/2006 1:17:45 PM |
| Modified By: administrator     | 6/19/2008 4:28:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:3/20/2006 9:16:30 AM

From Tim Armbrecht:

Other suggested issues that should be addressed w/program enhancements.

1. When specifying modified LFD Load Factors, the Resistance\* Factors must be manually coded or they are assumed by Virtis to be 0.0. When any of the available load or strength reduction factors are left blank, they should be assumed to be unchanged from the AASHTO specification. \*This term should be changed to Strength Reduction in accordance with AASHTO LFD specifications since "Resistance" is not used there at all.
3. Utilization of rebar development length not possible in the analysis of concrete structures using

4/19/2016 3:19:21 PM

HRS AASHTO

2079

**Complete Issue Information**

BRASS.

4. For non-composite structures Stage 2 loads cannot be specified as uniformly distributed. AASHTO specifies that superimposed dead loads (SDL's) such as parapets & wearing surface are distributed uniformly to all beams w/o regard to composite or non-composite beam action. Virtis should be modified to allow system computation of uniformly distributed SDL's for non-composite structures.

FROM:jduray DATE:3/21/2006 9:32:19 AM

FROM:kkennelly DATE:5/1/2006 9:47:38 AM  
Item 3 now in 7279, Item 4 in 7280

FROM:hlee DATE:7/10/2006 9:21:44 AM  
Changed Project to Support Center.

Issue ID: 7203  
Subject: No message for Point of Interest off member

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 3/23/2006 2:03:53 PM  
Modified By: administrator 6/19/2008 4:27:59 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resolved | High     | Bug      |

**Contacts**

4/19/2016 3:19:21 PM

HRS AASHTO

2080

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7210.16122 | Resolved      | Print not available for Truss Schematic |

**Description**

FROM:jihnmat DATE:3/23/2006 9:58:26 AM

When you create a POI at a distance that is longer than the member, it gets added to the tree at Span 0.

There's no message that it's off the member. Seems to be same for any kind of member or POI.

FROM:jihnmat DATE:7/19/2006 11:21:41 AM

Fixed in version 5.5.0 (Beta Build 3), for Steel, PS/RC, Timber and BmDef POIs.

Issue ID: 7210

Subject: Print not available for Truss Schematic

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha

3/27/2006 5:13:11 PM

Modified By: administrator

6/19/2008 4:27:59 PM

Priority: High

Category: Enhancement

4/19/2016 3:19:21 PM

HRS AASHTO

2081

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
| Li, Xinmei      | Information Needed |          |          |
| Ihnat, Joseph   | Assigned           |          |          |
| Li, Xinmei      | Resolved           |          |          |
| Li, Xinmei      | Resolved           | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS5.bbd             |             |

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 7214.16118 | Resolved      | Structure typical section schematic doesn't show generic appurtenances |

### Description

FROM:kkennelly DATE:3/27/2006 1:12:27 PM

See bridge attached to VI7207. View Truss Schematic for Truss 1. File/Print is not available.

FROM:jduray DATE:4/12/2006 3:16:25 PM

We are using the substructure schematic (3D) graphics which does not have print capability.

FROM:kkennelly DATE:5/23/2006 11:02:38 AM

File/Print Setup is available so maybe we should remove that if Print is not to be available.

FROM:hlee DATE:7/10/2006 9:21:57 AM

Changed Project to Support Center.

FROM:hlee DATE:7/26/2006 3:27:49 PM

Changed Category to Bug based on e-mail received from Brian McCaffrey on 7/26/2006.

FROM:gbhanushali DATE:8/10/2006 10:21:42 AM

Printing is now implemented for pier 3D schematic and truss schematic windows. For these two windows , Print and Print Preview menu items will be active.

4/19/2016 3:19:21 PM

HRS AASHTO

2082

**Complete Issue Information**

As far as Print Setup goes, it is active in all virtis windows regardless of Print and Print Preview available or not.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 7214                                                                  |
| Subject: Structure typical section schematic doesn't show generic appurtenances |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Li, Xinmei       | 3/27/2006 7:51:42 PM |
| Modified By: administrator     | 6/19/2008 4:27:58 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:3/28/2006 3:47:31 PM  
Is this a bug or intentional? Did previous release show them?

FROM:jihnata DATE:3/28/2006 3:55:54 PM  
Please attach your bridge.

FROM:jihnata DATE:3/29/2006 9:21:49 AM  
The Pedestrian Barrier is only 1 inch wide and 3.5 inches tall. The Tutorial needs to be corrected.

FROM:xli DATE:3/29/2006 10:31:29 AM  
Updated PS2. Analysis results don't change.

## Complete Issue Information

Issue ID: 7218

Subject: Background of bitmap on Diaphragm Wizard is wrong color

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Kennelly, Krisha

3/28/2006 2:23:40 PM

Modified By: administrator

6/19/2008 4:27:58 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:19:22 PM

HRS AASHTO

2084



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                                              |
|------------|---------------|------------------------------------------------------------------------------------------------------|
| 7225.16107 | Resolved      | Defined strand positions shouldn't be cleared when Straight/Debonded radio button is selected again. |

### Description

FROM:kkennelly DATE:3/28/2006 10:21:56 AM

Structure Framing Plan Details: Diaphragm Wizard. Open for a bridge that has skewed supports (like Training Bridge 1). Pick one of the 2 top selections on the first screen of the wizard. Hit Next. Second screen of wizard shows the bitmap with a white background.

FROM:jihnata DATE:3/29/2006 9:02:57 AM

Fixed in 5.4 and 5.5

Issue ID: 7225

Subject: Defined strand positions shouldn't be cleared when Straight/Debonded radio button is selected again.

Folder: /Virtis/Support Center

Primary Contact: Bhanushali, Girish

Submitted By: Lee, Herman

3/29/2006 12:29:10 PM

Modified By: administrator

6/19/2008 4:27:58 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:22 PM

HRS AASHTO

2085

**Complete Issue Information**

|            |           |      |                        |
|------------|-----------|------|------------------------|
| Duray, Jim | New       | High | Bug                    |
|            | On Hold   |      |                        |
| Duray, Jim | New       | High | Maintenance            |
|            | Suspended |      |                        |
| Duray, Jim | Suspended | High | Maintenance            |
|            |           |      | Maintenance - Internal |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier       | Description                   |
|------|---------------------------|-------------------------------|
|      | 2006 Update Specification | Dependent Items in Virtis.doc |

**Tasks**

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 7235.16097 | Suspended     | Update Virtis/Opis for AASHTO LRFD 2006 interims |

**Description**

FROM:hlee DATE:3/29/2006 8:17:45 AM

To reproduce:

1. Open PCITrainingBridge1 BWS.
2. Open Span 1 Strand Layout window. The Strand Configuration Type is selected as Straight/Debonded with the strand positions defined and showing in the schematic.
3. Select Straight/Debonded again by clicking the Straight/Debonded radio button.
4. The defined strand positions are not showing in the schematic anymore.

FROM:jihnat DATE:5/3/2006 8:13:56 AM

Support Center is the project for bugs.

FROM:gbhanushali DATE:8/10/2006 5:52:17 PM

Fixed for 5.5.5?

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 7235                                            |
| Subject: Update Virtis/Opis for AASHTO LRFD 2006 interims |

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Duray, Jim      |                      |
| Submitted By: Kennelly, Krisha   | 3/29/2006 7:20:12 PM |
| Modified By: hlee                | 5/17/2010 2:04:44 PM |
| Priority: High                   |                      |
| Category: Maintenance - Internal |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Ihnat, Joseph   | Assigned  |          | Enhancement |
|                 | Suspended |          |             |
|                 | Resolved  |          |             |
| Ihnat, Joseph   | Resolved  | High     | Enhancement |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7241.16091 | Resolved      | add BridgeWareAdmin to install options |

### Description

FROM:kkennelly DATE:3/29/2006 3:18:17 PM

Attached document contains changes to Virtis/Opis for AASHTO LRFD 2006 interims.

In summary:

1. Superstructure Definition Wizard: Change in computation of transverse stiffener width
2. Factors - LRFD:
  - a. DC min factor for Strength IV is now 0.9, we have 1.5 in the library
  - b. Wording changed for categories in Concrete Resistance Factors.
3. PS Design Tool:
  - Equation 5.7.3.1.1-3 changed

4/19/2016 3:19:23 PM

HRS AASHTO

2087

## Complete Issue Information

FROM:kkennelly DATE:4/3/2006 12:09:44 PM

|                                                 |
|-------------------------------------------------|
| Issue ID: 7241                                  |
| Subject: add BridgeWareAdmin to install options |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 4/4/2006 2:01:11 PM  |
| Modified By: administrator     | 6/19/2008 4:27:56 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:pjensen DATE:Tuesday, April 04, 2006 10:01:12 AM  
please add the executable BridgeWareAdmin to the install options.

thanks

FROM:jduray DATE:4/10/2006 9:37:59 AM  
Do this for 5.5.

4/19/2016 3:19:23 PM

HRS AASHTO

2088

**Complete Issue Information**

FROM:jihnat DATE:4/10/2006 10:00:02 AM  
Is there a reason that it's not already part of the installation?

FROM:hlee DATE:7/10/2006 9:22:44 AM  
Changed Project to Support Center.

FROM:jihnat DATE:11/17/2006 12:48:11 PM  
This was done for 5.5.0 Release.

Issue ID: 7242  
Subject: Allow user to enter more than one range of top flexural reinforcement for each span in Std Engine

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 4/5/2006 2:15:15 PM  
Modified By: hlee 6/10/2009 2:13:38 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 7243.16089 | Resolved      | Revisions to Training Examples |

### Description

FROM:hlee DATE:7/10/2006 10:10:23 AM

Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM: Herman Lee DATE: 6/10/2009 10:05:29 AM Eastern Daylight Time

In Virtis Std Engine, only one range of negative flexural reinforcement is allowed for a composite steel girder.

Issue ID: 7243

Subject: Revisions to Training Examples

Folder: /Virtis/Support Center

Primary Contact: Li, Xinmei

Submitted By: Goodrich, Brian

4/7/2006 2:43:46 PM

Modified By: administrator

6/19/2008 4:27:56 PM

4/19/2016 3:19:23 PM

HRS AASHTO

2090

## Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

## History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Enhancement |
|                    | Suspended |          |             |
| Ordoobadi, Mehrdad | Assigned  |          | Bug         |
|                    | Resolved  |          |             |
| Ordoobadi, Mehrdad | Resolved  | High     | Bug         |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                          |
|------------|---------------|--------------------------------------------------------------------------------------------------|
| 7247.16085 | Resolved      | Filter list of bridges based on attribute texts should perform the same for different databases. |

## Description

FROM:bgoodrich DATE:Friday, April 07, 2006 10:44:18 AM

The following issues were found during the Florida training (April 4-7) in the training manuals:

1. The BWS tree needs to be updated under the BRIDGE ALTERNATIVES folder, so it says SUPERSTRUCTURE instead of STRUCTURE. See pages STL1-20, RC2-7, PS1-12, and RC5-6.
2. The concrete material window on page PS1-5 needs to match the corresponding window in the LIB1 example on page LIB1-5.
3. On page PS1-32, the text at the top of the page discusses a "Modify" button that no longer exists. The text also says to enter the harp point location and close the window prior to selecting the Left button and selecting the strand layout. The harp point location is only saved to memory when one or more strands are harped.

FROM:jduray DATE:4/10/2006 9:39:29 AM

We should fix these issues when we update the examples for 5he 5.5 release.

FROM:xli DATE:3/2/2007 3:29:57 PM

4/19/2016 3:19:23 PM

HRS AASHTO

2091

**Complete Issue Information**

- 1. The BWS tree is updated for PS1,PS2,PS3,PS5,PS6,STL1,STL2,STL5,FS1,FS2,FS4
- 2. Updated PS1 to match LIB1
- 3. fixed for 5.5 update

|                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|
| Issue ID: 7247                                                                                            |
| Subject: Filter list of bridges based on attribute texts should perform the same for different databases. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Lee, Herman           | 4/12/2006 6:59:10 PM |
| Modified By: administrator          | 6/19/2008 4:27:56 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:4/12/2006 2:55:09 PM

Currently:

For Sybase Adaptive Server Anywhere and MSDE/Microsoft SQL Server databases, the attribute texts entered to filter the list of bridges are case insensitive. For Oracle database, the attribute texts entered to filter the list of bridges are case sensitive.

FROM:mordoobadi DATE:8/16/2006 12:17:25 PM

Fixed in 5.5 Beta 4.

The filtering is now case insensitive.



## Complete Issue Information

Issue ID: 7249

Subject: Bridge rating should continue even there is no superstructure definition assigned to some of the superstructure alternatives.

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Lee, Herman

4/12/2006 8:44:17 PM

Modified By: administrator

6/19/2008 4:27:56 PM

Priority: High

Category: Bug

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | On Hold  |          |          |
|                    | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Resubmit |          |          |
|                    | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

4/19/2016 3:19:24 PM

HRS AASHTO

2093

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 7256.16078 | Resolved      | Analysis Settings Template window doesn't respond to arrow keys |

### Description

FROM:hlee DATE:4/12/2006 4:36:18 PM  
Currently, rating will not be performed.

Unable to build the list of components to be analyzed.  
- Please assign a Structure Definition to Structure Alternative.  
No Structure Definitions assigned to Structure Alternative.

FROM:mordoobadi DATE:7/5/2006 12:26:35 PM  
Fixed for 5.5 Beta 3.

FROM:jihnat DATE:8/29/2006 8:37:28 AM  
What was the original intent of this request? Now the rating does not continue and no error message is displayed.

FROM:jduray DATE:9/1/2006 7:56:10 AM  
If there is a superstructure without a superstructure alt or without a structure definition assigned to the alt the analysis should issue a message (to be displayed when finished with all analyses) and continue to analyze other completed superstructures. The tree on the left of the progress dialog should show all of the components that should be analyzed. Those that were successful should be shown with a checkmark and those unable to be analyzed should be shown with an x.

FROM:mordoobadi DATE:9/6/2006 10:17:00 AM  
Implemented Jim's suggestion above.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 7256                                                           |
| Subject: Analysis Settings Template window doesn't respond to arrow keys |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 4/14/2006 7:57:51 PM |
| Modified By: administrator     | 6/19/2008 4:27:55 PM |

4/19/2016 3:19:24 PM

HRS AASHTO

2094

**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: Bug  |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 7258.16076 | Resolved      | Box Beam Distribution |

**Description**

FROM:jihnat DATE:4/14/2006 3:55:08 PM

The Analysis Settings Template window will respond when the selection is changed by clicking with the mouse,

but not when the keyboard arrow keys (up/down) are used.

A different or additional message needs to be handled.

FROM:jihnat DATE:5/25/2006 1:33:58 PM

Fixed in version 5.5.0

## Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 7258                 |
| Subject: Box Beam Distribution |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kelley, Robert      | 4/17/2006 2:10:17 PM |
| Modified By: administrator        | 6/19/2008 4:27:55 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:4/17/2006 10:08:45 AM  
Received via email from Robert Kelley <KELLEYS@michigan.gov>

When modeling a side by side prestressed concrete box beam superstructure, I had Virtis compute the live load distribution factor. I used S/11 distribution and I could not verify that using the 16th edition of the AASHTO Std. Specs. I would have used the formulas in 3.23.4.3 and got something much different.

Question 1: May we assume that for side by side box beam superstructures, that we will have to compute the distribution factors manually and input them? I believe that answer would be yes, else how would Virtis differentiate between the side by side design vs. spread box beams?

Question 2: Will Virtis be revised for the 17th edition of the Std. Specs?

4/19/2016 3:19:24 PM

HRS AASHTO

2096

### Complete Issue Information

FROM:kkennelly DATE:4/17/2006 12:53:00 PM

Question 1: Virtis can only determine spread vs. adjacent boxes if you have member alternatives created for all of your girders and a ps box shape assigned to each member alternative in the Beam Details window.

If you don't have all of your member alternatives created or don't have a ps box shape assigned in each member alt's Beam Details window, Virtis assumes that the boxes are spread and uses AASHTO 3.28 to compute the distribution factor.

Incident 7219 addresses this problem. Version 5.5 will check if the mbr alts on either side of the girder in question have ps box shapes assigned to them when the distribution factors are computed. If the adjacent mbr alts don't exist or don't have beam shapes assigned to them, Virtis will issue a message that it cannot determine if spread or adjacent boxes exist and the dist factor will not be computed.

Question 2: Version 5.5 of Virtis will follow the 17th edition of the Specs. However, in our review of the Virtis user interface we did not find anything that actually has to be updated for the 17th edition. Is there a particular item in Virtis that you think must be updated for the 17th edition?

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 7261                                                 |
| Subject: Longitudinal Stiffener Incorrectly Shown on Schematic |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Koenig, David    | 4/20/2006 1:44:48 PM |
| Modified By: administrator     | 6/19/2008 4:27:55 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Ihnat, Joseph   | Assigned  |          | Bug      |
|                 | Duplicate |          |          |
| Ihnat, Joseph   | Duplicate | High     | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

4/19/2016 3:19:25 PM

HRS AASHTO

2097

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L06974(1).bbd       |             |
|      | Test1.bmp           |             |
|      | ShapeSelection.bmp  |             |
|      | Test.bmp            |             |

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 7274.16060 | Closed        | Shape Selection Dialog. |

**Description**

FROM:dkoenig DATE:Thursday, April 20, 2006 9:44:48 AM

We have stumbled onto a problem with the girder schematic for plate girders. When entering longitudinal stiffeners, one of the options is to enter the location as a percentage of the web depth. The number should be entered as a percentage (i.e. whole number). When you enter the value as a whole number, the schematic does not display the stiffener correctly. In the attached bbd file, notice that over the intermediate supports, the longitudinal stiffener is showing on the schematic as way above the girder. The first longitudinal stiffener was input using a distance from the flange, and it displays correctly. This can be found on the first member alternative in the attached file.

FROM:jihnath DATE:5/2/2006 2:55:51 PM  
Similar to 7030?

FROM:jihnath DATE:5/3/2006 7:35:05 AM  
The workaround is to enter the percentage as a fraction between 0 and 1.

FROM:jihnath DATE:5/3/2006 7:44:44 AM  
Same as 7030 (#2).

FROM:dkoenig DATE:Tuesday, May 09, 2006 2:17:55 PM  
All this workaround does is make the schematic look correct. If you do it, then the BRASS export file will not produce the correct location for the longitudinal stiffener. This could lead to analysis errors. Because of this, the workaround should probably not be used. The code that is creating the schematic for these situations needs to be corrected so that it will properly display the stiffener.

FROM:jihnath DATE:5/9/2006 3:40:23 PM  
My bad. You are correct. Don't use the workaround.

|                                  |
|----------------------------------|
| Issue ID: 7274                   |
| Subject: Shape Selection Dialog. |

|                                 |
|---------------------------------|
| Folder: /Virtis/Support Center  |
| Primary Contact: Ihnath, Joseph |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Lee, Herman  | 4/27/2006 1:31:51 PM |
| Modified By: administrator | 6/19/2008 4:27:54 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 7276.16058 | Resolved      | Cancelling "Create Routing Results File" dialog should not ... |

### Description

FROM:hlee DATE:4/27/2006 9:16:50 AM

Attached 3 screen captures. 1 for the Shape Selection Dialog and 2 for the Shapes.

Compare the information in the Shape Selection Dialog with the Shapes:

1. The second Shape name is not exactly the same.
2. If dimension is not entered in the shape, the Shape Selection Dialog shows garbage numbers.

FROM:hlee DATE:4/28/2006 1:07:27 PM

Changed project to support since it's a existing bug.

FROM:jihnata DATE:5/3/2006 8:13:15 AM

Support Center is the project for bugs.

FROM:jihnata DATE:5/3/2006 10:24:38 AM

1) This is apparently by design ( in function CSysSteelShapeItem::AssignNewShapeName())

4/19/2016 3:19:25 PM

HRS AASHTO

2099

**Complete Issue Information**

FROM:hlee DATE:1/12/2007 9:37:39 AM  
2 is resolved for 5.6 Release.

FROM:xli DATE:2/5/2007 2:51:41 PM  
The steel shape selection dialog doesn't show any agency defined shapes in the selection list.

FROM:xli DATE:2/5/2007 4:24:27 PM  
Taking out the default shape designation solve the above problem.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 7276                                                          |
| Subject: Cancelling "Create Routing Results File" dialog should not ... |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Lee, Herman          | 4/27/2006 2:57:15 PM |
| Modified By: administrator         | 6/19/2008 4:27:54 PM |
| Priority: High                     |                      |
| Category: Bug                      |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:4/27/2006 10:48:48 AM  
enable the "View Routing Results File" button. If you click on the "View Routing Results File" button, File Explorer will be opened.

FROM:hlee DATE:4/28/2006 1:09:09 PM  
Changed project to support since it's a existing bug.

FROM:kkennelly DATE:5/16/2006 2:01:14 PM  
Fixed for version 5.5.

4/19/2016 3:19:25 PM

HRS AASHTO

2100



## Complete Issue Information

FROM:jihnat DATE:7/11/2006 9:28:01 AM  
Support Center is the project for bugs.

Issue ID: 7283

Subject: Floorbeam Definition Loads not being copied

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Ihnat, Joseph

5/4/2006 6:31:55 PM

Modified By: administrator

6/19/2008 4:27:53 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Accepted |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Bug      |

4/19/2016 3:19:26 PM

HRS AASHTO

2101

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrrecht | Illinois DOT     | tim.armbrrecht@illinois.gov         | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier         | Description   |
|------|-----------------------------|---------------|
|      | 106__WPG-Comp_.STS          |               |
|      | PDLCErrror-0820351_V540.xml | Version 5.4.0 |
|      | PDLCErrror-0820351_V550.xml | Version 5.5.0 |
|      | PDLCErrror-0820351.xml      |               |
|      | EngineFiles.LST             |               |
|      | 106__WPG-Comp_.dat          |               |
|      | 106__WPG-Comp_.log          |               |
|      | 106__WPG-Comp_.OUT          |               |
|      | PDLCErrror-0820351.bbd      |               |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 7284.16050 | Resolved      | Strange results when point of DL contraflexure set to specific value |

### Description

FROM:jihnata DATE:5/4/2006 2:29:04 PM

- 1) Open BID 13 and BID 15
- 2) Copy Floorbeam Def "Floorbeam 1" from BID 15 to BID 13
- 3) The Floorbeam Definition Load does not get copied (Uniform, SIP Forms)

FROM:jduray DATE:5/8/2006 10:58:40 AM

Is this new or did this problem exist in 5.3 and earlier?

FROM:kkennelly DATE:5/10/2006 8:56:34 AM

This existed in version 5.2

FROM:kkennelly DATE:5/10/2006 10:39:19 AM

Fixed for version 5.5. The problem was the assignment manager for the load cases was not being called in the UI before the floorbeam and stringer defs were copied.

FROM:jihnata DATE:5/31/2006 3:52:36 PM

OK in 5.5.0 Alpha Build 1.

4/19/2016 3:19:26 PM

HRS AASHTO

2102

### Complete Issue Information

Issue ID: 7284

Subject: Strange results when point of DL contraflexure set to specific value

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Armbrecht, Tim

5/5/2006 1:34:47 PM

Modified By: administrator

6/19/2008 4:27:53 PM

Priority: High

Category: Bug - Export 1

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 33I00750065.bbd     |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 7285.16049 | Resolved      | Failure of shear connectors |

### Description

FROM:tarmbrecht DATE:Friday, May 05, 2006 9:34:49 AM

In the attached model, the rating factors drop substantially when the point of DL contraflexure in span 1 is set to 76.62 (compared to 76.6, 76.61 or 76.63). The controlling rating factor when the value is 76.6, 76.61 or 76.63 is 1.638. When the value is set to 76.62 (and only that value), the rating factor is 0.995.

FROM:bgoodrich DATE:Monday, January 29, 2007 2:43:56 PM

I ran this bridge with version 5.3.1 and 5.5 with the various contraflexure percents for span 1. I get the same controlling rating factor (~1.6) for all cases, which is for the design lane. Is this problem still

4/19/2016 3:19:26 PM

HRS AASHTO

2103

**Complete Issue Information**

occurring? If so, please attach the BRASS data files that are generated.

FROM:tarmbrecht DATE:Tuesday, February 27, 2007 5:06:32 PM

Brian, we still appear to run into the same problems as before. I have attached a new xml file and the data output files.

FROM:bgoodrich DATE:Wednesday, February 28, 2007 4:25:46 PM

Tim's tolerance settings are:

|      |           |
|------|-----------|
| Unit | Tolerance |
| ft   | 0.01      |
| In   | 0.125     |

Using these tolerances, I was able to duplicate Tim's low rating. Based on the BRASS files, it is clear that the source of the problem is in the generation of the STEEL-GIRDER-CONTROL command for one of the ranges. The use of the tolerances in the export is affecting how the export determines if one of the ranges is composite or not. For the above tolerances one of the ranges is non-composite when it was composite in previous versions.

FROM:bgoodrich DATE:Wednesday, March 14, 2007 1:12:39 PM

The export creates an array of internal cross section change points. Shear connector ranges and contraflexure locations are among the items that make up this array. The end of the shear connector range was 202.5938 ft and the contraflexure location at 76.62% of span 1 was 202.604044 ft. One tolerance was used to determine if these points were essentially the same point and one of the points was removed. Another tolerance was used to determine if a range was in a composite region or not. The export was revised to use the same tolerance for both. Fixed for version 5.6.

The 76.62% was probably supposed to be exactly where the shear connector range ended, but the percentage was just rounded. The longer the span, the more accurate the contraflexure location percent must be.

|                                      |
|--------------------------------------|
| Issue ID: 7285                       |
| Subject: Failure of shear connectors |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ilnat, Joseph       | 5/5/2006 4:19:00 PM  |
| Modified By: administrator        | 6/19/2008 4:27:53 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 7293.16041 | Suspended     | Make it easier to Re-Register the Software |

### Description

FROM:jihnat DATE:5/5/2006 12:17:40 PM  
Received via email:

We here at the Tennessee DOT are experiencing a problem with the subject software as described below:

1. We are getting failure of shear connectors for a steel girder bridge which is a 2-span bridge, each span = 125.65 feet. When checking the specification check detail for the failure, the input value for  $E_c$ , the modulus of elasticity of concrete, is shown as 2.93 ksi for the exterior girders and 293.82 ksi for the interior girders. We input  $E_c$  as 3320.56 ksi. The low values of  $E_c$  that the program is using is resulting in an exceptional number of stud shear connectors required, as many as 2485 connectors over a distance of about 75 feet.

2. A second problem has been encountered which also has to do with the stud shear connectors. We tried entering a concrete strength different than what was used in paragraph 1 above. In paragraph 1  $f'_c$  was entered at 3.0 ksi. When we tried  $f'_c$  at 5.0 ksi, the specification check detail showed  $f'_c$  at 3.0, ignoring the 5.0 ksi entry. And again  $E_c$  was shown 2.93 ksi.

Attached is the file created by Opis/Vertis. Thank you in advance for your help on this matter.

Jim Pulley  
Tennessee Department of Transportation  
1100 J. K. Polk Building  
Nashville, TN 37243-0339  
TELE: 615-532-3816  
FAX: 615-532-7745

FROM:kkennelly DATE:5/8/2006 10:50:24 AM

4/19/2016 3:19:26 PM

HRS AASHTO

2105

**Complete Issue Information**

1. BRASS LRFD does not accept the modulus of elasticity of the deck concrete as an input value. The following warning message is issued in the log file created when the Opis data is exported to the BRASS input file:

WARNING (Medium):

For steel structures, there is no BRASS command parameter for directly inputting Ec for the deck. BRASS computes Ec as Es / n. The modular ratio could be set accordingly to obtain the correct Ec.

The modular ratio for the deck is entered on the Deck Profile window. For member G1, the first modular ratio entered on that window is "9897". That n value is why the Ec is computed as 2.93 ksi. For member G2, the first modular ratio is entered as "98.7". That is why its Ec is computed as 293 ksi.

2. I am not able to reproduce the problem of the 3 ksi being used instead of the 5 ksi. The Ec of 2.93 ksi is due to the value of n as described in item 1.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 7293                                      |
| Subject: Make it easier to Re-Register the Software |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/9/2006 4:04:55 PM  |
| Modified By: administrator     | 6/19/2008 4:27:52 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:19:27 PM

HRS AASHTO

2106

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Tuesday, May 09, 2006 12:04:56 PM

With both Virtis / Opis Superstructure and Opis Substructure installed on one PC it is tedious to say the least switching back and forth (register.bat)

We need three things added (fixed)

1. A more elegant way to register/re-register either piece of software.
2. The default in register.bat should be "/s" and not "%1"
3. The register.bat file should have an icon assigned to it (not a yucky windows default one) and placed on workspace just like the other program icons

FROM:jduray DATE:5/15/2006 11:17:57 AM

I will see what we can do to make this more friendly. Keep in mind though that we are asking that they not be installed on the same PC as V/O Superstructure. We don't want users confused by having to register.

FROM:dteal DATE:Monday, May 15, 2006 2:36:16 PM

That is exactly the problem – user will be confused.

How many designers have more than one pc available to them? I bet not very many. Every one of our designers have one pc and only one pc. If they are to make use of V/O superstructure and Opis substructure they have to co-exist on one pc -

FROM:hlee DATE:7/10/2006 9:22:56 AM

Changed Project to Support Center.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7294                                  |
| Subject: Allowable Shear Stress of Plate Girder |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Ha, Binh           | 5/12/2006 7:33:54 PM |
| Modified By: administrator       | 6/19/2008 4:27:52 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:19:27 PM

HRS AASHTO

2107

### Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Goodrich, Brian | Assigned  |      | Bug - BRASS |
|                 | Suspended |      |             |
| Duray, Jim      | New       | High | Unknown     |
|                 | Closed    |      |             |
| Duray, Jim      | Closed    | High | Unknown     |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Admin Error.JPG     |             |

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7361.15973 | Closed        | Can not Launch Bridgeware Administrator |

### Description

FROM:bha DATE:Friday, May 12, 2006 3:33:54 PM

According to Article 10.34.4.2 when the stiffener spacing exceeds the maximum spacing which is  $3 * D$  ( web depth) the allowable shear capacity should be calculated based on equation 10-25 instead of equation 10-26 of AASHTO 10.34.4.1.

For example girder G5 of spans 6&7 (attached .bbd file), at 1.0 tenths point the transverse stiffener input spacing is 177.5" > 171" (= 3D (max. spacing)), then the allowable shear stress computed from equation 10-25 with value of 7138 psi (not 10347 psi from equation 10-26).

Please investigate.

FROM:bgoodrich DATE:Friday, June 16, 2006 1:49:41 PM  
This issue has been forwarded to WYDOT for consideration.

FROM:bgoodrich DATE:Monday, March 05, 2007 5:47:49 PM  
E-mail from Mike Watters (WYDOT):

Since this is an ASD problem, we do not want to expend funds for this issue. If we get funding to fix any ASD problems, we will address it then.

Micheal J. Watters, P.E.

4/19/2016 3:19:27 PM

HRS AASHTO

2108



**Complete Issue Information**

Principal Bridge Engineer  
 Special Assignments Squad

|                                                  |
|--------------------------------------------------|
| Issue ID: 7361                                   |
| Subject: Can not Launch Bridgeware Administrator |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/5/2006 8:40:09 PM  |
| Modified By: administrator     | 6/19/2008 4:27:47 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Monday, June 05, 2006 4:40:21 PM

I cannot launch the BridgeWare Administrator in 5.4. This is the message:

Unable to locate Component

This application has failed to start because abscon.dll was not found. Reinstalling the application may fix this problem.

I reinstalled – it did not fix it.

Abscond.dll is in the installed directory.

FROM:dteal DATE:Monday, June 05, 2006 4:41:16 PM

jpeg attached

FROM:dteal DATE:Monday, June 05, 2006 5:29:14 PM

4/19/2016 3:19:27 PM

HRS AASHTO

2109

**Complete Issue Information**

NEVER MIND

I didn't have the admin file in my C dirve - it was a shortcut over our network - it works just fine now

FROM:jhnat DATE:6/6/2006 8:05:

|                                            |
|--------------------------------------------|
| Issue ID: 7380                             |
| Subject: Windows in Configuration Browser. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 6/7/2006 2:54:42 PM  |
| Modified By: administrator     | 6/19/2008 4:27:45 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status    | Priority    | Category |
|-----------------|-----------|-------------|----------|
| Duray, Jim      | New       | High        | Bug      |
|                 | On Hold   |             |          |
|                 | Suspended | Enhancement |          |
| Ihnat, Joseph   | Assigned  |             | Bug      |
|                 | Resolved  |             |          |
| Ihnat, Joseph   | Resolved  | High        | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:19:27 PM

HRS AASHTO

2110

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7388.15946 | Resolved      | WARNING LRFD live load distribution ... |

### Description

FROM:hlee DATE:6/7/2006 10:43:16 AM

1. Same window shouldn't be able to open more than one time. For example, double-click on System Defaults will open a System Defaults window. If you double-click on System Defaults again, it will open another System Defaults window. It should set focus on the first System Defaults window instead.
2. When you close Configuration Browser, child windows should also be closed. For example, if you close Configuration Browser window when the System Defaults window is opened, the System Defaults windows will still be there after Configuration Browser is closed.

FROM:jhnat DATE:8/15/2006 2:42:29 PM

Fixed in 5.5 and 5.6 code.

For consistency, I made #2 change to Library Explorer also.

|                                                  |
|--------------------------------------------------|
| Issue ID: 7388                                   |
| Subject: WARNING LRFD live load distribution ... |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 6/7/2006 7:11:47 PM  |
| Modified By: administrator        | 6/19/2008 4:27:45 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:28 PM

HRS AASHTO

2111

### Complete Issue Information

|                    |          |      |         |
|--------------------|----------|------|---------|
| Duray, Jim         | New      | High | Unknown |
| Ordoobadi, Mehrdad | Assigned |      | Bug     |
| Duray, Jim         | New      | High | Bug     |
| Lee, Herman        | Assigned |      |         |
|                    | Resolved |      |         |
| Lee, Herman        | Resolved | High | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI7389.xml          |             |

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 7389.15945 | Resolved      | Unable to export varied Concrete Tee cross section properties |

### Description

FROM:jihnmat DATE:6/7/2006 3:10:52 PM  
Received via email:

In saving a bridge description, I get the following warning for each defined beam:

Warning: LRFD live load distribution factors not defined.  
Warning: LRFD live load distribution factors not defined.

QUESTION ONE: I thought that the underlying BRASS engine calculated the distribution factors from the described beam, deck, and haunch.

--Why is Virtis/Opis warning me about the absence of LRFD Live Load Distribution Factors input?

QUESTION TWO: Previous savings had only reported this LRFD warning in ONE LINE. Now, the system repeats it (twice for every beam).

--Is this evidence there is some kind of inadvertent duplication somewhere or is it a minor bug?

Steven.Maberry@state.nm.us

FROM:mordoobadi DATE:6/12/2006 11:46:39 AM

4/19/2016 3:19:28 PM

HRS AASHTO

2112

**Complete Issue Information**

Krishna, could you please respond to this incident.

FROM:kkennelly DATE:6/28/2006 8:04:17 AM

QUESTION ONE:

--Why is Virtis/Opis warning me about the absence of LRFD Live Load Distribution Factors input?

ANSWER: The BRASS LRFD engine does compute the live load distribution factors for you but Virtis/Opis warns you of their absence because other engines may be hooked up to Virtis/Opis in the future and they may require these distribution factors. The Virtis/Opis user interface is meant to be independent of the analysis engines hooked up to it.

QUESTION TWO:

--Is this evidence there is some kind of inadvertent duplication somewhere or is it a minor bug?

ANSWER: I think the repeated warning is a minor bug. We will investigate.

FROM:kkennelly DATE:6/28/2006 8:31:07 AM

QUESTION TWO will be resolved as part of incident 7472 for the 5.5 release later this summer.

FROM:kkennelly DATE:6/28/2006 8:35:20 AM

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 7389                                                         |
| Subject: Unable to export varied Concrete Tee cross section properties |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Li, Xinmei       | 6/8/2006 2:36:58 PM  |
| Modified By: administrator     | 6/19/2008 4:27:45 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7411.15923 | Suspended     | ms sqlserver- VO using windows and LDAP authentication |

**Description**

FROM:xli DATE:6/8/2006 10:30:38 AM

Analyze attached bridge, Structure Definition #1, G1, Exterior 36" RC Tee Beam. In exported data file, all section properties are zero.

FROM:xli DATE:6/8/2006 10:40:08 AM

Unable to open the framing plan schematic after analysis, was able to before analysis.

FROM:hlee DATE:6/9/2006 8:09:57 AM

Cross section dimensions (not properties) were zeros due to uninitialized values. Framing plan schematic crashed due to Virtis Std Engine struck in the analysis. Resolved for 5.5 Beta 1.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7411                                                  |
| Subject: ms sqlserver- VO using windows and LDAP authentication |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jensen, Paul     | 6/13/2006 3:25:34 PM |
| Modified By: hlee              | 7/17/2014 3:35:52 PM |
| Priority: High                 |                      |

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Unknown        |
| Kennelly, Krisha | Assigned |          | Bug            |
| Goodrich, Brian  |          |          | Bug - Export 1 |
|                  | Resolved |          |                |
|                  | Closed   |          |                |
| Goodrich, Brian  | Closed   | High     | Bug - Export 1 |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Duplicate Commands.xml |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 7414.15920 | Closed        | Duplicate Commands with POI Wizard |

### Description

FROM:pjensen DATE:Tuesday, June 13, 2006 11:25:34 AM  
Pontis is supporting Windows authentication. When will VO support this process?

FROM: Herman Lee DATE: 7/17/2014 11:34:13 AM Eastern Daylight Time  
Duplicate of Incident 7411.

**Complete Issue Information**

Issue ID: 7414  
Subject: Duplicate Commands with POI Wizard

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 6/13/2006 4:16:58 PM  
Modified By: administrator 6/19/2008 4:27:43 PM  
Priority: High  
Category: Bug - Export 1

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, June 13, 2006 12:16:58 PM  
Xml attached  
Using the POI Wizard to generate all POI's. Analyzed at the generated POI's plus 10th points. Opis (brass errors) tells me I have duplicate commands.  
Virtis is OK with the same input file.

FROM:dteal DATE:Tuesday, June 13, 2006 1:16:02 PM  
In LRFD I found that it is generating POI's too close causing some errors.

FROM:dteal DATE:Tuesday, June 13, 2006 1:31:26 PM  
If I delete POI's that appear very close - Opis will run to completion

FROM:jduray DATE:6/13/2006 1:37:36 PM  
Seems we need to look for POI too close (need a tolerance and it may differ between engines)

4/19/2016 3:19:29 PM

HRS AASHTO

2116



## Complete Issue Information

FROM:kkennelly DATE:7/12/2006 9:41:15 AM

1. I don't think the Wizard should use a tolerance from an engine when it generates the points of interest. The wizard should simply follow the spec when it generates the POI's. The bridge data should be independent of the engine being used. Each engine should use its own tolerance when generating the commands for its input file.

2. Currently when Virtis/Opis generates the cross section ranges, it merges adjacent ranges based on the user tolerance input on the Systems Default Window. That is working correctly in this example.

3. The problem is the CONC-FATIGUE, CONC-AXIAL-LOAD and OUTPUT-INTERMEDIATE commands generated by the BRASS LRFD export for this problem. The export generates these commands for distances to the fourth decimal place but then BRASS LRFD complains that commands are repeated for distances using the second decimal place.

Partial commands generated by export:

CONC-FATIGUE 101.5312,  
CONC-FATIGUE 101.5318,

Then the following error is issued:

\*\* ERROR: The CONC-FATIGUE command has already been entered for Point of Interest 101.53.

Check the input file for a duplicate command.

FROM:kkennelly DATE:7/12/2006 10:44:38 AM

Project changed from beta testing to Support Center since this an existing bug.

FROM:bgoodrich DATE:Thursday, October 12, 2006 11:15:38 AM

The export was revised to ignore duplicate points of interest that were generated by Virtis/Opis. If user-defined duplicates are detected, an error is still issued. The attached bridge is successfully exported and analyzed for both LFD and LRFD. Fixed for 5.5.

FROM:dteal DATE:Tuesday, June 19, 2007 1:47:27 PM

Accepted

Issue ID: 7417

Subject: NSG enhancement - store influence surfaces (lines for 2D) for future use

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Armbrecht, Tim

6/13/2006 6:59:17 PM

Modified By: hlee

7/26/2011 4:41:32 PM

Priority: High

Category: Enhancement

## History

4/19/2016 3:19:29 PM

HRS AASHTO

2117

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
|                 | Closed    |          |             |
| Duray, Jim      | Closed    | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 7421.15913 | Closed        | Provide Schematic for NSG Vehicle Description |

### Description

FROM:tarmbrecht DATE:Tuesday, June 13, 2006 2:59:35 PM

It would be a good idea to store the influence lines and surfaces. Once they are generated, they should be good for that bridge until there is a change (like deterioration). The next time a user wants to run a superload over the bridge, the analysis should go a lot faster. Since it can take up to an hour to analyze a superload over a 5 span bridge, a user would probably be willing to put up with this kind of delay once.

FROM:hlee DATE:7/10/2006 9:27:28 AM  
Changed Project to Support Center.  
Incident entered for 5.5 Beta.

FROM: Herman Lee DATE: 7/26/2011 12:39:32 PM Eastern Daylight Time  
Large estimate based on storing FE results.

## Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 7421                                         |
| Subject: Provide Schematic for NSG Vehicle Description |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/14/2006 2:24:54 PM |
| Modified By: administrator     | 6/19/2008 4:27:42 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
|                 | Assigned |          | Enhancement |
| Duray, Jim      | Assigned | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 7429.15905 | Assigned      | Compute LFD Dist. Factor for Non-Splayed Girders in a Splayed Girder System |

## Description

FROM:dteal DATE:Wednesday, June 14, 2006 10:24:54 AM

I find input for the wheels/axels confusing. It would be nice to have a schematic that would allow use to view the user defined vehicle entered. A way to verify that what we entered is what we think we entered.

4/19/2016 3:19:29 PM

HRS AASHTO

2119

**Complete Issue Information**

FROM:hlee DATE:7/10/2006 9:24:08 AM  
Changed Project to Support Center.

FROM:jihnate DATE:6/18/2007 9:55:02 AM  
TF expanded this to include standard gauge vehicles.

FROM:dteal DATE:Thursday, October 18, 2007 9:28:34 AM  
Isn't this resolved in 5.6 Beta(X)

FROM:hlee DATE:10/18/2007 9:33:37 AM  
Resolved for 5.6 release.

FROM:dteal DATE:Wednesday, October 24, 2007 10:08:00 AM  
Accepted

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 7429                                                                       |
| Subject: Compute LFD Dist. Factor for Non-Splayed Girders in a Splayed Girder System |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/14/2006 6:04:44 PM |
| Modified By: administrator     | 6/19/2008 4:27:42 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, June 14, 2006 2:04:44 PM

4/19/2016 3:19:30 PM

HRS AASHTO

2120

**Complete Issue Information**

5 Girders system

Girder line 1-4 are parallel and girder 5 is splayed. I should be able to use the compute button in Virtis to find the Dist. Factors for girder 1-3. A window pops up not allowing the compute button for any girders as long as there is at least one splayed girder.

FROM:dteal DATE:Thursday, June 15, 2006 8:18:38 AM

FROM:hlee DATE:7/10/2006 9:24:37 AM  
Changed Project to Support Center.

FROM:hlee DATE:7/10/2006 9:27:05 AM  
Incident entered for 5.5 Beta.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 7440                                      |
| Subject: Expand/Collapse Branch in Library Explorer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 6/15/2006 1:22:41 PM |
| Modified By: administrator     | 6/19/2008 4:27:41 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:19:30 PM

**HRS AASHTO**

2121

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Suspended |      | Enhancement |
| Duray, Jim       | New       | High | Unknown     |
| Kennelly, Krisha | Assigned  |      | Enhancement |
|                  |           |      | Bug         |
|                  |           |      | Enhancement |
| Kennelly, Krisha | Assigned  | High | Enhancement |

### Contacts

| Name            | Company                        | Email 1                   | Phone 1       |
|-----------------|--------------------------------|---------------------------|---------------|
| Dean Teal       | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| Brian McCaffrey | AECOM/EarthTech                | Brian.McCaffrey@aecom.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 7445.15889 | Assigned      | Wizard to Create Superstructures and Superstructure Alts |

### Description

FROM:dteal DATE:Thursday, June 15, 2006 9:22:41 AM  
Expand/Collapse Branch is not available in the Library Explorer

FROM:hlee DATE:7/10/2006 9:25:36 AM  
Changed Project to Support Center.  
Incident entered for 5.5 Beta.

FROM:tthompson DATE:Thursday, July 20, 2006 3:41:07 PM  
Should probably have similar behaviour for all tree structures in all windows - not just bridge explorer.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 7445                                                    |
| Subject: Wizard to Create Superstructures and Superstructure Alts |

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 6/15/2006 3:42:46 PM |
| Modified By: administrator        | 6/19/2008 4:27:40 PM |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 7446.15888 | Suspended     | truss deck def needs to include timber decks |

### Description

FROM:dteal DATE:Thursday, June 15, 2006 11:42:46 AM

We have to enter the number of spans and span lengths "again". With a very long structure this can be tedious. Would like to see maybe a check box to select one of the structures you have already entered, similar to the pulldown on the next window (superstructure alternative).

Robert F. has a very good example of how tedious this extra input is.

FROM:jduray DATE:6/16/2006 8:11:13 AM

We need to address this for the 5.5 release if possible. We may need to get TF approval and charge to TF Directed for this work since it is an enhancement, not a bug.

First step is to brainstorm some ideas and then give the TAG and TF some mockups. Should try to have a plan for the TF to review before the July 12th TF meeting so they can discuss and approve.

4/19/2016 3:19:30 PM

HRS AASHTO

2123

**Complete Issue Information**

FROM:kkennelly DATE:6/19/2006 8:04:39 AM  
 Duplicate of of 6527

FROM:hlee DATE:7/10/2006 9:29:45 AM  
 Changed Project to Support Center.

FROM:dteal DATE:Wednesday, November 07, 2007 1:41:40 PM  
 We reviewed this for 5.6 but it wasn't included

FROM:dteal DATE:Friday, February 22, 2008 7:39:47 AM  
 Reviewed new mockups in Feb 08

|                                                       |
|-------------------------------------------------------|
| Issue ID: 7446                                        |
| Subject: truss deck def needs to include timber decks |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Jensen, Paul     | 6/15/2006 4:23:59 PM |
| Modified By: administrator     | 6/19/2008 4:27:40 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pjensen DATE:Thursday, June 15, 2006 12:23:59 PM  
 Most to all of the decks on trusses are timber decks. I do not have a facility to rate the deck when rating the truss and floor system.

FROM:hlee DATE:7/10/2006 9:28:32 AM  
 Changed Project to Support Center.

4/19/2016 3:19:30 PM

HRS AASHTO

2124



**Complete Issue Information**

Incident entered for 5.5 Beta.

FROM:kkennelly DATE:8/8/2006 8:05:14 AM

Steve Mample of Idaho DOT indicated that he also needs timber deck in trusses at the UG 2006 meeting.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 7450                                          |
| Subject: Installer needs to check for required software |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 6/15/2006 5:31:34 PM |
| Modified By: administrator     | 6/19/2008 4:27:40 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Ihnat, Joseph   | Assigned  |          | Bug         |

4/19/2016 3:19:31 PM

HRS AASHTO

2125

### Complete Issue Information

|               |                    |      |         |
|---------------|--------------------|------|---------|
|               | Resolved           |      |         |
| Ihnat, Joseph | Resolved           | High | Bug     |
| Duray, Jim    | New                | High | Unknown |
|               | Information Needed |      |         |
| Ihnat, Joseph | Resolved           |      |         |
| Ihnat, Joseph | Resolved           | High | Unknown |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | S0529ErrorFileVersion54.bbd          |             |
|      | S0529VirtisErrorMessageVersion54.doc |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 7455.15879 | Resolved      | BRASS DLL Error When Analyzing Structures |

### Description

FROM:pjensen DATE:Thursday, June 15, 2006 1:31:34 PM  
the installer need to check that required software is loaded on the node (ie acrobat, xml, ....)

FROM:hlee DATE:7/10/2006 9:29:03 AM  
Changed Project to Support Center.

FROM:jduray DATE:12/13/2007 10:56:58 AM  
WE may not be checking for thte correct version. Need to confirm.

FROM:jihnath DATE:12/14/2007 10:12:37 AM  
We've added necessary checks (and will continue to add based on support incidents).

|                                                    |
|----------------------------------------------------|
| Issue ID: 7455                                     |
| Subject: BRASS DLL Error When Analyzing Structures |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Ihnat, Joseph |

4/19/2016 3:19:31 PM

HRS AASHTO

2126

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Koenig, David | 6/16/2006 3:50:35 PM |
| Modified By: administrator  | 6/19/2008 4:27:39 PM |
| Priority: High              |                      |
| Category: Unknown           |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
|                 | Information Needed |          |          |
| Duray, Jim      | Information Needed | High     | Unknown  |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State      | Summary                           |
|------------|--------------------|-----------------------------------|
| 7456.15878 | Information Needed | Performance Issues on Version 5.4 |

### Description

FROM:dkoenig DATE:Friday, June 16, 2006 11:50:35 AM

We have been getting an error when running structures. The error indicates and error loading BRASS DLL. A screen shot of the error message is showing below. We have not been able to find any consistency in producing this error. It is happening randomly. Things will work fine for a while, and then we will start getting the error message when we run a structure. It doesn't always happen on a structure. It may run fine one time and then give the error message the next time. The bbd file of a structure that it has happened on is attached.

FROM:jihnmat DATE:6/16/2006 12:43:20 PM

Can't see the contents of the Analysis Progress dialog, but an Error Code = 8 would indicate insufficient memory to load BRASS.

Try increasing the maximum size of virtual memory by about 400 MB.

What version of Windows are you running?

FROM:dkoenig DATE:Friday, June 16, 2006 3:53:01 PM

The error code is as you suspected.

4/19/2016 3:19:31 PM

HRS AASHTO

2127

**Complete Issue Information**

Data file successfully exported!  
Error loading BRASS DLL! (Error Code = 8)

We are running Windows 2000 5.00.2195 Service Pack 4.

My machine has 256 MB Ram. My virtual memory appears to be in the range of 340 to 400.

Did you mean to increase the virtual memory size to 400 or increase it by 400? If you meant to increase it, then are you wanting something in the 700 to 800 range based on my apparent machine settings?

FROM:jihnat DATE:6/19/2006 7:12:27 AM  
In the virtual memory settings (Control Panel, System, Advanced, Performance Options, Change) there is an Initial size and a Maximum size.  
What is the current Maximum size? Try increasing it by 400 (don't forget to click Set).  
I think it needs to be in the 750-800 range if Virtis is the only application running.

FROM:dkoenig DATE:Monday, June 19, 2006 8:50:17 AM  
I found the virtual memory settings that you were looking for. The initial size is 384 and the maximum size is 768. All of the users that have had this error have the same settings. Based on your comment above, the maximum already appears to be within the range that you think is needed. Do you still want us to increase the maximum size of the virtual memory?

FROM:dkoenig DATE:Monday, June 26, 2006 10:02:03 AM  
We reinitialized the virtual memory settings per your discussions with our computer person. This eliminated the error for several days. We recieved the error again on Friday on a machine that had been adjusted based on your feedback. We will keep you updated.

FROM:jihnat DATE:7/5/2006 10:52:41 AM  
Spoke to John Gahagan this morning (573-526-4435). He gets error on a Windows 2000 system with 1 GB RAM.  
Virtual memory is set to 1524/3048 (initial/maximum) and pagefile does not appear to be fragmented. Permissions seem to be set correctly.

FROM:jihnat DATE:7/7/2006 2:55:06 PM  
John got all the available Windows Updates this morning and now it's working OK.  
There's an Update Rollup 1 for Windows 2000 SP4.  
(In the interim, we had sent them a BRASS DLL that used less memory, which also worked OK but was a special build of 5.9.3 Beta 3.)

Issue ID: 7456  
Subject: Performance Issues on Version 5.4

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Koenig, David 6/16/2006 3:57:48 PM  
Modified By: administrator 6/19/2008 4:27:39 PM

4/19/2016 3:19:31 PM

**HRS AASHTO**

2128

## Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

## Contacts

| Name            | Company                   | Email 1                   | Phone 1      |
|-----------------|---------------------------|---------------------------|--------------|
| Richard Withers | Mississippi Dept of Trans | rwithers@mdot.state.ms.us | 601-359-7167 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 7460.15874 | Resolved      | Cannot save rating information |

## Description

FROM:dkoenig DATE:Friday, June 16, 2006 11:57:48 AM

We updated to Version 5.4 this week. We have an Oracle setup on our database. We have noticed a tremendous difference in the performance of the program since we updated it. It takes a long time for the program to open up. It is also taking significantly longer to analyze a structure. I don't know if there is a problem with our installation. Based on the testing that was done prior to release, should it be expected that there will be significant differences in the performance of the program? If not, then we need to try and figure out what is causing our problems.

FROM:jduray DATE:6/19/2006 10:20:21 AM

BRASS-Girder takes significantly longer to initialize each time and analysis is run. I believe WyDOT will have an update that addresses the problem. We are not aware of any other performance issues with the 5.4 release. Other than running BRASS, are there other issues? If so, please provide details so we can investigate.

FROM:dkoenig DATE:Monday, June 19, 2006 10:58:19 AM

The analysis time is the biggest issue. We have also noticed that it seems to take longer for the program to load and bring up the database. We can open the program up and it takes 3 to 4 minutes for the program to retrieve the bridge list. It doesn't seem to matter how many structures you are

4/19/2016 3:19:31 PM

HRS AASHTO

2129

## Complete Issue Information

retrieving. My perception is that it is taking longer than it did in the past.

|                                         |
|-----------------------------------------|
| Issue ID: 7460                          |
| Subject: Cannot save rating information |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Withers, Richard      | 6/21/2006 3:57:13 PM |
| Modified By: administrator          | 6/19/2008 4:27:39 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:rwithers DATE:Wednesday, June 21, 2006 11:57:13 AM  
Mississippi is currently updating from Virtis version 5.2.0 to 5.4.0. We are using an Oracle 9.2.0.6.0 database. We ran the migration wizard to migrate the database from 5.2.0 to 5.4.0 and afterwards I load rated a bridge in our inventory and tried to save the new rating to the database. I got the following error:

Error updating database record set.  
10:57:08 AM - Line 434 in source file .\DmResultsLIAction.cpp.  
State:22003,Native:1426,Origin:[Oracle][ODBC][Ora]  
ORA-01426: numeric overflow

It will allow me to make changes to the bridge properties and save them, just not the rating data.

4/19/2016 3:19:32 PM

HRS AASHTO

2130

### Complete Issue Information

We then backed up and migrated from 5.2.0 to 5.3.0, which worked fine. We next stepped from 5.3.0 to 5.3.1, which also worked fine. However, when we went from 5.3.1 to 5.4.0, the same error occurred.

What do I need to do to fix this? If you need more information, tell me what you need and I will get it to you.

FROM:mordoobadi DATE:6/23/2006 8:46:51 AM

In order for us to be able to find out what's causing the problem we will need a copy of the bridge that you rated and wasn't able to save. Please export the bridge to an XML file and e-mail us at [bridgeware@mbakercorp.com](mailto:bridgeware@mbakercorp.com).

FROM:mordoobadi DATE:6/26/2006 3:42:14 PM

Fixed in 5.4.0 and later. AboRslt.dll posted on Support web-site.

|                                    |
|------------------------------------|
| Issue ID: 7462                     |
| Subject: Developed Rebar vs Hooked |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 6/22/2006 12:24:30 PM |
| Modified By: administrator        | 6/19/2008 4:27:39 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          | Bug       |
|                  | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

### Contacts

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:19:32 PM

HRS AASHTO

2131

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 7473.15861 | Resolved      | Error loading Brass DLL |

## Description

FROM:dteal DATE:Thursday, June 22, 2006 8:24:48 AM

In the attached RC flat slab (RCB) I have two models set up. The rebar extends from left support to right support.

In the first model I did not hook the rebar ends but checked the box in the girder profile reinforcement tab for Fully Developed.

In the second model I hooked the rebar ends and then did not check the Fully Developed box.

In my eye, I think that the two should arrive at like results. In the model that has the hooked bars I believe that Virtis doesn't consider this bar developed out to the end and therefore fails the rating due to zero capacity at the first 10th point.

FROM:kkennelly DATE:6/26/2006 9:06:55 AM

As discussed in the "Export of Schedule Based Reinforced Concrete Members" help topic:

"When Virtis/Opis computes the percent development of a hooked bar at a point within the development length of the bar, Virtis/Opis assumes the bar is developed 0% at the start of the bar and 100% at the end of the development length. Hooked bars are actually developed more than 0% at the start of the bar due to the hook, but this percentage of development is not computed by Virtis/Opis."

The AASHTO specs don't give any guidance to computing the percent the hook is developed in the actual hook part of the bar and I couldn't find any textbooks that give an equation for this either. Since the AASHTO specs do give equations for the development length of a hook, Virtis doesn't assume the hook is completely developed at the start of the hook.

FROM:dteal DATE:Monday, June 26, 2006 9:39:42 AM

OK - Thanks

FROM:kkennelly DATE:6/27/2006 7:53:27 AM

Closed based on accepted in track field.

Issue ID: 7473

Subject: Error loading Brass DLL

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:19:33 PM

HRS AASHTO

2132



### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Ihnat, Joseph | 6/28/2006 1:53:49 PM |
| Modified By: administrator  | 6/19/2008 4:27:38 PM |
| Priority: High              |                      |
| Category: Unknown           |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Ihnat, Joseph      |          |          |          |
|                    | Resolved |          |          |
| Ihnat, Joseph      | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 7490.15844 | Resolved      | Unable to open framing plan schematics and more |

### Description

FROM:jhnat DATE:6/28/2006 9:53:41 AM  
Received via email:

After we upgraded the Virtis form 5.3.1 to 5.4, we got an error message when we run the analysis. It came out a message say "Error loading Brass DLL! (Error Code = 1455), we tried to run couple different bridges, and they all came out the same error message. Could you please help us to fix this problem? Thank you

Patrick Chiu  
ASEC Corporation

FROM:jhnat DATE:6/28/2006 9:58:00 AM  
Error code 1455 is ERROR\_COMMITMENT\_LIMIT, "The paging file is too small for this operation to

4/19/2016 3:19:33 PM

HRS AASHTO

2133

### Complete Issue Information

complete." (winerror.h)  
Patrick was running Windows 2000  
128 MB memory  
Virtual memory: 200 initial, 400 maximum.  
We changed the maximum to 800 and he was able to load BRASS.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 7490                                           |
| Subject: Unable to open framing plan schematics and more |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Li, Xinmei       | 7/11/2006 1:26:48 PM |
| Modified By: administrator     | 6/19/2008 4:27:37 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:xli DATE:7/11/2006 9:24:00 AM  
To reproduce:  
1 Open BID8, analyze G2 with Virtis std engine  
2 Make a copy of BID8, do not close the original BID8  
3 Open the copied bridge, analyze G2 with Virtis std engine  
4 Close the copied bridge  
5 Open framing plan schematics window in the original BID8

Got system errors as follows:

4/19/2016 3:19:33 PM

HRS AASHTO

2134

## Complete Issue Information

Unable to retrieve Framing Plan data!

09:23:49 AM - Line 484 in source file c:\virtis\gui\abgbrdg2\schematicfrmplnview.cpp.

FROM:xli DATE:7/11/2006 9:29:09 AM

I tried other windows under the member alt, can't open any.

FROM:hlee DATE:7/11/2006 9:57:34 AM

I got a debug break when I switched to the original BID8 in Step 5.

CBridgeWorkSpaceView's OnUpdateTool called DoMemberAltPtr->GetSpngMbrDefId() and GetSpngMbrDefId() failed.

FROM:xli DATE:7/11/2006 10:39:21 AM

I tried to use Brass engine to do analysis, it breaks at step 4.

FROM:jihnat DATE:7/14/2006 2:45:38 PM

Reproduce without analyzing:

- 1 Open BID8
- 2 Make a copy of BID8, do not close the original BID8
- 3 Open the copied bridge, open then close Framing Plan Schematic
- 4 Open framing plan schematic window in the original BID8

FROM:jihnat DATE:7/14/2006 3:43:34 PM

This is probably related:

- 1 Open BID8
- 2 Make a copy of BID8, do not close the original BID8
- 3 Can't open BridgeAlt window in the original BID8

FROM:jihnat DATE:7/14/2006 3:47:24 PM

Export the original and the copy, compare the xml files.

FROM:mordoobadi DATE:7/14/2006 3:57:12 PM

This sounds like extra release(s) of domain dispatch(es).

FROM:mordoobadi DATE:7/14/2006 4:41:37 PM

This happens in 5.4. Also happens in 5.0.

FROM:mordoobadi DATE:7/14/2006 4:51:48 PM

I think we should disable copying a bridge when it is open.

The copy can be different from the original version of the bridge that the user wants to copy.

FROM:mordoobadi DATE:7/19/2006 9:10:36 AM

Joe, please disable copying of a bridge that is open in BWS.

FROM:jihnat DATE:7/19/2006 9:45:48 AM

Changed project to Support Center since this existed in prior versions.

FROM:jihnat DATE:9/7/2006 8:55:09 AM

Open bridges can no longer be copied.

Fixed in 5.5 (Beta 5) and 5.6

4/19/2016 3:19:33 PM

HRS AASHTO

2135

## Complete Issue Information

|                                                                                                               |
|---------------------------------------------------------------------------------------------------------------|
| Issue ID: 7494                                                                                                |
| Subject: Migration Wizard should allow user to migrate even the user selected No for backing up the database. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Lee, Herman      | 7/12/2006 3:02:01 PM |
| Modified By: administrator     | 6/19/2008 4:27:36 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Resolved | High     | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                                                     |
|------------|---------------|-----------------------------------------------------------------------------------------------------------------------------|
| 7497.15837 | Resolved      | Virtis Std Export: When inserting the 0.01 fictitious flexural reinforcement area, the unit should be set to square inches. |

## Description

FROM:hlee DATE:7/12/2006 10:54:29 AM

It happened to me when I tried to migrate a Sybase databsae to 5.5 Beta 3. I think it is in 5.4 Release also.

FROM:mordoobadi DATE:7/13/2006 9:00:41 AM

This has been like this since the beginning and I think we should not migrate unless the database is backed-up. Otherwise if the migration fails they will not be able to recover their database and we cannot do anything about it. But they will still expect us to fix it for them.

FROM:jduray DATE:7/19/2006 4:44:31 PM

I agree with Mehrdad.

4/19/2016 3:19:33 PM

HRS AASHTO

2136

## Complete Issue Information

Issue ID: 7497

Subject: Virtis Std Export: When inserting the 0.01 fictitious flexural reinforcement area, the unit should be set to square inches.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

7/12/2006 5:56:47 PM

Modified By: administrator

6/19/2008 4:27:36 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:7/12/2006 1:46:35 PM

If 0.01 is in mm<sup>2</sup>, the exported value (in in<sup>2</sup>) is too small to export.

4/19/2016 3:19:33 PM

HRS AASHTO

2137

## Complete Issue Information

Resolved in 5.5 Release.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7500                                  |
| Subject: Unable to remove stiffener definitions |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ordoobadi, Mehrdad    | 7/17/2006 1:30:10 PM |
| Modified By: administrator          | 6/19/2008 4:27:36 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |

4/19/2016 3:19:34 PM

HRS AASHTO

2138

### Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad | Resolved  | High | Bug         |
| Duray, Jim         | New       | High | Unknown     |
|                    | Suspended |      | Enhancement |
| Duray, Jim         | Suspended | High | Enhancement |
|                    | Resolved  |      |             |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 7504.15830 | Suspended     | Ability to define a entire bridge/structure definition for RC Slab bridges |

### Description

FROM:mordoobadi DATE:7/17/2006 9:27:43 AM  
Submitted via email by Bruce Woogen: Chas Sells 07/12/06 10:55 AM

We have been having a lot of problems with this specific bridge. I have been trying to delete both of the interior connection plate from transverse stiffener definition and The Dummy from bearing stiffener definition and I failed. Please take a look at it and let me know what to do at your most convenient.

FROM:mordoobadi DATE:7/17/2006 9:30:57 AM  
I found what is happening. I think the bridge used to have more girders (probably 3) then number of girders were reduced to 2. There was a bug in older versions of the Virtis/Opis application that when you removed a girder the software left behind some pieces of data in the database that will no longer be viewable in the application. For this reason the application detects that both the transverse and bearing stiffeners are in use.

One work around is to just remove the stiffeners from the "Stiffener Ranges" and "Bearing Stiffener Location" windows. You will not be able to remove the existing Stiffener definitions. You will be able to reuse the stiffener definitions, by renaming the existing stiffeners and changing their properties.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 7504                                                                      |
| Subject: Ability to define a entire bridge/structure definition for RC Slab bridges |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:19:34 PM

HRS AASHTO

2139

### Complete Issue Information

|                              |                       |
|------------------------------|-----------------------|
| Primary Contact: Duray, Jim  |                       |
| Submitted By: Thompson, Todd | 7/18/2006 12:52:10 PM |
| Modified By: hlee            | 7/7/2013 4:50:12 PM   |
| Priority: High               |                       |
| Category: Enhancement        |                       |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name             | Company | Email 1                  | Phone 1 |
|------------------|---------|--------------------------|---------|
| Krishna Kennelly |         | KKENNELLY@mbakercorp.com |         |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 7507.xml                |             |
|      | RightOverhang.png       |             |
|      | Steel Girder Bridge.bbd |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 7507.15827 | Resolved      | Calculation of deck overhang |

### Description

FROM:ttompson DATE:Tuesday, July 18, 2006 8:52:10 AM  
Enhancement Request

Ability to fully define a bridge, if it is a RC Slab structure.

Then with a fully defined bridge, one would have the ability to do a NSG analysis for RC Slabs.

Over 1/3 of our inventory is RC Slab bridges.

FROM: Herman Lee DATE: 7/7/2013 12:49:27 PM Eastern Daylight Time  
RC slab system is available in the 6.5 release.



## Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 7507                        |
| Subject: Calculation of deck overhang |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Kennelly, Krisha | 7/20/2006 12:24:18 PM |
| Modified By: administrator     | 6/19/2008 4:27:35 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:7/20/2006 8:19:06 AM  
Submitted on behalf of Alkesh Parikh, Fay, Spofford & Thorndike via email:

>>> "Alkesh Parikh" <AParikh@fstinc.com> 07/18/06 3:59 PM >>>  
Krisha,

Can you please look at the attached file ?

Please try rating "G2" in structure "Span 2". It gives the following message.

4/19/2016 3:19:34 PM

HRS AASHTO

2141

## Complete Issue Information

"Splayed girders and/or tapered overhangs are not allowed! Error generating deck commands!"

If you notice the framing plan, there no splayed girders!! Neither are there any tapered overhangs in Cross section.

please let me know what can we do to be able to rate the girder.

Thanks,  
ALKESH PARIKH  
Fay, Spofford & Thorndike  
5 Burlington Woods  
Burlington, MA 01803  
P: 781 221 1247  
F: 781 229 1115  
aparikh@fstinc.com

<<<<<<<From: KKENNELLY@mbakercorp.com [mailto:KKENNELLY@mbakercorp.com] >>>>>>>  
Sent: Wednesday, July 19, 2006 8:32 AM  
To: Alkesh Parikh  
Subject: Re: Virtis Project

Hi Alkesh,

Your structure has tapered overhangs due to the data entered on the Structure Typical Section: Deck tab. The total deck width at the start of the structure is  $44.82825 + 44.82825 = 89.6565'$ . The total deck width at the end of the structure is  $44.796627 + 44.796627 = 89.59325'$ .

So the deck width and thus the overhangs vary. The left overhang at the start is  $0.166667'$  and at the end is  $0.166538'$ . Virtis abbreviates these values as  $0.17'$  to make them easier to read as previous users have requested. You can view all of the decimal places when you select the cell where this data is entered. Virtis uses all of the significant digits that are entered when it performs its computations. You should adjust your entries as necessary if you do not intend the deck width to vary over the length of the structure.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

>>> "Alkesh Parikh" <AParikh@fstinc.com> 07/19/06 9:13 AM >>>  
Hi Krisha,

is there any way we can ask Virtis to use only two decimal digits ?

ALKESH PARIKH

4/19/2016 3:19:34 PM

HRS AASHTO

2142



**Complete Issue Information**

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

>>> "Alkesh Parikh" <AParikh@fstinc.com> 07/19/06 1:53 PM >>>

Krisha,

If I enter 89.6565 at the end of structure as well, it gives me incorrect value of "right overhang"

Here is my data

Left support has no skew. centre to centre of exterior girders at left support = 89.6565 ft out to out of deck at left support = 89.989833 (2" overhang on either side)

Right support has a skew of -2.1522 center to center of exterior girders at right support = 89.6565 ft out to out of deck at right support = 89.989833 (2" overhang on either side)

If I enter "distance between superstructure reference line and left end of deck" = 44.994917 (at start & end) and "distance between superstructure reference line and right end of deck" = 44.994917 (at start & end) and "left overhang" = 0.166667 ft (at start & end)

I get different numbers for "right overhang" at start & end !!!!

thanks,  
Alkesh

FROM:hlee DATE:7/28/2006 2:45:27 PM  
E-mail replied to Alkesh.

=====  
Alkesh,

I'm investigating the subject incident. After I entered your data described in Incident 7507 to the bridge that you sent to Krisha (see attached), Virtis computed right overhang matches my hand calculation.

Data in Structure Framing Plan Details window:  
Girder bay orientation is along support.  
Skew @ End = 2.1522 Deg.  
Girder Bay 1 @ End = 2.8915'  
Girder Bay 2, 3, ... , 17 @ End = 5.2500'  
Girder Bay 18 @ End = 2.7650'

Data in Structure Typical Section window:  
Left edge of deck to superstructure definition reference line @ End = 44.99492'  
Right edge of deck to superstructure definition reference line @ End= 44.99492'  
Left overhang @ End = 0.166667'

4/19/2016 3:19:34 PM

HRS AASHTO

2144

**Complete Issue Information**

Calculated right overhang  
= 44.99492' + 44.99492' - 0.166667' - (2.8915' + 16 \* 5.2500' + 2.7650') cos (2.1522)  
= 0.229917'

Please let me know if you have any questions.

Regards,  
Herman

|                                          |
|------------------------------------------|
| Issue ID: 7510                           |
| Subject: response file for the installer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 7/20/2006 4:18:03 PM |
| Modified By: administrator     | 6/19/2008 4:27:35 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Ihnat, Joseph   | Suspended |          | Enhancement |
| Ihnat, Joseph   | Suspended | High     | Enhancement |

**Contacts**

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7510.15824 | Suspended     | response file for the installer |

**Description**

4/19/2016 3:19:35 PM

HRS AASHTO

2145

**Complete Issue Information**

FROM:pjensen DATE:Thursday, July 20, 2006 12:18:18 PM  
after the install of 5.4 on all our system. We (MDT) need to repackage the installer to us it with our software delivery system. This was very painfull. Our systems person was wondering if the product is setup for a response file so that the install can be automated. If there is not, then we are requesting that all future installers have the capablility to run a response file with the installer for automated and silent installs.

Issue ID: 7511  
Subject: Unable to identify continuous cover plate ranges.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Maberry, Steven 7/20/2006 8:36:53 PM  
Modified By: administrator 6/19/2008 4:27:35 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                             |
|------------|---------------|-------------------------------------------------------------------------------------|
| 7537.15797 | Resolved      | Virtis/Opis Help Bridge Description Figure 1 should use terms that matches the BWS. |

**Description**

FROM:hlee DATE:7/20/2006 4:25:32 PM  
Attached 2 files from the e-mail.

Bridgeware,  
In modeling in Virtis/Opis a cover plate that is tapered at both ends, we tried describing it as shown in the attached "VO Message" file.

When we put it in as the rectangular section starting EXACTLY at the end of the tapered section (both at 46.75 feet from the support), we get the error message shown.

If we enter the LENGTH of the taper as 2.99 or 2.999, it accepts the input.

I thought the taper allowance was to model just THIS SORT of cover plate (see drawing "Cover Plate"). Are we SUPPOSED to just shorten the taper part (or alternatively the rectangular section) a small amount like we did ...

OR is this a minor bug?

Steven Maberry

FROM:hlee DATE:7/28/2006 9:49:10 AM  
This defect is also in beam definitions.  
Resolved in 5.5 Release.

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 7537<br>Subject: Virtis/Opis Help Bridge Description Figure 1 should use terms that matches the BWS. |
|----------------------------------------------------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

**Complete Issue Information**

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Lee, Herman    | 8/4/2006 2:34:29 PM  |
| Modified By: administrator   | 6/19/2008 4:27:32 PM |
| Priority: High               |                      |
| Category: Help               |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Reinforcement.png   |             |
|      | US41.bbd            |             |
|      | WebProfile.png      |             |
|      | US41.xml            |             |

**Tasks**

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 7552.15782 | Resolved      | Error message |

**Description**

FROM:hlee DATE:8/4/2006 10:25:46 AM  
Entered on behalf of Vermont AOT.

Structure should be Superstructure. Structure Alternative should be Superstructure Alternative.

FROM:jihnat DATE:8/10/2006 1:22:22 PM  
I think this requires Visio.

FROM:hlee DATE:8/11/2006 8:54:24 AM

4/19/2016 3:19:35 PM

HRS AASHTO

2148



## Complete Issue Information

Resolved for 5.5 Release.

|                        |
|------------------------|
| Issue ID: 7552         |
| Subject: Error message |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 8/9/2006 6:20:07 PM  |
| Modified By: administrator        | 6/19/2008 4:27:31 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:8/9/2006 2:20:10 PM

Received via email:

I am rating a variable depth R/C slab with version 5.3. When I attempt to rate the structure, I receive the message "Error converting Virtis/Opis R/C schedules to 'general' cross sections. Can't compute dev. Length if concrete material is unknown". Obviously, I did define a concrete for this structure. Can you help me with this problem or guide me to the proper place. Thank you

4/19/2016 3:19:36 PM

HRS AASHTO

2149

**Complete Issue Information**

Danny Wampler, PE  
Production Management Division  
Structural Services  
317-232-5307 (Voice)

FROM:hlee DATE:8/10/2006 1:28:02 PM  
Attached 5.5 Beta 3 xml file.

FROM:hlee DATE:8/10/2006 1:42:19 PM  
Reply e-mail to Danny Wampler:

=====  
Danny,

We checked the bridge that you sent us. Please make sure all Type 3 bar mark definitions (801c, 901c, 801ca, and 901ca) are located inside the depth of the slab. I have attached two screen captures of some of the input items that cause the error.

Let me know if you have more questions.

Regards,  
Herman Lee, PE

=====

FROM:hlee DATE:8/10/2006 4:39:22 PM  
PopulateAbaReinfDevBarData in DoGirderMbrAlt.cpp trys to get the slab's concrete material by DoCrossSectionPtr->GetTopFlangeConcreteDef().

I think rc slab should always get it by GetConcreteDef.

FROM:kkennelly DATE:8/16/2006 11:29:36 AM  
After discussion with Herman, I've added a check for the case where the bar is referenced from the bottom of the girder and the bar ends up being outside of the beam. An error message is then issued. This solves this user's problem by issuing a more descriptive error message of why the development length can't be computed.

Issue ID: 7553  
Subject: System Error message when missing Superstructure and rating

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 8/10/2006 11:50:18 AM  
Modified By: administrator 6/19/2008 4:27:31 PM  
Priority: High  
Category: Bug

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Ihnat, Joseph   | New                | High     | Bug         |
|                 | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          | Bug - GUI 1 |
| Ihnat, Joseph   | Resolved           | High     | Bug - GUI 1 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | PSIBmDetError(0530179).xml |             |

### Tasks

| Name       | Current State | Summary                                                                                                |
|------------|---------------|--------------------------------------------------------------------------------------------------------|
| 7575.15760 | Resolved      | Problem with Girder System Superstructure Definition window when the Member Alternative window is open |

### Description

FROM:jihnat DATE:8/10/2006 7:46:50 AM

Open BID 1, delete the Superstructure Alt and Superstructure, then try to rate the bridge, get the following error:

Unable to build the list of components to be analyzed.

- Please mark one of the Structure Alternatives as "Existing" in Structure window.
- Please create a Structure Alternative and attach a Structure Definition to it.
- Please create a Structure for the bridge alternative.

Cannot Build Tree: No Structures are defined.

The word "Structure" should be changed to "Superstructure" (all occurrences).

FROM:jihnat DATE:8/28/2006 1:03:22 PM

Fixed in version 5.5.0 (Beta 4).

## Complete Issue Information

Issue ID: 7575

Subject: Problem with Girder System Superstructure Definition window when the Member Alternative window is open

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Duray, Jim

8/25/2006 1:16:04 PM

Modified By: administrator

6/19/2008 4:27:29 PM

Priority: High

Category: Bug - GUI 1

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LiveLoadTest.xml    |             |

## Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 7583.15752 | Closed        | Defining a Live Load |

## Description

FROM:jduray DATE:8/25/2006 9:15:58 AM  
Email from Tim:

4/19/2016 3:19:37 PM

HRS AASHTO

2152

**Complete Issue Information**

For PS I-bms (see PSIBmDetError(0530179).xml), when <Apply> is clicked in the Girder System Superstructure Definition window while the Beam Details window for a Member Alternative is open, the following fields are erroneously divided by 25.4 (apparently some sort of metric conversion issue):

- Beam Projection Left/Right End (in.) under the Span Detail tab.
- Support Distance on Left, SL/Right, SR (in.) under the Continuous Support Detail tab.
- Distance (in.) for Left & Right Support under the Continuity Diaphragm tab.

FROM:jduray DATE:8/25/2006 9:17:05 AM  
Is this new or did the problem exist in 5.4 and earlier?

We need the xml files for this.

FROM:jduray DATE:8/25/2006 9:26:01 AM

FROM:jihnata DATE:8/25/2006 10:11:49 AM  
Attached file.

FROM:jihnata DATE:8/28/2006 8:00:59 AM  
This bug existed in previous versions.  
It can be reproduced with PCI TB1 (BID4), probably others.

FROM:jihnata DATE:8/28/2006 8:57:50 AM  
Fixed in version 5.5.0 (Beta 4).  
Changed project to Support Center.

|                               |
|-------------------------------|
| Issue ID: 7583                |
| Subject: Defining a Live Load |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 8/31/2006 7:41:45 PM |
| Modified By: administrator       | 6/19/2008 4:27:29 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:19:37 PM

HRS AASHTO

2153

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 7589.15746 | Resolved      | TrainingBridge3 bridge description is "Training bridge 2" |

**Description**

FROM:dteal DATE:Thursday, August 31, 2006 3:41:55 PM  
I can define a distributed load as a live load. I can run Opis. The load doesn't show up in the list of Live Loads in the tabular data – Does Opis not allow this?

FROM:bgoodrich DATE:Tuesday, September 19, 2006 7:59:33 PM  
Can you clarify how/where you are entering the distributed load as a live load, i.e., which windows. I don't quite understand the issue. Please attach your bridge if you think it will help.

FROM:dteal DATE:Wednesday, September 20, 2006 2:12:33 PM  
The program was being used to model a paving machine crossing a bridge. We wanted to use the live load short term factoring instead of dead load factoring.

In the example bridge I attached (taken from TrainingBridge1) has a LL load case for a paving machine, short term stage 3. In girder line 2 we have defined the LL distributed load case. For simplicity I haven't modified any distribution factors.  
After an Opis analysis, I wanted to find the moment/shears/reactions from this load case. The analysis results window doesn't contain any results for this load.

FROM:bgoodrich DATE:Friday, September 22, 2006 11:56:41 AM  
Now I understand the loading. However, BRASS LRFD only uses types D,DC and D,DW as stated in the engine help topic for the Load Case Description window.

If the paving machine is moving along the entire length of the bridge, I think you could model it using a truck with several axles spaced closely together.

FROM:dteal DATE:Friday, December 29, 2006 8:23:46 AM

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 7589                                                     |
| Subject: TrainingBridge3 bridge description is "Training bridge 2" |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 9/6/2006 11:43:54 AM |

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:28 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     |          |          |           |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 7592.15743 | Resolved      | splayed girders |

**Description**

FROM:mordoobadi DATE:10/16/2006 10:46:43 AM  
Fixed in 5.5 Beta 5.

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 7592           |
| Subject: splayed girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 9/7/2006 6:13:52 PM  |
| Modified By: administrator     | 6/19/2008 4:27:28 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:9/7/2006 2:13:35 PM

Received via email:

After entering in information for a bridge with multiple spacings and a few splayed girders, I was unhappily confronted with error messages informing me that BRASS doesn't accept splayed girders. I'm assuming that since splayed girders can be entered in Virtis that there is a method to get around this. Could you please let me know what that is? I had already entered the live load distribution factors manually.

Thanks,

4/19/2016 3:19:37 PM

HRS AASHTO

2156



**Complete Issue Information**

Beckie Curtis  
Bridge Load Rating Engineer  
MDOT C&T  
(517)-322-5120 (Temp Number)  
CurtisRe@michigan.gov

FROM:hlee DATE:9/7/2006 2:53:41 PM  
Reply e-mail to Beckie:

=====  
Beckie,

Splayed girder is not supported in Virtis 5.4. Although you may use girderline description, distribution factors cannot be entered in ranges. Splayed girder will be supported in Virtis 5.5 and only Virtis Std Engine will support this feature.

Herman Lee  
=====

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 7593                                                               |
| Subject: The Vci Calc. Method Changes When Switching Ignore Shear On and Off |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Armbrecht, Tim      | 9/8/2006 9:11:34 PM  |
| Modified By: administrator        | 6/19/2008 4:27:28 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Unknown  |

**Contacts**

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

4/19/2016 3:19:38 PM

HRS AASHTO

2157

## Complete Issue Information

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 086-0041 Shear Output.doc |             |
|      | 086-0040x.xml             |             |
|      | 086-0041x.xml             |             |
|      | 086-0040 Shear Output.doc |             |

### Tasks

| Name       | Current State | Summary                                                                                     |
|------------|---------------|---------------------------------------------------------------------------------------------|
| 7594.15741 | Resolved      | LL Shear @ Specified Point Varies more Than It Should Between Two Similar PS I-beam Bridges |

### Description

FROM:tarmbrecht DATE:Friday, September 08, 2006 5:11:37 PM

RE: 086-0040x.xml

In the attached model, after setting "Method used to determine Vci" to "no limit on Mcr/Mmax" reverts to the (non-AASHTO) default setting of "limit Mcr/Mmax to 1.0" unexpectedly. This will happen in the following sequence of events...

- set the value to "no limit on Mcr/Mmax", click <OK>
- click <Apply>
- under "Shear computation method", select the "Ignore shear" box for LFD, click <Apply>
- unselect the "Ignore shear" box for LFD, click <Apply>
- review the Engine Properties, where "Method used to determine Vci" has now been changed to "limit Mcr/Mmax to 1.0".

FROM:hlee DATE:9/11/2006 9:51:18 AM

Mcr/Mmax is used in the shear computation. When switching from not ignore shear to ignore shear and back, the default method (limit Mcr/Mmax to 1.0) to compute the Vci is set again.

FROM:jduray DATE:9/11/2006 11:22:28 AM

Should it be changed back to the default...sounds like Tim doesn't think it should be.

FROM:tarmbrecht DATE:Monday, September 11, 2006 1:39:22 PM

I would prefer that it is not changed back to the default, especially if I'm taking the time to change it from the default in the first place.

FROM:kkennelly DATE:9/12/2006 9:04:55 AM

Fixed for 5.5 beta 5. We no longer set the Mcr/Mmax limit to 1 when user switches Ignore Shear selection.

FROM:tarmbrecht DATE:Tuesday, October 17, 2006 9:49:14 AM

Tested in beta 5. Accepted.

Issue ID: 7594

4/19/2016 3:19:38 PM

HRS AASHTO

2158

## Complete Issue Information

Subject: LL Shear @ Specified Point Varies more Than It Should Between Two Similar PS I-beam Bridges

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 9/8/2006 9:14:56 PM  
Modified By: administrator 6/19/2008 4:27:28 PM  
Priority: High  
Category: Bug - BRASS

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 0100021-Bracing-Stiff.xml |             |

## Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 7595.15740 | Resolved      | Max Lat. Brace Pts & Stiff. Spacings =15 for VSE: Clarification |

## Description

FROM:tarmbrecht DATE:Friday, September 08, 2006 5:14:58 PM

My consultant discovered this:

RE: 086-0040x.xml & 086-0041.xml (also see the BRASS Shear calculation outputs in 086-0040 Shear Output.doc & 086-0041 Shear Output.doc).

In 086-0041.xml, a 3-Span (29.83'-43'-29.83') continuous PS I-beam structure, the controlling Inv/Opr

4/19/2016 3:19:38 PM

HRS AASHTO

2159

**Complete Issue Information**

rating factors are 1.074/1.817 @ .7 of Span 2 with shear controlling. After slightly modifying the model to create 086-0040.xml, a similar 3-Span (28.83'-43'-28.83') bridge with an identical center span, the Inv/Opr rating factors at the same point (.7 of Span 2) were 1.815/2.959. Upon further investigation I found that the BRASS calculated/reported corresponding live load shears concurrent with maximum moment (used to calculate Vi & Vci) vary widely and are the reason for the large variation in the rating factors.

For Truck 1, the live load shears concurrent w/max. moment were -3.16 kips for 086-0041 and -29.91 kips for 086-0040. It is obvious that, like all other loading forces for these two bridges, these values should be very close to each other. Why are they not? Which one is in error?

FROM:bgoodrich DATE:Wednesday, December 27, 2006 3:36:42 PM

The accuracy of the any concurrent action is dependent on the live load positioning. I increased the "Wheel advancement denominator" from 100 to 200 in the member alternative engine properties, which allows the truck to be moved along the influence line in shorter increments. This change results in more comparable concurrent actions and rating factors.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 7595                                                           |
| Subject: Max Lat. Brace Pts & Stiff. Spacings =15 for VSE: Clarification |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 9/8/2006 9:22:35 PM  |
| Modified By: administrator     | 6/19/2008 4:27:28 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:19:38 PM

HRS AASHTO

2160

**Complete Issue Information**

FROM:tarmbrecht DATE:Friday, September 08, 2006 5:22:37 PM

From my consultant:

RE: 0100021-Bracing-Stiff.xml

In the attached example, for Member 3 – 2nd N Int, the Virtis Standard Engine (VSE) returns the following error message after the connection plate stiffeners are added to the model:

Error - The number of lateral brace points and stiffener spacings lines exceeds the maximum (15) allowed!

Error - Unable to generate Lateral Brace Points and Stiffener Spacings!

Is the 15 limit for both bracing & stiffeners combined, or for each separately? Is it for the entire girder length or per span?

The example only has stiffeners applied to the bracing points and there 57 of them for a 3-span, 594' long girder. On a similar length girder with stiffeners between bracing points there could be 3 to 5 times that number.

Also of note is the fact that prior to the addition of the stiffeners, the analysis ran w/o error. There are 60 bracing points total w/18 in Spans 1 & 3 and 24 in Span 2, all exceeding the stated "maximum (15) allowed". (The controlling condition was stated as Critical Moment-Shear @ 100% of Span 2.)

Regardless, this is an extremely restrictive limitation. Will it be increased in the near future?

FROM:hlee DATE:9/12/2006 1:05:46 PM

From Has Mukh Lathia:

"The limit on stiffener spacings and lateral brace points is by the number of ranges (groups with equal spacing) for each. That limit is 150 (number of maximum spans times 10). There is no limit per span and there is no limit on the number of stiffeners and brace points. For a given analysis point, it determines the spacing by pointing to a ranges and getting a value for it."

I have updated the export to reflect the 150 limit.  
Resolved for 5.5 release.

FROM:tarmbrecht DATE:Tuesday, October 17, 2006 9:47:40 AM  
Tested in beta 5. Accepted.

Issue ID: 7596  
Subject: Why is Mcr/Mmax = 1 the default?

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 9/11/2006 5:45:29 PM  
Modified By: administrator 6/19/2008 4:27:28 PM

4/19/2016 3:19:39 PM

HRS AASHTO

2161

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Assigned  |          | Bug         |
| Ihnat, Joseph   | Suspended |          | Enhancement |
|                 | Assigned  |          | Bug - GUI 2 |
| Ihnat, Joseph   | Assigned  | High     | Bug - GUI 2 |
|                 | Closed    |          | Bug         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Export 8953.xml     |             |

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 7615.15720 | Assigned      | Export of NM BRidge |

### Description

FROM:tarmbrecht DATE:Monday, September 11, 2006 1:45:33 PM

Maybe this has been asked in another incident, but why is Mcr/Mmax = 1 the default setting? Since Mcr/Mmax with no limit comes from AASHTO Std. Specs, shouldn't the default reflect the bridge code, and if someone wants to deviate from AASHTO, they can switch from the default by limiting Mcr/Mmax = 1? Seems like the default settings in the Virtis/Opis program should reflect the current bridge code.

FROM:kkennelly DATE:9/12/2006 8:15:46 AM

Brian, Do you have any input on what the default value for limiting the Mcr/Mmax to 1 should be for the BRASS LFD Engine? Incident 5054 contains the original request for adding the feature to let the user control this. The incident doesn't specify what the default should be and I can't find any email that specifies it either.

FROM:tarmbrecht DATE:Tuesday, September 12, 2006 9:20:58 AM

Krishna/Brian, I guess I don't understand what BRASS has to do with the question. I'm referring to the

4/19/2016 3:19:39 PM

HRS AASHTO

2162

**Complete Issue Information**

setting in Virtis/Opis under Member Alternative (for a prestress beam) miscellaneous engine properties (BRASS LFD) with "ignore shear" unchecked. The radio button defaults to Mcr/Mmax = 1. I'm suggesting that for every new prestressed member alternative, this radio button should default to "no limit" when "ignore shear" is unchecked.

FROM:kkennelly DATE:9/12/2006 12:52:45 PM

Tim, In the past we have set the defaults for these engine data values based on what BRASS used as a default when the option to select the value was not available in Virtis. If we change the default value to something different from what BRASS was using, when everyone runs BRASS now they will get different values. We try to follow the rule that if you want the analysis run a different way you have to make a change (like changing the switch to not limit Mcr/Max).

FROM:kkennelly DATE:9/12/2006 1:40:18 PM

We'll have to discuss this with Jim. If we change the default for new ps mbr alts users will get a different type of analysis for existing and new mbr alts.

FROM:tarmbrecht DATE:Wednesday, September 13, 2006 10:11:35 AM

I understand your point, but isn't the point of Virtis to be universal so that more engines can tap into the database, not just BRASS? Shouldn't a new user entering data into Virtis for the first time expect the program defaults to follow the AASHTO Standard Specs and not the policies of the Wyoming DOT? Did the task force OK the rule to adjust Virtis to default to each of a third party's non-AASHTO defaults? If so, I can take this up with them.

FROM:jduray DATE:9/18/2006 8:46:54 AM

Email setn to TAG requesting instructions for how to handle this.

FROM:bgoodrich DATE:Tuesday, September 19, 2006 7:38:53 PM

The standard procedure that we have used for the engine properties is to set them according the engine defaults, which may or may not follow the AASHTO specification. I understand Tim's issue of having to go set this information every time a new member alternative is created. Note that the defaults for the engine properties are set in the database, but this information is not exposed to the user. I suggest that the configuration browser be enhanced to allow the user to edit the engine property defaults on a global basis. This would allow an agency to set these engine properties however they see fit. Comments?

Issue ID: 7615  
Subject: Export of NM BRidge

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 9/18/2006 3:23:30 PM  
Modified By: hlee 10/15/2011 11:49:14 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:19:39 PM

HRS AASHTO

2163

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 7618.15717 | Resolved      | Bridgework Admin utility does not run |

## Description

FROM:jihnat DATE:9/18/2006 11:22:49 AM  
Received via email:

WHEN I try to do anything with the STRAND LAYOUT under "DESIGNED" MEMBER ALTERNATIVES (G2) it crashes.

Steven Maberry  
NMDOT

FROM:jihnat DATE:9/18/2006 11:43:57 AM  
More from Steve:

"Anything" is from STRAND LAYOUT, click to select or change on an 'x' (no strand) or a "o" (stand there).

Example: >>SUPERSTURCTURE DEFINTIONS; >>MEMBERS; >>G2; >>MEMBER ALTERNATIVES; >>DESIGNED; >> STRAND LAYOUT; >> SPAN 1 ... click to select ANY dot or x ... results: "VirtisOpis Application has encountered a problem and needs to close. We are sorry for the inconvenience."

"Inconvenience" is an understatement since VO just closes; saving nothing. And I am completely stopped from working on rating this bridge ... ever.

I suspect a "corrupted file." But have no idea how it got that way or what to do about it to salvage the existing file.

FROM:jihnat DATE:9/26/2006 3:14:56 PM  
I was able to reproduce the crash, after clicking around a little. Then I noticed if I opened the Strand Layout window and clicked the "Left end" radio button, a series of messages appeared:

4/19/2016 3:19:39 PM

HRS AASHTO

2164



## Complete Issue Information

"The harped position, column 1 in row 28, for the strand in column 1 of row 6 is not valid and there is not a valid strand position in row 28 above column 1 in row 6! The harping will be removed."

After answering OK for each of these messages (sixteen in all) I was no longer able to reproduce the crash.

FROM:jihnmat DATE:9/27/2006 7:53:48 AM

Perhaps the strand pattern was changed after the strand layout was set?

I fixed a bug in the schematic that was causing the crash, but this will not fix the data. (Fixed in version 5.5.0)

An enhancement would be to detect the bad data in the validation, or to compare timestamp of strand layout to timestamp of strand pattern.

FROM:jduray DATE:7/23/2007 10:36:21 AM

What do we do if the user changes the strand grid after defining the starnd layout? We should delete the strand layout. I think in the window where the strand grid is defined we should check to see if any mbr alts use the cross section being changed. If so, the user should be asked (for each one) if the strand layout should be deleted. A better approach would be to validate the strand layout using the new strand grid. If the layout is no longer valid ask the user if the layout should be deleted. Provide a way to cancel the changes to the grid.

FROM: Herman Lee DATE: 10/15/2011 7:41:45 PM Eastern Daylight Time

It is reasonable for user to change the strand grid after or during defining the strand layout. For example, user wants to adjust the vertical locations in the strand grid.

Issue ID: 7618

Subject: Bridgeware Admin utility does not run

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Waheed, Amjad 9/19/2006 1:24:10 PM

Modified By: administrator 6/19/2008 4:27:25 PM

Priority: High

Category: Education

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

## Contacts

4/19/2016 3:19:39 PM

HRS AASHTO

2165

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 7623.15712 | Assigned      | Update Training Examples |

**Description**

FROM:awaheed DATE:Tuesday, September 19, 2006 9:24:10 AM  
Each time we try to run Bridgeware Admin utility (we tried on two different machines running Virtis/Opis 5.4, it gives an error which says:

This application has failed to start because abscon.dll was not found. Re-installing application may fix this problem."

FROM:jduray DATE:9/19/2006 2:23:31 PM  
The utility must be installed (copied) to the folder where Virtis/Opis is installed.

|                                   |
|-----------------------------------|
| Issue ID: 7623                    |
| Subject: Update Training Examples |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Goodrich, Brian  | 9/21/2006 3:19:57 PM |
| Modified By: xli               | 9/16/2008 3:10:14 PM |

4/19/2016 3:19:39 PM

**HRS AASHTO**

2166

## Complete Issue Information

|                         |
|-------------------------|
| Priority: High          |
| Category: Documentation |

## History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Accepted           |          |          |
|                 | Closed             |          |          |
| Ihnat, Joseph   | Closed             | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 7624.15711 | Closed        | End Depth cell not updated when tabbing out of Depth Vary dropdown |

## Description

FROM:bgoodrich DATE:Thursday, September 21, 2006 11:20:22 AM

During the Utah DOT training, it was pointed out that some of the training examples were out of date with the latest version. Several windows now have additional fields for LRFR and NSG. See LIB1 and RC5 specifically. The vehicle tree in the Library Explorer is another place.

Also in RC5 (page 23), some of the depths are incorrect for the "Parabolic" variation. See rows 4, 6, and 8 where the depth is the same at the left and right of the parabolic range.

FROM:hlee DATE:9/22/2006 4:22:31 PM

Some users selected Apply instead of OK for those Bar Mark Definition windows since those screen captures show Apply focused and there's no text description for the process. As a result, they created only one bar mark definition.

FROM:kkennelly DATE:9/25/2006 7:57:19 AM

4/19/2016 3:19:40 PM

HRS AASHTO

2167

**Complete Issue Information**

I think we decided to not update the examples for 5.4 since it is a lengthy process to update them and 5.5 will be released very soon. The examples are going to be updated for 5.5.

FROM: bgoodrich DATE: Wednesday, December 06, 2006 11:57:09 AM  
During the New Mexico DOT training, it was pointed out that the prestressed concrete training examples use "Monolithic" for the Interface type on the Slab Interface tab of the Beam Details window. It should be one of the other options.

FROM: bgoodrich DATE: Wednesday, December 06, 2006 12:01:12 PM  
For STL1, the mid-span point of interest is already considered because tenth points are turned on. The POI should be changed to one at the bottom flange transition (36.667').

FROM: xli DATE: 2/22/2007 1:43:51 PM  
Updated the following items for 5.5 training samples:  
1) LIB1: Updated the vehicle tree  
2) STL1: Changed the POI from mid span to the bottom flange transition (36.667')

FROM: xli DATE: 3/2/2007 3:21:27 PM  
3) Windows that are related to LRFR and NSG are updated for PS1, PS2, PS3, PS5, PS6, STL1, STL2, STL4, STL5, RC1, FS1, FS2, FS4.  
4) Slab Interface tab is changed to "intentionally roughened" for PS1, PS2, PS5, PS6.

FROM: Xinmei Li DATE: 9/16/2008 11:09:41 AM Eastern Daylight Time  
All items listed are fixed for 6.0 Training examples.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 7624                                                              |
| Subject: End Depth cell not updated when tabbing out of Depth Vary dropdown |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 9/21/2006 3:26:09 PM |
| Modified By: administrator     | 6/19/2008 4:27:24 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7625.15710 | Assigned      | Invert bitmap when selected in list box |

### Description

FROM:bgoodrich DATE:Thursday, September 21, 2006 11:26:10 AM

Open the Girder Profile window for a schedule-based R/C member alt to the Web tab. In the grid, the "End Depth" cell is not being updated when tabbing out of the "Depth Vary" dropdown when it is open. When "Paraboic" is selected, the "End Depth" cell should be enabled, but it is not. Likewise, when "None" is selected, the "End Depth" cell should be disabled and set automatically to the "Start Depth". See RC5 training example. Also, there was some confusion at the Utah DOT training regarding the depth to be entered on this window. This dimension is missing from the graphic on the Section tab. Based on the training manual, it looks like the total section depth is to be entered, which is confusing given the tab is titled "Web" and the help says to look at the sketch.

FROM:jihnat DATE:9/27/2006 12:58:38 PM

Were you using the keyboard for navigation? This is a longstanding issue with the grid software we are using.

Works OK when the mouse is used for navigation.

FROM:bgoodrich DATE:Wednesday, June 11, 2008 12:30:12 PM

I tested this using 6.0 beta and the "End Depth" is enabled/disabled as expected for both keyboard and mouse navigation.

Issue ID: 7625

Subject: Invert bitmap when selected in list box

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Goodrich, Brian

9/21/2006 3:35:19 PM

Modified By: administrator

6/19/2008 4:27:24 PM

4/19/2016 3:19:40 PM

HRS AASHTO

2169

### Complete Issue Information

|                    |
|--------------------|
| Priority: High     |
| Category: Cosmetic |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 7626.15709 | Suspended     | Add "OK/Next" button to component defintions windows to speed up input |

### Description

FROM:bgoodrich DATE:Thursday, September 21, 2006 11:35:20 AM

In the Haunch Profile window, it is difficult to see which bitmap is selected for the Haunch Type. Can this control be reworked to invert the bitmap that is selected rather than just putting a blue rectangle around it? At the Utah DOT training, one of the users was receiving a very low rating and it took a good deal of time to track down the problem, which was having selected the wrong haunch type.

FROM:bgoodrich DATE:Wednesday, December 06, 2006 11:55:22 AM

The bitmaps in the structure definition wizard are inverted when selected.

## Complete Issue Information

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 7626                                                                  |
| Subject: Add "OK/Next" button to component defintions windows to speed up input |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 9/21/2006 3:42:54 PM |
| Modified By: administrator     | 6/19/2008 4:27:24 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:Thursday, September 21, 2006 11:42:54 AM

Utah DOT had the following suggestion for an input enhancement:

When entering components such as bar mark definitions, shear reinforcement definitions, stiffener definitions, etc, the input would go faster if these windows contained another button called "OK/Next", which would OK the window that is open (close and save data to memory) and then open a new window for the next definition and already be populated with the content from the previous window.

FROM:jduray DATE:7/23/2007 9:44:01 AM

Sounds like a wizard to me. Probably a good idea.

4/19/2016 3:19:40 PM

HRS AASHTO

2171

## Complete Issue Information

Issue ID: 7637  
Subject: Virtis/Opis prestress deflection questions

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Lee, Herman 9/29/2006 12:31:52 PM  
Modified By: administrator 6/19/2008 4:27:23 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |



## Complete Issue Information

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Rebar in layers beta6.JPG |             |
|      | Rebar in layers beta6.xml |             |
|      | Rebar in Layers.xml       |             |
|      | Rebar in layers.JPG       |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7638.15697 | Closed        | Rebar in Layers in RC Slab |

### Description

FROM:hlee DATE:9/29/2006 8:26:46 AM

Bridgware e-mail from Steve Yip, J.F. SATO AND ASSOCIATES:

To Whom it may concern,

JFSA & Associates in Colorado just leased the Virtis/Opis software from AASHTOWARE four months ago.

I have two questions of deflections of Prestress when comparing with Conspan and Virtis program.

Since we do not have Conspan program, the output from Conspan and Vptis are from different project.

My questions are as below.

Conspan output from one of my old project. (single span)

CAMBER / DEFLECTION: (PICK Design Handbook - 4th Ed.- Table 4.6.2)

0.5 x L = 47.50 ft

: Release Mult Erection Mult Final

Prestress : 4.357 1.80 7.843 2.20 9.586

Self Wt. : -1.677 1.85 -3.103 2.40 -4.025

Deck + Haunch : -1.216 2.30 -2.797

Supplemental : 0.000 2.30 0.000

DL-Prec. (DC) : -0.303 3.00 -0.910

Diaphragm : 0.000 3.00 0.000

DL-Prec. (DW) : 0.000 3.00 0.000

DL-Comp. (DC) : 0.000 3.00 0.000

DL-Comp (DW) : -0.279 3.00 -0.837

DL-Supp. (DC) : 0.000 3.00 0.000

DL-Supp. (DW) : 0.000 3.00 0.000

Vptis output from any project (single span)

Description: Prestress Loads

Load Type: Prestress Load

Stage: Non-composite (Stage 1)

Span Distance Y Deflection

1 62.5 -5.3056

Description: Initial Prestress Loads

Load Type: PS Load at release

Stage: Non-composite (Stage 1)

4/19/2016 3:19:41 PM

HRS AASHTO

2173

**Complete Issue Information**

Span Distance Y Deflection  
1 62.5 -6.3215

Questions:

1. What is the Y deflection for Prestress load - long term or short term?  
2. Comparing the Conspan output and Vptis:  
Conspan - long term deflection is more than release (forgot about the sign now) Camber increase with time  
Vptis - initial deflection is more than deflection of Prestress Load. (forgot about the sign now) Camber decrease with time  
Conspan and Vptis have different sign convention.  
Why two programs come out different behavior of deflection?  
I left two message in your voice mail this morning. I think that I should e-mail this and provide more information so you can understand the questions more?  
Please call me at (303)797-5050 EX 1130, if you need more information.  
Thanks for your help  
Man Cheung (Steve) Yip, P.E., S.E.  
Bridge Engineer  
J.F. SATO AND ASSOCIATES

FROM:hlee DATE:9/29/2006 10:37:14 AM  
Bridgware e-mail from Steve Yip, J.F. SATO AND ASSOCIATES:

We have opis and virtis 5.4.0.  
Actually the information below is from opis; I compared deflection between opis and Conspan, not virtis.

FROM:hlee DATE:9/29/2006 11:38:23 AM  
Attached bridge xml files.

FROM:jduray DATE:10/3/2006 8:24:17 AM  
Steve - your consultant license includes limited support for installation. Your primary support is through the DOT you are doing work for. I suggest you contact them with your request for a comparison between LEAP Conspan and BRASS. We will provide an answer to your question about the y deflection for the prestress load.

FROM:bgoodrich DATE:Tuesday, October 03, 2006 10:33:24 AM  
The prestress forces/moments are applied to the structure using the load-balancing method and then solved using the direct stiffness method, resulting in moments, shears, and deflections. These would be considered short-term deflections. If AASHTO losses are used, the losses are applied to the structure opposite the initial prestressing, which results in deflections that are long-term (due to the nature of the LRFD formulas) but oppose the earlier deflections. BRASS denotes a downward deflection as a positive.

Issue ID: 7638  
Subject: Rebar in Layers in RC Slab

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 9/29/2006 4:33:33 PM |
| Modified By: administrator | 6/19/2008 4:27:23 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | RC 5 span ver 5.4.xml    |             |
|      | RC Profile View.JPG      |             |
|      | 5 Span RCSH 5.5 beta.xml |             |

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 7641.15694 | Closed        | RC Profile View - SI Text |

### Description

FROM:dteal DATE:Friday, September 29, 2006 12:33:46 PM

See attached jpg and xml export, RC slab structure in 5.4

I thought we fixed this??

Entering rebar in schedule based RC slab, the top mat of steel is made up of several different sizes of rebar making the distance to the centroids slightly different. In this case 3.5 mm. The rebar is truly in one layer but it is being shown in multiple layers. Was this fixed earlier?

FROM:jihnat DATE:9/29/2006 3:08:31 PM

4/19/2016 3:19:41 PM

HRS AASHTO

2175

**Complete Issue Information**

Works OK when the member alt is US. Not so good for SI.  
Fixed for version 5.5.0

FROM:dteal DATE:Friday, October 27, 2006 9:53:26 AM  
Still reporting layers when it's not a layer.

The bottom steel consists of bars ranging form #13 SI to #36 (SI). All bars in the bottom in the bottom mat have a 30mm clearance to the deformed diameter of the bar. When they are measured to the centroids vary from 37 mm to 50.5 mm.

So even though the centroids vary by 13.5 mm, the bars deformed surface is still 30 mm from the bottom. The tolerance used to define layers has to be greater than 13.5 mm difference in centroids.

FROM:jihnat DATE:10/31/2006 7:39:34 AM  
Please attach your bridge(s). The schematic of the attached bridge (Rebar in layers.xml) shows a single layer in Beta 6.

FROM:dteal DATE:Tuesday, October 31, 2006 10:40:11 AM

FROM:dteal DATE:Tuesday, October 31, 2006 10:44:43 AM  
Info attached

FROM:dteal DATE:Tuesday, October 31, 2006 10:45:59 AM

FROM:jihnat DATE:11/2/2006 7:53:39 AM  
Fixed for 5.5.0 Release

FROM:dteal DATE:Tuesday, November 07, 2006 2:48:07 PM

FROM:jihnat DATE:11/8/2006 10:51:02 AM  
Track field Accepted.

|                                    |
|------------------------------------|
| Issue ID: 7641                     |
| Subject: RC Profile View - SI Text |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 10/3/2006 1:01:01 PM |
| Modified By: administrator     | 6/19/2008 4:27:23 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:41 PM

HRS AASHTO

2176

## Complete Issue Information

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Girder_Line.err          |             |
|      | RC 5 span ver 5.4.xml    |             |
|      | 5 Span RCSH 5.5 beta.xml |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 7643.15692 | Assigned      | RC Fails – Change Point too Close to Node Point |

### Description

FROM:dteal DATE:Tuesday, October 03, 2006 9:01:01 AM

In the attached RC structure the SI dimensioning text at the top of the Profile View doesn't make too much sense. All dimensions are preceded by a zero?? When I change to US units the zeros go away?

Bridge attached  
jpg of the profile view attached

FROM:jduray DATE:10/3/2006 10:16:59 AM  
Joe - is this new to 5.5?

FROM:jihnat DATE:10/3/2006 1:49:34 PM  
Been like this since version 5.2  
Fixed for 5.5.0

FROM:dteal DATE:Thursday, October 26, 2006 5:17:56 PM  
Accepted in 5.5.0 Beta 6

Issue ID: 7643

Subject: RC Fails – Change Point too Close to Node Point

4/19/2016 3:19:42 PM

HRS AASHTO

2177

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 10/3/2006 1:43:54 PM |
| Modified By: dteal               | 5/12/2010 8:12:47 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | DeadLoads.png       |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 7651.15684 | Resolved      | Stiffner Weights in Steel Bridges |

### Description

FROM:dteal DATE:Tuesday, October 03, 2006 9:43:54 AM

I thought we fixed this some time ago? Maybe it's an SI thing?

Structure exports to BRASS then fails stating that at several points the change point located at centerline of pier is within 0.99 feet of another node point.

At the places BRASS states I have a change point – nothing changes at this point??

Xml attached

BRASS error file attached

FROM:dteal DATE:Tuesday, October 03, 2006 12:40:10 PM

This exports and rates in the STD engine. With ignore shear checked and changing the end supports for Fixed/Fixed to Pinned/Roller. I haven't verified the values the Std engine displayed, only stating that

4/19/2016 3:19:42 PM

HRS AASHTO

2178

**Complete Issue Information**

it runs.

FROM:bgoodrich DATE:Tuesday, October 03, 2006 2:55:30 PM

The cross section ranges input do not change at the 0.0057 ft location, but the development length for some reinforcement is changing at that point. The Virtis domain returns the cross sections and ranges and the BRASS export generates the commands. When the BRASS-GIRDER engine detects a cross section range that is too close to an existing node point, it replaces the existing node point rather than ignoring the range as is done in BRASS-GIRDER(LRFD). In this case, the nodes that were replaced at the left end of spans 3, 4, and 5. I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Friday, October 20, 2006 11:37:44 AM  
WYDOT assigned this issue to BRASS Problem Log 710.

FROM: Brian Goodrich DATE: 12/8/2009 12:06:25 PM Mountain Standard Time  
BRASS-GIRDER(STD) 6.0.3 was revised so nodes are no longer shifted during the creation of the model. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/5/2010 2:35:19 PM Eastern Daylight Time  
Tested the 5.4 XML file in this incident.  
Verified in 6.2 Beta 1.

FROM: Dean Teal DATE: 5/12/2010 4:12:47 PM Eastern Daylight Time  
Accepted 6.2 beta 1

|                                            |
|--------------------------------------------|
| Issue ID: 7651                             |
| Subject: Stiffner Weights in Steel Bridges |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Maberry, Steven  | 10/6/2006 11:06:23 AM |
| Modified By: administrator     | 6/19/2008 4:27:22 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7653.15682 | Resolved      | Analysis Events dialog - Unload does not work properly |

**Description**

FROM:jihnat DATE:10/6/2006 7:06:16 AM  
Received via email:

I've looked for a definitive answer in the HELP files (like under MEMBER LOADS, >> "Dead Loads") and cannot find a confirmation or denial of this question:

When Virtis Opis passes the description of a steel beam bridge to the underlying engine (e.g., BRASS), are the weights of the stiffners included?

NOTE: There is enough geometric information to calculate the weight of the stiffners IF Virtis Opis refers back to the MATERIAL: Steel.\

Steven Maberry, NMDOT

FROM:hlee DATE:10/6/2006 10:38:33 AM  
Reply e-mail to Steven:

The Dead Load (BRASS LFD) Help topic summarizes the dead load components used by BRASS (see attached).

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7653                                                  |
| Subject: Analysis Events dialog - Unload does not work properly |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Duray, Jim            | 10/10/2006 4:22:26 PM |
| Modified By: administrator          | 6/19/2008 4:38:36 PM  |
| Priority: High                      |                       |



**Complete Issue Information**

Category: Bug

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          |             |
| Duray, Jim       |           |          | Enhancement |
| Kennelly, Krisha |           |          |             |
| Kennelly, Krisha | Assigned  | High     | Enhancement |
|                  | Suspended |          |             |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7672.15663 | Assigned      | Traffic Tab Missing Design ADT Field |

**Description**

FROM:jduray DATE:10/10/2006 12:22:22 PM  
Refer to 7620.

FROM:mordoobadi DATE:10/16/2006 9:38:14 AM  
Fixed in 5.5 and later.

## Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 7672                                |
| Subject: Traffic Tab Missing Design ADT Field |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/20/2006 2:27:35 PM |
| Modified By: hlee                 | 6/10/2011 8:32:27 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Friday, October 20, 2006 10:27:36 AM

On the traffic tab we have ADT which is used to calculate the Recent ADTT.

What we are missing is the "Design" ADT which would be used to calculate the Design ADTT.

I think all the fatigue calc's in LRFD are based on Design ADTT and not Recent ADTT.

What we have right now, the designer has to go find the design ADT and do the calc's to populate the field.

If this field isn't populated, ( I think) the LRFD code uses the maximum of 20,000?

FROM:kkennelly DATE:10/23/2006 11:40:32 AM

Changed to Support since this data was implemented for version 5.4. Data was reviewed and tested for version 5.4 so changing this to an enhancement request.

FROM:dteal DATE:Thursday, October 26, 2006 8:52:33 AM

Can we at least add this to the help to give designers direction on how to calculate this?

4/19/2016 3:19:43 PM

HRS AASHTO

2182

## Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 7673                                         |
| Subject: Traffic Tab Missing Truck Fraction Multiplier |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/20/2006 2:28:07 PM |
| Modified By: hlee                 | 6/10/2011 8:32:39 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          |             |
| Duray, Jim       |           |          | Enhancement |
| Kennelly, Krisha |           |          |             |
| Kennelly, Krisha | Assigned  | High     | Enhancement |
|                  | Suspended |          |             |

### Contacts

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:19:43 PM

HRS AASHTO

2183

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                         |
|------------|---------------|-------------------------------------------------------------------------------------------------|
| 7680.15655 | Suspended     | The name of the engine files created by NSG analysis may need to append to the EngineFiles.LST. |

## Description

FROM:dteal DATE:Friday, October 20, 2006 10:28:07 AM

When following the LFRD code we need to look at the # of trucks going one direction. If we have an interstate or other multi-laned divided travelway, of lets say 3 or more lanes going in one direction. We have % of trucks going in one direction but according to table 3.6.1.4.2-1 we are to use a multiplier of 0.80 to reduce the % of trucks in a single lane.

I think this field should have been included.

FROM:kkennelly DATE:10/23/2006 11:37:32 AM

Changed to Support since this data was implemented for version 5.4. Data was reviewed and tested for version 5.4 so changing this to an enhancement request.

FROM:kkennelly DATE:10/23/2006 11:40:00 AM

FROM:dteal DATE:Thursday, October 26, 2006 8:50:56 AM

Can we at least add this to the help to give designers direction?

Issue ID: 7680

Subject: The name of the engine files created by NSG analysis may need to append to the EngineFiles.LST.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Lee, Herman

10/26/2006 3:25:27 PM

Modified By: administrator

6/19/2008 4:27:19 PM

Priority: High

Category: Enhancement

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:43 PM

HRS AASHTO

2184

### Complete Issue Information

|            |                    |      |             |
|------------|--------------------|------|-------------|
| Duray, Jim | New                | High | Unknown     |
|            | Resolved           |      | Education   |
| Duray, Jim | New                | High | Unknown     |
|            | Information Needed |      |             |
|            | Assigned           |      |             |
|            | Suspended          |      | Enhancement |
| Duray, Jim | Suspended          | High | Enhancement |

### Contacts

| Name            | Company                        | Email 1                   | Phone 1       |
|-----------------|--------------------------------|---------------------------|---------------|
| Dean Teal       | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| Brian McCaffrey | AECOM/EarthTech                | Brian.McCaffrey@aecom.com |               |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Zoomed Schematic.JPG |             |
|      | Rebar Text.JPG       |             |
|      | Rebar text.xml       |             |
|      | Zoomed Schematic.xml |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 7682.15653 | Suspended     | Text Overwritten in Rebar Schematic |

### Description

FROM:hlee DATE:10/26/2006 10:23:34 AM

For a standard analysis, the engine will create Plate\_Girder.dat, Plate\_Girder.log, and Plate\_Girder.OUT.

For a NSG analysis, the engine will create Plate\_Girder - NSG\_(Centered)\_-\_ADJ\_(None).dat, Plate\_Girder - NSG\_(Centered)\_-\_ADJ\_(None), and Plate\_Girder - NSG\_(Centered)\_-\_ADJ\_(None).OUT.

Since the name of the files created by NSG analysis (Plate\_Girder - NSG\_(Centered)\_-\_ADJ\_(None)) is different than standard analysis (Plate\_Girder), there may have 2 set of engine files in the same folder. The EngineFiles.LST should also have 2 set of engine files so the files can be properly deleted.

Is there a reason why the name of the files created by NSG analysis is different than standard analysis? Both the file deletion process and view latest analysis output window use EngineFiles.LST.

4/19/2016 3:19:43 PM

HRS AASHTO

2185

### Complete Issue Information

There will be a problem if the names are different.

FROM:jduray DATE:10/26/2006 2:07:43 PM

The NSG can be run for multiple paths per analysis. Filenames distinguish the path evaluated.

FROM:hlee DATE:10/26/2006 3:39:01 PM

The EngineFiles.LST file, view latest analysis output window, and the file deletion process need to be enhanced to handle different file names.

FROM:jduray DATE:10/27/2006 8:20:15 AM

When this window and mechanism was designed and implemented the intent was to only work with files associated with the latest analysis. The process needs to be reviewed and possibly modified if we want it to work for multiple analysis events.

FROM:jduray DATE:12/13/2007 11:07:39 AM

Discussed with TAG...delete the files that are listed in the LST file and the LST file prior to an analysis.

|                                              |
|----------------------------------------------|
| Issue ID: 7682                               |
| Subject: Text Overwritten in Rebar Schematic |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 10/27/2006 2:04:16 PM |
| Modified By: hlee              | 6/10/2009 2:31:11 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Friday, October 27, 2006 10:04:16 AM

4/19/2016 3:19:44 PM

HRS AASHTO

2186

## Complete Issue Information

In the schematic of the rebar, look in the upper left corner. The text is being overwritten, even at 400% zoom

FROM:jduray DATE:10/27/2006 11:13:18 AM

In resolving this situation it would be useful to know if this is this new to 5.5 so we know if we broke something since the last release.

FROM:jduray DATE:10/27/2006 11:53:59 AM

We need to determine if this overlap is occurring because it is a situation for placement that was not included in the design/implementation or a bug in the code that should handle this situation.

FROM:dteal DATE:Friday, October 27, 2006 12:00:23 PM

Sorry – I can't tell if this was prior problem. In 5.4 the rebar was displayed in layers. Now in 5.5 beta 6 the layer display is partially corrected bunching all the text together.

FROM:jihnat DATE:10/31/2006 8:16:21 AM

You can type in a higher zoom than what's in the droplist, say 600 or 800.

FROM:dteal DATE:Tuesday, October 31, 2006 10:39:12 AM

At a 500% typed in zoom resolution the text isn't overwriting itself.

FROM:jduray DATE:11/2/2006 7:46:12 AM

Significantly more logic is required in the code to check for overlapping objects. Therefore I'm changing this to an enhancement.

FROM:bmccaffrey DATE:Thursday, November 09, 2006 9:24:02 AM

This is a programmers oversight, not an enhancement. I'm putting this on the 'bug' list. Fixing a display glitch is not an enhancement.

FROM:jduray DATE:7/23/2007 10:01:17 AM

It is not a display glitch. The schematics do not contain logic for detecting overlapping text and repositioning the text to avoid overlaps.

FROM:dteal DATE:Wednesday, February 13, 2008 12:16:28 PM

The attached bridge and schematic shows three lines of text on top of each other. I zoomed it to 1000% (one thousand percent) and it didn't change anything (just made it big and wrong).

The line on the right in the schematic should read:

S1 Right

S2 Right

S3 Right

FROM: Herman Lee DATE: 6/10/2009 10:28:43 AM Eastern Daylight Time

Beta TAG comment: See if moving bar mark text to the dimension line helps.

Issue ID: 7687

Subject: NMDOT question

Folder: /Virtis/Support Center

4/19/2016 3:19:44 PM

HRS AASHTO

2187

### Complete Issue Information

|                                    |                       |
|------------------------------------|-----------------------|
| Primary Contact: Kennelly, Krishna |                       |
| Submitted By: Ihnat, Joseph        | 11/1/2006 11:23:04 AM |
| Modified By: administrator         | 6/19/2008 4:27:19 PM  |
| Priority: High                     |                       |
| Category: Education                |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 7692.15643 | Discard       | P/S allowables |

### Description

FROM:jihnat DATE:11/1/2006 7:23:07 AM  
received via email:

Dear Bridgeware,

I am responsible for oversight and auditing of bridge rating in New Mexico. I sometimes struggle to figure out what other engineers have done to trigger odd outcomes. This is a case on point ... however, since the identical thing has occurred with two different engineers, I suspect it has something to do with the nature of the bridge and how it is described in Virtis Opis.

This bridge consists of two PARALLEL bridges with the oddity of a non-continuous construction joint

4/19/2016 3:19:44 PM

HRS AASHTO

2188



**Complete Issue Information**

between the two—hence there is no continuity of force effects across the joint. The joint is then covered with a median. The cross section is shown in the figure below.

When we do this, and try to get a “Compute from Typical Section” in the LIVE LOAD DISTRIBUTION, we get the message shown below. Of course, the resulting “Zero” distribution factors prevents anything from running (fortunately—otherwise, one engineer would have actually thought that was an accurate bridge model).

We have modeled one other half-bridge like this before. The differences in the model were: 1) It was a steel bridge; 2) the cross section was entered as a mirror image of what you see in the illustration below.

Can you explain how VO came to the conclusion that the deck acts as a simple span between members—resulting and Distribution Factors of zero?

Thanks,

Steven Maberry, P.E., Ph.D. [NMDOT]

FROM:jihnat DATE:11/2/2006 1:09:18 PM  
Attached documents.

FROM:kkennelly DATE:11/6/2006 9:36:02 AM  
Virtis uses the travelway as defined by the user to determine where to place the wheel lines to compute the simple beam distribution factors. The first wheel line is placed 2' from the edge of the travelway as per AASHTO Figure 3.7.7.A. That places the first wheel line to the right of girder G2 and thus there is no contribution to girder G1 when computing the simple beam DF. If you want Virtis to compute simple beam DF for girder G1 for you, you should revise the travelway on the Structure Typical Section: Lane Position tab. Otherwise you have to compute the simple beam DF to girder G1 yourself.

|                         |
|-------------------------|
| Issue ID: 7692          |
| Subject: P/S allowables |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: McCaffrey, Brian | 11/9/2006 2:10:32 PM |
| Modified By: administrator     | 6/19/2008 4:27:18 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

4/19/2016 3:19:44 PM

HRS AASHTO

2189

### Complete Issue Information

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

### Documents

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                            |
|------------|---------------|--------------------------------------------------------------------------------------------------------------------|
| 7693.15642 | Rejected      | Date Modified and Modified By should be populated once the file is linked in Bridge Multimedia Attachments window. |

### Description

FROM:bmccaffrey DATE:Thursday, November 09, 2006 9:10:32 AM

This area needs to be fixed ASAP before 5.6. If there are data items that are not used by any of the engines then it needs to be explicitly shown directly on the window that it is not used. This goes for other windows that have no use - either explain their purpose directly in the window or remove them altogether - P/S Stress Limits; Slab Interface; Shrinkage etc.

FROM:jduray DATE:11/9/2006 1:30:45 PM

These items are explained in the help for each engine. It has been that way for years. What you suggest can be done but the user would have to select the engine for which the items are to be displayed (or indicated). This would require each engine provide a file (or database entries for a new set of tables) that could be used by the UI to determine the items to display (or their format). I don't think this is difficult, but it is tedious because we have over 25000 data items. The file would be huge (although the proper way to do it would be to indicate the items not to display -an exceptions file).

FROM:hlee DATE:11/10/2006 9:26:34 AM

Related to Incident 6605.

FROM:hlee DATE:4/30/2008 2:37:00 PM

Discarded by TAG 12/07.

Issue ID: 7693

Subject: Date Modified and Modified By should be populated once the file is linked in Bridge Multimedia Attachments window.

Folder: /Virtis/Support Center

4/19/2016 3:19:44 PM

HRS AASHTO

2190

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Lee, Herman      | 11/10/2006 2:36:22 PM |
| Modified By: administrator     | 6/19/2008 4:27:18 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
|                    | Resolved |          |             |
| Ordoobadi, Mehrdad | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                             |
|------------|---------------|-----------------------------------------------------------------------------------------------------|
| 7695.15640 | Resolved      | The selection for "Save Analysis Results" in Analysis Settings window is not saved in the template. |

### Description

FROM:jduray DATE:Tuesday, November 14, 2006 12:54:40 PM

FROM:jihnat DATE:10/24/2007 8:24:49 AM

They are populated when the link is modified, not when it is created.

## Complete Issue Information

|                                                                                                              |
|--------------------------------------------------------------------------------------------------------------|
| Issue ID: 7695                                                                                               |
| Subject: The selection for "Save Analysis Results" in Analysis Settings window is not saved in the template. |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Lee, Herman           | 11/14/2006 3:39:21 PM |
| Modified By: administrator          | 6/19/2008 4:27:18 PM  |
| Priority: High                      |                       |
| Category: Bug - GUI 2               |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mordoobadi DATE:11/15/2006 10:32:31 AM

This is by design. The Save Analysis Results checkbox is only for bridge explorer and it is not persistent.

## Complete Issue Information

Issue ID: 7696

Subject: Typo in Batch Import dialog.

Folder: /Virtis/Support Center

Primary Contact: Li, Xinmei

Submitted By: Lee, Herman

11/14/2006 9:06:25 PM

Modified By: administrator

6/19/2008 4:27:18 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Li, Xinmei      | Assigned |          | Bug - GUI 2 |
|                 | Resolved |          |             |
| Li, Xinmei      | Resolved | High     | Bug - GUI 2 |

### Contacts

4/19/2016 3:19:45 PM

HRS AASHTO

2193

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State      | Summary                                 |
|------------|--------------------|-----------------------------------------|
| 7698.15637 | Information Needed | ERROR** On the BRACING-SCHEDULE command |

**Description**

FROM:hlee DATE:11/14/2006 4:06:08 PM  
 "View Warnings/Erros" should be "View Warnings/Errors"

|                                                  |
|--------------------------------------------------|
| Issue ID: 7698                                   |
| Subject: ERROR** On the BRACING-SCHEDULE command |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Pandey, Sita Ram | 11/16/2006 2:44:29 PM |
| Modified By: administrator     | 6/19/2008 4:27:18 PM  |
| Priority: High                 |                       |

4/19/2016 3:19:45 PM

HRS AASHTO

2194

## Complete Issue Information

Category: Unknown

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Ihnat, Joseph   | Assigned  |          |          |
|                 | Duplicate |          |          |
| Ihnat, Joseph   | Duplicate | High     | Unknown  |

## Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 7702.15633 | Duplicate     | Deleting previous versions prior to installing new |

## Description

FROM:dwhittemore DATE:Thursday, November 16, 2006 9:44:30 AM

I am getting the following error while running the BRASS LFD and ASD module in Virtis/Opis. If anyone have the clue to sort out this problem, I will appreciate.

Error No.: 1886  
Type : Input Error  
Location : Input Data File

**\*\*ERROR\*\*** On the BRACING-SCHEDULE command, the Spacing must be evenly divisible into the Range Length +/- 0.01 ft.

Thanks,

FROM:kkennelly DATE:11/20/2006 7:58:18 AM  
Please export your bridge to an xml file and attach it to this incident so we can investigate. Thanks.

FROM:tthompson DATE:Tuesday, November 28, 2006 2:41:12 PM  
Also looks similar to my VI 7469

4/19/2016 3:19:45 PM

HRS AASHTO

2195

**Complete Issue Information**

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 7702                                              |
| Subject: Deleting previous versions prior to installing new |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: McCaffrey, Brian | 11/24/2006 6:49:24 PM |
| Modified By: administrator     | 6/19/2008 4:27:17 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:bmccaffrey DATE:Friday, November 24, 2006 1:49:27 PM

Any insight on how to do this would be appreciated. Every time we install a new version of V/O we get the same meggage that a previous version is installed even though I uninstall all old versions and delete the folders.

FROM:jihnat DATE:3/15/2007 1:05:30 PM  
Same as 3473.



## Complete Issue Information

Issue ID: 7703  
Subject: Virtis Output Report Questions

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Murgoitio, Shanon 11/27/2006 8:55:37 PM  
Modified By: administrator 6/19/2008 4:27:17 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name                                     | Company          | Email 1                             | Phone 1      |
|------------------------------------------|------------------|-------------------------------------|--------------|
| Brian Goodrich                           | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT        | Shanon.Murgoitio@itd.idaho.<br>gov  | 208-334-8547 |

4/19/2016 3:19:46 PM

HRS AASHTO

2197

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 7704.15631 | Closed        | IE 7.0  |

### Description

FROM:smample DATE:Monday, November 27, 2006 3:55:38 PM

I have two questions regarding output:

1. In the analysis output report, what field in Virtis populates the "Structure No." field?

Idaho Transportation Department

Page 1

Date 11/27/2006

Structure No. Bridge Name: 03020J 002.42

Member: 13785 - G1 Ext - RC - over UPRR

Continuous 3 span reinforced concrete tee beam .

2. How do I get rid of these warnings? What do these warnings refer to?

WARNING (Low):

There are no structure definition component sets defined!

The BRASS engine properties for the structure definition have not been specified!

WARNING (Low):

There are no member alternative component sets defined!

The BRASS engine properties for the member alternative have not been specified!

FROM:kkennelly DATE:11/29/2006 10:12:28 AM

Brian, can you answer #1?

1. I cannot find any command in the BRASS LFD help that corresponds to the "Structure No." title in the BRASS output file. Maybe Brian can answer this question.

2. These warnings refer to the settings you have specified on the "Engine" tab located in several places in Virtis (for example, the Engine tab on the Member Alternative window). If you have not specified any settings on the Engine tab for BRASS LFD then the default Engine settings are used for BRASS LFD and this warning appears in the export to the BRASS LFD program. There is no way to turn off these warnings. I think you can just ignore these warnings.

FROM:bgoodrich DATE:Monday, December 18, 2006 4:40:23 PM

The "Structure No." field should be populated by the NBI structure ID. The BRIDGE-NAME command is written to the data file, but it is not transferred to the report header within the BRASS engine. I'll forward this issue to WYDOT.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 12:48:57 PM

4/19/2016 3:19:46 PM

HRS AASHTO

2198

### Complete Issue Information

WYDOT assigned this issue to BRASS Problem Log 728. This has been addressed and will be in the next release. Fixed for version 5.6.

|                 |
|-----------------|
| Issue ID: 7704  |
| Subject: IE 7.0 |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 11/28/2006 3:25:26 PM |
| Modified By: administrator     | 6/19/2008 4:27:17 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |
| Duray, Jim      | Closed             | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Tuesday, November 28, 2006 10:25:44 AM

When will we be compatible with IE 7.0

FROM:jduray DATE:1/15/2007 10:48:04 AM

Are you aware of problems? We have not done any testing yet. I will check with the TF and recommend we do.

4/19/2016 3:19:46 PM

HRS AASHTO

2199

**Complete Issue Information**

FROM:dteal DATE:Monday, January 22, 2007 12:32:57 PM  
I haven't heard of anything specifically – Except – I know BRASS-Culvert has some issues creating a report in IE 7.0.

FROM:dteal DATE:Wednesday, November 07, 2007 2:04:46 PM  
Please Close

|                                     |
|-------------------------------------|
| Issue ID: 7705                      |
| Subject: Crash in BWS Review report |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Ihnat, Joseph |                        |
| Submitted By: Ihnat, Joseph    | 11/29/2006 12:14:25 PM |
| Modified By: administrator     | 6/19/2008 4:27:17 PM   |
| Priority: High                 |                        |
| Category: Unknown              |                        |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00023 - I-17-NK.xml |             |

4/19/2016 3:19:46 PM

HRS AASHTO

2200

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7710.15625 | Resolved      | Hinge in a Prestressed Concrete Beam |

**Description**

FROM:jihnat DATE:11/29/2006 7:14:37 AM  
received via email:

Every time my bridge engineer tries to run the review report option he receives the attached error. Any/all files, Virtis 5.4, Winxp pro/SP2.

Frank Jagla, CH2M Hill

FROM:jihnat DATE:11/29/2006 8:22:02 AM  
I've confirmed this to be a bug in Virtis, for PS U beam bridges. Version 5.5 also crashes with this particular bridge. The workaround is to use the Report Tool, Open the file "BWS Report for ps girders.abr", and Generate the report.

FROM:jihnat DATE:11/29/2006 9:30:56 AM  
Fixed for version 5.6.0  
Also fixed a similar bug in Report Tool (missing units under Interior Diaphragms of PS U beams).

FROM:xli DATE:2/5/2007 2:38:22 PM  
It works fine for 5.6 beta 1.

|                                               |
|-----------------------------------------------|
| Issue ID: 7710                                |
| Subject: Hinge in a Prestressed Concrete Beam |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Curtis, Beckie   | 12/4/2006 3:12:23 PM |
| Modified By: administrator     | 6/19/2008 4:27:17 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:47 PM

HRS AASHTO

2201

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Duray, Jim       | New       | High | Unknown     |
|                  | Resolved  |      | Education   |
| Duray, Jim       | New       | High | Unknown     |
| Kennelly, Krisha | Assigned  |      |             |
|                  | Suspended |      | Enhancement |
| Kennelly, Krisha | Suspended | High | Enhancement |

### Contacts

| Name           | Company                    | Email 1                             | Phone 1        |
|----------------|----------------------------|-------------------------------------|----------------|
| Brian Goodrich | BridgeTech, Inc.           | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688   |
| David Koenig   | Missouri DOT               | david.koenig@modot.mo.gov           | (573) 526-0556 |
| Hasmukh Lathia |                            | HLathia@mbakercorp.com              |                |
| Herman Lee     | Michael Baker Jr.,<br>Inc. | hlee@mbakercorp.com                 |                |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 7715.15620 | Suspended     | Phi Factor for P/S Negative Moment Capacity |

### Description

FROM:rcurtis DATE:Monday, December 04, 2006 10:12:23 AM

I am attempting to model a 3-span prestressed concrete structure with the middle span cantilevering off of the piers a short distance and the tail spans bearing on this cantilever. Is there a way to model this in Virtis?

Thank you.

FROM:kkennelly DATE:12/5/2006 8:15:57 AM

You cannot model a PS beam with hinges in Virtis.

Issue ID: 7715

Subject: Phi Factor for P/S Negative Moment Capacity

4/19/2016 3:19:47 PM

HRS AASHTO

2202

## Complete Issue Information

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Koenig, David        | 12/5/2006 8:03:22 PM |
| Modified By: administrator         | 6/19/2008 4:27:16 PM |
| Priority: High                     |                      |
| Category: Enhancement              |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 7718.15617 | Suspended     | Superstructure Definition Wizard Enhancements |

## Description

FROM:dkoenig DATE:Tuesday, December 05, 2006 3:03:22 PM

We stumbled onto an issue about what Virtis is using for the phi factor in the check of negative moment capacity at the intermediate supports on continuous P/S bridges. Based on our review of some structures, Virtis is exporting a phi factor of 0.90 to BRASS for it to do the analysis. If you look at the standard AASHTO factor libraries in Virtis, this is what it has as the phi factor for flexural capacity of nonprestressed elements. We have always used a phi factor of 1.0 for design of the negative moment steel. We have reviewed some PCA examples, and they do it the same way.

In AASHTO, Article 9.7.2.3 states that negative moment reinforcement should be designed with the load factors in accordance with Article 9.14. In Article 9.14, it specifies a phi factor of 1.0 for factory produced prestressed concrete members. Based on these two articles, it is our opinion that AASHTO is clearly specifying to use the phi factor of 1.0 for negative moment checks at the piers on continuous P/S structures and that the phi factor of 0.90 in the standard library is incorrect. We would request that

4/19/2016 3:19:47 PM

HRS AASHTO

2203







**Complete Issue Information**

**Description**

FROM:bgoodrich DATE:Wednesday, December 06, 2006 2:33:03 PM

Users at the New Mexico training made suggestions regarding the structure definition wizard.

1. Add an option for specifying a non-composite structure, i.e., no shear connectors at all.
2. Another suggestion was having the wizard calculate the effective flange width when the structure definition is finished rather than having to visit the Deck Profile window to select the Compute button.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 7719                                                                |
| Subject: Pressing Enter key when New button has focus does not create new row |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: lhnat, Joseph |                      |
| Submitted By: Goodrich, Brian  | 12/6/2006 7:38:30 PM |
| Modified By: administrator     | 6/19/2008 4:27:16 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

4/19/2016 3:19:48 PM

HRS AASHTO

2206

### Complete Issue Information

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Duray, Jim      | New       | High     | Unknown  |
|                 | On Hold   |          |          |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 7720.15615 | Duplicate     | Incorrect grid behavior in Beam Details form Continuity Diaphragm tab |

### Description

FROM:bgoodrich DATE:Wednesday, December 06, 2006 2:38:31 PM

A user at the New Mexico training found the following issue. Pressing Enter key when New button has focus does not create new row. For the following windows, it closes the window:

1. PS Haunch Profile (Example PS1)
2. Cross Section Ranges (Example RC2)
3. Interior Diaphragms

For the following windows, it does nothing at all:

1. Beam Details - Continuity Diaphragm (PS2)

It would be a good idea to test every New button to verify it creates a new row.

FROM:jihnat DATE:1/9/2007 1:10:03 PM

Fixed in version 5.6

FROM:xli DATE:2/5/2007 1:56:33 PM

Checked the following windows, problem is fixed for 5.6 beta 1

Load Case Description  
Framing plan detail  
Structural typical section  
Hinge locations

4/19/2016 3:19:48 PM

HRS AASHTO

2207

## Complete Issue Information

Splice  
Member loads  
Live load distribution  
Strand layout  
Girder profile  
Floorbeam profile  
Deck profile  
PS Haunch Profile  
Lateral support  
Stiffener ranges  
Interior Diaphragms  
Shear reinforcement ranges  
Deterioration profile  
Floorbeam member locations  
Floorbeam intermediate supports  
Floorbeam member alternative  
Stringer member alternative

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 7720                                                                 |
| Subject: Incorrect grid behavior in Beam Details form Continuity Diaphragm tab |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Goodrich, Brian  | 12/6/2006 8:34:00 PM |
| Modified By: administrator     | 6/19/2008 4:27:16 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

4/19/2016 3:19:48 PM

HRS AASHTO

2208

**Complete Issue Information**

FROM:bgoodrich DATE:Wednesday, December 06, 2006 3:34:05 PM

On the Beam Details form Continuity Diaphragm tab, when a new row is added, certain cells are only enabled/disabled when the Span Number dropdown is selected using the mouse. If the keyboard is used to specify the span number, the cells are not updated.

FROM:kkennelly DATE:5/21/2007 12:27:49 PM

I think this is a duplicate of incident 77. Problem is with the Stingray grid. Work around is to hit the span number twice with the keyboard.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 7725                                                             |
| Subject: BRASS engine - Vary reinforcement area calculation is not correct |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Li, Xinmei         | 12/12/2006 2:50:20 PM |
| Modified By: hlee                | 5/7/2010 1:52:15 PM   |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:48 PM

HRS AASHTO

2209

**Complete Issue Information**

|                  |          |      |           |
|------------------|----------|------|-----------|
| Duray, Jim       | New      | High | Bug       |
| Goodrich, Brian  | Assigned |      |           |
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Assigned |      |           |
|                  | Resolved |      | Education |
| Kennelly, Krisha | Resolved | High | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Steven 06485.xml    |             |

**Tasks**

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 7728.15607 | Resolved      | Review input for items included in Load Case: Diaphragms |

**Description**

FROM:xli DATE:12/12/2006 9:40:38 AM

See attached bridge, super def: RC Slab - Test Vary Reinforcement, member alt: Schedule Based Slab - with point of interest, analyze with BRASS LFD, bottom reinforcement area is 1.069, it should be 1.11

The following is quoted from Brass output file:

**REINFORCED CONCRETE SECTION - STRENGTH DESIGN/RATING**

ANALYSIS POINT 100.42

**SECTION DIMENSIONS (in)**

SECTION DEPTH : 17.50

WEB THICKNESS : 12.00

TOP FLANGE THICKNESS : 0.00 TOP FLANGE WIDTH : 0.00

BOTTOM FLANGE THICKNESS: 0.00 BOTTOM FLANGE WIDTH: 0.00

**REINFORCING DETAILS**

BOTTOM STEEL: AREA1 = 1.069 (in<sup>2</sup>) DIST FROM BOT. D1 = 3.189 (in)

AREA2 = 0.000 D2 = 0.000

AREA3 = 0.000 D3 = 0.000

TOP STEEL : AREA4 = 0.000 DIST FROM TOP D4 = 0.000

AREA5 = 0.299 D5 = 1.938

AREA STIRRUPS, Av = 0.000 (in<sup>2</sup>)

STIRRUP SPACING = 0.000 (in)

**Complete Issue Information**

FROM:jduray DATE:12/15/2006 4:46:24 PM  
Does this problem exist in 5.5 Release?

FROM:xli DATE:12/19/2006 11:29:20 AM  
5.5 has exactly the same problem.  
Bottom reinforcement development length is from -0.5ft to 2.66ft. BRASS bottom reinforcement area at 1.2ft and 1.25ft are same, which should be varied linearly.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 5:39:52 PM  
The cross section range at 1.25 ft is within the small element distance from the range at 1.2 ft. Therefore, a node point cannot be added at both locations. Then, when BRASS processes the cross section ranges to assign section dimensions and rebar to the structural analysis elements, there is a discrepancy between the ranges and nodes, which is the source of the error. This issue is not limited to reinforcement. General section dimensions are a problem too; however, they are generally constant, so errors have not been seen. I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Monday, March 05, 2007 5:46:42 PM  
WYDOT assigned this issue to BRASS Problem Log 710.

FROM: Brian Goodrich DATE: 3/5/2009 1:29:14 PM Mountain Standard Time

Vinacs reported the same issue:

>>> Murugesu Vinayagamoorthy <murugesu\_vinayagamoorthy@dot.ca.gov>  
>>> 3/3/09 10:45 AM >>>

Attached is the bridge that has variable depth.

Bridge Model: MVV Span1-3 MDL 1of 1 (This bridge is symmetrical and therefore all the details of 108 and 302 should be identical)

We have entered the rebar from top of the deck. (BRASS is used to analyze the member)

The depth of bottom rebars estimated at 1.08 pt and 3.02 pt are different.  
It should have been 1.75. The depth reported for 302 is 1.51 inches.

Why is that?

**REINFORCED CONCRETE SECTION - STRENGTH DESIGN/RATING**

ANALYSIS POINT 108.00

SECTION DIMENSIONS (in)

SECTION DEPTH : 12.00

WEB THICKNESS : 156.00

TOP FLANGE THICKNESS : 12.00 TOP FLANGE WIDTH : 156.00

BOTTOM FLANGE THICKNESS: 0.00 BOTTOM FLANGE WIDTH: 0.00

**REINFORCING DETAILS**

BOTTOM STEEL: AREA1 = 12.540 (in^2) DIST FROM BOT. D1 =  
1.750 (in)

AREA2 = 0.000

D2 =

4/19/2016 3:19:48 PM

**HRS AASHTO**

2211

**Complete Issue Information**

0.000  
          AREA3 = 0.000                          D3 =  
0.000  
  TOP STEEL : AREA4 = 0.000          DIST FROM TOP  D4 =  
0.000  
          AREA5 = 6.900                          D5 =  
2.250  
  AREA STIRRUPS, Av = 0.000 (in^2)  
  STIRRUP SPACING = 0.000 (in)

**MATERIAL STRENGTH**

  REINFORCEMENT YIELD, fy : 33.00 (ksi)  
  CONCRETE, fc (top) : 3.000 (ksi)  
  CONCRETE, fc (bot) : 3.000 (ksi)  
  CONCRETE, fc (shear) : 3.000 (ksi)

**REINFORCED CONCRETE SECTION - STRENGTH DESIGN/RATING**

ANALYSIS POINT 302.00  
SECTION DIMENSIONS (in)  
  SECTION DEPTH : 12.00  
  WEB THICKNESS : 156.00  
  TOP FLANGE THICKNESS : 12.00    TOP FLANGE WIDTH : 156.00  
  BOTTOM FLANGE THICKNESS: 0.00    BOTTOM FLANGE WIDTH: 0.00

**REINFORCING DETAILS**

  BOTTOM STEEL: AREA1 = 12.540 (in^2)    DIST FROM BOT.  D1 =  
1.510 (in)  
          AREA2 = 0.000                          D2 =  
0.000  
          AREA3 = 0.000                          D3 =  
0.000  
  TOP STEEL : AREA4 = 0.000          DIST FROM TOP  D4 =  
0.000  
          AREA5 = 6.900                          D5 =  
2.250  
  AREA STIRRUPS, Av = 0.000 (in^2)  
  STIRRUP SPACING = 0.000 (in)

**MATERIAL STRENGTH**

  REINFORCEMENT YIELD, fy : 33.00 (ksi)  
  CONCRETE, fc (top) : 3.000 (ksi)  
  CONCRETE, fc (bot) : 3.000 (ksi)  
  CONCRETE, fc (shear) : 3.000 (ksi)

(See attached file: 46C0403.xml)  
Vinacs M Vinayagamoorthy  
916-227-8657



## Complete Issue Information

FROM: Brian Goodrich DATE: 12/8/2009 12:29:47 PM Mountain Standard Time

Regarding the issue with TestVirtisStdVaryRebarEnhance.xml:

1. The cross section change point at 1.25 ft is never added because it is too close to the existing node point at 1.2 ft.
2. BRASS ignores the cross section range at 1.25 ft.
3. BRASS interprets a cross section range starting at 1.2 ft and ending at 2.6623 ft. Starting Cross Section = 1; Ending Cross Section = 4.
4. When the 100.42 POI is analyzed, there is no node point at this location, so the nearest node is found, i.e., the 100.40 POI.
5. Section properties at this node are found by choosing the side of the node with the smallest moment of inertia or if they are the same, then the side with the smallest rebar area.
6. In this case, this is the left side of the node at 1.2 ft, which is why the rebar area is not as expected.

FROM: Brian Goodrich DATE: 1/26/2010 12:00:21 PM Mountain Standard Time

This issue has been addressed in BRASS-GIRDER(STD) 6.0.3. When a point of interest cannot be added as a node point because it is too close to an existing node point, BRASS now does the following when obtaining the section properties for said point of interest.

1. Locates the closest node point.
2. Determines which side of the node the POI is located.
3. Gets the section properties from the element end on the same side as the POI rather than checking for the smallest moment of inertia and smallest rebar area.

Also note that there is a slight difference in the properties due to BRASS interpolating at the element end. There is a slight offset between the node location and the ends of elements. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/7/2010 9:44:20 AM Eastern Daylight Time

Tested the TestVirtisStdVaryRebarEnhance.xml file in this incident.

Verified in 6.2 Beta 1.

Issue ID: 7728

Subject: Review input for items included in Load Case: Diaphragms

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Maberry, Steven

12/15/2006 6:46:55 PM

Modified By: administrator

6/19/2008 4:27:15 PM

Priority: High

Category: Education

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:19:49 PM

HRS AASHTO

2213

**Complete Issue Information**

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | I-17-NG_help.xml    |             |
|      | Fatal Error.xml     |             |

**Tasks**

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7734.15601 | Closed        | Fatal Error that closes Program |

**Description**

FROM:hlee DATE:12/15/2006 1:41:39 PM  
Submitted on behalf of Steven Maberry, NM DOT via bridgeware e-mail:

Bridgeware,

Attached find an xml file for a bridge. Using Version 5.4.0, Virtis Opis returns the following error message when one tries to rate the beams on Span Five:

-----  
-----

Error generating LFD/ASD load commands!  
Error generating concentrated load commands!  
Review input for items included in Load Case: Diaphragms  
Unable to get adjusted distance of load (P/S beams)!  
Error preparing concentrated load for BRASS commands!  
Unable to compute span where load is applied!

There is no "Diaphragms" Load Case, and I cannot tell what differences there might be between Span Five and the other FOUR Span Structures.

WHAT is causing this error? How should I fix it?

Steven Maberry

FROM:hlee DATE:12/15/2006 1:49:52 PM  
Response e-mail to Steven Maberry:

Steve,

## Complete Issue Information

I've entered your question into the Support Center (<http://aashto.bakerprojects.com/>) as Incident 7728.

We are looking for the cause of the problem. A work around for now is to change the diaphragm spacing from 13.916667 to 13.916666 ft.

Herman Lee

FROM:kkennelly DATE:1/15/2007 1:30:29 PM

This problem is related to the values entered for the diaphragm spacing on the Framing Plan Details window and the tolerances set on the System Defaults: Tolerance tab.

The diaphragm spacing is entered on the Framing Plan Details window as 13.916667' for 3 spaces resulting in the last diaphragm being located at 41.750001'. The export to the BRASS LFD program internally uses these distances in "inches" even though you entered them as feet in Virtis. When trying to create the "Point-DL" command, the BRASS export tries to determine what span the diaphragm load is on. When trying to determine what span the diaphragm is located on, the export uses the Tolerance for inches that is entered on the System Defaults: Tolerance tab. The Tolerance for inches on your pc must be set at a value like 0.00001 or smaller.

The export tries to find what span the last diaphragm is on by checking if  $41.750001 * 12 \text{ in/ft} = 501.000012$  is on the span length of  $41.75 * 12 \text{ in/ft} = 501.000000$ ". Using a tolerance of 0.00001, the system sees that  $501.000012 > 501.00001$  and the export thinks that the last diaphragm is not on the span. (If your tolerance for inches was 0.001 the export would see that  $501.000012 < 501.0001$  and think that the last diaphragm was on the span.)

The best solution is to enter your diaphragm locations as 13.916666'. This will ensure that the last diaphragm is on the span regardless of the Tolerances set on your pc. We do not encourage users to change the Tolerances because these Tolerances affect all of your bridges not just the bridge that is having this problem.

Issue ID: 7734

Subject: Fatal Error that closes Program

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

12/18/2006 9:53:07 PM

Modified By: administrator

6/19/2008 4:27:15 PM

Priority: High

Category: Unknown

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |

4/19/2016 3:19:49 PM

HRS AASHTO

2215

### Complete Issue Information

|             |          |      |         |     |
|-------------|----------|------|---------|-----|
|             | Resolved |      |         |     |
|             | Closed   |      |         |     |
| Duray, Jim  | New      | High | Unknown | Bug |
| Lee, Herman | Assigned |      |         |     |
|             | Resolved |      |         |     |
| Lee, Herman | Resolved | High | Bug     |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | I-17-NG_help.bbd    |             |
|      | I-17-NG_help.xml    |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7739.15596 | Resolved      | Why won't bridge rate? |

### Description

FROM:dteal DATE:Monday, December 18, 2006 4:53:16 PM  
I got this from a designer with CH2MHILL in Denver. Attached  
This is a Virtis 5.4 file that I opened (migrated to 5.5)  
4 span pre stressed U on 58 degree skew.

Select Member G2

Highlight the member Alt called Interior Girder

Select the View schematic button

I get a message "VirtisOpis application has encountered a problem and needs to close."

I got this 3 out of 3 tries.

FROM:dteal DATE:Monday, December 18, 2006 4:54:35 PM  
Fatal Error is the 5.5 file that crashed me  
the second file is there 5.4 file I brought into 5.5

FROM:jihnat DATE:12/19/2006 12:37:32 PM  
Fixed for 5.6.0

FROM:xli DATE:2/5/2007 1:47:07 PM  
It's fine for 5.6 beta1

4/19/2016 3:19:49 PM

HRS AASHTO

2216

**Complete Issue Information**

FROM:dteal DATE:Thursday, February 22, 2007 2:09:50 PM  
Accepted in 5.6 Beta1

|                                 |
|---------------------------------|
| Issue ID: 7739                  |
| Subject: Why won't bridge rate? |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Ihnat, Joseph    | 12/19/2006 7:41:48 PM |
| Modified By: administrator     | 6/19/2008 4:27:14 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:12/19/2006 2:40:27 PM  
Received via email:

I am trying to Rate a multi span U-girder bridge in Colorado. I am having trouble getting VIRTIS to rate. I don't see any errors so there must be something that I have missed in my input. Could you trouble shoot my bridge? I have attached both the xml and the bbd files from Virtis 5.4.0. Let me know what I need to add/fix/take out to make this work. Thanks.

Steve Howard  
CH2MHILL  
Tel. 720.286.2116  
Showard1@ch2m.com

4/19/2016 3:19:49 PM

HRS AASHTO

2217

**Complete Issue Information**

FROM:hlee DATE:12/19/2006 3:33:49 PM  
Virtis terminated when I tried to open the girder profile schematic.

Reply e-mail to Steve:

=====  
Steve,

BRASS doesn't conform to AASHTO 9.20.1.4 regarding the shear consideration at prestress beam end regions (at distance h/2 from face of support). There's not enough shear strength at the start and end of the girders. Also, please check the haunch profiles for the exterior girders.

Hope this helps!  
- Herman Lee

=====

FROM:hlee DATE:12/20/2006 2:28:53 PM  
Girder profile schematic problem is a duplicate of Incident 7734.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7740                                  |
| Subject: POI do not showup in graphs and output |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Jensen, Paul       | 12/19/2006 9:22:44 PM |
| Modified By: administrator       | 6/19/2008 4:27:14 PM  |
| Priority: High                   |                       |
| Category: Enhance BRASS          |                       |

**History**

| Primary Contact | Status   | Priority | Category             |
|-----------------|----------|----------|----------------------|
| Duray, Jim      | New      | High     | Unknown              |
| Goodrich, Brian | Assigned |          | Bug<br>Enhance BRASS |
|                 | Resolved |          |                      |
| Goodrich, Brian | Resolved | High     | Enhance BRASS        |

**Contacts**

| Name           | Company          | Email 1   | Phone 1      |
|----------------|------------------|-----------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@ | 307 222-4688 |

### Complete Issue Information

|             |             |                        |              |
|-------------|-------------|------------------------|--------------|
|             |             | BridgeTech-Laramie.com |              |
| Paul Jensen | Montana DOT | pjensen@mt.gov         | 406-444-9245 |
| Paul Jensen | Montana DOT | pjensen@mt.gov         | 406-444-9245 |

### Documents

| Name | Resource Identifier                                                                | Description |
|------|------------------------------------------------------------------------------------|-------------|
|      | Memory Usage Comparison<br>Between Accumulating And<br>Purging Analysis Events.doc |             |

### Tasks

| Name       | Current State         | Summary                     |
|------------|-----------------------|-----------------------------|
| 7741.15594 | Information<br>Needed | Brass dll can not be loaded |

### Description

FROM:pjensen DATE:Tuesday, December 19, 2006 4:22:54 PM

some of my designers are having issues finding shear and moments at poi using lrfd. the hard output from the brass run is there, but in the graphs and the tables, there is no values.

I do not think this is normal. (lrfd the table are being populated with values for poi's).....

FROM:jduray DATE:12/20/2006 9:00:51 AM

Brian - Paul is right. Using TrainingBridge1 I added a POI at 75'. It appears in the BRASS output but not in the results object for reporting on the tabular reports and graph windows.

FROM:bgoodrich DATE:Wednesday, December 27, 2006 10:50:16 AM

The presence of the point of interest location in the actions output is controlled by the "Action Output Level" in the engine properties of the Analysis Settings window. "Print actions at all node points" should be selected to get the POI to show up in the BRASS output as well as the tabular and graphical results. BRASS-GIRDER behaves a bit differently than BRASS-GIRDER(LRFD), i.e., BRASS-GIRDER includes the points of interest in the action reports when the "Print actions at 1/10 points" option is selected.

I will forward a request to WYDOT for modifying the "Print actions at 1/10 points" option to include points of interest as well.

FROM:bgoodrich DATE:Monday, January 29, 2007 4:50:55 PM

WYDOT indicated this functionality would be added to the merged engine, but it is not yet authorized.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 12:52:11 PM

WYDOT assigned this issue to BRASS Problem Log 737 and authorized the work.

FROM:bgoodrich DATE:Wednesday, July 25, 2007 12:21:12 PM

This issue has been addressed in BRASS-GIRDER(LRFD) 2.0.0. Fixed for version 5.6.

### Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 7741                       |
| Subject: Brass dll can not be loaded |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Jensen, Paul     | 12/19/2006 9:26:42 PM |
| Modified By: hlee              | 10/30/2009 6:59:59 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Duray, Jim      | New              | High     | Unknown  |
| Li, Xinmei      | Assigned         |          |          |
| Duray, Jim      | Not Reproducible |          |          |
| Duray, Jim      | Not Reproducible | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Application Error.JPG |             |
|      | Application error.xml |             |

### Tasks

| Name       | Current State    | Summary                          |
|------------|------------------|----------------------------------|
| 7744.15591 | Not Reproducible | Application Error Closes Program |

### Description

FROM:pjensen DATE:Tuesday, December 19, 2006 4:26:42 PM  
I think this is a problem that we had before with NSG. my designer and i was working on his workstation and had a number of lrfd runs completed (he indicated that he ran 10 or 12). When we

4/19/2016 3:19:50 PM

HRS AASHTO

2220



## Complete Issue Information

switched from design to rating, and tried to run brass lfd, we got the "brass dll can not be loaded" error.

FROM:jduray DATE:12/20/2006 9:10:43 AM

I tried to reproduce this twice. The first time with the Preferences set to "Remove previous analysis results before beginning a new analysis". As you know we added this setting to resolve the problem with NSG (because with each analysis (standard or NSG) the analysis events were retained in memory so they could be reviewed any time as long as the BWS remained open). For NSG this slowly depleted the available memory and eventually there wasn't enough to load the 400 mb BRASS dll.

The second was with the setting disabled so events were accumulated. The BRASS successfully loaded and executed each time. I also opened more BWS and performed ratings. I then ran several NSG analyses (still with Preferences set to accumulate events).

Can you reproduce this problem and if so please attach the error message to this incident?

If the Preferences are not set to unload events it is possible to eventually accumulate enough events to exceed virtual memory even with standard analysis and the analysis engine will not load. See the attached Word file containing a comparison of the effects of the preferences setting.

FROM:jduray DATE:12/20/2006 11:01:31 AM

FROM:pjensen DATE:Friday, December 22, 2006 11:16:29 AM

The user has not been able to reproduce this in the past day and a half. The only other applications that he has had open during the running of V/O is Microsoft Excel and Outlook 2003 sp 2. The remaining service patches of NT I do not know. The user is connect to Oracle 9.2.0.7

FROM:pjensen DATE:Friday, December 22, 2006 11:21:44 AM

one more thing-

the database is a repository and have check in/out. the user only checked out the structure alt.

FROM:jduray DATE:6/11/2008 11:49:52 AM

is this still an issue?

FROM:pjensen DATE:Wednesday, June 11, 2008 1:01:26 PM

today it has not happened. It comes and goes. Soon as I close this issue, it happens... I think it is an issue with the combination of programs and memory release with the WOW and the 16bit programs (ie BRASS). Is the standard engine 16bit or 32?

FROM: Jim Duray DATE: 10/6/2009 1:21:52 PM Eastern Daylight Time

It is 32 bit, all of Virtis/Opis is 32 bit.

FROM: Herman Lee DATE: 10/30/2009 2:48:48 PM Eastern Daylight Time

Changed Status to Not Reproducible until more information is available.

Issue ID: 7744

Subject: Application Error Closes Program

4/19/2016 3:19:50 PM

HRS AASHTO

2221

## Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Teal, Dean       | 12/20/2006 6:24:02 PM |
| Modified By: administrator     | 6/19/2008 4:27:14 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |
|                 | Resolved |          | N/A      |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | N/A      |

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | System Error During Export.JPG |             |
|      | System Error During Export.xml |             |

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7745.15590 | Closed        | System Error During Export |

## Description

FROM:dteal DATE:Wednesday, December 20, 2006 1:24:03 PM

In the attached bridge I had just completed using the wizard to create my structure definition. I attempted to save and got this application error. I restored the structure when I logged into VirtisOpis again and went through the same steps using the wizard – this time it saved just fine.

4/19/2016 3:19:50 PM

HRS AASHTO

2222

**Complete Issue Information**

FROM:jduray DATE:12/21/2006 8:33:23 AM

May - see if you can reproduce this problem so I can have Mehrdad investigat the cause once we can reproduce it.

FROM:xli DATE:12/21/2006 10:49:43 AM

I can't reproduce this problem. I added two structure definitions (one steel girder system, one prestress box girder system) by using wizard, they were all saved with no problem.

|                                     |
|-------------------------------------|
| Issue ID: 7745                      |
| Subject: System Error During Export |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 12/20/2006 8:10:00 PM |
| Modified By: administrator       | 6/19/2008 4:27:14 PM  |
| Priority: High                   |                       |
| Category: N/A                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, December 20, 2006 3:10:00 PM

I get the attached System Error when trying to run Opis or Virtis. I have looked at the error message and tried to find something wrong with my input – the input all looks good, this error may be a software bug??

FROM:bgoodrich DATE:Wednesday, December 27, 2006 11:15:33 AM

4/19/2016 3:19:51 PM

HRS AASHTO

2223

**Complete Issue Information**

Please review the Reinforcement tab on the Deck Profile window. The "Distance" column is completely empty. I added these vertical distances and the "Std Bar Count" and the bridge is able to be exported now.

FROM:dteal DATE:Wednesday, December 27, 2006 11:54:46 AM

Oops - I enter all my distances in the bar spacing column - I bet I looked at this 100 times and didnt' see it.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 7749                                                         |
| Subject: Possible erroneous results for prestressed concrete box beams |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Armbrecht, Tim     | 12/22/2006 3:49:28 PM |
| Modified By: administrator       | 6/19/2008 4:27:14 PM  |
| Priority: High                   |                       |
| Category: Unknown                |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

4/19/2016 3:19:51 PM

HRS AASHTO

2224

### Complete Issue Information

|                 |        |      |         |
|-----------------|--------|------|---------|
| Goodrich, Brian | Closed | High | Unknown |
|-----------------|--------|------|---------|

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | BRASS Test.xml         |             |
|      | Truck.lby              |             |
|      | Wizard_Alternative.dat |             |
|      | LLOAD.DAT              |             |
|      | B078120.DAT            |             |
|      | Sections.lby           |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7750.15585 | Closed        | PS Don't Agree, Virtis vs BRASS |

### Description

FROM:tarmbrecht DATE:Friday, December 22, 2006 10:49:28 AM

RE: PSDBAnalysisErrors(0162087).xml

In the attached file, the results for Superstructure Definition "West Span PSD (DPN)" appear to be erroneous. For example, for Member "1st N Int-x", the controlling inventory/operating rating factors are 0.139 (Concrete Tension) / 1.747 (Ultimate Strength Shear). The corresponding member in the other superstructure Definition, "West Span PSD (TES)", which appears to have virtually the same properties, returns inventory/operating rating factors of 1.178 / 1.968 (both are from Ultimate Strength Flexure). The results for the second are consistent with our design charts. Perhaps some kind of hidden corruption in the first? Please review and advise. Thanks, Tim

FROM:bgoodrich DATE:Monday, January 29, 2007 12:44:37 PM

I reviewed the two members and found one significant difference. Member "1st N Int-x" has completely fixed supports while Member "2 - 1st N Int" has a pin and a roller, thereby causing the moments to be completely different between the two. Could this be the source of the difference?

FROM:bgoodrich DATE:Monday, January 29, 2007 3:01:32 PM

E-mail from Tim:

From: Armbrecht, Tim A [mailto:Tim.Armbrrecht@illinois.gov]

Sent: Monday, January 29, 2007 12:22 PM

4/19/2016 3:19:51 PM

HRS AASHTO

2225

**Complete Issue Information**

To: Goodrich@BridgeTech-Laramie.com  
Subject: RE: Virtis Incident 7749

Hi Brian,

You are absolutely correct. That was the difference.

Didn't even see that – thanks for supplying the extra pair of eyes.

Tim

|                                          |
|------------------------------------------|
| Issue ID: 7750                           |
| Subject: PS Don't Agree, Virtis vs BRASS |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Teal, Dean         | 12/22/2006 5:35:17 PM |
| Modified By: administrator       | 6/19/2008 4:27:13 PM  |
| Priority: High                   |                       |
| Category: Unknown                |                       |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
|                 | Information Needed |          |          |
| Aboesono, Bobby | Assigned           |          |          |
| Goodrich, Brian |                    |          |          |
|                 | Closed             |          |          |
| Goodrich, Brian | Closed             | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

4/19/2016 3:19:51 PM

HRS AASHTO

2226

## Complete Issue Information

### Description

FROM:dteal DATE:Friday, December 22, 2006 12:35:17 PM

I ran a PS structure in Virtis 5.5.0

I then ran data set that Virtis created in BRASS Girder 5.9.4

In Virtis I used Structure Def. "As Rated" with Member #2

The rating factor for an HS20 Truck in Virtis is 1.008 and in BRASS Girder it's 1.230.

Which one is incorrect?

FROM:jduray DATE:12/22/2006 4:02:58 PM

Please complete the form on our web site so we can more efficiently review the difference. We need for you to compare the section properties, actions for DL, and LL, etc. (as we discussed during our TAG meetings). Once we know where the two programs depart we can investigate.

FROM:dteal DATE:Tuesday, December 26, 2006 8:42:17 AM

I'm drawing a blank here -

What form on what website?

FROM:jihnat DATE:12/26/2006 9:25:58 AM

Virtis Technical Support website, <http://aashto.bakerprojects.com/virtis/>

Technical Notes,

LFD Rating Analysis Results Comparison Template.

There's also a flowchart to assist you.

FROM:dteal DATE:Tuesday, December 26, 2006 10:00:24 AM

These are for comparing the Virtis Std Engine to BRASS

I am comparing the released stand alone version of BRASS 5.9.4 to the BRASS engine in 5.5

Do you still want to use this spreadsheet even if it doesn't have an area for BRASS stand alone?

FROM:dteal DATE:Wednesday, December 27, 2006 7:48:38 AM

This is a BRASS issue, 5.9.3 vs 5.9.4

FROM:dteal DATE:Wednesday, January 03, 2007 8:32:18 AM

FROM:dteal DATE:Thursday, January 04, 2007 8:10:09 AM

It appears that the version of BRASS (5.9.3) that is included in Virtis 5.5 has some errors in the PS.

When will be getting a patch that includes the corrections to BRASS 5.9.4?

FROM:dteal DATE:Wednesday, February 21, 2007 7:45:16 AM

I see in 5.6 beta that BRASS has been updated to 5.9.4

With that - I can close this incident

FROM:hlee DATE:2/22/2007 2:12:27 PM

Status changed to Close.

---

4/19/2016 3:19:51 PM

HRS AASHTO

2227

**Complete Issue Information**

Issue ID: 7751

Subject: BRASS Structural Analysis Error Message

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Ihnat, Joseph

12/22/2006 6:13:06 PM

Modified By: administrator

6/19/2008 4:38:36 PM

Priority: High

Category: Bug - BRASS

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

**Contacts**

| Name           | Company                    | Email 1                     | Phone 1      |
|----------------|----------------------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT               | tim.armbrrecht@illinois.gov | 217-782-6266 |
| Jim Duray      | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com       |              |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7759.15576 | Closed        | Last record is hidden in Bridge Explorer |

**Description**

FROM:jihnat DATE:12/22/2006 1:11:57 PM  
 Received via email from Steve Maberry, NMDOT:

4/19/2016 3:19:51 PM

HRS AASHTO

2228



## Complete Issue Information

When attempting to run the attached bridge, I get the following error message:

----- Contents of BRASS Error File -----

File: C:\Program  
Files\AASHTOWARE\VirtisOpis54\000000000005725\AS\_BUILT\G1\Standard\_Tee\_C  
SG\_Serial\_Drawings\BRASS\_LFD\Standard\_Tee\_CSG\_Serial\_Drawings.ERR

Fatal Error Encountered - Unexpected Termination

Data File: RASS\_LFD\Standard\_Tee\_CSG\_Serial\_Drawings.DAT

-----  
Error No.: 2103

Type : Structural Analysis Error

Location : Data File

The change point located 0.0000 ft from the left end of span 1 is within 0.099 ft of another node point (located at 0.0212 ft).

-----  
Error No.: 2103

Type : Structural Analysis Error

Location : Data File

The change point located 0.0000 ft from the left end of span 3 is within 0.099 ft of another node point (located at 0.0213 ft).

-----  
Error No.: 2103

Type : Structural Analysis Error

Location : Data File

One or more elements are too small. A change point(s) is within 0.099 ft of another node point. Numerical instability will result.

Adjust the location of the change point slightly away from the conflicting point. See page 10.1 of Vol 1.

----- End of Contents of BRASS Error File -----

4/19/2016 3:19:52 PM

HRS AASHTO

2229

**Complete Issue Information**

I have looked for something that might be "page 10.1 of Vol 1," but I have been unsuccessful. I suspect that the error message wants me to move something in the SCHEDULE BASED description of the RC Beam.

FROM:bgoodrich DATE:Wednesday, December 27, 2006 11:26:21 AM  
I tried running this bridge with version 5.5 and received an error about the rebar being outside the beam (this may be new). I think the depth entered on the Web tab of the Girder Profile window should be the total depth of the beam, not just the web portion. Although there is no sketch on this for the schedule-based input, I checked the cross section based input window and the sketch shows the dimension as I described above.

FROM:bgoodrich DATE:Wednesday, December 27, 2006 12:27:16 PM  
I believe the node point issue is the same as 7643, which has already been assigned a BRASS problem log.

Issue ID: 7759  
Subject: Last record is hidden in Bridge Explorer

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Armbrecht, Tim 1/9/2007 10:03:39 PM  
Modified By: administrator 6/19/2008 4:27:13 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Tuesday, January 09, 2007 5:03:39 PM

4/19/2016 3:19:52 PM

HRS AASHTO

2230

### Complete Issue Information

In the Bridge Explorer, after dragging the scroll handle all the way to the bottom, the last bridge in the list remains hidden below the bottom. To view it, one must subsequently click the down scroll arrow (or do an equivalent keyboard action). Even then, after going to another window (w/in or outside of Virtis) and returning to the Bridge Explorer window the last listed bridge is found to again be hidden.

FROM:jihnat DATE:10/1/2007 3:39:18 PM  
Objective Grid incident is 1198573.

FROM:jihnat DATE:12/26/2007 3:06:11 PM  
Resolution of OG incident (10/1/07):  
This bug was introduced in OG10 but fixed in OG11. Please, download the latest Visual Studio 2006 v3 from 'MyAccount' on our web-site, there are many others bugs vere fixed and enhancements implemented.  
If you can not migrate for some reasons, you can rebuild grid replacing file gxcorscr.cpp with one I'm sending you by separate email.

FROM:jihnat DATE:12/27/2007 12:39:14 PM  
I've applied the OG patch.  
Fixed for version 6.0.0

FROM:tarmbrecht DATE:Monday, May 12, 2008 5:08:54 PM  
Accepted for 6.0

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 7760<br>Subject: Detailed Rating Results under LFD Analysis Output Report |
|-------------------------------------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 1/9/2007 10:11:07 PM |
| Modified By: administrator     | 6/19/2008 4:27:12 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:19:52 PM

HRS AASHTO

2231

### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
| Lee, Herman      | Assigned |      |             |
|                  | Resolved |      | Education   |
| Duray, Jim       | New      | High | Unknown     |
| Kennelly, Krisha | Assigned |      |             |
|                  | Resolved |      | Education   |
|                  | Assigned |      |             |
| Duray, Jim       |          |      | Enhancement |
| Duray, Jim       | Assigned | High | Enhancement |

### Contacts

| Name          | Company                 | Email 1                    | Phone 1      |
|---------------|-------------------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT            | tim.armbrecht@illinois.gov | 217-782-6266 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com      |              |

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | PSIB LLDistrComp-5.5.0 (1010177).xml |             |

### Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 7761.15574 | Assigned      | Prestressed Concrete I-Beam Wheel Distribution Factor Computation Problem |

### Description

FROM:tarmbrecht DATE:Tuesday, January 09, 2007 5:11:08 PM

Quick question - Is the "Detailed Rating Results" option under the "LFD Analysis Output" report supposed to generate any information? It doesn't appear to do this for steel or prestressed concrete beam members.

FROM:hlee DATE:1/12/2007 10:57:17 AM

Currently, only Virtis Std Engine reports the "Cross Section Properties" and "Detailed Rating Results" back to Virtis. This capability is not implemented in BRASS-GIRDER.

Issue ID: 7761

Subject: Prestressed Concrete I-Beam Wheel Distribution Factor Computation Problem

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 1/9/2007 10:12:13 PM |
| Modified By: administrator     | 6/19/2008 4:27:12 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 7768.15567 | Resolved      | Right-click popup menu doesn't appear when Bridge Explorer is maximized. |

## Description

FROM:tarmbrecht DATE:Tuesday, January 09, 2007 5:12:17 PM

In the attached file, w/prestressed I-beams, when attempting to compute the Wheel Distribution Factor the following error is produced unless the adjacent Member Alternative(s) has(have) both "Existing" and "Current" checked (under the Member definition). This did not occur in v. 5.4.0 and we are not aware of the problem existing in the v. 5.5.0 Beta builds. Also, it does not occur with steel beam member alternatives.

"Beam shapes are not assigned to adjacent member alternatives! Virtis cannot determine if spread or adjacent beams exist and cannot compute the live load distribution factors!"

FROM:jduray DATE:Wednesday, January 10, 2007 9:54:59 AM

4/19/2016 3:19:52 PM

HRS AASHTO

2233

## Complete Issue Information

FROM:kkennelly DATE:1/10/2007 2:22:32 PM

The warning message is new to version 5.5 but it was present in all of the 5.5 beta builds. This warning was added in response to incident 7219. As per that incident Virtis was previously computing the DF for a ps beam by always using the Spread Box equations when the adjacent mbr alts didn't have beam shapes assigned to them. (Incident 7258 is the same as 7219 and was submitted by a user)

This message is only issued for prestressed concrete beams. We issue it for all types of PS beams, not just boxes, so we can determine if Article 3.23.4 should be used since Virtis allows PS I's and Tees to be adjacent deck beams.

FROM:kkennelly DATE:1/10/2007 2:46:52 PM

FROM:tarmbrecht DATE:Friday, January 12, 2007 11:42:30 AM

But why do both Existing and Current boxes need to be checked? It seems like this warning should only be produced when the Current box is not checked. It is my understanding that when the Existing box is not checked (and Current is checked), it indicates that a beam shape is assigned but that it is not to be analyzed.

FROM:hlee DATE:1/16/2007 3:23:36 PM

The warning message will only be produced when the Existing box is not checked in adjacent beam(s). The distribution factor computation is looking for existing adjacent member(s). The Current box represents the current alternative being modified or reviewed by user. The Current box is used for drawing the schematics.

FROM:kkennelly DATE:1/17/2007 3:25:05 PM

Need to discuss with Jim before we implement any changes. 2 possible solutions:

1. Workaround for user is to mark all of the beams as existing, use the Compute button to compute DF's and then uncheck the beams he doesn't want analyzed in a batch analysis before the bridge is saved. (User must be doing this unchecking of mbr alts anyway because the first mbr alt is always set to Existing when it is created.)
2. Or we can change the code to first check if the adjacent mbr alts are marked as Existing. If it is, use the Existing mbr alt for the DF calcs. If it is not then check if the adjacent mbr alt is marked as Current. If it is, use the Current alt for DF calcs. If it is not, then issue message that we can't compute DF's. Note that we'll have to make the same change on the Deck Profile: Compute Eff Flange Width button.

FROM:tarmbrecht DATE:Wednesday, January 17, 2007 3:47:30 PM

Krishna,

My consultant had originally reported this to me and prepared a response to Herman's 1/16 response and before your 1/17 reponse. It is as follows:

First, the incidents (7219 & 7258) that led to this are both with regard to box beams and the problem with determining whether they are "side-by-side" or "spread". Although kkennelly stated in the 1/10/07 response, "Virtis allows PS I's and Tee's to be adjacent deck beams, according to AASHTO (3.23.4) the kinds of beams that this might apply to are: channel beams, single-/multi-stemmed tee beams and box

4/19/2016 3:19:52 PM

HRS AASHTO

2234

**Complete Issue Information**

beams. I-beams are not indicated and could not practically compose an adjacent deck-beam type structure. Therefore, the computation of the wheel distribution factor ("DF" hereafter) for prestressed concrete I-beams should not be affected by the fix. The DF for PS I-beams is clearly stated under AASHTO Std. Specs. Table 3.23.1 and is unaffected by the nature of the flanking beam(s).

Second, the nature of the flanking/adjacent beam(s) should be based on which Member Alternative has the Current box checked, not the Existing box. This would be consistent with whether the computation for Deck Profile is allowed. In that case it is the converse of how the DF computation is done. In practice, these two boxes work thus:

- Existing selected/Current selected => member is present in the model and is to be included in batch analyses
- Existing not selected/Current selected => member is present in the model and is not to be included in batch analyses
- Existing selected/Current not selected => ??
- Neither Existing or Current selected => a member alternative that is desired to be saved but does not actually exist. (It should be stated that, in practice, the instance of multiple Member Alternatives under a Member permanently is extremely rare, probably fewer than 5 of the 2600 bridges entered by IL DOT.)

In the 1/16/07 response hlee stated that the problem only happens "when the Existing box is not checked". That creates a major problem! In by far the majority of cases, the outside beam and other beams that do not control the rating of the Superstructure Definition are to be left out of batch analysis ("Existing" box not checked). Therefore, the user is now forced to check the box, then go to the next member and set it up, running the DF computation, then go back and uncheck it. The same procedure must be performed for all the other members in the Superstructure Definition that will, by inspection, not control the rating. This has potential to significantly increase the time required to set up a bridge model for prestressed members. The wheel DF computation should be like the Deck Profile computation, which is based on the members that show in the schematic view (Current box selected).

(Tim A.) When I showed him the two possible solutions that you had proposed in your 1/17 response, he felt that the first option wouldn't work for the reason stated above. He agreed with the second option, but noted that none of this should apply to I beams for the reasons stated above.

FROM:tarmbrecht DATE:Wednesday, September 12, 2007 2:43:17 PM

Has there been any movement on this issue? Thanks.

Issue ID: 7768  
Subject: Right-click popup menu doesn't appear when Bridge Explorer is maximized.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 1/11/2007 12:39:22 PM  
Modified By: administrator 6/19/2008 4:27:12 PM  
Priority: High  
Category: Bug

4/19/2016 3:19:53 PM

**HRS AASHTO**

2235

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          | Education |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | RC Precast U Beam.jpg |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 7769.15566 | Resolved      | Precast--Non Prestressed RC U-Beams |

### Description

FROM:jihnat DATE:1/11/2007 7:38:21 AM

The Bridge Explorer context menu doesn't appear when the Bridge Explorer is maximized. Probably always been like this, I tested 5.5 and 5.2

FROM:jduray DATE:1/15/2007 10:42:43 AM

Please add to our bug list.

FROM:jihnat DATE:1/17/2007 9:38:02 AM

Fixed for 5.6.0

FROM:xli DATE:2/5/2007 1:34:50 PM

It looks fine in 5.6 beta 1



## Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 7769                               |
| Subject: Precast--Non Prestressed RC U-Beams |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Maberry, Steven     | 1/12/2007 12:10:37 PM |
| Modified By: administrator        | 6/19/2008 4:27:12 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:jihnata DATE:1/12/2007 7:11:01 AM  
Received via email from Steven Maberry, NMDOT:

I am rating older bridges, and we have several bridges that were constructed from pre-cast RC U-shaped beams placed upside down. This "bottom" of the U-beam then formed the deck, with the lips hanging downward. See Sketch attached.

I find no similar beam configuration available in Virtis-Opis. Is the best way to handle these beams to treat them as T-Beams, with each "U" contributing half of the beam to the virtual T-Beam?

FROM:kkennelly DATE:1/15/2007 12:50:54 PM

The model you have described, (treat the beams as T-Beams with the 2 adjacent U legs forming the web of the T-Beam), is probably the best way to model the interior beams. However, the exterior leg of the exterior beams will not be accurately modeled in Virtis. Virtis assumes that the tributary width and

4/19/2016 3:19:53 PM

HRS AASHTO

2237

### Complete Issue Information

effective flange width entered in Virtis is equally split between the left and right sides of the web. (ie, if you enter 42" as the effective flange width Virtis assumes 21" exists to the left of the web CL and 21" exists to the right of the web CL.) I do not see any way to model the exterior beams in Virtis.

|                       |
|-----------------------|
| Issue ID: 7770        |
| Subject: Virtis Crash |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 1/12/2007 4:27:21 PM |
| Modified By: administrator     | 6/19/2008 4:27:12 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Ihnat, Joseph   | Assigned  |          | Bug      |
|                 | Duplicate |          |          |
| Ihnat, Joseph   | Duplicate | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VIRTIS EXAMPLE.xml  |             |

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 7783.15552 | Resolved      | Section properties change mid-beam |

**Description**

FROM:jihnat DATE:1/12/2007 11:23:17 AM  
Reported by Michelle Jose, DMJM Harris (Boston)  
Import the attached bridge, change Span Details and Stress Limit Ranges, try to save, Virtis crashes.

There are two concrete materials with the same name.  
The workaround is to delete one of them then reenter the Beam Details info.

We should investigate the crash and prevent it if possible.

FROM:jihnat DATE:1/16/2007 1:32:42 PM  
Crash was duplicate of 7727.

|                                             |
|---------------------------------------------|
| Issue ID: 7783                              |
| Subject: Section properties change mid-beam |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 1/17/2007 6:02:35 PM |
| Modified By: administrator     | 6/19/2008 4:27:10 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
|                  | Information Needed |      |         |
| Lee, Herman      |                    |      |         |
| Duray, Jim       | New                | High | Unknown |
| Kennelly, Krisha | Assigned           |      | Help    |
|                  | Resolved           |      |         |
| Kennelly, Krisha | Resolved           | High | Help    |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | StructuralFramingPlan.png    |             |
|      | StructuralTypicalSection.png |             |
|      | FramingPlanHelp.png          |             |
|      | FramingPlanView.png          |             |
|      | TypicalSectionHelp.png       |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 7786.15549 | Resolved      | Support line skew in flared girder system. |

### Description

FROM:rcurtis DATE:Wednesday, January 17, 2007 1:02:35 PM

In a pin and hanger structure, one beam is used for span 1 and the cantilever portion of span 2, and a larger beam is used for the suspended portion of span 2. The results show the section properties at midspan of span 2 reverting to that of the smaller beam in span 1 with the Virtis LFD engine. The Brass LFD engine does not appear to do this.

FROM:hlee DATE:1/17/2007 3:55:28 PM

Please export the bridge as a Bridgeware XML data file and attach to this incident for us to investigate.

FROM:rcurtis DATE:Thursday, January 18, 2007 9:59:51 AM

See Span 1-2. It doesn't appear to be a problem in span 3-4.

FROM:hlee DATE:1/18/2007 2:59:42 PM

I'm not able to reproduce the problem. The results of both Virtis LFD and BRASS LFD engines show changes in section properties at 7.50 ft in Span 2 for "Spans 1-2" and 68.40 ft in Span 1 for "Spans 3-4".

4/19/2016 3:19:53 PM

HRS AASHTO

2240

## Complete Issue Information

Please provide more information about the problem. Direct us to a specific page on the output file or a specific window that shows the problem will be helpful.

FROM:rcurtis DATE:Friday, January 19, 2007 10:05:28 AM

The section properties at the locations you mentioned are supposed to change, as I stated a larger beam is used for those spans. The problem I mentioned is, as stated above, "The results show the section properties at midspan of span 2 reverting to that of the smaller beam in span 1" I am attaching a screen shot of the results output. I highlighted the portion of concern. This screenshot is from the report tool.

FROM:hlee DATE:1/22/2007 7:37:30 AM

There was a bug in the engine when populating Virtis results in 5.5. This bug had been fixed during the Virtis Std Engine enhancements for 5.6.  
Resolved for the 5.6 Release.

FROM:rcurtis DATE:Wednesday, January 24, 2007 3:42:29 PM

Will this bug affect my results?

FROM:hlee DATE:1/25/2007 10:09:52 AM

No, your rating results are not affected by this bug. The cross section properties in the Virtis Std Engine output text file (Bridge menu | Output) are not affected also. That's why I couldn't locate the problem the first time. This bug will affect the tabular reports (Bridge menu | Tabular Report) and the report generated by the Report Tool (Bridge menu | Report Tool).

FROM:xli DATE:2/2/2007 3:50:45 PM

Tabular report and report tool generated report are both checked fine in VirtisOpis 5.6 Beta build 1.

Issue ID: 7786

Subject: Support line skew in flared girder system.

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Lee, Herman

1/18/2007 5:55:48 PM

Modified By: administrator

6/19/2008 4:27:10 PM

Priority: High

Category: Help

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

4/19/2016 3:19:54 PM

HRS AASHTO

2241

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier         | Description                       |
|------|-----------------------------|-----------------------------------|
|      | Fatigue for cover plate.doc | BRASS output illustrating concern |
|      | H-1-17.xml                  |                                   |

**Tasks**

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 7789.15546 | Open          | Opis Version 5.5.0 (composite section properties in negative flexure) |

**Description**

FROM:hlee DATE:1/18/2007 11:27:35 AM

Attached files were generated using the bbd attached in Incident 7758.

According to Virtis/Opis Help, the support line skew is measured from the line perpendicular to the girder. For a flared girder system, the support line skews for the girders will be different along a support line. Is the support line skew measured from the line perpendicular to the left exterior girder?

FROM:kkennelly DATE:5/7/2007 8:32:09 AM

The help will be changed to state that the skew is measured from a line perpendicular to the superstruct def ref line.

FROM:kkennelly DATE:5/9/2007 12:26:31 PM

Fixed for 5.6

FROM:xli DATE:6/15/2007 9:30:35 AM

Verified the change in help with 5.6 Beat3.

Issue ID: 7789

Subject: Opis Version 5.5.0 (composite section properties in negative flexure)

4/19/2016 3:19:54 PM

HRS AASHTO

2242

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 1/22/2007 1:06:27 PM  |
| Modified By: bgoodrich           | 10/31/2012 7:17:06 PM |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |
| Ihnat, Joseph   |          |          |          |
| Duray, Jim      |          |          | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Incident 7790.xls   |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 7790.15545 | Resolved      | User not getting live load results from BRASS LRFD |

### Description

FROM:jihnat DATE:1/22/2007 8:07:39 AM

Received via email (Bridgeware):

I have a question regarding the composite section properties in negative flexure. AASHTO LRFD Articles 6.6.1.2.1 and 6.10.4.2.1 permit the use of the full composite section to determine flexural stresses for both

4/19/2016 3:19:54 PM

HRS AASHTO

2243

## Complete Issue Information

positive and negative moment at the fatigue and service II limit states, respectively, when member with shear connectors provided entire length and conc. Deck reinf. satisfy Article 6.10.1.7. Seem to me Opis don't account the deck slab effective for fatigue and service II limit states. See attached file for details.

Hanh Nguyen  
Mass Highway Dept.  
In House Design  
10 Park Plaza  
Boston, MA 02116  
Phone: 617-973-7588. Fax: 617-973-7575  
Hanh.nguyen@mhd.state.ma.us

FROM:bgoodrich DATE:Tuesday, February 27, 2007 9:34:42 PM  
The intermediate output for Service II and Fatigue contains the following statement:  
"Beam stresses will be determined using only positive bending section properties per AASHTO LRFD 6.6.1.2.1 ."

Please forward the output/calculations illustrating how the effective slab is not considered. Also include which point of interest you are investigating.

FROM:bgoodrich DATE:Wednesday, February 28, 2007 11:24:15 AM  
E-mail from Hanh:

Thank you for responded to my email. As I stated below AASHTO LRFD Interim 2005 Articles 6.6.1.2.1 contains the following statement:

For flexural members with shear connectors provided throughout their entire length, and with concrete deck reinforcement satisfying the provisions of Article 6.10.1.7, live load stresses and stress ranges for fatigue design may be computed using the short-term composite section assuming the concrete deck to be effective for both positive and negative flexure.

Attached is output from Opis and Opis files. For the Fatigue check of cover plate (Beam #7 under safety curb) point of interest (108.63). The Composite Section in Negative Flexure didn't shown the effected of concrete deck.

thanks,

Hanh

FROM:bgoodrich DATE:Wednesday, February 28, 2007 11:26:36 AM  
Thanks for the additional information. I now see there is a problem in the BRASS engine with determining when only positive properties should be used for fatigue. I will forward this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Thursday, March 08, 2007 11:53:01 AM

4/19/2016 3:19:54 PM

HRS AASHTO

2244



**Complete Issue Information**

WYDOT assigned this issue to BRASS Problem Log 751.

FROM: Brian Goodrich DATE: 10/31/2012 1:12:20 PM Mountain Daylight Time  
This issue was assigned to BRASS Incident 51. The steel module was revised to store the outcome of the minimum slab reinforcement check for design vehicles. If any design vehicle fails this check, both positive and negative properties will be used for the fatigue checks. Otherwise, positive properties will be used. Fixed for BRASS-GIRDER(LRFD) Version 2.1.5.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 7790                                              |
| Subject: User not getting live load results from BRASS LRFD |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 1/22/2007 1:30:51 PM |
| Modified By: administrator     | 6/19/2008 4:27:10 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:1/22/2007 8:32:13 AM  
Could it be that the parser is not in synch with the properties string in the db?  
Incident 6652 sounds similar, supposedly fixed (by me) in 5.5.

To reproduce in 5.5,  
define vehicles manually (i.e. don't use template) and there's no LL results.  
Workaround is to open engine properties, select everything for output, then get LL results.

FROM:jihnat DATE:1/22/2007 9:17:50 AM  
Stepping through the parser code, it's returning the correct value to AbxBrass.

4/19/2016 3:19:54 PM

HRS AASHTO

2245

## Complete Issue Information

FROM:jihnat DATE:1/22/2007 10:18:28 AM

The LL results aren't produced unless the Output for Stage 3 is turned on (even if the LL reports are turned on).

The BRASS input files are otherwise identical.

I don't know if that is the intended behavior.

FROM:bgoodrich DATE:Tuesday, January 23, 2007 12:18:56 PM

I ran TrainingBridge1 with version 5.5 and a truck set manually (no template). The live load actions were available in the tabular reports. Is the user running a database with an old db properties string?

FROM:mordoobadi DATE:1/24/2007 9:20:40 AM

This does not seem to be related to database migration.

The defaults for outputting stages 1, 2, 3 are TRUE, TRUE, and FALSE in AboBRASS and in the database. (TRUE, TRUE, TRUE in AbxBrass2).

While trying to debug the code I noticed that we have the parser code in two places AboBRASS and AbxBrass2. I am not familiar with the code but I think we should do all the parsing in AboBrass not in AbxBrass2. The two versions of parsing code in the two projects are slightly different.

Conclusion: the live load results are turned off because of the LRFD Event Engine Properties in the database.

Observation: If the user has a default analysis event template then the live load results will be reported even if the default template is a rating template.

FROM:bgoodrich DATE:Monday, January 29, 2007 11:49:47 AM

The stage 3 output flag has NOT always been FALSE. It was TRUE in earlier versions (at least in the defaults). The current CDoBrassLRFDAAnalEvtParser class in AboBrass is setting the default for stage 3 to FALSE. Was the stage 3 default changed to match the property string, when really the property string should have been changed to match the default?

Also, for some reason, the defaults (between 3.0 and 5.3) for several output flags were changed from FALSE to TRUE, when they should not have been. The output flags are supposed to be the same as the BRASS engine defaults. I'm not sure why this got changed but it appears to be discussed in Incident 6693, which may be the source of the problems. When "sboukamp" added camber, it was inserted in the parser. However, it appears that, the CDoBrassLRFDAAnalEvtParser::MakePropertyString function is not including camber in the string.

I suggest we revise CDoBrassLRFDAAnalEvtParser to use the defaults from the 3.00.01.01 properties string and correct the MakePropertyString function, which appears to be correct in AbxBrass2. Next, we update AbxBrass2 to use AboBrass to do the parsing so it is one place (as Mehrdad suggests in the incident discussion). Finally, we correct the properties string in the database.

FROM:kkennelly DATE:6/8/2007 3:38:37 PM

Problem also noted by Illinois DOT:

>>> "Armbrecht, Tim A" <Tim.Armbrrecht@illinois.gov> 6/8/2007 3:32 PM >>>

Hi Krisha,

4/19/2016 3:19:54 PM

HRS AASHTO

2246

**Complete Issue Information**

Could you please verify for me that this is the default in Opis - "Do not print Stage 3 output". Our designers were having a difficult time reading the reports and the spec checker because no live load results were appearing after the analysis. If this is the case, then I'll submit a request/incident. If it's not the case, then what are we doing wrong (this time)?

Thanks, Tim

Timothy A. Armbrecht, P.E., S.E.  
Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures

Phone: (217) 782-6266  
Fax: (217) 782-7960  
Email: Tim.Armbrrecht@illinois.gov

FROM:jduray DATE:8/7/2007 10:53:26 AM  
The parsing classes were added sometime after the code was written in abxbrass. That is why it is in two places. All new work after the parsing classes were created should use the parsing classes only. We did not go back to change abxbrass to use the parsing classes since what was being used had already been tested and released. If we are making changes to the engine data we probably should abandon the parsing code in the export and use the parsing classes.

FROM:hlee DATE:10/3/2007 9:50:29 AM  
The problem, resolution and test cases are in the attached file.  
Resolved for 5.6 Release.

FROM:bgoodrich DATE:Wednesday, October 03, 2007 11:11:32 AM  
I reviewed your file and added a column with the BRASS defaults (see attached file). I think your idea will work to get this release out. However, I think we need to rework Abxbrass2 to use Abobrass instead of having its own default setting and parsing functions. We don't want to keep maintaining the same code in two projects.

Issue ID: 7795  
Subject: Truss floor system rating - Increment of load movement across span is too small?

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Lutgen, Ed 1/24/2007 2:30:25 PM  
Modified By: administrator 6/19/2008 4:27:09 PM  
Priority: High  
Category: Unknown

**History**

4/19/2016 3:19:55 PM

HRS AASHTO

2247

### Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Ihnat, Joseph      | Resolved |          |          |
|                    | Closed   |          |          |
| Ihnat, Joseph      | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | System Error 011-119.xml |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 7799.15536 | Closed        | System Error When saving in 5.5.0 |

### Description

FROM:elutgen DATE:Wednesday, January 24, 2007 9:30:25 AM

I am attempting to rate a the floor system of a through truss. The total span length is roughly 50' with floorbeams spaced at about 5' throughout the span. The stringers run on top of the floorbeams and are continuous from one end of the bridge to the other.

When I attempt to run the stinger analysis, I get the following message:

```
-----  
Error No.: 1301  
Type   : Input Error  
Location : zero.for  
**** ERROR ****  
Increment of load movement across span is still too small. Decrease  
wheel advancement denominator below 50.0 See LIVE-LOAD command  
4th parameter. Program terminated  
-----
```

4/19/2016 3:19:55 PM

HRS AASHTO

2248

**Complete Issue Information**

I am at a loss as to how to deal with this problem. I have located what I believe to be the input data file for this analysis and have decreased the wheel advancement denominator well below 50.0, but continue to get the same results.

Please review and advise.

FROM:elutgen DATE:Wednesday, January 24, 2007 9:46:41 AM

FROM:jihnat DATE:1/25/2007 11:20:43 AM

Open your floorbeam definition window.

On the Engine tab, select BRASS LFD.

Click the Properties button. This is where you'll find the wheel advancement denominator.

(Repeat for the stringer member definition)

FROM:bgoodrich DATE:Monday, January 29, 2007 12:25:54 PM

This error pertains to the stringers, so the wheel advancement denominator should be adjusted on the stringer definition (named Pseudo stringer). Open the Stringer Definition window and follow the instructions from the previous post for getting to the engine properties. Because the stringers spans are so short (around 5'), a wheel advancement denominator of 50 results in the truck stepping across the structure in about 0.01' increments, which is smaller than the allowable element length for the structural analysis. I changed the wheel advancement denominator to 10 and it successfully ran.

FROM:bgoodrich DATE:Monday, January 29, 2007 1:12:39 PM

I contacted Ed Lutgen to discuss the wheel advancement denominator. His engineer made the change and no longer received the error.

|                                            |
|--------------------------------------------|
| Issue ID: 7799                             |
| Subject: System Error When saving in 5.5.0 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 1/25/2007 3:13:29 PM |
| Modified By: administrator     | 6/19/2008 4:27:09 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:19:55 PM

HRS AASHTO

2249

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                                     |
|------------|---------------|-------------------------------------------------------------------------------------------------------------|
| 7802.15533 | Resolved      | Virtis Std Engine: Provide means to obtain rating results at user-defined points of interest for ps girder. |

## Description

FROM:dteal DATE:Thursday, January 25, 2007 10:13:29 AM

I have gotten this same error earlier with version 5.5. This is the second time in as many weeks. I really don't expect you to duplicate it, I just wanted to report it in case there is a pattern here.

System Error when saving data, structure attached

Unable to save Bridge data!

09:09:25 AM - Line 884 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmSuperLoadCase (SaveOrder object 132).

09:09:18 AM - Line 446 in source file .\DmBridgeCache.cpp.

Assignment of data to recordset variables failed.

09:09:18 AM - Line 936 in source file .\DmSuperLoadCase.cpp.

Trying to set NAME to NULL in table ABW\_SUPER\_LOAD\_CASE, but the field is not allowed to be NULL.

09:09:18 AM - Line 1009 in source file .\DmObject.cpp.

FROM:dteal DATE:Thursday, January 25, 2007 10:29:41 AM

One thing I noticed that was weird –

Under the Girder Member Loads, there was one blank load case name (the first one).

FROM:mordoobadi DATE:2/7/2007 9:22:42 AM

The error indicates that a superstructure load case name is NULL (blank) this is the reason that it is failing.

I think we should check for blank names in the Load Case Description window validation if we are not doing it already.

Joe, could you please add validation of load cases to the window.

FROM:jihnat DATE:2/22/2007 10:45:58 AM

Validation added.

FROM:dteal DATE:Wednesday, June 20, 2007 9:49:51 AM

4/19/2016 3:19:55 PM

HRS AASHTO

2250

**Complete Issue Information**

Accepted in 5.6 Beta 3

FROM:jihnata DATE:6/21

|                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------|
| Issue ID: 7802                                                                                                       |
| Subject: Virtis Std Engine: Provide means to obtain rating results at user-defined points of interest for ps girder. |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Duray, Jim                     |
| Submitted By: Lee, Herman 1/26/2007 1:17:38 PM  |
| Modified By: administrator 6/19/2008 4:27:09 PM |
| Priority: High                                  |
| Category: Enhancement                           |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

**Contacts**

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:1/26/2007 8:23:13 AM

FROM:hlathia DATE:Friday, May 18, 2007 8:39:03 AM  
A new input of defining the the points of interest will be added.

FROM:hlee DATE:2/5/2008 10:56:57 AM  
Resolved in Virtis Std Engine for 6.0 Release.

4/19/2016 3:19:55 PM

HRS AASHTO

2251

**Complete Issue Information**

Issue ID: 7803  
Subject: Virtis Std Engine: Consider positive moments at supports in the rating calculations for continuous span ps girder.

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 1/26/2007 1:43:29 PM  
Modified By: administrator 6/19/2008 4:27:09 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 7804.15531 | Suspended     | Virtis Std Engine: Support harped and straight debonded strand configuration. |

### Description

FROM:hlee DATE:1/26/2007 8:23:14 AM

Currently, positive moment is ignored in the rating calculations.

FROM:hlee DATE:4/2/2007 3:01:27 PM

Duplicate of Incident 7907.

Issue ID: 7804

Subject: Virtis Std Engine: Support harped and straight debonded strand configuration.

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Lee, Herman

1/26/2007 1:46:18 PM

Modified By: administrator

6/19/2008 4:27:09 PM

Priority: High

Category: Enhancement

### History

4/19/2016 3:19:56 PM

HRS AASHTO

2253

**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 7805.15530 | Suspended     | Virtis Std Engine: Support single lane loaded option for each vehicle. |

**Description**

FROM:hlee DATE:1/26/2007 8:47:02 AM

## Complete Issue Information

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 7805                                                                  |
| Subject: Virtis Std Engine: Support single lane loaded option for each vehicle. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Lee, Herman      | 1/26/2007 2:00:54 PM |
| Modified By: administrator     | 6/19/2008 4:27:09 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

## Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

## Documents

| Name | Resource Identifier     | Description      |
|------|-------------------------|------------------|
|      | lib_pic.bmp             |                  |
|      | lib_pic_post_delete.bmp | gui after delete |

## Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7809.15526 | Closed        | error when adding timber shapes (oracle database only) |

## Description

4/19/2016 3:19:56 PM

HRS AASHTO

2255

## Complete Issue Information

Issue ID: 7809

Subject: error when adding timber shapes (oracle database only)

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Jensen, Paul

1/26/2007 11:23:03 PM

Modified By: administrator

6/19/2008 4:27:08 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:pjensen DATE:Friday, January 26, 2007 6:23:03 PM

we are getting the following error when adding shapes to the timber shape lib. I just started happening

4/19/2016 3:19:57 PM

HRS AASHTO

2256

## Complete Issue Information

in 5.5..

save operation failed: Library Timber Rect Shape  
04:14:36 PM - Line 333 in source file .\UiLibShapeTimberRectVw.cpp.

Error updating database record set.  
04:14:36 PM - Line 356 in source file .\DmLibTimberRectBeamShape.cpp.  
State:23000,Native:1,Origin:[Oracle][ODBC][Ora]  
ORA-00001: unique constraint (PONTIS40.XPKABW\_LIB\_TIMBER\_RECT\_BEAM\_SH) violated

I tuned on the constraint and add a shape. The Database had 3 records and three records in the gui. The delete of the shape remove the record from the gui but not from the shape properites table. I removed by hand from the database and enabled the constraint. The same problem. Attached are screen shots.

FROM:mordoobadi DATE:2/7/2007 8:50:53 AM  
The data for a Timber shape is stored in two tables abw\_lib\_timber\_beam\_shape AND abw\_lib\_timber\_rect\_beam\_shape. Table abw\_lib\_timber\_beam\_shape is the sub-type parent of table abw\_lib\_timber\_rect\_beam\_shape.

Please make sure that a Foreign Key between the two tables exists and is enabled. The foreign key constraint will have a generated name (e.g. SYS\_C00123..). Also make sure that all the constraints for the two tables exist and are enabled.

Somebody may have removed or disabled the constraints on the tables.

As an example if the FK between the tables is disabled or dropped and then you remove the timber shape that was created last from library, the record in the abw\_lib\_timber\_beam\_shape will be removed but the record in the abw\_lib\_timber\_rect\_beam\_shape table may stay in the database. Then if you create a new rectangular timber shape, it creates a row in the parent table with the ID of the deleted shape and attempts to insert a record in the child table but a record exists with the same ID, so it fails.

So, you need to clean-up the records in the child table abw\_lib\_timber\_rect\_beam\_shape such that there is no records in it that does not have corresponding record in the abw\_lib\_timber\_beam\_shape table. (basically you are removing orphaned records). Then you need to enable the constraints that were disabled or dropped.

FROM:pjensen DATE:Wednesday, February 07, 2007 12:46:50 PM  
base on the information above- I have added the constraint to the database. I could not find the constraint in the update scripts (this database has been upgraded since version 2.0)...  
--For now please close--

FROM:mordoobadi DATE:2/7/2007 12:57:13 PM  
Resolved by Paul Jensen.

Issue ID: 7813

Subject: Virtis Software Support Question

4/19/2016 3:19:57 PM

HRS AASHTO

2257

## Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 1/30/2007 12:11:25 PM |
| Modified By: administrator       | 6/19/2008 4:27:08 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

## History

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Duray, Jim         | New           | High     | Unknown  |
| Bhanushali, Girish | Assigned      | Urgent   |          |
|                    | Investigation |          |          |
|                    | Resolved      |          |          |
| Lutgen, Ed         |               |          |          |
| Bhanushali, Girish |               |          |          |
| Bhanushali, Girish | Resolved      | Urgent   | Unknown  |

## Contacts

| Name      | Company                                | Email 1                           | Phone 1      |
|-----------|----------------------------------------|-----------------------------------|--------------|
| Ed Lutgen | Minnesota<br>Department of<br>Transpor | edward.lutgen@dot.state.mn.<br>us | 651-747-2124 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | truss1.bbd          |             |
|      | truss1.xml          |             |
|      | truss2.bbd          |             |
|      | truss2.xml          |             |

## Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 7816.15519 | Resolved      | Truss rating - compression member capacity and unbraced length |

## Description

4/19/2016 3:19:57 PM

HRS AASHTO

2258

## Complete Issue Information

FROM:jihnat DATE:1/30/2007 7:12:44 AM  
Received via email:

I am trying to verify the Load rating Factors that Virtis has spit out in the rating summary. In that summary I can find dead loads and live loads. In the Output data I can find the capacity for each girder. According to the AASHTO Manual for Condition Evaluation of Bridges Section 6.5.1, I can calculate the Rating Factor with the variables. But my calculations don't match the RFs from Virtis. I was wondering if the dead load and live load factors are different from what I entered.

Could you call me to discuss? Thanks.

Steve Howard  
Bridge Engineer

CH2MHILL  
9191 South Jamaica Street  
Englewood, Colorado 80112  
Tel. 720.286.2116  
Fax 720.286.9366  
Email Showard1@ch2m.com <mailto:Showard1@ch2m.com>

FROM:jihnat DATE:2/8/2007 10:37:04 AM  
Received from Steve via email:

What's the status on the VIRTIS Rating Factors? I still cannot reproduce the rating factors (by hand) that are produced by Virtis. Could someone tell me where I can find the correct Dead load and live load moment, impact factor, and capacity? Perhaps it isn't that simple.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 7:15:30 PM  
I have been assigned to investigate your Virtis issue regarding rating factors. It would be helpful if you would send me your Virtis bridge in the form of a BBD or XML. If you haven't exported a bridge to a file before, open your bridge workspace, select the File>Export menu item, choose a filename, and click the Save button. It will help if I have the bridge in front of me for any discussions. If you have any of your rating calculations in electronic form, please send them as well. I also need to know what location you are investigating and what limit state is controlling (flexure, shear, etc.).

FROM:bgoodrich DATE:Wednesday, February 28, 2007 10:24:48 AM  
E-mail from Steve:

Thanks for taking my call. I have attached the bbd file and a pdf of my hand calculations. I am trying to verify the Virtis Ratings by hand and cannot reproduce the Rating Factors. In the back of my calcs is a spreadsheet that uses the RF equation (6-1a) from AASHTO's Manual for Condition Evaluation of Bridges. My hand ratings are a little lower than what Virtis shows and I just want to be sure that I am doing it correctly.

The ratings are for each girder line, each span. I even checked the Lane Load but the truck load controls.

4/19/2016 3:19:57 PM

HRS AASHTO

2259

## Complete Issue Information

Let me know if you need more info, or what you find out.

Steve Howard  
Bridge Engineer

FROM: bgoodrich DATE: Thursday, March 08, 2007 11:47:54 AM  
I believe I found source of the difference in the rating factors. The live load actions reported in Virtis/BRASS include impact. Then, your hand calculations are including impact again in the denominator of the rating equation. Please let me know if this addresses your concern.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 7816                                                          |
| Subject: Truss rating - compression member capacity and unbraced length |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Lutgen, Ed            | 1/30/2007 6:57:37 PM |
| Modified By: administrator          | 6/19/2008 4:27:08 PM |
| Priority: Urgent                    |                      |
| Category: Unknown                   |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: elutgen DATE: Tuesday, January 30, 2007 1:57:37 PM  
I have a question regarding the calculation of member compressive capacity for a truss.

For my problem, the truss geometry necessitates an intermediate node at the mid-panel point along the top chord between the bracing points to correctly create the truss geometry. By default, Virtis uses the member length as the unbraced length for the compression capacity calculation. However, the actual

4/19/2016 3:19:57 PM

HRS AASHTO

2260



## Complete Issue Information

unbraced length I would like to use is double the default value. Stated another way, the unbraced length of the top chord members between bracing points should be 12.5'; however, given the nodal layout required to create the truss geometry, the default top chord member length (and therefore unbraced length) is 6.25'.

I have attached the input file truss1.bbd, which has only the default settings (top chord unbraced length = member length = 6.25'). When I run the file with the default settings, the Rating Results Report indicates an axial capacity of 267.89 kips for the upper chord members, and the Member Section Property Report indicates a member length and unbraced length of 6.25'. The reports indicate these values regardless of live load vehicle type considered. To verify the axial capacity, I have independently calculated the member capacity as 267.53 kips.

The problem to which I need resolution occurs when I use the MemberOfInterest command to change the unbraced length of the top chord members from 6.25' to 12.5'. The input file truss2.bbd contains the additional commands to change the unbraced length. When I run this file, the Rating Results Report indicates an axial capacity of 291.69 kips for the upper chord members for an HS 20-44 Design truck loading, and an axial capacity of 266.48 kips for an HS 20-44 Design lane loading. The Member Section Property Report indicates a member length of 6.25' and the unbraced length of 12.5' which is what I input. To verify the axial capacity, I have independently calculated the member capacity as 254.63 kips.

My questions are:

1. From the truss2.bbd output, how is it possible to have a different capacity for a top chord member for different types of live load?
2. From the truss2.bbd output, how can the axial capacity of a compression member increase from 267.53 kips to 291.69 kips when the unbraced length is increased from 6.25' to 12.5'?

Thanks for your attention to this problem.

FROM:gbhanushali DATE:3/19/2007 3:55:33 PM

291.69 kips was a reporting error.

Also, unbraced length was being ignored if it was greater than actual member length.

Both the issues are fixed for next release.

Note:

If you only want to specify the unbraced lengths on member to member basis than you don't need to enter Member of Interest. Please refer to Member command in user's guide. Also look at remark section 3 for how/when to enter #

You can input member command as below,

```
Member
// Upper chord
U0U1 U0 U1 Truss_Member_D # # 12.5 12.5
U1U2 U1 U2 Truss_Member_D # # 12.5 12.5
...
```

4/19/2016 3:19:57 PM

HRS AASHTO

2261

### Complete Issue Information

FROM:xli DATE:3/20/2007 2:35:27 PM

Tested: Truss1 and Truss 2

1. Truss2: Upper chord members compressive capacity is 256.02 kips for both HS 20-44 Design truck loading and HS 20-44 Design lane loading. (independently calculated by ELutgen 254.63 kips)

2. Truss1 vs. Truss2: Truss1, Upper chord members compressive capacity is 267.89 kips (independently calculated by ELutgen 267.23 kips)

Both problems reported by user were tested resolved.

|                                         |
|-----------------------------------------|
| Issue ID: 7819                          |
| Subject: 1% of deck thickness, 6.10.1.7 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 1/30/2007 9:54:35 PM |
| Modified By: bgoodrich           | 1/26/2010 6:04:50 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          | Education |
| Goodrich, Brian | Assigned | High     | Education |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 7819.15516 | Assigned      | 1% of deck thickness, 6.10.1.7 |

4/19/2016 3:19:58 PM

HRS AASHTO

2262

**Complete Issue Information**

**Description**

FROM:dteal DATE:Tuesday, January 30, 2007 4:54:35 PM  
AASHTO 6.10.1.7 states that we should take 1% of the "total cross-sectional area" of the deck. (not structural thickness)  
Opis is using 1% of the "structural thickness"  
Jay Puckett new text book follows Opis (1% of the structural thickness)

Is Opis wrong or did AASHTO error in writing the spec?

FROM:bgoodrich DATE:Tuesday, February 27, 2007 8:23:03 PM  
I forwarded this issue to Jay.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 8:32:55 AM  
BRASS only has the structural slab thickness available. If the deck geometry is input, we could get the actual slab thickness; however, it wouldn't vary by cross section.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 6:38:56 PM  
E-mail from Jay Puckett:

1% is a nominal requirement. The interpretation is judgment. It would be conservative to use the larger area.  
Jay

FROM:bgoodrich DATE:Wednesday, June 06, 2007 6:46:25 PM  
I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 3/10/2009 12:28:37 PM Mountain Daylight Time  
This issue is to be addressed as part of BRASS Problem Log 764.

FROM: Brian Goodrich DATE: 1/26/2010 11:01:40 AM Mountain Standard Time  
BRASS has been modified to allow input of the actual slab thickness as part of the cross section. Furthermore, control options have been added to allow the user to choose if the actual or structural thickness is used in the Minimum Negative Flexure Concrete Deck Reinf. calculation. These changes must now be implemented in the export and engine properties.

|                                                |
|------------------------------------------------|
| Issue ID: 7820                                 |
| Subject: Non standard gague vehicle won't save |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 1/30/2007 9:58:57 PM |
| Modified By: administrator          | 6/19/2008 4:27:07 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          | Bug      |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |
| Paul Jensen      | Montana DOT | pjensen@mt.gov                | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LRFDRreport.XML     |             |
|      | LRFDRreport.XSL     |             |

### Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 7832.15503 | Resolved      | use of Special characters in descriptions- error in parsing XML information |

### Description

FROM:tarmbrecht DATE:Tuesday, January 30, 2007 4:58:58 PM

Please see attached for the error message we're getting.

FROM:jduray DATE:Thursday, February 01, 2007 1:50:33 PM

Is there another vehicle in your library named "Test".

FROM:tarmbrecht DATE:Tuesday, February 06, 2007 5:20:52 PM

No there isn't. Curiously though, we were just able to save the truck now. After restarting the program it works? Not sure if we'll be able to duplicate the problem.

FROM:kkennelly DATE:2/7/2007 8:31:18 AM

This sounds just like 7784

FROM:mordoobadi DATE:2/7/2007 8:42:13 AM

The error indicates that a vehicle with the same ID exists in the database.

4/19/2016 3:19:58 PM

HRS AASHTO

2264

**Complete Issue Information**

Is the database a shared database that other people who use Virtis/Opis connect to? If yes, then if two people save a vehicle at almost the same time then this problem may happen.

FROM:tarmbrecht DATE:Thursday, February 08, 2007 1:38:51 PM

It is a shared database, but it is unlikely that two people were logged in at the same time, let alone saved a vehicle near the same time. Most people here just run our standard library of vehicles. Not too many new ones to save (only when we get a permit request), and we only have one person who handles permits in Virtis right now.

FROM:mordoobadi DATE:2/9/2007 4:37:40 PM

Are you able to reproduce this problem?

FROM:tarmbrecht DATE:Wednesday, February 14, 2007 12:11:23 PM

No, we are not able to reproduce the problem. Incident is closed as far as I'm concerned.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 7832                                                                       |
| Subject: use of Special characters in descriptions- error in parsing XML information |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Jensen, Paul     | 2/8/2007 7:55:44 PM  |
| Modified By: administrator     | 6/19/2008 4:27:06 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:pjensen DATE:Thursday, February 08, 2007 2:55:44 PM

we have found that the use of special characters in the description causes a display error in the parsing

4/19/2016 3:19:58 PM

**HRS AASHTO**

2265

**Complete Issue Information**

and display (the report will not display in a browser). Attached is a report and style sheet that illustrates the issue.

FROM:jduray DATE:2/8/2007 3:37:30 PM  
Probably missing the CDATA().

FROM:hlee DATE:2/9/2007 2:57:40 PM  
Fixed both LFD and LRFD reports.  
Resolved for 5.6 Release.

Issue ID: 7833  
Subject: New bridge not listed in Bridge Explorer.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Jensen, Paul 2/9/2007 3:22:25 PM  
Modified By: administrator 6/19/2008 4:27:06 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

**Complete Issue Information**

|             |                  |      |     |
|-------------|------------------|------|-----|
| Lee, Herman | Assigned         |      |     |
|             | Not Reproducible |      |     |
| Duray, Jim  | New              | High | Bug |
| Lee, Herman | Assigned         |      |     |
|             | Not Reproducible |      |     |
| Lee, Herman | Not Reproducible | High | Bug |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | load_error.zip          |             |
|      | p00005018_0946_redo.png |             |
|      | p00005018_0946.png      |             |

**Tasks**

| Name       | Current State    | Summary                             |
|------------|------------------|-------------------------------------|
| 7834.15501 | Not Reproducible | Extra load in the BRASS input file. |

**Description**

FROM:hlee DATE:2/9/2007 10:20:10 AM  
Paul Jensen entered the following in Incident 7827:

since i was crusing through the reports, this issue happens with the our database if we do not fill out desc(cont) tab, the bridge explorer will not list the bridge on the desktop. I have to change the data in the abw\_overflow table. The columns that I have to change from null are  
county,  
district,  
owner,  
custodian,  
adminarea,  
funcclass,  
nhs\_ind

Once all of this data is fixed, then the bridge appears on the desktop for use.

FROM:hlee DATE:2/9/2007 10:28:03 AM  
Reply e-mail to Paul Jensen:

=====  
Paul,

4/19/2016 3:19:59 PM

HRS AASHTO

2267

**Complete Issue Information**

We're not able to reproduce what you described to Jim regarding a new bridge not showing up in the Bridge Explorer when the "Description (cont'd)" tab of the Bridge window is blank (no data). The testing details and results are listed below. Could you check to see what might be different between our test environment and your setup?

Pontis version:  
Pontis 4.4.2 Hot Fix 5

Virtis/Opis version:  
Virtis/Opis 5.5

Database and connection information:  
See "Database Information.png" in the attached zip file.

Testing video captures:  
1. Create new Virtis/Opis bridge without linking to a Pontis bridge. See "Create New Bridge (Not Linked).avi"  
2. Create new Virtis/Opis bridge with linking to a Pontis bridge. See "Create New Bridge (Linked).avi"

- Herman

=====

FROM:pjensen DATE:Wednesday, February 28, 2007 11:11:48 AM  
I have found that the if a user places a special charater in any of the rows that make up the view for the query between overflow and bridge (i think) causes issues.

|                                              |
|----------------------------------------------|
| Issue ID: 7834                               |
| Subject: Extra load in the BRASS input file. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Jensen, Paul     | 2/12/2007 7:16:17 PM |
| Modified By: administrator     | 6/19/2008 4:27:06 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|



**Complete Issue Information**

**Contacts**

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | POI error.xml       |             |

**Tasks**

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 7840.15495 | Closed        | BRASS Export not handling POI correctly in RC Slab |

**Description**

FROM:hlee DATE:2/12/2007 2:06:57 PM  
E-mail from Paul Jensen:

The attached zip file has 4 files  
2 xml files (redo is the correct one)  
2 brass output files

the span in question is span 2 and G1.

FROM:hlee DATE:2/14/2007 10:07:10 AM  
Reply e-mail:

=====  
Paul,

I checked the loads in the BRASS data file for the G1 member in Span 2 superstructure definition. All the loads in Virtis windows are exported and accounted for in the BRASS data file. Please see the attached files, one for each provided XML file. p00005018\_0946.xml has a WS girder member load that is not defined in the redo XML file.

- Herman  
=====

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 7840                                              |
| Subject: BRASS Export not handling POI correctly in RC Slab |

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/16/2007 1:08:18 PM |
| Modified By: administrator       | 6/19/2008 4:27:05 PM |
| Priority: High                   |                      |
| Category: Bug - Export 1         |                      |

### History

| Primary Contact | Status    | Priority | Category           |
|-----------------|-----------|----------|--------------------|
| Duray, Jim      | New       | High     | Unknown            |
| Goodrich, Brian | Assigned  |          | Bug<br>Bug - BRASS |
| Goodrich, Brian | Duplicate |          |                    |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS        |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Beckie Curtis  | Michigan DOT     | CurtisR4@michigan.gov               | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 12021r01.xml        |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7841.15494 | Duplicate     | cross section area of zero |

### Description

FROM:dteal DATE:Friday, February 16, 2007 8:08:47 AM

In the attached single span RC slab structure I get the error you see below while running attempting a rating. This POI command should have been taken care of in the export. I know how to correct it in BRASS, but I don't know how to work around this Virtis and the export?

Error No.: 1875

Type : Input Error

Location : Input Data File

4/19/2016 3:19:59 PM

HRS AASHTO

2270

**Complete Issue Information**

**\*\*ERROR\*\*** A POINT-OF\_INTEREST command is required when.  
parameter 6 of the ANALYSIS command is 3, 4, or 5.

FROM:kkennelly DATE:2/16/2007 12:53:27 PM

Seems like all of the generated POI's are being ignored when it comes to writing the POINT-OF-INTEREST command when only the POI's generated for LRFD dev lengths should be ignored. (You have 2 poi's that were generated as locations of interest. I think the Export should be creating POINT-OF-INTEREST commands for those 2. But even if you didn't have any poi's that should be considered I think the export should change the parameter 6 of the ANALYSIS command to a 1 instead of 3. At least that's how it works for a steel mbr alt when you specify 3 as the POI option on the Mbr Alt engine tab and you don't have any poi's created. The export changes the POI option to 1 in that case.)

The only workaround I see is to create a dummy POI so you have at least 1 POI that is user-defined and it will be considered. Or you can change the POI Control setting on the Mbr Alt engine from 3 to 1. But then you will have to change the POI Control setting back to 3 when you do a design review in Opis.

FROM:bgoodrich DATE:Tuesday, March 13, 2007 6:52:43 PM

The export attempted to adjust the POI control; however, it included the LRFD development length POI when making this determination. I revised the export to only consider R/C POI that are specific to the analysis method, which includes user-defined points. Fixed for version 5.6.

FROM:dteal DATE:Wednesday, June 20, 2007 9:49:18 AM

Accepted in 5.6 Beta 3

|                                     |
|-------------------------------------|
| Issue ID: 7841                      |
| Subject: cross section area of zero |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Curtis, Beckie     | 2/16/2007 1:48:47 PM |
| Modified By: administrator       | 6/19/2008 4:38:36 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:19:59 PM

**HRS AASHTO**

2271

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 7842.15493 | Resolved      | Can not update pontis ratings |

**Description**

FROM:rcurtis DATE:Friday, February 16, 2007 8:48:47 AM

In the attached bridge, when I try to solve I am getting an error that my floor beams have a cross section of zero. I have tried to adjust all of the lengths, to no avail.

Any troubleshooting steps to use in the future would be greatly appreciated.

FROM:kkennelly DATE:2/16/2007 12:36:08 PM

I think this is the same problem as incident 7639 and is due to the cantilever spans only being 0.5' long. BRASS tries to put nodes at tenth pts in the span which would be 0.05' = 0.6" which is probably too small of an element length for BRASS.

I've assigned this to Brian for him to confirm. Based on incident 7639 I don't think there is a workaround but maybe Brian can confirm that.

FROM:rcurtis DATE:Friday, February 16, 2007 12:56:22 PM

I modified the model to omit the cantilevers. Thanks for the help.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 5:59:05 PM

This is a duplicate of Incident 7639. At this time there is no workaround.

|                                        |
|----------------------------------------|
| Issue ID: 7842                         |
| Subject: Can not update pontis ratings |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Jensen, Paul          | 2/16/2007 6:51:09 PM |

4/19/2016 3:20:00 PM

**HRS AASHTO**

2272

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:05 PM |
| Priority: Urgent           |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7845.15490 | Closed        | Compute Column Stiffness Wording in Help |

### Description

FROM:mordoobadi DATE:2/16/2007 1:51:07 PM

Reported by Paul Jensen. [2/8/2007 2:56 PM]

>>> "Jensen, Paul" <pjensen@mt.gov> 2/8/2007 2:56 PM >>>

Attached are error messages that we have received with 5.5 when updating the Pontis ratings. We have done everything with the database. I have checked that the role is allowing write to the database and the bridge table and column. From sqlplus there are no issues.

I have been working on this problem for a week! I have no solution to the problem.

Paul

FROM:mordoobadi DATE:2/16/2007 1:54:27 PM

4/19/2016 3:20:00 PM

HRS AASHTO

2273

## Complete Issue Information

Paul send this error description to us:

-----  
Error updating database record set.  
08:53:48 AM - Line 314 in source file .\DmVPontisBridgeRating.cpp.

No rows were affected by the update or delete operation.  
-----

FROM:mordoobadi DATE:2/16/2007 1:56:12 PM

>>> Mehrdad Ordoobadi 2/15/2007 4:35 PM >>>

Paul,

After much investigation I have found the source of the problem. Here is what's happening:

When Virtis/Opis updates PONTIS ratings it uses Microsoft MFC database library and CRecordSet class. When an update command is issued through CRecordSet, it creates a command like this to the database. (See the SQL tab of the Session corresponding to VirtisOpis run in Oracle Enterprise Manager.):

```
UPDATE bridge
  SET truck1or = :v001,
      truck2or = :v002,
      truck3or = :v003,
      truck1ir = :v004,
      truck2ir = :v005,
      truck3ir = :v006,
      orload = :v007,
      irload = :v008,
      altorload = :v009,
      altirload = :v010,
      ratingdate = :v011
 WHERE truck1or = :v012
 AND truck2or = :v013
 AND truck3or = :v014
 AND truck1ir = :v015
 AND truck2ir = :v016
 AND truck3ir = :v017
 AND orload = :v018
 AND irload = :v019
 AND altorload = :v020
 AND altirload = :v021
 AND rater_ini IS NULL
 AND irtype = :v022
 AND altormeth = :v023
 AND ortype = :v024
 AND ratingdate = :v025
 AND altirmeth = :v026
 AND brkey = :v027
```

4/19/2016 3:20:00 PM

HRS AASHTO

2274

## Complete Issue Information

```
AND srstatus = :v028;
```

You can see from the WHERE clause that every column value in the abw\_v\_pontis\_bridge\_rating is checked against original values.

When MFC reads a double precision value from the database it puts it in a C++ variable with data type double which is accurate up-to the 14th or 15 digit. When you update or delete a row from a table through MFC's CRecordSet it builds a where clause (just like the one shown above) for the row to make sure that it is processing the same row. If any of the double precision values stored in that row of data have more accuracy than 14 or 15 digits, the WHERE clause that MFC's CRecordSet builds will not find the corresponding record. That is the reason you get the error message "No rows were affected by the update or delete operation." Because it is not finding the row that is trying to update.

I noticed that I can reproduce the problem that you reported with BID = 230. In order to fix this issue I rounded the rating values in the bridge table to 10 decimal places for BID = 230, BRKEY = 'I00015357+00752'. I ran the following commands to round the values.

```
UPDATE abw_v_pontis_bridge_rating SET truck1or = ROUND(truck1or, 10) WHERE truck1or IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET truck2or = ROUND(truck2or, 10) WHERE truck2or IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET truck3or = ROUND(truck3or, 10) WHERE truck3or IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET truck1ir = ROUND(truck1ir, 10) WHERE truck1ir IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET truck2ir = ROUND(truck2ir, 10) WHERE truck2ir IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET truck3ir = ROUND(truck3ir, 10) WHERE truck3ir IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET orload = ROUND(orload, 10) WHERE orload IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET altorload = ROUND(altorload, 10) WHERE altorload IS NOT NULL AND brkey = 'I00015357+00752';
UPDATE abw_v_pontis_bridge_rating SET altirload = ROUND(altirload, 10) WHERE altirload IS NOT NULL AND brkey = 'I00015357+00752';
COMMIT;
```

After doing this I attempted to update Pontis Rating Results again, it did not fail this time.

I suggest that you try updating Pontis rating results for bridge BID = 230, brkey = 'I00015357+00752'. It should fail with "No rows were affected by the update or delete operation." error.

Then run the above UPDATE statements to round the values.

Then update Pontis rating results again and confirm that it completes without any errors.

I am not sure how those numbers with too many decimal places have gotten into your database. Do you know?

Please let us know what you find out.

Regards,  
Mehrddad Ordoobadi

4/19/2016 3:20:00 PM

HRS AASHTO

2275

**Complete Issue Information**

FROM:mordoobadi DATE:2/16/2007 1:56:42 PM  
Here is Paul's response:

>>> "Jensen, Paul" <pjensen@mt.gov> 2/16/2007 10:39 AM >>>

Yes- they are coming from a computation update that was need to facilitate metric/English. This was done to facilitate errors that were from the users confusion on the columns are metric or English when using the Pontis website. The program will compute double precision ensure the elements will return the value that the user is inputting from the website (it is inputting English). I think this should accommodate doubles..

Thanks

Paul

FROM:mordoobadi DATE:2/16/2007 1:58:05 PM  
Paul is going to correct the program that has populated the double precision values with too many decimal places.  
In 5.6 we should change the Save operation in the corresponding DM class to run a SQL command (with a where clause like WHERE BRKEY = 'XXXXXXXXXX') and bypass CRecordSet to update the Pontis bridge records.

FROM:mordoobadi DATE:2/21/2007 4:03:18 PM  
Fixed for 5.6.0 Beta 2.  
Save function updated so that it doesn't use the corresponding CRecordset class.

|                                                   |
|---------------------------------------------------|
| Issue ID: 7845                                    |
| Subject: Compute Column Stiffness Wording in Help |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 2/19/2007 5:43:32 PM |
| Modified By: administrator        | 6/19/2008 4:27:05 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7846.15489 | On Hold       | Create a Sample DB TAG |

**Description**

FROM:dteal DATE:Monday, February 19, 2007 12:43:37 PM  
View/Compute Column Stiffness in the help (RC Frame)  
Depth at top and Depth at bottom  
Both refer to the "column depth" at top or bottom of column  
This is confusing wording  
Width or thickness may be more appropriate.

FROM:kkennelly DATE:2/26/2007 1:01:12 PM  
The help has the description "The depth is measured parallel to the superstructure definition reference line." Does that make the intent clearer?

FROM:dteal DATE:Monday, February 26, 2007 3:16:02 PM  
I understand the intent. I can get the correct dimension.  
It just doesn't ring true with me to use "depth" to measure in this direction.  
But I can live with it :)  
Accepted

|                                 |
|---------------------------------|
| Issue ID: 7846                  |
| Subject: Create a Sample DB TAG |

|                                        |                      |
|----------------------------------------|----------------------|
| Folder: /Virtis/Support Center         |                      |
| Primary Contact: Generated, task force |                      |
| Submitted By: Teal, Dean               | 2/19/2007 5:44:38 PM |

4/19/2016 3:20:00 PM

HRS AASHTO

2277

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:05 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 7847.15488 | Closed        | Folder properties window |

### Description

FROM:dteal DATE:Monday, February 19, 2007 12:44:38 PM

We have a tutorial for RC Frame structures (x-section) but we don't have an example structure in our delivered database. We should provide one, x-section and schedule based.

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 7847                    |
| Subject: Folder properties window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Li, Xinmei       | 2/19/2007 8:30:46 PM |
| Modified By: administrator     | 6/19/2008 4:27:05 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:xli DATE:2/19/2007 3:29:48 PM

In folder properties window, after clicking "Find Now" button I can't use keyboard to enter data.

FROM:hlee DATE:2/20/2007 9:28:39 AM

Unable to use the Tab key for navigation after clicking the "Find Now" button.

FROM:jihnat DATE:3/21/2007 9:35:16 AM

Fixed in 5.6.0 (after Beta 2)

4/19/2016 3:20:01 PM

HRS AASHTO

2279

## Complete Issue Information

Issue ID: 7848  
Subject: RC Frame Data Input

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 2/19/2007 9:21:24 PM  
Modified By: administrator 6/19/2008 4:27:05 PM  
Priority: High  
Category: Education

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:20:01 PM

HRS AASHTO

2280

**Complete Issue Information**

|           |                                   |                |               |
|-----------|-----------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of<br>Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|-----------------------------------|----------------|---------------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 7849.15486 | Closed        | Wizard Generated Points |

**Description**

FROM:dteal DATE:Monday, February 19, 2007 4:21:25 PM

I was entering a RC Frame very similar to the geometry in the attached PDF. The only difference is that the RC Frame Legs are longer.

Entering this as schedule based – have I entered the girder profile correctly?

FROM:kkennelly DATE:2/26/2007 12:45:34 PM

I think the girder profile and reinforcement profile look ok. I don't know what the plans look like for the rebar but I think entering the bars as you have is ok. The analysis is considering the first 1' of the span as a beam when it really isn't a beam but that should be ok because there is no moment there. The shear analysis should be ok since you've defined some rebar in that first 1' of the span so that the effective depth can be computed.

Do you have any specific questions about this bridge?

FROM:dteal DATE:Monday, February 26, 2007 3:23:04 PM

Just wanted somebody to verify that my model was entered correctly and that I don't make some bone head mistake. My main concern was the fillets at each end.

Thanks

Accepted

|                                  |
|----------------------------------|
| Issue ID: 7849                   |
| Subject: Wizard Generated Points |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 2/20/2007 8:36:02 PM |
| Modified By: administrator        | 6/19/2008 4:27:05 PM |
| Priority: High                    |                      |
| Category: Help                    |                      |

4/19/2016 3:20:01 PM

HRS AASHTO

2281

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Open     |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Interior_1'_Strip.ERR |             |
|      | RC Slab Error.xml     |             |
|      | Interior_1'_Strip.OUT |             |
|      | Interior_1'_Strip.dat |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7851.15484 | Closed        | BRASS Export Problem in RC Schedule Base |

### Description

FROM:dteal DATE:Tuesday, February 20, 2007 3:36:03 PM

In the Member Alt Description, Engine Tab

For LRFD and LFD we can select our POI controls.

We can select User-defined by itself or in combination with 10th points.

There is no mention of Wizard Generated Points (Gen )

I assume they are considered as User Defined??

Maybe we should state that

FROM:kkennelly DATE:2/26/2007 12:59:04 PM

We can included that in the help.

4/19/2016 3:20:01 PM

HRS AASHTO

2282

**Complete Issue Information**

FROM:kkennelly DATE:5/9/2007 1:40:58 PM  
Resolved for 5.6

FROM:xli DATE:6/15/2007 10:53:43 AM  
Verified help updated with 5.6 Beta 3.

FROM:dteal DATE:Tuesday, June 19, 2007 1:41:41 PM  
Accepted in 5.6 beta 3

|                                                   |
|---------------------------------------------------|
| Issue ID: 7851                                    |
| Subject: BRASS Export Problem in RC Schedule Base |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/20/2007 9:29:09 PM |
| Modified By: administrator       | 6/19/2008 4:27:04 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, February 20, 2007 4:29:09 PM  
I have schedule based input for a 3 span RC structure.  
Be sure to look at the second structure definition (schedule based)  
When I run Opis I get the following error:

Error No.: 1707  
Type : Input Error  
Location : Data File

4/19/2016 3:20:02 PM

HRS AASHTO

2283

**Complete Issue Information**

\*\* ERROR: Parameter 3 on the CONC-REBAR command must be greater than zero.

From the .out file I have printed the error below:

8-2.8 CONC-REBAR 20, 1, 0.000, 9, 1.6250

\*\* ERROR: Parameter 3 on the CONC-REBAR command must be greater than zero.

- 1. Cross Section Number : 20
- 2. Row Number : 1
- 3. Number of Reinforcing Bars : 0.000
- 4. Bar Size : 9
- 5. Distance to Bar Center : 1.625

For some reason that I can't find, the export is generating a cross section #20 with no rebar present. I have checked and rechecked and I don't think this is correct.

FROM:dteal DATE:Friday, February 23, 2007 7:10:28 AM

I didn't mention earlier but it runs to completion in Virtis using the BRASS engine.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 8:55:06 PM

It appears that cross sections generated by Opis include one with a very small area of rebar. When this small area is exported using 3 digits right of the decimal, it becomes zero to BRASS. I plan on modifying the export to detect the small area and then not generate a CONC-REBAR command.

FROM:dteal DATE:Wednesday, February 28, 2007 7:43:34 AM

Is there a work around in the mean time?

This happens on one of our slab standards we use in production, one of the more popular sizes.

FROM:bgoodrich DATE:Tuesday, March 13, 2007 6:56:46 PM

I couldn't find any work around.

I revised the export to detect when a small number of bars was input and then not generate that particular command. I did this for the CONC-REBAR and COMPOSITE-REBAR commands for LRFD and the XSECT-G command for ASD/LFD. Fixed for version 5.6.

FROM:dteal DATE:Friday, April 06, 2007 1:49:54 PM

Accepted in 5.6 Beta 2

FROM:bgoodrich DATE:Tuesday, June 05, 2007 11:08:53 PM

Closed.

Issue ID: 7852  
 Subject: Double Rectangular Void in a Box Beam

Folder: /Virtis/Support Center  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Curtis, Beckie 2/21/2007 7:04:13 PM  
 Modified By: administrator 6/19/2008 4:27:04 PM



### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Octavio Modified 7870.xml |             |

### Tasks

| Name       | Current State | Summary                                                                          |
|------------|---------------|----------------------------------------------------------------------------------|
| 7857.15478 | Resolved      | Nonsensical Schematic for STRUCTURE TYPICAL SECTION on bridge with splayed beams |

### Description

FROM:rcurtis DATE:Wednesday, February 21, 2007 2:04:13 PM

I have a side-by-side box beam with two rectangular voids. I see an option for multiple circular voids. Is there a way to input multiple rectangular voids or an efficient work-around?

FROM:kkennelly DATE:2/26/2007 2:25:33 PM

You cannot enter a box beam with multiple rectangular voids in Virtis. As a workaround, you can try entering the wall thickness of the box beam in Virtis as 1/2 the sum of all wall thicknesses in your section. The BRASS program models the box as an I section anyway so this workaround may give you the same section properties as your multiple voided shape.

Refer to the BRASS help file for the BRASS "XSECT-B" command for more information.

FROM:rcurtis DATE:Tuesday, February 27, 2007 1:49:39 PM

Thanks for the help. I will try this.

4/19/2016 3:20:02 PM

HRS AASHTO

2285

## Complete Issue Information

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 7857                                                                            |
| Subject: Nonsensical Schematic for STRUCTURE TYPICAL SECTION on bridge with splayed beams |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Maberry, Steven  | 2/22/2007 3:59:59 PM |
| Modified By: administrator     | 6/19/2008 4:27:03 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:2/22/2007 11:01:20 AM  
Received via email from Steven M, NMDOT:

Find attached a bridge model file for a bridge that is both skewed and has splayed beams. When the beam spacing are described "Along Support," and the deck is subsequently described in the STRUCTURE TYPICAL SECTION, the schematic places the beams under the deck as spaced equal to the spacing along the skewed support line rather than perpendicular to beams.

The result is a beam structure shown underneath the bridge deck that extends beyond the deck. Of course, this is highly confusing and terribly inaccurate (beams are actually spaced closer to 10-feet rather

4/19/2016 3:20:02 PM

HRS AASHTO

2286

**Complete Issue Information**

than the 14-ft shown in the schematic).

FROM:jihnat DATE:3/26/2007 12:38:17 PM  
Fixed for 5.6.0 Release.

FROM:xli DATE:6/15/2007 2:50:39 PM  
Verified with 5.6 Beta3

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 7858                                                                                       |
| Subject: Logic Error? Epoxy Coated Grade 60 Rebar in Slab Bridge Rates HALF of Epoxy Coated Grade 40 |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Maberry, Steven     | 2/22/2007 4:12:01 PM |
| Modified By: administrator        | 6/19/2008 4:27:03 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:20:02 PM

HRS AASHTO

2287

## Complete Issue Information

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | TomC Modified 8044.xml |             |
|      | STL1.xml               |             |

## Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 7860.15475 | Resolved      | Report tool doesn't report DL moment and shear at POI |

## Description

FROM:jihnat DATE:2/22/2007 11:11:29 AM  
Received via email from Steven M, NMDOT:

Find attached a Virtis Opis bridge model for a schedule-based slab bridge.

The project is to replace an existing slab bridge that contains Grade 40 Reinforcement with a new slab bridge. To increase capacity, the plan was to use Grade 60 in place of the old Grade 40.

If you run this bridge with Grade 60 Epoxy-Coated, it has an inventory rating factor of 0.529.

If you LOWER the reinforcement strength (by merely changing the SPECIFIED YIELD STRENGTH in the MATERIALS ... REINFORCING STEEL), the bridge miraculously experiences an increase of the inventory rating factor to 1.094.

This is counter-intuitive, and various investigation of the output seems to suggest that the subroutine that calculates reduced steel area for development length is making an error in calculating the reduced steel area for the Grade 60.

FROM:kkennelly DATE:2/26/2007 1:36:33 PM

The basic dev length of a rebar is a function of the fy of the rebar. See AASHTO Article 8.25.1. The fy is in the numerator of the equations in 8.25.1 so the stronger the rebar the longer the required development length of the bar.

The difference in rating factors can be explained by the following details found in the output file containing the calculations for computing the rebar development length. This file "Std Reinf Dev Length Calcs Log File" can be opened from the "View latest analysis output" toolbar button when the name of your member alternative is selected in the Bridge Workspace tree.

Reviewing the Std Reinf Dev Length Calcs Log File for Reinf. Set #: 4 Bar Mark Def: #10T5, I see the following:

At start of bar:

Computed Dev. Length = 81.93 in

Bar Start Distance = 55.5' + 81.93" = Bar developed at: 62.327 ft

4/19/2016 3:20:03 PM

HRS AASHTO

2288

**Complete Issue Information**

###Error! Bar is not long enough to be considered developed at start and at end. Bar will not be exported!

At end of bar:  
Computed Dev. Length = 81.93 in  
Bar End Distance = 68.5' - 81.93" = Bar developed at: 61.673 ft

###Error! Bar is not long enough to be considered developed at start and at end. Bar will not be exported!

So when the rebar fy is 60 ksi, the rebar in set #4 is not exported to the BRASS engine.

-----  
When the rebar fy is 40 ksi, the required development length is

At start of bar:  
Computed Dev. Length = 54.62 in  
Bar developed at: 55.5' + 54.62" = 60.052 ft

At end of bar:  
Computed Dev. Length = 54.62 in  
Bar developed at: 68.5' - 54.62" = 63.948 ft

The rebar in set #4 is exported when its fy is 40 ksi.

-----  
I see several error messages about bars not long enough to be exported in the Std Reinf Dev Length Calcs Log File when the fy is 60 ksi.

FROM:kkennelly DATE:2/26/2007 2:05:00 PM

Issue ID: 7860  
Subject: Report tool doesn't report DL moment and shear at POI

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Li, Xinmei 2/22/2007 7:26:12 PM  
Modified By: administrator 6/19/2008 4:27:03 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:20:03 PM

**HRS AASHTO**

2289

### Complete Issue Information

|                  |          |      |               |
|------------------|----------|------|---------------|
| Kennelly, Krisha | Assigned |      |               |
| Duray, Jim       | New      | High | Unknown       |
| Kennelly, Krisha | Assigned |      | Documentation |
| Kennelly, Krisha | Assigned | High | Documentation |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 7863.15472 | Assigned      | TN0011 is Misleading |

### Description

FROM:xli DATE:2/22/2007 2:15:19 PM  
To reproduce, use attached bridge,  
Analyze G2 - Plate Girder with HL-93  
Report tool/LRFD analysis output/Generate

In generated report, DL moment and shear at 36.67' are all blank. There is a POI at 36.67'.

FROM:hlee DATE:2/23/2007 2:14:09 PM  
The numbers are in the "LRFD Critical Loads" tabular report and also the BWS report. I suspect there's a bug in generating the canned LRFD Analysis Output report.

FROM:kkennelly DATE:5/2/2007 2:43:58 PM  
The report code recognizes the fact that the results for the IDoMemberCriticalLoadsLrfdPtr and the IDoSteelLSSummaryDetailPtr do not use the same point of interest ids so the report checks the distance of the points of interest to find a match for a poi in these tables. The abw\_interest\_pt table has 2 values for the point at 36.67' - 11.17583m (36.6661') and 11.17601m (36.6667'). I don't know why 2 points are generated for this location, I think we get these values from BRASS and have no control over them.

When the report tool checks to see if the poi's match, it uses a hardcoded tolerance of 0.0001 so these points don't match and the dead load is not printed from the IDoMemberCriticalLoadsLrfdPtr. I'm reluctant to change the tolerance because that could result in the report combining output from close points of interest thus breaking what we have working now. However, the tolerance of 0.0001 does seem awful tight.

4/19/2016 3:20:03 PM

HRS AASHTO

2290

**Complete Issue Information**

FROM:kkennelly DATE:5/7/2007 2:38:43 PM  
I relaxed the tolerance to 0.001 and values print out now.

FROM:xli DATE:6/18/2007 11:12:48 AM  
It's still not working for 5.6 Beta3.

FROM:kkennelly DATE:6/18/2007 2:00:26 PM  
Changing the tolerance in the UI to compare the distance of the points in these 2 tables doesn't seem to work in the release build.

Brian, do you know why the results fills up two locations in the abw\_interest\_pt table for the point at 36.67' - 11.17583m (36.6661') and 11.17601m (36.6667')?

FROM:bgoodrich DATE:Wednesday, July 25, 2007 12:58:00 PM  
The point of interest is input at the cross section change of 36.666666'. However, the POI is converted to the BRASS format of 102.2774. Due to limiting the number of digits right of the decimal to four digits, the POI is converted back to a length in BRASS as 161\*0.22774=36.66614. We could revise the export to use six digits for the POI to help avoid this problem.

This issue may also be due to BRASS not outputting actions for POI when only the 10th point output option is turned on. This was just fixed in Incident 7740. I change the Action Output Level to "Print actions at all node points" and the report from the output tool showed actions at 36.67'.

FROM:bgoodrich DATE:Thursday, September 20, 2007 10:52:29 AM  
This issue appears to be addressed with the new BRASS-GIRDER(LRFD) engine released with Opis 5.6.0. The generated report now shows results for 36.67'.

|                               |
|-------------------------------|
| Issue ID: 7863                |
| Subject: TN0011 is Misleading |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 2/26/2007 4:13:50 PM |
| Modified By: administrator        | 6/19/2008 4:27:02 PM |
| Priority: High                    |                      |
| Category: Documentation           |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                    |
|------------|------------------|----------------------------|
| 7865.15470 | Not Reproducible | Report Tool and New Window |

### Description

FROM:dteal DATE:Monday, February 26, 2007 11:13:50 AM

Technical Note 0011 on our support page is misleading. It leads one to believe that using the term and format for "Copy/Convert the data" is an automated process. Like there's a button someplace to copy/convert the Time data.

Our agency has approx. 400 structures that this effects, I have been doing them one at a time as needed.

Issue ID: 7865

Subject: Report Tool and New Window

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

2/26/2007 8:00:48 PM

4/19/2016 3:20:03 PM

HRS AASHTO

2292



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:02 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Lee, Herman     | Assigned           |          | Bug         |
|                 | Information Needed |          |             |
| Lee, Herman     | Information Needed | High     | Bug         |
|                 | Assigned           |          |             |
| Lathia, Hasmukh |                    |          | Support     |
|                 | Resolved           |          |             |
|                 | Suspended          |          | Enhancement |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | 61-72__PS_Bulb-Tee.dat               |             |
|      | 72__PS_Bulb-Tee.dat                  |             |
|      | PSRtgProb-VSE(0930021)<br>(7867).xml |             |
|      | PSRtgProb-VSE (0930021).xml          |             |
|      | PSRtgProb-VSE(0930021)<br>(7867).doc |             |
|      | 72__PS_Bulb-Tee.log                  |             |
|      | 72__PS_Bulb-Tee.OUT                  |             |
|      | 61-72__PS_Bulb-Tee.OUT               |             |

### Tasks

| Name       | Current State         | Summary                                              |
|------------|-----------------------|------------------------------------------------------|
| 7867.15468 | Information<br>Needed | Low rating factor at CL bearing of PS beam using VSE |

**Complete Issue Information**

**Description**

FROM:dteal DATE:Monday, February 26, 2007 3:00:48 PM

Version 5.5 and 5.6

From you view/preferences/report tool tab you can set your report tool to open in a new window. Sometimes when you do this the new window is created minimized (I think that's the term) and the only way to view it is to use the pull down – Window - and then select it from the bottom of the list – other times it's not created at all. All you get is quick flash of the cursor hour glass and then it goes away.

Is it supposed to work that way or should it have opened up on your desktop in a new window (that is what I expected it to do)?

If I uncheck this option the report window is created just fine.

FROM:jihnat DATE:3/8/2007 11:21:48 AM

I haven't been able to reproduce this.

Are you running Windows XP SP2 and IE 6?

FROM:dteal DATE:Thursday, March 08, 2007 12:44:42 PM

Yes - XP SP2 and IE6

FROM:jihnat DATE:3/15/2007 8:56:22 AM

Changed project to Support Center, since it's being reported for a released version (5.5).

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 7867                                                |
| Subject: Low rating factor at CL bearing of PS beam using VSE |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Lathia, Hasmukh |                       |
| Submitted By: Armbrecht, Tim     | 2/27/2007 10:16:14 PM |
| Modified By: hlee                | 3/15/2010 4:49:06 PM  |
| Priority: High                   |                       |
| Category: Enhancement            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 7868.15467 | Resolved      | LL Shear concurrent with maximum moment differences |

**Description**

FROM:tarmbrecht DATE:Tuesday, February 27, 2007 5:16:14 PM

In the subject example, PSRtgProb-VSE (0930021).xml, a 4-Span continuous composite PS Bulb-Tee beam, the rating factor values at 0.75' of Span 3 are less than half of the values @ CL of pier w/moment strength controlling. It would seem that the rating factors should be nearly the same or slightly higher.

SPAN 3

=====

```

      MOMENT STRENGTH  RATING FACTORS
X  POSITIVE NEGATIVE  IR    OR
0.00  976.9 -5040.8  1.55 U  2.59 U
0.75  439.8 -5040.8  0.73 U  1.22 U
4.15  5126.8 -5040.8  2.36 U  3.94 U

```

FROM:hlee DATE:3/1/2007 8:48:54 AM

I'm not able to reproduce above low rating factor values at 0.75' of Span 3. I tried both the default tolerances and the tolerance settings listed in Incident 7284. Belows is the output from both runs.

SPAN 3

=====

```

      MOMENT STRENGTH  RATING FACTORS
X  POSITIVE NEGATIVE  IR    OR
0.00  976.9 -5040.8  1.57 U  2.61 U
0.75  439.8 -5040.8  1.66 U  2.78 U
4.15  5139.2 -5040.8  2.17 U  3.63 U

```

Tim, could you try to see whether you can reproduce those values at 0.75' of Span 3? If yes, please attach the generated 72\_\_PS\_Bulb-Tee dat, log, and out files to this incident.

FROM: Tim Armbrecht DATE: 7/11/2008 10:33:16 AM Eastern Daylight Time  
Herman, I had my consultant look at this. here is his response:

I checked it out in v. 6.0 (Beta 4) and got essentially the same results. Pos. moment strength is radically less at the bearing centerline than it is at the pier centerline only 9" away. And the rating factor is much less, It should be almost the same. The example is for lane loading, "SP-1" I think.

I have attached the revised problem report, the v.6.0(Beta4) export file and the three requested output files.

FROM: Herman Lee DATE: 3/14/2010 4:10:11 PM Eastern Daylight Time  
I'm able to reproduce the issue in 6.1 Release. Attached Virtis Std Engine input and output files (61-72\_\_PS\_Bulb-Tee).

4/19/2016 3:20:04 PM

HRS AASHTO

2295

**Complete Issue Information**

Hasmukh, please investigate the reported positive moment strength at Span 3 0.75'.

FROM: HasMukh Lathia DATE: 3/14/2010 9:31:27 PM Eastern Daylight Time

The positive moment strength at 0.75' in Span is much less because it is reduced by a reduction factor k.

Virtis Std Engine uses flexural strength reduction factor k (AASHTO Manual 6.6.3.3) when  $\Phi * M_n$  is less than 1.2 times the cracking moment  $M_{cr}$ . If a rating agency decides not to use provision of this reduction factor, then the rating factor should be calculated using the moment strength without a reduction factor. Also see incident 9615. Providing a user option (an enhancement) to use or not to use this reduction in strength will resolve this issue.

FROM: Herman Lee DATE: 3/15/2010 8:11:48 AM Eastern Daylight Time

Duplicate of Incident 9615.

FROM: HasMukh Lathia DATE: 3/15/2010 12:12:46 PM Eastern Daylight Time

After looking at this issue further, I inquired with PennDOT if their PSLRFD program checks for cracking moment strength at center line of bearing. I got the following response:

PSLRFD does not compute a  $M_{cr}$  between the simple support locations. See the output below. Also, the program only computes and reports the required positive moment connection reinforcement area. It does not use this steel for any other calculations. It is only computed for the continuous only analysis option.

I recommend that Virtis Std Engine should not compute  $M_{cr}$  and use the strength reduction factor k between the bearing lines at piers. This would be an enhancement to Virtis Std Engine.

Issue ID: 7868  
Subject: LL Shear concurrent with maximum moment differences

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 2/27/2007 10:20:13 PM  
Modified By: administrator 6/19/2008 4:27:02 PM  
Priority: High  
Category: Bug - BRASS

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Open     |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

4/19/2016 3:20:04 PM

HRS AASHTO

2296

## Complete Issue Information

---

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 32021B01.xml        |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 7871.15464 | Resolved      | No deck on side-by-side post-tensioned box beams |

### Description

FROM:tarmbrecht DATE:Tuesday, February 27, 2007 5:20:14 PM

From my consultant:

In the subject example, PS-ViProb (0930021).xml, two POI's, @ 37.75' & @ 38.25' of Span 1 in a 4-Span continuous composite PS Bulb-Tee beam, were specified. As indicated in the BRASS output below (see attached Word document), the values for "Shear concurrent with maximum mom." are radically different, 0.17 kips for the first, and 30.45 kips for the second. By inspection and experience, one would expect the two values to be close to the same and within 80% or so of the "Live load pos shear" (~35 kips) since they are only 0.6% of the span away from each other. Please advise.

FROM:bgoodrich DATE:Wednesday, February 28, 2007 5:58:43 PM

I investigated the issue and was able to duplicate the problem using the following tolerances:

| Unit | Tolerance |
|------|-----------|
| ft   | 0.01      |
| in   | 0.125     |

FROM:bgoodrich DATE:Wednesday, February 28, 2007 6:00:26 PM

This issue can sometimes be fixed by increasing the wheel advancement denominator. I tried 100, 150, and 200, but the concurrent shear went from one extreme to the other and then back again. Next, I ran the bridge (with the various wheel advancement denominators) with the latest BRASS-GIRDER engine. For all cases, the concurrent shear at the points in question was around 30 kips, which is reasonable. This engine will be included in the next major release.

Issue ID: 7871

Subject: No deck on side-by-side post-tensioned box beams

Folder: /Virtis/Support Center

4/19/2016 3:20:04 PM

HRS AASHTO

2297

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Curtis, Beckie      | 2/28/2007 4:14:55 PM |
| Modified By: administrator        | 6/19/2008 4:27:02 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact  | Status    | Priority | Category      |
|------------------|-----------|----------|---------------|
| Duray, Jim       | New       | High     | Unknown       |
| Kennelly, Krisha | Assigned  |          |               |
| Goodrich, Brian  | Suspended |          | Enhance BRASS |
| Goodrich, Brian  | Suspended | High     | Enhance BRASS |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7874.15461 | Suspended     | DC2 gets Changed to DW |

### Description

FROM:rcurtis DATE:Wednesday, February 28, 2007 11:14:55 AM

I have a structure of post-tensioned, side-by-side box beams that has no deck. There is a wearing surface and sidewalks.

Currently, BRASS is modelling the structure with all of the loads being treated as DC1, even though they are entered as DC2.

Is there a fix for this other than inserting a fictitious deck thickness?

FROM:kkennelly DATE:2/28/2007 2:09:20 PM

4/19/2016 3:20:04 PM

HRS AASHTO

2298

**Complete Issue Information**

FROM:kkennelly DATE:2/28/2007 2:21:21 PM

I'm assuming that you want the wearing surface on the Structural Typical Section window to be considered composite because if it is not composite there is no difference in the loads being applied to DC1 or DC2. (The section properties would be due to the beam acting alone if the wearing surface is not composite for both stage 1 and stage2)

Virtis does not consider the thickness entered on the Future Wearing Surface tab to be made composite with your beam. It is considered to be a non-structural overlay.

I think this workaround will work:

Specify the strength of the wearing surface as the Deck Concrete material on the Structure Typical Section: Deck (Cont'd) tab. Specify the thickness as zero on this tab.

Specify a deck range on the Deck Profile: Concrete tab that has 4" for the structural thickness and an eff flange width and then specify that the vertical shear reinf extends into the deck on the Shear Reinforcement Ranges window. Then BRASS will apply the DC2 loads to stage 2.

You should verify that the Stage 1 and Stage 2 section properties in the BRASS output file reflect what you want to model and that the dead loads are correct.

|                                 |
|---------------------------------|
| Issue ID: 7874                  |
| Subject: DC2 gets Changed to DW |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 2/28/2007 7:31:21 PM |
| Modified By: administrator       | 6/19/2008 4:27:02 PM |
| Priority: High                   |                      |
| Category: Enhance BRASS          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:20:05 PM

HRS AASHTO

2299

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, February 28, 2007 2:31:22 PM

In the wearing surface tab of the structure typical section, the load case.

Why do we get a choice of load cases when DW or Not assigned are the only ones that will be used?

We treat Silica Fume Overlays as structural, and we would code them DC2. But selecting DC2 will result in DW when Opis is run.

These other choices shouldn't even be there.

FROM:jduray DATE:3/8/2007 8:35:29 AM

Is this issue new to 5.6 Beta 1?

If not it should be changed to a support center incident and investigated under our maintenance task.

FROM:dteal DATE:Thursday, March 08, 2007 9:25:47 AM

Not a 5.6 beta issue

Version 5.5 and earlier

FROM:jduray DATE:3/8/2007 10:20:37 AM

You can define a many load case descriptions as you want - the window doesn't have knowledge of a specification so it can't filter load cases based on stages (and I don't think it should).

I assigned the wearing surface to DC1 and the results are different than when it was assigned to DW so it seems the export is applying as requested (for both Opis and Virtis).

I assigned the wearing surface to DC2 and the results matched the results produced when it is assigned to DW

FROM:bgoodrich DATE:Tuesday, March 13, 2007 8:34:15 PM

I believe the issue that Dean is referring to is the warning in the log file:

WARNING (High):

The load case assigned to the Wearing Surface is not a DW type!

The wearing surface is always applied to a BRASS DW load case in the specified stage.

The load is getting into BRASS just fine, but it is being factored as a DW load and Dean would like it factored as a DC load.

The BRASS export takes the information on the wearing surface tab as a non-structural wearing surface and applies this to the stage assigned to the dead load case assigned to the wearing surface load. If the wearing surface load is input using the BRASS "wearing surface" command parameters, BRASS assumes the load is DW, which is why the warning is printed. BRASS uses these commands for the automatic dead load distribution as well.

Regarding ways to address this issue, one alternative would be for the export to determine the distributed wearing surface weight, which would take a fair amount of effort given all the distribution methods (tributary, transverse simple-beam, transverse continuous-beam, etc.). Another alternative would be to modify the BRASS engine to allow the assignment of a dead load type (DC or DW) to the

4/19/2016 3:20:05 PM

HRS AASHTO

2300



**Complete Issue Information**

wearing surface load.

FROM:jduray DATE:3/14/2007 12:43:25 PM  
Seems like this is an enhancement, not a bug.  
I think the change should be made in BRASS rather than the export since that is probably a lot easier.  
I'm changing the incident to Enhancement for Brass.

FROM:dteal DATE:Monday, March 19, 2007 11:04:41 AM  
I don't think this is a BRASS issue, it's a GUI issue.

I think we all missed the point here.  
In the wearing Surface Tab the user can assign a load to DC2 but it will NEVER get exported and analyzed as a DC2 load, it will ALWAYS be analyzed as a DW load case with DW load case factors.

We are letting the user believe they are getting DC2 load case factors and behind the scenes we give them DW factors.

DW should be the only load case available, the others should be grayed out.

Some agencies consider wearing surfaces such as silica fume, structural (DC2 Load) and not simply a wearing surface (DW).

FROM:dteal DATE:Monday, December 10, 2007 8:58:49 AM  
Releated to 2759 & 4315

|                                     |
|-------------------------------------|
| Issue ID: 7890                      |
| Subject: Error in generating report |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Curtis, Beckie   | 3/9/2007 12:49:22 PM |
| Modified By: administrator     | 6/19/2008 4:27:00 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

**Contacts**

4/19/2016 3:20:05 PM

HRS AASHTO

2301

### Complete Issue Information

| Name           | Company      | Email 1                    | Phone 1      |
|----------------|--------------|----------------------------|--------------|
| Beckie Curtis  | Michigan DOT | CurtisR4@michigan.gov      | 517-322-1186 |
| Steven Maberry |              | steven.maberry@state.nm.us |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | octavio 7870.xml    |             |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 7891.15444 | Resolved      | Girder gains an extra span without being told to |

### Description

FROM:rcurtis DATE:Friday, March 09, 2007 7:49:22 AM

When using the report tool to generate an LFD report, the following error is created:

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

-----  
Whitespace is not allowed at this location. Error processing resource 'file:///C:/Program Files/AASHTOWARE/Virtis55/Reports...

<BRIDGE\_NAME>I-94 EB OVER NORFOLK SO. & PORTAGE CR</BRIDGE\_NAME>  
-----^

Importing this file into a different database does not help. Other bridges in the same database still appear to generate the report without problem.

FROM:hlee DATE:3/9/2007 10:53:15 AM

Duplicate of Incident 7832.

Work around for now is to delete the "&" character in the bridge name.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 7891                                            |
| Subject: Girder gains an extra span without being told to |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Maberry, Steven     | 3/9/2007 7:02:47 PM  |
| Modified By: administrator        | 6/19/2008 4:27:00 PM |

4/19/2016 3:20:05 PM

HRS AASHTO

2302

## Complete Issue Information

Priority: High  
Category: Bug

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Lee, Herman        | Resolved |          |          |
|                    | Closed   |          |          |
| Lee, Herman        | Closed   | High     | Unknown  |

## Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SetBRASSASD.sql     |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 7894.15441 | Closed        | Request for an SQL script |

## Description

FROM:jihnat DATE:3/9/2007 2:03:10 PM  
Received via email (Bridgeware):

Import the attached bridge file

go to "5-Girder system Span 7"

Double Click.

Note that the input for the span is a single span (70.74-ft)

Now, go to G5; Double Click on G5

Notice that Virtis Opis has assigned TWO spans to this girder.

4/19/2016 3:20:05 PM

HRS AASHTO

2303

## Complete Issue Information

Where did it get THAT idea without being told? Or, alternatively, where did we tell it?

Steven Maberry, NMDOT

FROM:kkennelly DATE:3/12/2007 4:16:37 PM

Email question from Joe to Steven:

Did "5-Girder system Span 7" always have 1 span and 5 girders? Or was it originally something else?

Email response from Steven:

There is a small possibility that the "5-Girder system Span 7" MAY have started as 1 span and 7 girders. Not sure if it did or not. The person who is trying to model the bridge says he MAY have started it that way thinking the longer span would control--then later changed it when he realized he would have to model all spans to find the controlling span.

FROM:smaberry DATE:Friday, March 23, 2007 3:37:30 PM

FROM:kkennelly DATE:4/2/2007 11:00:07 AM

Email sent to Steven on 4/2/07:

I'm unable to reproduce any steps that cause this situation to occur. Something must have gone wrong with the internally computed G5 member length and the values written to the database when inputting the skewed supports, splayed girder spacing and flared deck width but I can't determine what went wrong.

Do you need the data in this xml file to be corrected to continue working with this structure? If you do I will try to repair the values written to the database. Otherwise I will leave this incident as "Not reproducible".

FROM:kkennelly DATE:4/2/2007 11:08:58 AM

FROM:kkennelly DATE:4/9/2007 8:10:25 AM

Email received from Steven on 4/6:

To reproduce the error in Incident 7891, take the steps outlined below. This procedure FIRST fixes the problem (see the web site where I reported a work around), then reproduces the problem.

Load the XML file that is attached to Incident 7891

FIX THE PROBLEM:

- 1) Double click on SUPERSTRUCTURE DEFINITIONS>> 5-Girder System Span 7>> G5  
VERIFY that G5 shows a second span (length 0.000018)
- 2) Double Click on SUPERSTRUCTURE DEFINITIONS>> 5-Girder System Span 7>> "Framing Plan Detail."
- 3) Change Skew degrees from 45 to 0 for both supports.
- 4) Click "Apply"
- 5) Change the Skew degrees BACK to 45 for both supports.
- 6) Click "Apply" or "OK"

THIS fixes the problem. You can verify that it has been fixed by going back to G5 and noting that the

4/19/2016 3:20:05 PM

HRS AASHTO

2304

**Complete Issue Information**

second span has disappeared.

**REPRODUCE THE PROBLEM:**

- 1) Go To SUPERSTRUCTURE DEFINITIONS>> 5-Girder System Span; double click to open.
- 2) Change the Span Length from 70.74 to 75.
- 3) Click "OK"
- 4) Go back to G5 and note that the beam has again acquired a new second span (0.000056 feet)

Looks like a recalculation problem when the span length is changed on a skewed, splayed structure.

FROM:kkennelly DATE:5/7/2007 2:04:50 PM  
Fixed for version 5.6.

Problem was in the DoGirderSystemStructDef:SetSpanLength() function. Code for setting girder mbr ref line lengths did not work for splayed girders.

FROM:xli DATE:6/15/2007 3:04:20 PM  
Verified resolved with 5.6 Beta 3.

|                                    |
|------------------------------------|
| Issue ID: 7894                     |
| Subject: Request for an SQL script |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Thompson, Todd   | 3/13/2007 5:14:53 PM |
| Modified By: administrator     | 6/19/2008 4:27:00 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:ttompson DATE:Tuesday, March 13, 2007 1:15:00 PM

I was looking for some help to run a SQL script against my ASA DB so the Member Alternative for ASD has BRASS ASD selected. When we imported all of our structures into Virtis, it only populated BRASS LFD for LFD Analysis Module.

I suspect it's an easy script, but wanted assistance. Thanks.

We are currently 5.3.0 and waiting for our IT folks to install 5.5.0 running ASA 9.0.1

FROM:ttompson DATE:Tuesday, April 10, 2007 2:19:34 PM

We are upgraded to 5.5.0 with ASA 9.0.1

FROM:hlee DATE:4/26/2007 8:50:42 AM

E-mail reply to Todd:

=====

Todd,

Please find the attached SQL script. The script will set the ASD module to "BRASS ASD" for all the member alternatives/definitions that have "BRASS LFD" set in LFD module. The script has been tested against both 5.3.0 and 5.5.0 Sybase databases. You could run the script using Sybase Interactive SQL and log in as the owner of the database. Make sure you have a backup of the database before running the script.

Please let me know if you have any questions.

Herman

=====

FROM:ttompson DATE:Thursday, May 10, 2007 3:18:12 PM

Appears to have worked without any problems.

Can Close this request.

Issue ID: 7898  
Subject: The parameter in DoAnalysisEvent::SetVehicleCategory should be the category mask.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 3/15/2007 6:34:30 PM  
Modified By: administrator 6/19/2008 4:27:00 PM  
Priority: High

4/19/2016 3:20:06 PM

**HRS AASHTO**

2306

## Complete Issue Information

Category: Bug - Domain 2

## History

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Duray, Jim      | New                | High     | Unknown   |
| Goodrich, Brian | Assigned           |          | Education |
|                 | Information Needed |          |           |
|                 | Assigned           |          |           |
|                 | Duplicate          |          |           |
| Goodrich, Brian | Duplicate          | High     | Education |
|                 | Resubmit           |          | Unknown   |
| Duray, Jim      |                    |          |           |

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ignore Pos Mu.xml   |             |

## Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7900.15435 | Duplicate     | PS Continuity Diagram, Ignore Pos Moment |

## Description

FROM:hlee DATE:3/15/2007 2:33:28 PM  
The check for valid category should be removed.

FROM:jduray DATE:3/16/2007 8:55:55 AM  
Who should this be assigned to?

FROM:hlee DATE:3/19/2007 7:20:22 AM

4/19/2016 3:20:06 PM

HRS AASHTO

2307

**Complete Issue Information**

Resolved for 5.6 Release.

|                                                   |
|---------------------------------------------------|
| Issue ID: 7900                                    |
| Subject: PS Continuity Diagram, Ignore Pos Moment |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 3/19/2007 3:01:40 PM |
| Modified By: hlee              | 6/24/2008 1:32:27 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Monday, March 19, 2007 11:01:40 AM

In the attached bridge, using member G1

In the Beam Details, Continuity Diaphragm tab

Leave the "ignore positive moment at supports in ratings" un-checked

When you run an LRFD Design review, there are no Design Ratio failures.

Check this box, Now I get design ratio failures.

When we give instructions to ignore this in Virtis, why is it effecting Opis results?

FROM:kkennelly DATE:5/21/2007 12:47:20 PM

The engine related help for BRASS LRFD does not say that this data is ignored so I think it is functioning as intended.

FROM:dteal DATE:Wednesday, May 30, 2007 10:54:36 AM

The help states:

4/19/2016 3:20:06 PM

HRS AASHTO

2308



## Complete Issue Information

"Ignore positive moment at supports in ratings

Check this box to ignore the positive moments at the supports in the rating calculations"

The problem is that checking this box effects design calc's when it should only effect rating calc's??

FROM:bgoodrich DATE:Wednesday, June 06, 2007 9:53:20 AM

I think Dean is correct that this "Ignore..." checkbox should only apply to ratings. I can revise the export to ignore this field for a design review, but will this change affect existing bridges? If users checked this box for a design review, then the bridge will not be analyzed because there will be no reinforcement over the interior supports. Could another checkbox be added for a design review, similar to the Structural Slab Thickness checkboxes for rating and design on the structure definition window?

FROM:kkennelly DATE:6/6/2007 12:06:55 PM

Dean - do you want 2 checkboxes on this window? The boxes would be as follows:

1. the existing check box "Ignore positive moment at supports in ratings"
2. a new check box "Ignore positive moment at supports in design"

Does it get even trickier? When you do a design review using BRASS LRFD, BRASS LRFD also computes rating factors. Do you want the pos moments considered for design but not for the rating factor calculations?

Brian, am I correct in my following assumptions on how these check boxes work?

1. Check the box to ignore pos moment in ratings -
  - 2 things happen: a. Positive creep, etc moments are not deducted from the DL moment at the support
  - b. Connection steel not checked for the positive creep, etc. plus pos live load at the support.

FROM:dteal DATE:Thursday, June 21, 2007 7:35:06 AM

I would like to see it stay with the one check box "Ignore positive moment at supports in ratings" and I think we would want to consider Pos moments for design.

FROM:dteal DATE:Thursday, June 21, 2007 8:46:20 AM

FROM:bgoodrich DATE:Wednesday, July 25, 2007 1:18:09 PM

BRASS calculates the factored moment at the support from all loads, including dead, live, creep, shrinkage, etc. If this result is positive and the "Ignore positive moment at supports" is checked, then BRASS bypasses the flexural calculations for that POI. BRASS also has an option to ignore the negative moment at supports too. How should we proceed?

FROM:kkennelly DATE:7/26/2007 2:55:07 PM

Dean, I think there are some users who achieve continuity by extending the PS strands and cannot adequately describe this condition in Virtis/Opis. They will need to be able to specify to ignore the positive moments so I don't think we can force everyone to always consider the positive moments in design.

Therefore we are thinking that we should resolve this issue by:

1. Revising the wording on the checkbox to read "Ignore positive moment at supports" and continue to have this checkbox exported to both Virtis and BRASS. Our thinking is that if you don't consider it in design you won't want to consider it in rating either so one checkbox will suffice.

4/19/2016 3:20:06 PM

HRS AASHTO

2309

**Complete Issue Information**

What are your thoughts?

FROM:kkennelly DATE:7/26/2007 3:05:25 PM  
Refer to incident 4683 for why we implemented this checkbox in Opis.

FROM:dteal DATE:Wednesday, August 01, 2007 2:51:40 PM  
FROM:dteal DATE:Wednesday, August 01, 2007 2:51:40 PM  
Here are my thoughts/comments:

- 1. It seems to me that the original "intent" of the check box was to ignore Pos Mu at supports for ratings (ratings only and not for design). I think the original intent should be cleared up.
- 2. The user , in my opinion, should have the flexibility to check the box for rating and not checking it for design. Again, back to the original intent, the way the user thought it was working.

Solutions:??

- 1. Provide two check boxes, one to ignore Pos Mu over supports for Rating and one for Design.
- 2. When migrating to the new version, if the single box was checked for rating then let the migration utility check both boxes. If the box wasn't checked, then leave both boxes blank in the new version. Results for both Virtis and Opis will remain unchanged unless the user manually changes the box condition after migration.

FROM:dteal DATE:Friday, August 03, 2007 1:20:01 PM

FROM:dteal DATE:Friday, August 03, 2007 1:20:01 PM

FROM:jduray DATE:4/30/2008 9:09:04 AM  
Same as vi6434 Item 6.

FROM:dteal DATE:Tuesday, June 17, 2008 11:52:46 AM  
Above states this is included in Item #6 of VI 6434  
VI 6434 states all is resolved except Item #6 and refers back to this incidnet (which is marked as Duplicate)  
It appears to me that this should still be open as Un-Resolved or reopen 6434 as unresolved??

Issue ID: 7901  
Subject: Virtis Error (NSG)

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Ihnat, Joseph 3/20/2007 12:42:27 PM  
Modified By: administrator 6/19/2008 4:26:59 PM  
Priority: High  
Category: Unknown

4/19/2016 3:20:06 PM

**HRS AASHTO**

2310

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Duray, Jim         | New      | High     | Unknown   |
| Ordoobadi, Mehrdad | Assigned |          | Bug       |
|                    | Q/A      |          | Education |
| Ordoobadi, Mehrdad | Q/A      | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 7903.15432 | Q/A           | AddRow to DoMemberRatingSummary and AddVehicle to DoMemberResults. |

### Description

FROM:jihnat DATE:3/20/2007 8:41:17 AM  
Received via email (Bridgeware):

I am having trouble running a NSG truck. I exported the bridge, truck and errors. [Attached]  
Rob Benshoof, TDOT

FROM:jduray DATE:3/20/2007 6:18:27 PM  
Shear modulus for the rigid links is 0.0. The call to the FE element to generate the element stiffness matrix throws an exception because G = 0.0.

FROM:jduray DATE:3/21/2007 12:23:08 PM  
While investigating this incident I found that if the FE analysis and NSG analysis fail there is a memory leak. You can force it by adding the following code to AbxVirtisDistFactEngine.cpp.

```
SHORT CAbxVirtisDistFactEngine::DoAnalysis(IDispatch* lpAnalysisEventDisp, IDispatch* lpItemDisp,
BOOL bUnused)
{
    AFX_MANAGE_STATE(AfxGetStaticModuleState());
    SHORT nRet = ANALYSIS_OK;
```

```
ReleaseAll();
```

4/19/2016 3:20:06 PM

HRS AASHTO

2311

**Complete Issue Information**

```
return ANALYSIS_FAILED;
}
```

After the failure I cannot analyze again (in a debug build). Program asserts in CCmdTarget::InternalRelease().

FROM:kkennelly DATE:3/21/2007 1:24:02 PM  
Response email sent to Rob:

I looked into your problem and found that in the Deck Profile: Deck Concrete tab you have defined the concrete deck over a range from 0' to 135'. The members in your bridge have a length of 137'. The FE model that is being generated by Virtis has an error in it due to the last 2' of the beams not having a concrete deck defined on the Deck Profile: Deck Concrete tab. If you change the range length on that tab from 135' to 137' your structure can be analyzed for the NSG truck.

We are revising Virtis so that you will be alerted to this missing data in the future.

Please let me know if you have further questions.

Regards,  
Krisha Kennelly, PE

FROM:kkennelly DATE:3/21/2007 1:25:58 PM  
Notes for programmer:  
DoGirderMbrAlt:GetFESectionAtDistance() line 22578. If DoMbrAltConcDeckRangeSetPtr->MoveDistance() fails, get the concrete material from the Structural Typ Section instead.

FROM:jduray DATE:3/21/2007 3:28:53 PM

FROM:kkennelly DATE:3/27/2007 12:15:01 PM  
Fixed for 5.6

FROM:xli DATE:6/18/2007 10:00:38 AM  
Verified resolved for 5.6 Beta 3

Issue ID: 7903  
Subject: AddRow to DoMemberRatingSummary and AddVehicle to DoMemberResults.

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Lee, Herman 3/20/2007 7:13:57 PM  
Modified By: administrator 6/19/2008 4:26:59 PM  
Priority: High  
Category: Education

**History**

4/19/2016 3:20:07 PM

HRS AASHTO

2312

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Double tee view.xml |             |

**Tasks**

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 7906.15429 | Closed        | Strand layout view for double tee section |

**Description**

FROM:hlee DATE:3/20/2007 2:23:04 PM

If AddRow and AddVehicle are done in the same loop for each vehicle, the vehicle ids will get mixed up in DoMemberRatingSummary.

To reproduce: Loop through DoMemberRatingSummary to GetVehicleId after the following.

=====  
=====

```

long IExportVehicleId = 0;
if (m_AnalysisEventPtr->FirstEventVehicle())
{
    while (m_AnalysisEventPtr->MoveNextEventVehicle())
    {
        IExportVehicleId++;
        lpVehicleDisp = m_AnalysisEventPtr->GetEventVehicleDisp().Detach();

        // Add vehicle to results object
        if (!MemberResultsPtr->AddVehicle(lpVehicleDisp, (LPCTSTR) "Vehicle Name",
            TYP_VEHICLELD_VLDLANAXL, IExportVehicleId))
            return FALSE;

        // Both impact and lane loadings are as requested
        MemberRatingSummaryPtr->SetLoadingConditions(0, 0);

        // Populate member rating summary
        long INullBitMask = 419424; // 2^5+2^6+2^9+2^10+2^13+2^14+2^17+2^18
        if (!MemberRatingSummaryPtr->AddRow(IExportVehicleId, // 0
            (short) MemberResultsPtr->GetDesignMethodType(), // 1
            TYP_RATCODE_SUCCRAT, // 2

```

**Complete Issue Information**

```

                25.0, // 3
                25.0, // 4
                0.0, // 5 NULL
                0.0, // 6 NULL
                1.0, // 7
                1.0, // 8
                0.0, // 9 NULL
                0.0, // 10 NULL
                10.0, // 11
                10.0, // 12
                0.0, // 13 NULL
                0.0, // 14 NULL
                "Overload Provisions", // 15
                "Overload Provisions", // 16
                "", // 17 NULL
                "", // 18 NULL
                INullBitMask))
                return FALSE;
            }
    }

```

=====

FROM:mordoobadi DATE:8/24/2007 11:12:06 AM

The code assigns Unique Vehicle IDs for the exported vehicles. This must be done once every vehicle is added to the results object.

The vehicles must be added to the Results object before an analysis is performed and the results are populated. Please revise code.

FROM:hlee DATE:9/7/2007 9:20:41 AM

If above information is not in the API documentation, it needs to be included.

Issue ID: 7906  
 Subject: Strand layout view for double tee section

Folder: /Virtis/Support Center  
 Primary Contact: Ihnat, Joseph  
 Submitted By: McCaffrey, Brian 3/22/2007 2:26:02 PM  
 Modified By: administrator 6/19/2008 4:26:59 PM  
 Priority: High  
 Category: Unknown

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:07 PM

**HRS AASHTO**

2314

### Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Duray, Jim    | New       | High | Unknown     |
| Ihnat, Joseph | Assigned  |      |             |
| Duray, Jim    | New       | High | Unknown     |
| Lee, Herman   | Assigned  |      |             |
|               | Suspended |      | Enhancement |
| Lee, Herman   | Suspended | High | Enhancement |

### Contacts

| Name           | Company      | Email 1                    | Phone 1      |
|----------------|--------------|----------------------------|--------------|
| Tim Armbrecht  | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
| Hasmukh Lathia |              | HLathia@mbakercorp.com     |              |

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | VSEWontIgnorePosMomatSup<br>port.xml |             |

### Tasks

| Name       | Current State | Summary                                                                                    |
|------------|---------------|--------------------------------------------------------------------------------------------|
| 7907.15428 | Suspended     | VSE apparently does not do "ignore positive moment at supports..." for continuous PS beams |

### Description

FROM:bmccaffrey DATE:Thursday, March 22, 2007 10:26:16 AM

The deck portion of my double tee section in the attached bridge does not appear in the view in the strand layout window. Single and triple tee sections appear fine.

FROM:hlee DATE:3/23/2007 9:03:23 AM

See whether adjusting the size of the strand layout window helps. Sometimes the scroll bars will only appear after you adjust the window size.

FROM:bmccaffrey DATE:Monday, March 26, 2007 10:39:20 AM

You are correct. Once I alter the window size the view control icons become active and I can fit the section on the screen. Still looks like a bug. The view controls should always be active, not just after minimizing and maximizing the screen.

FROM:jihnath DATE:4/3/2007 4:09:45 PM

Fixed for 5.6.0 Release

4/19/2016 3:20:07 PM

HRS AASHTO

2315

**Complete Issue Information**

FROM:xli DATE:6/15/2007 3:30:30 PM  
Verified resolved for 5.6 Beta 3.

FROM:bmccaffrey DATE:Thursday, June 28, 2007 10:56:13 AM

Verified working properly in v/5.6 b3

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 7907                                                                                      |
| Subject: VSE apparently does not do "ignore positive moment at supports..." for continuous PS beams |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 3/23/2007 9:08:32 PM |
| Modified By: administrator     | 6/19/2008 4:26:59 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Friday, March 23, 2007 5:08:32 PM

In the subject example, VSEWontIgnorePosMomatSupport.xml, a 3-span continuous PS I-beam bridge, we're trying to analyze the bridge, ignoring the positive moment at the supports (see Member Alternative/Beam Details/Continuity Diaphragm tab). This works for BRASS but not when utilizing the Virtis Standard Engine. Perhaps some documentation warning the user displayed near the button that makes the selection. Of course, we would prefer to make it function with VSE.

FROM:jduray DATE:3/26/2007 12:51:07 PM

Let's see what it would take to modify VSE to handle this.



**Complete Issue Information**

FROM:hlee DATE:3/30/2007 1:36:46 PM

Virtis Std Engine Help states that "Ignore positive moment at supports in ratings" is not used by Virtis Std. We use Engine Help to document engine specific information.

FROM:hlathia DATE:Monday, April 02, 2007 10:43:09 AM

This will be added to the VSE enhancement list.

Issue ID: 7908  
Subject: Wood Bridge VO model not recognizing added Member Loads

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Maberry, Steven 3/26/2007 1:12:05 PM  
Modified By: administrator 6/19/2008 4:26:59 PM  
Priority: Urgent  
Category: Bug - Madero

**History**

| Primary Contact | Status   | Priority | Category            |
|-----------------|----------|----------|---------------------|
| Duray, Jim      | New      | High     | Unknown             |
| Goodrich, Brian | Assigned | Urgent   | Bug<br>Bug - Madero |
|                 | Resolved |          |                     |
| Goodrich, Brian | Resolved | Urgent   | Bug - Madero        |

**Contacts**

4/19/2016 3:20:08 PM

HRS AASHTO

2317

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7909.15426 | Resubmit      | Manual Issues from Michigan Training |

### Description

FROM:jihnat DATE:3/26/2007 9:12:41 AM  
Received via email (Bridgeware):

Find attached a Virtis 5.5 bridge model.

When you open the model, rate the Girder G2 with an HS20-44 Vehicle Live Load

NOTE that the result is Rf of Inventory 2.137 Operating 2.843 for the truck and 2.695/3.585 for the lane load.

NOW go to STRUCTURAL TYPICAL SECTION ... WEARING SURFACE and increase the thickness from 0 to 20-inches (or any other thickness).

Rate G2 again ... notice that the rating remains UNCHANGED despite the rather dramatic increase in load.

NOW go to G2 Member Loads. Add a line under DC1-Uniform Load. Fill in 1 kip/ft (All Spans).

Rate G2 again ... the rating STILL remains UNCHANGED.

Kind of hard to fathom that such increases in dead loads are being ignored by Virtis Opis in ASD ratings for timber bridges.

Steven Maberry, NMDOT

FROM:bgoodrich DATE:Wednesday, March 28, 2007 10:40:02 AM  
I am able to duplicate the problem. The wearing surface thickness is being written to the GENLDIM command. I'll continue to investigate.

FROM:bgoodrich DATE:Tuesday, February 12, 2008 2:47:59 PM  
I found the source of the loading issue in the export. The deck density was input as zero and was

4/19/2016 3:20:08 PM

HRS AASHTO

2318

**Complete Issue Information**

being exported as such. The Madero engine requires that a non-zero deck density be input; however, it does not issue an error message. A short warning message is written to the output file that states that an input error occurred. When this input error is detected, the engine exits the subroutine it is in and does not load any of the dead load information. This is why changing the wearing surface or uniform dead load had no effect on the rating factors. Madero was basically ignoring all the dead loads. I revised the CMaderoDeadLoads::PrepareStringerBridge function to export deck density as small number when it is zero to get past Madero's validation.

We might want to consider revising the Madero engine to issue error messages when an input error is detected and halting the analysis.

|                                               |
|-----------------------------------------------|
| Issue ID: 7909                                |
| Subject: Manual Issues from Michigan Training |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Goodrich, Brian  | 3/26/2007 7:54:30 PM |
| Modified By: xli               | 9/5/2008 1:46:57 PM  |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
| Li, Xinmei      | Resubmit | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: bgoodrich DATE: Monday, March 26, 2007 3:54:50 PM

Training Example STL5: The first parapet dimension on page iii should be 12" instead of 9".

FROM: xli DATE: 3/27/2007 2:07:52 PM

Fixed STL5 files in Originals - v5.5 folder.

FROM: bgoodrich DATE: Tuesday, March 27, 2007 3:54:28 PM

There are no final rating result pages for STL3 and FS3, so the users have nothing to compare to during the training.

FROM: bgoodrich DATE: Wednesday, March 28, 2007 12:54:38 PM

For FS1 example, the effective flange width of the girder is shown as 102" (See Deck Profile window on page FS1-62). The slab thickness X 12 appears to control the effective width. This assumes that the spacing is from girder to girder (30 ft), rather than the spacing from girder to stringer (6 ft). Should the spacing actually control, i.e., 1/2 spacing + overhang (3'+2'=5'=60")? Please include a description at the beginning of the example that illustrates how this is calculated (maybe for the stringer too) and why it controls over the spacing check.

FROM: bgoodrich DATE: Wednesday, March 28, 2007 2:20:58 PM

For FS2 and FS4 examples, a user pointed out a difference in the input that should be reviewed. The Deck Profile window for the floorbeam on page FS2-20 shows an effective flange width of 63" while the same window on page FS4-24 shows 102". These should both be the same. Also, should we add a note somewhere discussing that a separate floorbeam definition for exterior and interior locations may be necessary if the effective width happens to be different?

FROM: bgoodrich DATE: Wednesday, March 28, 2007 3:43:32 PM

Entering the truss commands for example T1 was quite tedious. I suggest adding this example to the sample database or providing the commands in a file that the user paste into the truss field. Maybe the majority of the commands could be provided and the user wouldn't have to type so much during the training.

FROM: bgoodrich DATE: Thursday, March 29, 2007 9:24:43 AM

On example STL6, the schematic window shown on page STL6-29 needs updated. The top flange lateral support shading is only shown over span 2, when it should be shown over the entire length of the girder.

Also on STL6, the generic appurtenance window on page STL6-7 does not show the distance to the centroid of the load. Based on the figure at the beginning of the example, it looks like the centroid should be around 7 or 8 inches.

FROM: Xinmei Li DATE: 9/4/2008 3:44:42 PM Eastern Daylight Time

Example FS1,

Stringer deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the stringer,  $39'-11\frac{1}{2}"/4 = 59.875"$ , the distance center to center of stringers,  $6' = 72"$ , and twelve times the least thickness of the slab,  $12 \times 8.5" = 102$ . One-fourth of the span length of the stringer,  $59.875"$  controls.

Girder deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the girder,  $80'/4 = 20' = 240"$ , the distance center to center of girders,  $30'/2+2' = 17' = 204"$ , and twelve times the least thickness of the

**Complete Issue Information**

slab,  $12 \times 8.5 = 102$ ". Twelve times the least thickness of the slab, 102" controls.

Example FS2,

Page FS2-20 shows an effective flange width of 63", it's for floorbeam.

floorbeam deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the floorbeam,  $21\frac{1}{4} = 63$ ", the distance center to center of floorbeams, 45', and twelve times the least thickness of the slab,  $12 \times 9 = 108$ ".

One-fourth of the span length of the floorbeam, 63" controls.

FS4-24 shows 84", not 102". It's for stringer.

Interior stringer deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the stringer,  $45\frac{1}{4} = 11.25' = 135$ ", the distance center to center of stringers,  $7' = 84$ ", and twelve times the least thickness of the slab,  $12 \times 9 = 108$ ". The distance center to center of stringers, 84" controls.

Above text will be added to the examples for 6.0 update.

FROM: Xinmei Li DATE: 9/5/2008 9:46:27 AM Eastern Daylight Time

Example FS4,

Floorbeam deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the floorbeam,  $35\frac{1}{4} = 105$ ", the distance center to center of floorbeams, 45', and twelve times the least thickness of the slab,  $12 \times 8.5 = 102$ ".

One-fourth of the span length of the floorbeam, 102" controls.

Stringer deck effective flange width is calculated according to AASHTO Article 10.38.3, the effective flange width shall not exceed one-fourth of the span length of the stringer,  $45\frac{1}{4} = 11.25' = 135$ ", the distance center to center of stringers,  $7\frac{1}{2} + 2.25' = 69$ ", and twelve times the least thickness of the slab,  $12 \times 8.5 = 102$ ". The distance center to center of stringers, 69" controls.

|                                               |
|-----------------------------------------------|
| Issue ID: 7910                                |
| Subject: Low Rating Factor Due to BRASS 5.9.3 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 3/27/2007 7:08:15 PM |
| Modified By: administrator       | 6/19/2008 4:26:59 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Closed   |          |             |

**Complete Issue Information**

|                 |        |      |             |
|-----------------|--------|------|-------------|
| Goodrich, Brian | Closed | High | Bug - BRASS |
|-----------------|--------|------|-------------|

**Contacts**

| Name       | Company                 | Email 1             | Phone 1 |
|------------|-------------------------|---------------------|---------|
| Herman Lee | Michael Baker Jr., Inc. | hlee@mbakercorp.com |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | fs3.xml             |             |

**Tasks**

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 7911.15424 | Resolved      | Unable to save and import bridge. |

**Description**

FROM:dteal DATE:Tuesday, March 27, 2007 3:08:16 PM

In the attached bridge, reinforced concrete haunched slab. Imported into Virtis several versions ago.

When Virtis used BRASS 5.9.0 and/or 5.9.1 the HS20 inventory rating factor was 1.18

Now with BRASS version 5.9.3 the inventory rating factor is 0.31

This is a known problem in BRASS, as of today it hasn't been fixed yet.

I don't have the PL #

I just wanted to be sure it was listed as a Virtis problem (BRASS Bug)

The problem may have occurred in 5.9.2 but I can't verify that.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 8:49:48 AM

WYDOT assigned this issue to BRASS Problem Log 734.

FROM:bgoodrich DATE:Wednesday, July 25, 2007 12:22:57 PM

This issue has been addressed in BRASS-GIRDER(STD) 6.0.0. Fixed for version 5.6.

FROM:dteal DATE:Wednesday, November 07, 2007 2:14:19 PM

Accepted

Issue ID: 7911

Subject: Unable to save and import bridge.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Lee, Herman

3/28/2007 5:55:18 PM

4/19/2016 3:20:09 PM

HRS AASHTO

2322

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:26:58 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
| Ihnat, Joseph   | Information Needed |          |          |
|                 | Resolved           |          |          |
| Ihnat, Joseph   | Resolved           | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | BWS Report for ps girders.xml<br>55033.xml |             |
|      | BWS Report for ps girders.xml              |             |

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 7914.15421 | Resolved      | Error with Virtis Report Tool |

### Description

FROM:hlee DATE:Wednesday, March 28, 2007 1:55:29 PM  
Attached bridge cannot be saved or imported to another database. It can be exported.

FROM:hlee DATE:Wednesday, March 28, 2007 2:02:48 PM  
The name tag in ABW\_SUPER\_STRUCT\_SPNG\_MBR is NULL in the xml file.

FROM:hlee DATE:Wednesday, March 28, 2007 2:09:49 PM  
To reproduce:  
1. Open FLine GF TrainingBridge3.  
2. Open "Floorbeam 1" and click OK to enable the Save button.  
3. Double-click on the FLOORBEAM MEMBERS to create a new one.  
4. Close the window by clicking the x at the upper right corner of the window.  
5. Click the Save button on the toolbar.

4/19/2016 3:20:09 PM

HRS AASHTO

2323

**Complete Issue Information**

Error message:

=====
Unable to save Bridge data!
02:15:27 PM - Line 884 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmSuperStructMbr (SaveOrder object 251).
02:15:26 PM - Line 446 in source file .\DmBridgeCache.cpp.

Assignment of data to recordset variables failed.
02:15:26 PM - Line 1026 in source file .\DmSuperStructSpngMbr.cpp.

Trying to set NAME to NULL in table ABW\_SUPER\_STRUCT\_SPNG\_MBR, but the field is not allowed to be NULL.
02:15:26 PM - Line 1009 in source file .\DmObject.cpp.
=====

FROM:mordoobadi DATE:4/11/2007 9:15:30 AM
This should be handled inside the window. The new domain object must be removed if the window is closed by clicking the x.

FROM:jihnat DATE:4/11/2007 10:07:49 AM
Window fixed for 5.6.0 Release.

FROM:xli DATE:6/15/2007 3:33:20 PM
Verified resolved for 5.6 Beta3.

Issue ID: 7914
Subject: Error with Virtis Report Tool

Folder: /Virtis/Support Center
Primary Contact: Ihnat, Joseph
Submitted By: Ihnat, Joseph 3/30/2007 3:00:01 PM
Modified By: administrator 6/19/2008 4:26:58 PM
Priority: High
Category: Unknown

**History**

Table with 4 columns: Primary Contact, Status, Priority, Category

**Contacts**

Table with 4 columns: Name, Company, Email 1, Phone 1



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 7915.15420 | Resolved      | Point of interest control |

### Description

FROM:jihnat DATE:3/30/2007 10:59:29 AM  
Received via email (Bridgeware):

I'm trying to use the Report Tool to create a BWS report. When I generate the report I get the following error message in my web browser:

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

I have tried this on two separate computers with the same results. The first computer is running IE6 on Windows 2000. The second is running IE7 on Windows XP.

The XML and XSL files are both being generated and saved in my Reports subdirectory of my Virtis 55 folder. [Files are attached to this incident]

Eric Evenson, URS

FROM:jduray DATE:4/2/2007 10:17:04 AM

We need the rpt file to try to reproduce the problem. I was able to double-click the xml file and display the report.

FROM:jihnat DATE:4/3/2007 8:18:23 AM

What rpt file?

I can also open the report, but the report is only partial and an error displays at the end: "End tag 'Member\_Alt\_Prestressed\_Concrete\_I\_Beam\_Schd\_Gs' does not match the start tag 'Analysis\_Event\_Gs\_Psis'. Error proce..."

If I import the bridge, I can successfully generate the entire report.

FROM:jihnat DATE:4/3/2007 8:56:59 AM

Eric's abr file (BWS Report for ps girders.abr) had the Release timestamp, but his file may have somehow become corrupted.

When I sent him a new file he was able to generate the report.

Issue ID: 7915

Subject: Point of interest control

4/19/2016 3:20:09 PM

HRS AASHTO

2325

## Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Ihnat, Joseph       | 4/4/2007 6:17:14 PM  |
| Modified By: administrator        | 6/19/2008 4:26:58 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | ReOpen   |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

## Contacts

| Name           | Company                    | Email 1                             | Phone 1      |
|----------------|----------------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc.           | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Beckie Curtis  | Michigan DOT               | CurtisR4@michigan.gov               | 517-322-1186 |
| Herman Lee     | Michael Baker Jr.,<br>Inc. | hlee@mbakercorp.com                 |              |

## Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | error.xml                |             |
|      | RolledBeamComparison.xls |             |
|      | RolledBeamComparison.zip |             |
|      | STL5-RollBeamBridge.xml  |             |

## Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 7917.15418 | Closed        | Error in running superstructure with small continuous spans |

4/19/2016 3:20:09 PM

HRS AASHTO

2326

## Complete Issue Information

---

### Description

FROM:jihnat DATE:4/4/2007 2:18:55 PM  
Received via email (Bridgeware):

I am currently working on some bridge rating for MassHighway. The instructions for the ratings requires each member to have two reports produced. The first report is to determine the lowest rating value (analyzed by using POI control #3), the second report determines the rating value at each point of interest (analyzed by using POI control #5). The way I have been doing this is by running the analysis with POI control #3 then copying each member. I change the POI control to #5 for the "Copy of .. " delete all but one POI, then run the analysis, printing the report and then change to the next POI and repeat for each POI for each member. This has become very time consuming and I was hoping there is a more efficient way.

Is there a way the analyze a member and get the rating values at each point of interest without having to run each POI separately? A co-worker who used VIRTIS a while ago remembered getting some information outside of the bridge workspace, but did not remember if everything could be done in the bridge library to meet the MHD reporting requirements.

Thank you for any assistance.

Stephen Bartha  
Conley Associates  
214 Cambridge Street  
Boston, MA 02114  
Office: 617.742.5111  
Fax: 617.742.5333  
Cell: 508.395.2590

FROM:kkennelly DATE:4/17/2007 1:59:41 PM  
Response sent via email:

If you are using the BRASSLFD program as your analysis engine, you cannot see the rating factors for each point of interest on one screen in Virtis. You can only see the most critical rating factor on the Analysis Results window.

If you use the Virtis Std analysis engine, you can view the rating factors for 10th points and cross section change points by selecting "Detailed Rating Results" in the Analysis Results window but you can't see the rating factors for user defined points of interest (You will be able to view the rating factors for user defined points of interest in that window in Version 5.6).

The only workaround I can think of for you to produce these reports using the BRASS LFD engine is to:

1. Analyze the member using the POI control option 3. The Analysis Results window then gives you the critical rating factor report.
2. Change the POI control option to 5 and analyze the member. Then open the BRASS LFD output text file (from the "View Latest Analysis Output" window in Virtis) and search for the words "Rating Factor Report". That will lead you to the portion of the BRASS output that lists the output for each user

4/19/2016 3:20:09 PM

HRS AASHTO

2327

**Complete Issue Information**

defined point of interest. Cut and paste that portion of the output file into your report.

3. Change the POI control option back to 3.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 7917                                                       |
| Subject: Error in running superstructure with small continuous spans |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Curtis, Beckie     | 4/6/2007 4:58:51 PM  |
| Modified By: administrator       | 6/19/2008 4:26:58 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rcurtis DATE:Friday, April 06, 2007 12:58:51 PM

I am getting errors when trying to run the WB crossover superstructure definition in the attached file.

The errors from Brass are:

Error generating LFD/ASD load commands!

Error generating distributed load commands!

Review input for items included in Load Case: False Decking

This would include uniform or distributed dead loads or the section dimensions used to generate dead loads (slab, haunch, etc.).

Error getting start distance and range for distributed dead load!

Error preparing distributed load for BRASS commands!

Unable to determine span where range ends!

Error determining start distance and range!

The errors in the Virtis engine are:

Girder Dead Loads

4/19/2016 3:20:10 PM

HRS AASHTO

2328

**Complete Issue Information**

Error - Unable to determine span where range ends!  
Error - Unable to determine span start distance and range!  
Error - Unable to determine user-defined girder distributed dead load!  
Error - Unable to determine user-defined girder dead load!  
Error - Unable to generate Girder Dead Loads!

Thanks!

FROM:rcurtis DATE:Friday, April 06, 2007 1:01:22 PM  
I checked to make sure the member span lengths equal the span input already.

FROM:hlee DATE:4/6/2007 2:42:14 PM  
The length of the distributed load for "False Decking" is 65.3647 ft, which is longer than the span lengths (65.3439 ft).  
G3 and G7 ran ok after this is fixed. For G1, the BRASS engine complains "Cross-section area less than or equal to zero".

```
=====
=====
Error No.: 1103
Type   : Input Error
Location : prgen.for
      ****ERROR**** A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN
1 SPAN POINT = 1
      RUN STOPPED.
      REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.
=====
=====
```

FROM:rcurtis DATE:Friday, April 06, 2007 3:35:05 PM  
I didn't input the length of the load (it is a member load input) and so how do you check that it is too long and how do you change it?

FROM:hlee DATE:Sunday, April 08, 2007 3:45:44 PM  
The distributed member load is on the second tab of the Member Loads window. You can change the length of the load there.

I guess when the uniform member load was entered in the first tab with the "All spans" selection, the span lengths was 65.3647 ft and Virtis stored this load length internally. Then, the span lengths changed to 65.3439 ft. When the Member Loads window is opened again, the uniform load with load length 65.3647 ft will go to the distributed tab since the load length doesn't match the new span lengths.

Virtis Help describes an opposite scenario in "Loads - Member: Uniform":  
"If you enter a uniformly distributed load over an entire span on the Loads - Member: Distributed tab, the data will be saved as a uniform load and will appear on this tab the next time you reopen the Loads - Member window."

FROM:kkennelly DATE:5/21/2007 11:38:16 AM  
Add description to help informing users that if they change the span lengths after adding a Uniform

4/19/2016 3:20:10 PM

**HRS AASHTO**

2329

**Complete Issue Information**

Member Load, the load will appear on the Distributed Load tab.

Brian still to investigate problem running G1.

FROM: bgoodrich DATE: Wednesday, June 06, 2007 11:57:03 AM  
BRASS is not getting the cross section dimensions from the library file. This structure is currently being exported as a wide flange that varies from one cross section to another, which is not permitted by the BRASS engine. Rather than request an engine change, I suggest revising the export. If the member is exported as a plate girder, the analysis is successfully run. We do this already for tapered cover plates or if loss exists.

FROM: bgoodrich DATE: Wednesday, June 06, 2007 3:42:25 PM  
E-mail from Krisha:

Jim and I discussed this and we would like this to only be implemented if the rolled beam shape varies over the length of the member. We want to be sure that we don't change any existing ratings for rolled beams.

FROM: bgoodrich DATE: Wednesday, June 06, 2007 3:43:07 PM  
The change I proposed would not affect the ratings of existing structures. It would only affect how the section dimensions get into BRASS - either from the section library or from the XSECT-B command. This basically means the XSECT-STD command would no longer be exported. The cross sections are generated and then assigned to the ranges, so I don't think we can detect a difference prior to the cross section generation.

FROM: bgoodrich DATE: Thursday, June 07, 2007 8:30:00 AM  
E-mail from Krisha:

If you are sure that neither the selfweight of the beam nor the cross section properties will change you can make the change for all rolled beams.

Krisha

FROM: bgoodrich DATE: Friday, August 03, 2007 3:14:17 PM  
Modified BrassStdCrossSections.cpp to force the rolled beam to be exported as an equivalent plate girder. This method bypasses a BRASS engine error check that requires that a rolled beam be constant over each range. This change affects how the section dimensions get into the engine.

FROM: bgoodrich DATE: Friday, October 05, 2007 6:21:40 PM  
Reopened after comments from Brian McCaffrey regarding changes to some ratings.

FROM: jduray DATE: 10/9/2007 3:18:25 PM  
Becky's mbr alt deck profile description is not symmetric and she describes tapering eff. flg width. I don't see anywhere in the spec where it says to taper the eff. flg width. So, I suggest we remove the changes to BrassStdCrossSections.cpp that force the rolled beam to be exported as an equivalent plate girder and suggest Becky describe the mbr alt as follows:

| Support | Range    | Eff. Flg W |
|---------|----------|------------|
| 1       | 0 - 5.47 | 16.41      |

4/19/2016 3:20:10 PM

HRS AASHTO

2330



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 7927.15408 | Resolved      | Clarification of dead loads automatically calculated |

### Description

FROM:rcurtis DATE:Wednesday, April 18, 2007 12:26:34 PM

In the following bridge, I ran G1 and then generated a report. As you can see, the summary load ratings differ dramatically from the detailed rating results portion.

FROM:rcurtis DATE:Tuesday, April 24, 2007 4:06:14 PM

I am attaching another bridge with a similar problem. See structure "Spans 1-3 SD". I am also attaching a pdf of the Brass and Virtis input. The Brass input seems to match the detailed rating results portion more accurately than the summary load rating from Virtis.

FROM:jduray DATE:4/25/2007 8:43:20 AM

May - please investigate and let me or Krisha know what you find.

FROM:xli DATE:4/25/2007 9:01:51 AM

Emailed Beckie:

Hi Beckie,

I've investigated incident 7925 you submitted on 4/18.

Detailed rating results In LFD report match that in Virtis Standard Engine output file. If the section is compact, detailed rating result matches compact rating factor of the section in Virtis Standard Engine output file. If the section is non-compact, detailed rating result matches non-compact rating factor of the section in Virtis Standard Engine output file.

For example,

G1, Span1, 31.67',

Detailed rating results In LFD report: IR = 1.699, OR =2.831

Virtis Standard Engine output file: Non-Compact factor IR = 1.16, OR =1.93 , Compact factor IR = 1.70, OR =2.83

Section is compact, so detailed rating results In LFD report matches Compact factors Virtis Standard Engine output file.

G1, Span1, 132.48',

Detailed rating results In LFD report: IR = 1.630, OR =2.717

Virtis Standard Engine output file: Non-Compact factor IR = 1.63, OR =2.72, Compact factor IR = NA, OR = NA

Section is non-compact, so detailed rating results In LFD report matches Non-Compact factors Virtis Standard Engine output file.

Virtis Standard Engine assumes that the plastic moment capacity can only be used for the calculation of ratings if all sections over the entire length of the member (whether composite or non-composite) qualify as compact sections (Virtis Std User Manual 3.9.1.1 page 3-56).

Because there are non-compact sections over the girder we analyzed, Virtis Standard Engine can only use non-compact moment capacity for the calculation of ratings based on above assumption. In the

4/19/2016 3:20:10 PM

HRS AASHTO

2332



**Complete Issue Information**

summary rating results, non-compact rating factors are reported.  
Summary rating results: IR = 1.160, OR =1.934  
Virtis Standard Engine output file: Non-Compact factor IR = 1.16, OR =1.93

So the difference between load rating summary and detailed rating results is due to the Virtis Standard Engine assumption stated above.

Please let me know if you have additional questions.

FROM:kkennelly DATE:5/21/2007 12:44:33 PM  
Enhancement is to add a note in the report if the compact or non-compact rating factor is being printed out.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 7927                                                |
| Subject: Clarification of dead loads automatically calculated |

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center                     |
| Primary Contact: Duray, Jim                        |
| Submitted By: Curtis, Beckie 4/23/2007 12:39:47 PM |
| Modified By: administrator 6/19/2008 4:26:57 PM    |
| Priority: High                                     |
| Category: Education                                |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

**Contacts**

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:rcurtis DATE:Monday, April 23, 2007 8:39:47 AM

Do the Virtis/Brass engines automatically add the dead load of the stiffeners added in the "Stiffener Ranges" section, or should this be included as a member load?

FROM:jduray DATE:4/25/2007 8:44:31 AM

It is not automatically added. this is usually handled on the member alternative window as an extra load.

|                                                |
|------------------------------------------------|
| Issue ID: 7928                                 |
| Subject: Question BRASS Shear Connection Count |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/24/2007 1:20:08 PM |
| Modified By: administrator       | 6/19/2008 4:26:57 PM |
| Priority: Urgent                 |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned | Urgent   |          |

4/19/2016 3:20:11 PM

HRS AASHTO

2334

### Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
|                 |          |      | Education   |
| Duray, Jim      | Resolved |      |             |
|                 | New      | High | Unknown     |
| Goodrich, Brian | Assigned |      |             |
|                 |          |      | Bug - BRASS |
| Goodrich, Brian | Assigned | High | Bug - BRASS |
|                 | Resolved |      |             |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 054-074.xml         |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 7929.15406 | Assigned      | Question Total Nominal Shear Force |

### Description

FROM:dteal DATE:Tuesday, April 24, 2007 9:20:09 AM  
Attached My BID #2680, My County-Serial 054-074

Using Superstructure Definition: Design Check MLL, Let Oct. 2007

In my example a specification check is done at the 104.51 point instead of using the 104 point (the location of the maximum positive Live Load plus impact moment). Why is Opis using the 104.51 point instead of the 104 point? On long spans it makes a big difference in the number of shear connectors Opis determines the user has defined if the proper point is not used. According to the specifications for the Strength Limit State the number of shear connectors is checked between the maximum positive live load plus impact moment and the adjacent end and the maximum positive live load plus impact moment and the centerline of the interior support for continuous spans that are composite for negative flexure. How does Opis calculate the number of shear connectors between these points? In span 1, I couldn't get the same answer as Opis. In Span 2, I was able to calculate the same number as Opis.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 4:15:28 PM

4/19/2016 3:20:11 PM

HRS AASHTO

2335

**Complete Issue Information**

BRASS is determining the maximum live load moment using the critical of the design truck (w/ impact) + lane, design tandem (w/ impact) + lane, etc. This results in a maximum moment at the 104.51 point. By default, actions at 10th points are turned on, so I changed it to print actions at all points using the engine properties for the Analysis settings.

FROM:dteal DATE:Wednesday, June 20, 2007 9:57:46 AM  
Accepted in 5.6 Beta 3

|                                             |
|---------------------------------------------|
| Issue ID: 7929                              |
| Subject: Question Total Nominal Shear Force |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/24/2007 1:22:09 PM |
| Modified By: bgoodrich           | 2/10/2009 2:12:05 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, April 24, 2007 9:22:09 AM  
Attached My BID #2680, My County-Serial 054-074

Using Superstructure Definition: Design Check MLL, Let Oct. 2007

question is related to the calculation of the total nominal shear force (6.10.10.4.2), P, between the point of maximum positive design live load plus impact moment and the centerline of adjacent support. P is equal to Pp plus Pn. According to the specifications, Pp is at the point of maximum positive live load plus impact moment and Pn is over an interior support. Looking at the Opis (BRASS) output shows that at the point 110 (over an interior support) the section parameters for the calculation of the

4/19/2016 3:20:11 PM

HRS AASHTO

2336

**Complete Issue Information**

longitudinal shear force are for over the pier. These parameters were used to calculate the value for Pp (the lesser of Equations 6.10.10.4.2-2 or 6.10.10.4.2-3) instead of using the section parameters at the point of maximum positive live load plus impact moment. I believe this to be an error.

In the Opis (BRASS) output under Nominal Shear Resistance (6.10.10.4.3) it lists input parameters of which Ec is listed. The value listed for Ec does not match the value that is listed under the materials properties tab for the slab concrete.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 6:25:33 PM  
Dean's comments regarding the Pp calculations appear to be correct. I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, July 25, 2007 1:04:04 PM  
WYDOT assigned this issue to BRASS Problem Log 764.

FROM: Brian Goodrich DATE: 2/10/2009 7:13:40 AM Mountain Standard Time  
This issue has been addressed in the BRASS-GIRDER(LRFD) V2.0.2 engine. Fixed for Opis 6.1.

|                                           |
|-------------------------------------------|
| Issue ID: 7930                            |
| Subject: Slab Thickness Used In Equations |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 4/24/2007 1:23:27 PM |
| Modified By: bgoodrich           | 1/26/2010 6:05:23 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          | Education |
| Goodrich, Brian | Assigned | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:20:11 PM

HRS AASHTO

2337

**Complete Issue Information**

|                |                                |                                 |               |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7931.15404 | Resolved      | Incorrect ASD analysis module in BID 2. |

**Description**

FROM:dteal DATE:Tuesday, April 24, 2007 9:23:27 AM

Thickness of the slab used in the equations that determine the value for Pp and Pn. Opis uses the structural thickness and when I calculated it by hand I used the total thickness. Which is correct?

FROM:bgoodrich DATE:Wednesday, June 06, 2007 6:31:43 PM

BRASS does not provide an input for the actual slab thickness as part of the cross section. If the deck was defined for dead or live load distribution, this could be used; however, there is no user control over if this should be done or not. I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 7/16/2008 1:30:24 PM Eastern Daylight Time

WYDOT assigned this issue to BRASS Problem Log 764.

FROM: Brian Goodrich DATE: 7/9/2009 9:46:44 AM Mountain Daylight Time

BRASS has been modified to allow input of the actual slab thickness as part of the cross section. Furthermore, control options have been added to allow the user to choose if the actual or structural thickness is used in the longitudinal shear force calculation. These changes must now be implemented in the export and engine properties.

Issue ID: 7931

Subject: Incorrect ASD analysis module in BID 2.

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Lee, Herman

4/26/2007 12:43:12 PM

Modified By: administrator

6/19/2008 4:26:56 PM

Priority: High

Category: Bug

4/19/2016 3:20:12 PM

HRS AASHTO

2338

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7932.15403 | Resolved      | Clarification of Engine Related Help |

### Description

FROM:hlee DATE:4/26/2007 8:40:15 AM

In abw\_super\_struct\_spng\_mbr\_alt, the asd\_analysis\_module\_id is set to 2 in the datadase. It should be 3, which is "BRASS ASD".

Need to update this value in the installed databases and scripts.

## Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 7932                                |
| Subject: Clarification of Engine Related Help |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Curtis, Beckie      | 4/30/2007 2:38:38 PM |
| Modified By: administrator        | 6/19/2008 4:26:56 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

## Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

## Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | S04-0-82192 Standard virtis.pdf |             |
|      | Deterioration Problem.xml       |             |
|      | S04-0-82192 Standard.pdf        |             |

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7936.15399 | Resolved      | Deterioration of Structure |

## Description

FROM:rcurtis DATE:Monday, April 30, 2007 10:38:38 AM

Under "Beam Details:Stress Limit Ranges", it says "No exceptions to this tab for Virtis Std."

Does this mean that Virtis Std uses this information, or that like the Brass engine it doesn't use it? We are trying to clarify whether or not this tab is used in any way by Virtis/Brass. There was a difference in

4/19/2016 3:20:12 PM

HRS AASHTO

2340



### Complete Issue Information

interpretation of what this help item meant in our office, especially since the other tabs specifically say "Not used by Virtis Std."

Thanks!

FROM:kkennelly DATE:5/2/2007 9:42:47 AM

The phrase "No exceptions to this tab for Virtis Std" means that the Virtis Std engine uses all of the data shown on the tab.

The phrase "Not used by Virtis Std" means that the Virtis Std engine does not use that data.

|                                     |
|-------------------------------------|
| Issue ID: 7936                      |
| Subject: Deterioration of Structure |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 5/8/2007 3:03:32 PM  |
| Modified By: administrator     | 6/19/2008 4:26:56 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:rcurtis DATE:Tuesday, May 08, 2007 11:03:32 AM

I have some deterioration on a beam. I first ran it in Brass. I then ran it in Virtis and got very different

4/19/2016 3:20:12 PM

HRS AASHTO

2341

**Complete Issue Information**

results. When I checked the cross sections, it appears that Virtis is not including the deterioration. However, in the help under the deterioration tab it says that the Virtis engine uses all of the input.

I am attaching the bridge, the Brass output and the Virtis output. The beam in question is span 2-3, G1.

FROM:hlee DATE:5/9/2007 6:54:31 AM  
StdEngine should export the dimensions in the cross section instead of the dimensions in the shape. This incident is limited to deterioration in steel rolled beam. There's no work around in the 5.5 Release. Resolved for 5.6 Release.

FROM:xli DATE:6/15/2007 3:36:35 PM  
Tested with 5.6 Beta 3, BRASS and VSE results are close.

BRASS IR = 0.787, OR = 1.315;  
VSE IR = 0.768, OR = 1.28;

Issue ID: 7938  
Subject: Allow selection of PS Loss Calculation using either the Refined estimate of time-dependent losses or Approximate estimate

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Obeidat, Khalid 5/8/2007 5:53:45 PM  
Modified By: hlee 10/13/2009 5:15:19 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:20:12 PM

HRS AASHTO

2342

### Complete Issue Information

|                 |          |      |  |             |
|-----------------|----------|------|--|-------------|
| Goodrich, Brian | Assigned |      |  | Enhancement |
| Duray, Jim      | New      | High |  | Unknown     |
|                 | Assigned |      |  |             |
|                 | Resolved |      |  | Education   |
| Duray, Jim      | Resolved | High |  | Education   |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00046 - 41141024000S050.xml |             |
|      | Interior_Beam_55.dat        |             |
|      | Interior_Beam_56.dat        |             |
|      | CVAR_56.png                 |             |
|      | brass output.doc            |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7939.15396 | Resolved      | Parabolic Reinforced Concrete Tee Beam |

### Description

FROM:kobeidat DATE:Tuesday, May 08, 2007 1:53:46 PM

OPIS uses the approximate estimate of time-dependent losses of article 5.9.5.3. is there an option to calculate the refined estimate of time dependent losses in accordance to article 5.9.5.4? If not OPIS needs to provide that option

Does OPIS give you a choice of using the transformed section properties (transforming the strands) vs. the gross section.properties? what section properties are used in calculating refined losses?

FROM:kobeidat DATE:Friday, May 11, 2007 12:16:54 PM

FROM:kkennelly DATE:5/14/2007 10:38:33 AM

Khalid called this morning to discuss his questions. He would like his questions answered within this week so he can prepare a presentation on Opis.

The Prestress Design Tool in Opis uses the refined method in Article 5.9.5.4 to compute the losses and also uses the transformed section properties. The Prestress Design Tool computes a preliminary strand layout for the user but does not perform all of the specification checks that a final design requires.

4/19/2016 3:20:13 PM

HRS AASHTO

2343

**Complete Issue Information**

Brian will answer what the BRASS LRFD analysis program uses.

FROM:kkennelly DATE:5/14/2007 1:43:16 PM  
Email from Brian Goodrich:

The export is using the BRASS default for the AASHTO losses, which is the approximate method in this case. We can change it to the refined method since that is the only AASHTO loss option for Opis. Will the approximate method ever be available as an option?

BRASS LRFD uses gross section properties.

FROM:kkennelly DATE:5/14/2007 1:47:24 PM  
The export should keep using the Approximate for now. This incident is being marked as an enhancement to allow the user to select either the "AASHTO Approximate" or "AASHTO Refined" method for ps loss computation.

FROM: Herman Lee DATE: 10/13/2009 1:13:28 PM Eastern Daylight Time  
Resolved in 6.1 Release.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7939                                  |
| Subject: Parabolic Reinforced Concrete Tee Beam |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Curtis, Beckie   | 5/10/2007 8:42:28 PM |
| Modified By: administrator     | 6/19/2008 4:26:56 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:20:13 PM

HRS AASHTO

2344

## Complete Issue Information

### Description

FROM:rcurtis DATE:Thursday, May 10, 2007 4:42:28 PM

In the following structure I have a couple of issues that I am hoping you can help me with.

1. The original design list 1.125in<sup>2</sup> as the rebar for some locations (not a 1.125 diameter bar), which doesn't match any current size. We attempted to model this as a #9 and a #3 bar at the same location. Is the the best work around, or is there a way to add a new rebar size to the library?

2. The Virtis engine creates an error when the analysis is run, but Brass is able to run.

3. Compared to an old BARS run that appears to be relatively accurate in the input, the Load Rating from Brass is very low. I am attempting to find where the differences are, but I am not completely understanding the BRASS output. In the attached word document (the output log from Brass) I pulled out the rating results at 105.03. I am not sure how the values for R5 are calculated. I can figure out the values for R1, R2 and R4.

This is a high priority for our department and so I am eagerly anticipating your response!

FROM:hlee DATE:5/14/2007 7:54:24 AM

1. Another way is to model as #9 with number of bars equals to 1.125. There's no option in the library to define new rebar.

2. "THE NUMBER OF RC PROPRTIES RANGES EXCEEDS THE MAXIMUM OF 150" in the Virtis Std Engine analysis. Attached CVAR\_56.png, Interior\_Beam\_55.dat, and Interior\_Beam\_56.dat for investigation.

FROM:hlee DATE:5/14/2007 11:05:04 AM

3. At 105.03 (Span 1 - 20.25 ft), A112 (Reinf. Set #: 1) is partially developed (38.5%). Only 38.5% of the bar will be exported. With the member alternative selected, the development length calculation "Std Reinf Dev Length Calcs Log File" can be opened from the Analysis Output window (Bridge menu | Output). If you want the whole length of bar fully developed, check the "Fully Developed" box in the last column of the reinforcement grid.

Issue ID: 7940

Subject: Hinged Structure error with Virtis Engine

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Curtis, Beckie

5/14/2007 7:51:06 PM

Modified By: administrator

6/19/2008 4:26:55 PM

Priority: High

Category: Education

### History

4/19/2016 3:20:13 PM

HRS AASHTO

2345

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | On Hold  |          | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 7942.15393 | Resolved      | Virtis 5.5 Bug |

### Description

FROM:rcurtis DATE:Monday, May 14, 2007 3:51:07 PM

When running the attached structure, I get an error using the Virtis Engine. The Brass Engine doesn't have a problem running.

FROM:hlee DATE:5/15/2007 7:47:57 AM

The shear at supports live load distribution factor is a required input for the Virtis Std LFD engine.

FROM:rcurtis DATE:Thursday, May 17, 2007 8:00:09 AM

The shear at the supports was only affecting G1. I modified that, and now I get the message "Error - Unknown exception when preparing Lateral Brace Points and Stiffener Spacings!" for the other two modeled girders. I have checked the lateral bracing input and that is correct. There are no interior stiffeners. However, when I check the bearing stiffeners the I don't have bearing stiffeners at the abutments. If you have bearing stiffeners entered at a pier, are you required to enter them at the abutment, even if the structure doesn't have them there?

When I make this change, the beam runs. They are encased in concrete backwalls, so I don't have a problem putting a stiffener there for this bridge, I just don't know if I would want to have to do so for all bridges.

FROM:hlee DATE:5/17/2007 9:50:12 AM

4/19/2016 3:20:13 PM

HRS AASHTO

2346

**Complete Issue Information**

The problem you described is a duplicate of Incident 7913. 7913 is related to a span with only one lateral bracing. Since lateral bracing and stiffener are entered in the same Virtis Std Engine command. The problem of having only one bearing stiffener in a span is also resolved in 7913 for the 5.6 release. If you consider the beam support (encased in concrete backwalls) is fixed at abutment, you need to change the abutment support type in the Supports window. Currently, only BRASS will support fixed abutment. Virtis Std Engine will support this condition in new year 6.1 release.

|                         |
|-------------------------|
| Issue ID: 7942          |
| Subject: Virtis 5.5 Bug |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Ihnat, Joseph    | 5/16/2007 12:02:30 PM |
| Modified By: administrator     | 6/19/2008 4:26:55 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnmat DATE:5/16/2007 8:04:27 AM  
Received via email (Bridgeware):

I would just like to point out something that I believe might be a bug in the software, albeit a minor one. When modeling a splayed girder system (for rating with the VirtisSTD engine), the "Lane Position" in the "Structure Typical Section" is not auto computed properly if you have no railings/curbs/parapets modeled. This is the case on several bridges, where the fascia assembly is bracketed directly to the fascia girder and first interior, and is not supported on the deck.

4/19/2016 3:20:13 PM

HRS AASHTO

2347

**Complete Issue Information**

Virtis properly calculated the lane width for the begin section of the bridge, it then uses this same width for the end section automatically. In a splayed girder system the begin and end deck widths are often different.

Its easily corrected by manually entering the numbers, I just wanted to bring this to someone's attention. This issue does occur if you have railings/parapets/curbs modeled.

Frank DeOrtentiis  
Chas H Sells

FROM:hlee DATE:12/31/2007 10:53:11 AM  
Fixed a bug in setting the deck width at end.  
Resolved for 6.0 release.

|                               |
|-------------------------------|
| Issue ID: 7945                |
| Subject: NSG Analysis Results |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Teal, Dean       | 5/16/2007 8:17:19 PM |
| Modified By: administrator     | 6/19/2008 4:26:55 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
|                 | Closed   |          |           |
| Duray, Jim      | Closed   | High     | Education |

**Contacts**

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:20:14 PM

**HRS AASHTO**

2348



**Complete Issue Information**

Transportation

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Frame Connection.JPG |             |

**Tasks**

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7946.15389 | Resolved      | Frame Connection GUI, Input Box |

**Description**

FROM:dteal DATE:Wednesday, May 16, 2007 4:17:19 PM

In the NSG Analysis results, the last column is Distribution Factor. I can't seem to match this DF up any of the output. Where does it come from?

FROM:jduray DATE:5/17/2007 4:21:55 PM

It is computed during the NSG analysis (that is the purpose of the NSG analysis) and then used in the analysis by either BRASS or StdEngine.

Issue ID: 7946

Subject: Frame Connection GUI, Input Box

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

5/17/2007 11:55:57 AM

Modified By: administrator

6/19/2008 4:26:55 PM

Priority: High

Category: Education

4/19/2016 3:20:14 PM

HRS AASHTO

2349

## Complete Issue Information

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Unknown  |
| Bhanushali, Girish | Assigned           |          |          |
|                    | Investigation      |          |          |
|                    | Development        |          |          |
|                    | Investigation      |          |          |
| Bhanushali, Girish | Investigation      | High     | Unknown  |
|                    | Information Needed |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | TRUSS.pdf           |             |
|      | 2427Truss.xml       |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7948.15387 | Investigation | Truss analysis problem |

### Description

FROM:dteal DATE:Thursday, May 17, 2007 7:55:58 AM

In the attached jpg of a GUI of the Girder System Superstructure Def, look at the Frame Connections pull down box. With a 3 span (4 supports), the box for support #4 is partially hidden. If you click on the check box for #4 the window moves up hiding Support #1, a side slide bar never appears letting you navigate back to #1, you have to do some random clicking to get #1 back. I maximized the window, doesn't make any difference on the size of the frame connections box.

I think the window (Frame Connections input box) is missing the side navigation bar.

FROM:dteal DATE:Thursday, May 17, 2007 8:00:01 AM

We are provided a Right /Left slide bar that's not needed, but no up/down one that is needed??

FROM:jihnat DATE:5/17/2007 1:22:12 PM

This looks like a minor scrollbar quirk.

If you slightly narrow the first column, the horizontal scrollbar goes away.

The vertical scrollbar appears if another span is added.

FROM:dteal DATE:Wednesday, May 30, 2007 12:05:32 PM

4/19/2016 3:20:14 PM

HRS AASHTO

2350

**Complete Issue Information**

“This looks like a minor scrollbar quirk.” Sounds like a bug in the scrollbar GUI that should be fixed??

“If you slightly narrow the first column, the horizontal scrollbar goes away.” Is a work around but it doesn’t sound like a permanent fix?

This only happens (I think) when describing a girder system being it’s on the Girder System Superstructure Definition GUI. When used for girder line this scroll bar is on the Member GUI and is not a problem.

FROM:dteal DATE:Wednesday, November 07, 2007 2:15:46 PM  
Nothing was resolved??

|                                 |
|---------------------------------|
| Issue ID: 7948                  |
| Subject: Truss analysis problem |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Bhanushali, Girish |                       |
| Submitted By: Oramasionwu, Geoffrey | 5/23/2007 11:38:00 AM |
| Modified By: gbhanushali            | 9/14/2009 2:51:54 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:5/23/2007 7:39:08 AM  
Received via email (Bridgeware):

I am having problems with the results I got with the Truss analysis using VIRTIS. I have defined the truss in two ways,(EAST TRUSS & WEST

4/19/2016 3:20:14 PM

HRS AASHTO

2351

**Complete Issue Information**

TRUSS) with the only difference being the presence of the middle horizontal member.  
Enclosed are the XML file from the VIRTIS TRUSS definition and a photo copy of the truss. I would like to know how I can define the horizontal members of the truss as well as what type of member release to use.

Geoffrey C. Oramasionwu, Dip.; M.Eng.; P.Eng.  
Senior Structural (Rating) Engineer  
Manitoba Infrastructure and Transportation  
Bridges and Structures Branch  
600 - 215 Garry Street  
Winnipeg, Manitoba  
R3C 3Z1  
Phone (204) 945-5202  
Fax (204) 945-4456  
Email goramasi@gov.mb.ca

FROM: Girish Bhanushali DATE: 9/11/2009 1:49:13 PM Eastern Daylight Time  
Is this still an issue?

FROM: Girish Bhanushali DATE: 9/14/2009 10:49:23 AM Eastern Daylight Time  
If you think this is still an issue, please provide us what problems you are having with the results and what you are comparing with.

Issue ID: 7949  
Subject: Truss angle box definition problem

Folder: /Virtis/Support Center  
Primary Contact: Bhanushali, Girish  
Submitted By: McCaffrey, Brian 5/23/2007 2:43:58 PM  
Modified By: administrator 6/19/2008 4:26:54 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Duray, Jim         | New           | High     | Unknown  |
| Bhanushali, Girish | Assigned      |          |          |
|                    | Investigation |          |          |

### Complete Issue Information

|                 |             |      |             |
|-----------------|-------------|------|-------------|
|                 | Development |      |             |
|                 | Resolved    |      |             |
| Duray, Jim      | New         | High | Unknown     |
| Goodrich, Brian | Assigned    |      | Bug - BRASS |
|                 | Resolved    |      |             |
| Goodrich, Brian | Resolved    | High | Bug - BRASS |
|                 | Closed      |      |             |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Br 026-059.xml                    |             |
|      | Moment Gradient Modifier Calc.doc |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7957.15378 | Resolved      | Moment Gradient Modifier, Cb Calculation |

### Description

FROM:bmccaffrey DATE:Wednesday, May 23, 2007 10:44:02 AM

Looks like some data fields are either being switched or moved on the angle box command and being passed to the engine incorrectly. This effects both English and Metric command sets.

When you run the attached truss .xml file with Section 1 defined as a channel box, which is the section alternative defined as "Section1alt1", the Fy is correctly defined as 30ksi. When running section 1 as an anglebox section, as either "Section1alt2" or "Section1", the Fy changes to a figure below 30ksi. The Modulus of Elasticity also changes. See the attached file.

Also, when adding an additional web plates, the following things occur:

1. The web plates add inward, not outward as in the User Manual.

4/19/2016 3:20:15 PM

HRS AASHTO

2353

**Complete Issue Information**

2. The "Iyy" section modulus is not calculated correctly and the documented calculations for the Right Web Plates are incorrect(i.e. for AZ => 16.25 x 18.56 = 167.06). See the attached file.

FROM:gbhanushali DATE:7/30/2007 11:46:24 AM  
This has been fixed for 5.6 beta build 6 ~ Aug/07

FROM:ssalata DATE:8/3/2007 1:06:51 PM  
Verified that Fy is correct.

FROM:ssalata DATE:8/6/2007 4:19:15 PM  
From my investigation of these issues:

1. The web plates are adding correctly although the documentation should be more specific on how the web plates add. For angle boxes the web plates will add in the opposite direction of the angles. For example if the angles are specified as outward facing, then the web plates add inwardly.

2. The AZ values for the right web plates are incorrect. The values for A and Z for the right web plates are correct however.

FROM:gbhanushali DATE:8/7/2007 4:56:51 PM  
Issue 2 is fixed - ~ Aug 07 5.6 - Beta 4

|                                                   |
|---------------------------------------------------|
| Issue ID: 7957                                    |
| Subject: Moment Gradient Modifier, Cb Calculation |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 6/8/2007 1:04:06 PM  |
| Modified By: mordoobadi          | 7/23/2008 7:45:22 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7960.15375 | Suspended     | Additional fields in Bridge Explorer |

### Description

FROM:dteal DATE:Friday, June 08, 2007 9:04:07 AM

I got the following form one of our designers - the graphs referenced are in the attached Word document

I am doing a design check for Br. No. 183-26-27.77 (059). It is a part of Proj. No. 183-26 K-7422-01. The bridge is a 42.7-57-57-42.7 m Welded Plate Girder structure. I have entered the bridge into Opis. I used BRASS LRFD as the design engine. When reviewing the Rating Factors for Moment, I noticed that the Rating Factors were different at Pier No. 1 and Pier No. 3. As this is a symmetrical structure the values at these two points should be identical. I have placed a copy of the graphical output for the Rating Factors below. As can be seen there is a difference. To determine the cause for this difference, I reviewed the intermediate output for the POI at the two piers, 200.00 and 310.00 respectively. Within the two reports I discovered that the difference was in the calculation of the Moment Gradient Modifier, Cb. Using the same input values, BRASS LRFD calculates two different values for Cb. I have placed copies of the two calculations below the Rating Factor graph. I believe that the program's logic used to determine the midpoint Moment, Mmid, is incorrect. At Pt. 310.00, the program uses the larger value of the two moments at the brace points. At Pt. 200.00, the program uses the smaller value of the two moments at the brace points. By looking at the graph of the Critical Moment Envelope, it is apparent that the Midpoint Moment should be a value that is between the moments at the brace points, probably very close to the average. I have placed a copy of the Critical Moment Envelope at the bottom of this e-mail. Additionally I have attached a copy of the Opis file for this bridge.

MINIMUM Actions: Unbraced Length 2

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 6.10.6 Strength Limit State

Point of Interest : 200.00  
Construction Stage: 3

AASHTO REFERENCE: A6.3.3 (Moment Gradient Modifier)

EQUATION NO. : A6.3.3-7

Units: Stresses are in (MPa).

Moments are in (m-kN).

Input Parameters: [Compression (-), Tension (+)]

f(Left) = -212.007 M(Left) = -9695.463

f(Middle) = -212.007 M(Middle) = -9695.463

f(Right) = -315.879 M(Right) = -14154.098

Concave moment variation along unbraced length: YES

Calculated Parameters: [Compression (+), Tension (-)]

Mmid = 9695.463 M0 = 9695.463 M2 = 14154.098

M1 = M0 = 9695.463 [AASHTO LRFD A6.3.3-11]

4/19/2016 3:20:15 PM

HRS AASHTO

2355

## Complete Issue Information

Summary:

$$C_b = 1.75 - 1.05 (M_1/M_2) + 0.3 * (M_1/M_2)^2 = 1.172$$

$$C_b \leq C_b \text{ max} \implies \text{OK}$$

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 6.10.6 Strength Limit State

Point of Interest : 310.00

Construction Stage: 3

AASHTO REFERENCE: A6.3.3 (Moment Gradient Modifier)

EQUATION NO. : A6.3.3-6

Units: Stresses are in (MPa).

Moments are in (m-kN).

Input Parameters: [Compression (-), Tension (+)]

$$f(\text{Left}) = -210.988 \quad M(\text{Left}) = -9648.877$$

$$f(\text{Middle}) = -309.503 \quad M(\text{Middle}) = -14154.135$$

$$f(\text{Right}) = -315.880 \quad M(\text{Right}) = -14154.135$$

Concave moment variation along unbraced length: NO

Calculated Parameters: [Compression (+), Tension (-)]

$$M_{\text{mid}} = 14154.135 \quad M_0 = 9648.877 \quad M_2 = 14154.135$$

$$M_1 = 2 M_{\text{mid}} - M_2 = 14154.135 \text{ [AASHTO LRFD A6.3.3-12]}$$

$$M_1 \geq M_0 \implies \text{OK}$$

Summary:

$$C_b = 1.000$$

$$C_b \leq C_b \text{ max} \implies \text{OK}$$

Stephen G. Burnett  
Kansas Department of Transportation  
Bureau of Design  
700 SW Harrison Street  
Topeka, KS 66603-3754  
785-296-6468  
burnett@ksdot.org

FROM:dteal DATE:Friday, June 08, 2007 9:21:14 AM

I was using Girder G1 of the Superstructure Definition entitled "42.7-57-57-42.7 m SGB Check" for my review.

FROM:bgoodrich DATE:Monday, June 18, 2007 6:03:37 PM

I am able to duplicate the issue with the moment gradient factor. I forwarded this issue to WYDOT.

4/19/2016 3:20:15 PM

HRS AASHTO

2356



**Complete Issue Information**

FROM: bgoodrich DATE: Wednesday, July 25, 2007 1:02:01 PM  
WYDOT assigned this issue to BRASS Problem Log 766.

FROM: bgoodrich DATE: Monday, December 17, 2007 1:39:16 PM  
This issue has been addressed in BRASS-GIRDER(LRFD) 2.0.1, which should be released with the next vesion of Virtis/Opis. Fixed for version 6.0.0.

FROM: dteal DATE: Tuesday, June 17, 2008 12:12:57 PM  
Should this be tested in beta 4?

FROM: Dean Teal DATE: 7/1/2008 3:30:14 PM Eastern Daylight Time  
Accepted in beta 4

|                                               |
|-----------------------------------------------|
| Issue ID: 7960                                |
| Subject: Additional fields in Bridge Explorer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 6/12/2007 9:49:51 PM |
| Modified By: hlee              | 7/17/2014 1:27:22 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

**Contacts**

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:20:15 PM

HRS AASHTO

2357

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:tarmbrecht DATE:Tuesday, June 12, 2007 5:49:51 PM

Incident 2876 would be a duplicate of this incident. I note that it has been suspended since 2000, and was wondering what it would take to add additional fields to Bridge Explorer? In addition to the fields Todd proposed, I also feel there should be a field for analyst identification in order to note who is entering these in and modifying them.

Would this be a great undertaking?

FROM:jduray DATE:6/15/2007 7:09:30 AM

The Bridge Explorer currently get its data from a couple tables. In order to display the name of the person who last modified a component in a bridge would require a query that would be rather slow. However, we could add a new colukmn to the abw\_bridge table that stores the id of that person and then it would be very quick. The development effort (for just this request) is in the small category.

Work tasks:

add new column to db

modify the Save function for the BWS to update the new column with the current user id (may want a timestamp too)

modify the report tool

modify the Find Bridge dialog

modify the Bridge Explorer to display

modify the Domain, Db, De, Dm

FROM: Herman Lee DATE: 7/17/2014 9:21:55 AM Eastern Daylight Time

Resolved by the Bridge Explorer customization in version 6.6.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 7961                                                            |
| Subject: St. Venant Torsional Constant for PS box beam with circular void |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 6/14/2007 6:15:02 AM |
| Modified By: administrator     | 6/19/2008 4:26:53 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:20:15 PM

HRS AASHTO

2358

**Complete Issue Information**

|             |          |      |           |
|-------------|----------|------|-----------|
| Lee, Herman | Assigned |      |           |
|             | Resolved |      | Education |
| Duray, Jim  | New      | High | Unknown   |
| Lee, Herman | Assigned |      | Education |
|             | Resolved |      |           |
| Lee, Herman | Resolved | High | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7966.15369 | Resolved      | Virtis technical questions |

**Description**

FROM:hlee DATE:Thursday, June 14, 2007 2:15:22 AM  
 Submitted on behalf of Norman Perkins, Baker Engineering via email:

Good afternoon Herman. I am working on the prestressed voided slab with adjacent box superstructure bridge rating that you started for Bill Kristoff (Rocky Hill, CT) and was wondering why Virtis calculates the Saint-Venant torsion constant for the box section but not the voided slab.

Any info would be great.

Thank you.

Norman F. Perkins  
 Engineer  
 Baker Engineering  
 2096-B Silas Deane Highway  
 Rocky Hill, CT 06706

Ph. 860-257-2414  
 Fax 860-529-6627  
 email: nperkins@mbakercorp.com

FROM:hlee DATE:12/28/2007 11:43:30 AM  
 Virtis calculates the St. Venant torsional constant for box beam with rectangular void based on AASHTO LRFD Equation C4.6.2.2.1-3. This equation only applies to closed thin-walled shapes. That's why it is not used for box beam with circular void.

4/19/2016 3:20:16 PM

HRS AASHTO

2359

## Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 7966                      |
| Subject: Virtis technical questions |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 6/20/2007 1:48:45 PM |
| Modified By: administrator     | 6/19/2008 4:26:53 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 7969_Beam_A.dat     |             |
|      | 7969_Beam_A.out     |             |

## Tasks

| Name       | Current State | Summary                                                                                                                          |
|------------|---------------|----------------------------------------------------------------------------------------------------------------------------------|
| 7969.15366 | Suspended     | Virtis Std Engine: Support both harped strand configuration and debonded strand configuration in multi-span continuous structure |

## Description

FROM:jihnat DATE:6/20/2007 9:50:18 AM  
Received via email (Bridgeware):

Regarding defining my superstructure typical section in Virtis:

4/19/2016 3:20:16 PM

HRS AASHTO

2360

**Complete Issue Information**

I would like to define the shoulders of the bridge as having a 3" asphalt overlay (wearing surface), but I do not want to apply a lane load in this area. The only way I have found to apply the wearing surface is in conjunction with the lane load. Is there a way to apply a wearing surface to a portion of the bridge without lane loading?

Also, when examining the "dead load actions" report type in the analysis results, are the resulting forces (moment, shear, axial, reactions, etc.) unfactored?

Aaron M. Lachance  
Structural Engineer  
Stantec  
Ph: (603) 669-8672  
Aaron.Lachance@stantec.com

FROM:hlee DATE:7/2/2007 1:08:56 PM  
You may apply the shoulder 3" asphalt overlay in the Member Loads window.  
The Dead Load Actions in the Analysis Results window are unfactored.

|                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 7969                                                                                                                            |
| Subject: Virtis Std Engine: Support both harped strand configuration and debonded strand configuration in multi-span continuous structure |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Lee, Herman      | 6/22/2007 12:54:18 PM |
| Modified By: administrator     | 6/19/2008 4:38:36 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:20:16 PM

HRS AASHTO

2361

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlathia DATE:Friday, June 22, 2007 11:53:35 AM

VSE prints an error message when some spans have harped strands and some spans have debonded strands in a multi-span continuous prestressed concrete structure. See the attached input and output files for a VSE run. Enhance VSE to allow the above configuration. The scope of this enhancement will be limited each span having the same type of strand configuration (all straight, straight with harped or straight with debonded). A span having both the harped and the debonded strands in the same beam is a separate enhancement (see VI7804)

FROM:hlee DATE:7/23/2007 1:49:50 PM

This incident describes the situation that some spans are harped and some spans are debonded. Incident 7804 describes the situation that harped and debonded strands are in the same span.

Issue ID: 7973

Subject: Column Heading for Rating Results Summary Report

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

6/26/2007 12:11:29 PM

Modified By: administrator

6/19/2008 4:26:52 PM

Priority: High

Category: Unknown

4/19/2016 3:20:16 PM

HRS AASHTO

2362

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category                   |
|-----------------|--------------------|----------|----------------------------|
| Duray, Jim      | New                | High     | Unknown                    |
| Lee, Herman     | Assigned           |          |                            |
|                 | Suspended          |          | Enhancement                |
| Lee, Herman     | Suspended          | High     | Enhancement<br>Maintenance |
|                 | Information Needed |          |                            |
|                 | Assigned           |          |                            |
|                 | Suspended          |          |                            |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7974.15361 | Suspended     | Rating Method selected for Prestressed |

### Description

FROM:dteal DATE:Tuesday, June 26, 2007 8:11:29 AM

The third column heading in the Rating Results Summary Report is misleading. It states "Design Method"

I think it should state "Rating Method" like it does on the Analysis Settings GUI where the type of rating is defined.

FROM:jihnat DATE:6/29/2007 3:18:57 PM

Fixed for 5.6.0 Release.

FROM:dteal DATE:Wednesday, November 07, 2007 2:19:01 PM

Accepted

4/19/2016 3:20:17 PM

HRS AASHTO

2363

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 7974                                  |
| Subject: Rating Method selected for Prestressed |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 6/26/2007 12:13:58 PM |
| Modified By: hlee              | 7/3/2013 8:01:01 PM   |
| Priority: High                 |                       |
| Category: Maintenance          |                       |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7975.15360 | Closed        | Duplicate Data in Rating Results Summary |

## Description

FROM:dteal DATE:Tuesday, June 26, 2007 8:13:59 AM  
Using our delivered "in the can" Example 7  
In the Analysis Settings GUI I selected ASD as the Rating Method  
After running a rating using the BRASS Engine  
The Rating Results Summary Report still states LFD in the Design Method column.

4/19/2016 3:20:17 PM

HRS AASHTO

2364



**Complete Issue Information**

If I where to rate our delivered "in the can" TrainingBridge3 the same way, the Design Method column says ASD.

FROM:hlee DATE:6/26/2007 8:58:32 AM  
This issue is a duplicate of Incident 3568.

FROM:dteal DATE:Friday, June 29, 2007 12:44:12 PM  
I knew that BRASS didn't do ASD and only did LFD. My thinking was that the process should have stopped instead of letting the user think they where getting ASD results. If they don't check warning messages or catch it in the output, they may still think they are getting ASD. It would be nice if it stopped and forced the user to select LFD.

FROM:hlee DATE:7/2/2007 9:27:25 AM  
I think we should remove "BRASS ASD" from ASD Analysis Module for new prestressed member alternative. For existing prestressed member alternative, BRASS export should stop and inform the user.

FROM:hlee DATE:9/4/2007 1:34:35 PM  
Changed Category to Enhancement. Enhancement of BRASS export to detect and stop ASD rating of prestressed member. Currently, BRASS will switch to do LFD rating with the following message in the analysis log.

WARNING (High):  
The ASD method is not applicable for prestress structures.  
Therefore, an LFD analysis will be performed by BRASS.  
Refer to Section 6.6.2.5 of the Manual for Condition Evaluation of Bridges for details.

FROM: Herman Lee DATE: 4/12/2010 1:12:29 PM Eastern Daylight Time  
Related to Incident 9719.

FROM: Herman Lee DATE: 4/2/2012 2:21:30 PM Eastern Daylight Time  
Task Force direction (Jan. 2012 TF Meeting): Category changed from Enhancement to Maintenance.

FROM: Herman Lee DATE: 6/10/2013 2:16:33 PM Eastern Daylight Time  
When using AASHTO ASD to rate PS girders, the engine will warn the user with the following message.

=====  
Warning - As per MBE Article 6B.6.2.5, rating of prestressed members should be by Load Factor Method,  
not Allowable Stress Method. Rating will continue using the Load Factor Method!  
=====

There are two ways to specify ASD as the Rating Method.  
1. Select ASD in the Analysis Settings window.  
2. Select Member Alternative in the Analysis Settings window and set the Default rating method in the member alternative to ASD. If we stop the analysis and force the user to switch to LFD, the user will need to switch the Default rating method to LFD for all the member alternatives. Having the Member

4/19/2016 3:20:17 PM

**HRS AASHTO**

2365

**Complete Issue Information**

Alternative as the Rating Method in the Analysis Settings window allows user to mix rating methods in a batch analysis.

Dean, please let us know your comments. Thanks.

FROM: Dean Teal DATE: 6/19/2013 5:00:47 PM Eastern Daylight Time  
I agree with your comment on 7/2/2007

|                                                   |
|---------------------------------------------------|
| Issue ID: 7975                                    |
| Subject: Duplicate Data in Rating Results Summary |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 6/26/2007 1:37:57 PM |
| Modified By: administrator          | 6/19/2008 4:26:52 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, June 26, 2007 9:37:57 AM

In a rating Analysis Results report, using the Detailed Report option.

It appears to me we are duplicating data making the report longer than it needs to be. We have the As Requested Data on one report. When you use the Detailed Report you also get the "As Requested" data. The As Requested data is always going to be one of the lines in the report, there is no need to duplicate it.

FROM:mordoobadi DATE:7/12/2007 1:13:47 PM  
Fixed for 5.6 Beta 4.

4/19/2016 3:20:17 PM

HRS AASHTO

2366

**Complete Issue Information**

FROM:dteal DATE:Wednesday, November 07, 2007 2:34:52 PM  
Accepted

Issue ID: 7979  
Subject: Shear at supports DF factor

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 6/26/2007 2:26:55 PM  
Modified By: administrator 6/19/2008 4:26:52 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:20:17 PM

HRS AASHTO

2367

**Complete Issue Information**

|               |              |                            |              |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
|---------------|--------------|----------------------------|--------------|

**Documents**

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | GFSStrgrReactProb<br>(560B3).xml |             |

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 7980.15355 | Resolved      | erroneous stringer reactions in GFS |

**Description**

FROM:tarmbrecht DATE:Tuesday, June 26, 2007 10:26:55 AM

My consultant was reviewing beta 3, and was questioning the Multi-lane "Shear at Supports" wheel distribution factor. Could you please verify the calculation for interior beams? In the attached example, LLDF-20-24ft(0160046-560B3).xml, which has a 22' roadway supported by 4 beams spaced 8'-3½", the Shear at Supports factor calculated by Virtis is the same for both 1-lane and multi-lane conditions (1.276). This is correct for 1-lane but are not sure about multi-lane. We feel there is a contribution from the second lane where the nearest wheel line is 4' from the 1st lane, placing it 5.48' from the beam in question, which results in an additional .339 to be added to the 1-lane factor for a total multi-lane wheel distribution factor of 1.616.

FROM:hlee DATE:7/3/2007 8:30:52 AM  
 Changed Project to Support Center since it's an existing issue.

The number of lanes on the attached bridge is 2 based on MCEB spec. The truck needs to be placed in the center of the 11' wide lane. The resulting interior beam Shear at Supports factor for 1-lane condition is 1.276 and for multi-lane condition is 1.475. These two numbers matches those entered for the interior beams in the attached bridge. I'm not able to get the 1.616 number entered above.

Resolved for the 5.6 Release.

FROM:tarmbrecht DATE:Wednesday, May 14, 2008 3:06:35 PM

Accepted, though we see a problem with the exterior beams now. Entered as incident 8662.

|                                              |
|----------------------------------------------|
| Issue ID: 7980                               |
| Subject: erroneous stringer reactions in GFS |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 6/26/2007 2:40:42 PM |

4/19/2016 3:20:17 PM

HRS AASHTO

2368

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:26:51 PM |
| Priority: High             |                      |
| Category: Bug - Domain 2   |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Cosmetic |
| Ihnat, Joseph   | Resolved | High     | Cosmetic |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | DeckProfile.png     |             |
|      | 874161.xml          |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 7985.15350 | Resolved      | Texts in Deck Profile table header overlap. |

### Description

FROM:tarmbrecht DATE:Tuesday, June 26, 2007 10:40:42 AM

For a Girder-Floorbeam-Stringer system bridge, when doing a stringer analysis, Virtis generates Stage 2 Dead Load New Computed Reactions that appear to be 4 times what they should be. However when the values are "Accepted" and the window closed w/<OK>, then re-opened, the correct former values are again present in the "Previous Computed" column and the erroneous values still appear in the "New Computed" column. After this, when the Stringer is re-analyzed the results are unchanged from the original analysis. Check N Stringer in Unit1 Stringer1 of GFSSStrgrReactProb(560B3).xml

FROM:hlee DATE:7/30/2007 8:42:30 AM

This bug didn't affect saved reactions in existing database.  
Resolved for 5.6 and 6.0 release.

4/19/2016 3:20:18 PM

HRS AASHTO

2369

## Complete Issue Information

Issue ID: 7985

Subject: Texts in Deck Profile table header overlap.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Lee, Herman

6/28/2007 2:45:53 PM

Modified By: administrator

6/19/2008 4:26:51 PM

Priority: High

Category: Cosmetic

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:6/28/2007 10:44:08 AM

Attached screen capture and xml files.

FROM:jihnat DATE:6/28/2007 2:26:33 PM

Fixed for 5.6.0 release.

4/19/2016 3:20:18 PM

HRS AASHTO

2370

## Complete Issue Information

Issue ID: 7990  
Subject: Bridges won't run under NSG

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Armbrecht, Tim 6/29/2007 4:12:59 PM  
Modified By: administrator 6/19/2008 4:26:51 PM  
Priority: High  
Category: Bug - Warranty

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
|                 | Assigned |          |                |
|                 | Resolved |          | Bug - Warranty |
| Duray, Jim      | Resolved | High     | Bug - Warranty |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

4/19/2016 3:20:18 PM

HRS AASHTO

2371

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 7991.15344 | Suspended     | NSG suggestion - disable checkbox requirement for analysis |

**Description**

FROM:tarmbrecht DATE:Friday, June 29, 2007 12:13:00 PM

The bridges in the attached files will not run utilizing non-standard gauge analysis. When attempted, they generate an "unknown failure".

FROM:kkennelly DATE:8/7/2007 12:53:36 PM  
Problem was due to tolerances. Fixed for 5.6 Beta 4.

FROM:kkennelly DATE:8/7/2007 12:56:46 PM  
Related to 7998

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 7991                                                      |
| Subject: NSG suggestion - disable checkbox requirement for analysis |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 6/29/2007 4:18:09 PM  |
| Modified By: hlee              | 7/17/2014 12:29:34 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Assigned  |          | Bug         |
| Duray, Jim      | Assigned  | High     | Bug         |
|                 | Resolved  |          |             |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7992.15343 | Assigned      | NSG suggestion - add bridge ID to report |

### Description

FROM:tarmbrecht DATE:Friday, June 29, 2007 12:18:10 PM

I'm not suure how much of an effort it would be to fix this, but I don't think that a user should be required to go into each member for each structure that s/he wants analyzed for NSG and have to check both the "Existing" and "Current" boxes. First of all, selecting only "Current" is the normal way of selecting members to be analyzed for standard linear analysis. Nearly all of our bridge models (2700+) are entered so that only the critical members remain active for routine analyses. To have to manually change them so that NSG may be run is time consuming and also results in substantial and undesirable increases in the time to perform daily routine analyses of groups of bridges on requested overweight permit routes. I suggest that the program override the "Current" & "Existing" checkboxes (leaving them be) and just do the analysis to get a successful run.

FROM:tarmbrecht DATE:Friday, June 29, 2007 2:22:36 PM

Sorry, I really should put in a more descriptive title for this incident and 7992. Any way to alter the subject to read "NSG suggestion - disable checkbox requirement for analysis"

FROM:jduray DATE:7/2/2007 4:05:53 PM

The "Existing" is required for processing member alternatives if you select any object above the member alternative (structure def, structure, structure alt , bridge alt or the bridge). That is the analysis

4/19/2016 3:20:18 PM

HRS AASHTO

2373

## Complete Issue Information

requirement for system definitions and is not new to NSG. "Current" has nothing to do with identifying the member alt to be analyzed. "Current" is used to select the member alt to be drawn in the schematics.

The processing could be changed to to use the only member alt for a member is there is only one so existing does not have to checked by the user. This would apply to the BWS if a structure def, structure, structure alt , bridge alt or the bridge is the slected object. It souel als apply to rating from the bridge explorer.

FROM:jduray DATE:7/2/2007 4:11:34 PM

The following is from the online help:

### Existing

Check the box next to the name of the member alternative that represents the existing member. The existing member alternative is selected for analysis during a batch analysis process. Only one member alternative may be selected as existing. The member alternative selected as "Existing" displays in the Bridge Workspace tree with a (E) following the name.

### Current

Check the box next to the name of the member alternative that represents the current alternative being modified or reviewed. The schematics draw the alternative marked as current. Only one member alternative is allowed to be the current alternative, but the current alternative does not need to be the same alternative as the alternative selected as existing. The member alternative selected as "Current" displays in the Bridge Workspace tree with a (C) following the name.

FROM:tarmbrecht DATE:Monday, July 02, 2007 5:10:31 PM

Jim, I understand what you are saying, and this is fine for a normal analysis. We use "existing" to only analyze the members we are interested in and to cut down on analysis time because of redundancy. For a normal rating, this is prefered. However, and correct me if I'm wrong, ALL the members need to be checked "existing" to run a NSG analysis. If I'm doing a overweight analysis for 300 bridges, I would prefer not to go into each structure and check all the check boxes, run the analysis, and then go in and undo everything to get it back to normal. I just want all the boxes "checked" during NSG, so is it possible to code the program to think that all the boxes for the structures selected are checked during a NSG analysis even though in reality they are not? This would be during a NSG analysis only.

FROM:jduray DATE:7/23/2007 10:55:37 AM

Yes, all members must have a mbr alt marked existing in order to do a NSG analysis. Otherwise we don't know which mbr alt to use (if there are more than one). We could modify so if there is only one mbr alt we could use it even if it isnot marked as existing. The problem I have with this approach is we are assuming the unmarked alt is correct and complete. So changing to match your business process may not work for others. It would take a few hours to make the change you are requesting and then some testing by us and the TAG so it is not a big deal. The TF needs to authorize the change.

FROM: Herman Lee DATE: 7/16/2014 11:04:58 AM Eastern Daylight Time

The processing has been enhanced to use the only member alt for a member if there is only one so existing does not have to be checked by the user.

4/19/2016 3:20:18 PM

HRS AASHTO

2374

**Complete Issue Information**

FROM: Herman Lee DATE: 7/17/2014 8:21:56 AM Eastern Daylight Time  
Implemented in version 6.3.

|                                                   |
|---------------------------------------------------|
| Issue ID: 7992                                    |
| Subject: NSG suggestion - add bridge ID to report |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 6/29/2007 6:09:19 PM |
| Modified By: tarmbrecht        | 6/17/2010 4:40:31 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Friday, June 29, 2007 2:09:20 PM

Add the Bridge ID to the Advanced rating Results Summary Report. Bridge Name and "Super Structure" (usually one word "superstructure") are both listed, but no Bridge ID (or NBI Structure ID).

FROM:tarmbrecht DATE:Friday, June 29, 2007 2:25:01 PM

Any way to alter the subject to read "NSG suggestion - add bridge ID to report"?

FROM: Jim Duray DATE: 4/27/2010 7:30:12 AM Eastern Daylight Time  
Added for Alpha 4.

FROM: Jim Duray DATE: 4/30/2010 3:16:02 PM Eastern Daylight Time  
Verified - 6.2 alpha 4.

FROM: Tim Armbrecht DATE: 6/17/2010 12:40:31 PM Eastern Daylight Time

4/19/2016 3:20:19 PM

**HRS AASHTO**

2375

## Complete Issue Information

Accepted.

|                                          |
|------------------------------------------|
| Issue ID: 7993                           |
| Subject: NSG - operating only in results |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Armbrecht, Tim   | 6/29/2007 6:16:39 PM |
| Modified By: administrator     | 6/19/2008 4:26:50 PM |
| Priority: High                 |                      |
| Category: Change Request       |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Change Request |
| Duray, Jim      |          |          |                |
| Duray, Jim      | Assigned | High     | Change Request |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Todd Thompson  | South Dakota DOT | todd.thompson@state.sd.us           | 605-773-3285 |

4/19/2016 3:20:19 PM

HRS AASHTO

2376

## Complete Issue Information

### Documents

| Name | Resource Identifier                                           | Description              |
|------|---------------------------------------------------------------|--------------------------|
|      | sd_24324051.xml                                               | Data Set                 |
|      | Rolled_Girder_W_33_x_130 - NSG_(Centered)_-_ADJ_(None)(1).dat | Girder G3 Brass data set |
|      | Rolled_Girder_W_33_x_130 - NSG_(Centered)_-_ADJ_(None).dat    | Girder G2 Brass data set |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7996.15339 | Accepted      | NSG Analysis - Non-symmetrical results |

### Description

FROM:tarmbrecht DATE:Friday, June 29, 2007 2:16:39 PM

This is related to incident 7426. Obviously, we've been doing some NSG testing lately. I realize that BRASS gives both inventory and operating results, but why does Virtis need to put them both in the results, when under analysis settings, only Operating is chosen? Can't Virtis be coded to not print the inventory results if not requested? It's just an example of TMI from BRASS, and Virtis doesn't need to publish the info when the user clearly doesn't desire it.

Typically, every agency evaluates superloads at the operating level.

FROM:jduray DATE:7/2/2007 4:19:38 PM  
Brian - can we do this?

FROM:tthompson DATE:Wednesday, July 25, 2007 12:44:27 PM  
See VI 2726, this has been a long standing enhancement request. I think it's a bug and not an enhancement. The user is led to believe that by assigning a truck to only inventory or operating, one will get only that.

Might be a cheaper enhancement to just add a truck to do an analysis and get both results.....

FROM:bgoodrich DATE:Wednesday, July 25, 2007 2:19:19 PM  
I don't see any problem with Virtis filtering results based on options that are not supported by an engine.

FROM:hlee DATE:9/24/2007 3:08:13 PM  
Related to Incident 8157.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7996                                  |
| Subject: NSG Analysis - Non-symmetrical results |

4/19/2016 3:20:19 PM

HRS AASHTO

2377

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Thompson, Todd   | 7/3/2007 5:09:29 PM  |
| Modified By: administrator     | 6/19/2008 4:26:50 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

## Contacts

| Name       | Company       | Email 1           | Phone 1      |
|------------|---------------|-------------------|--------------|
| Adam Price | Tennessee DOT | Adam.Price@tn.gov | 615-741-5390 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8000.15335 | Resolved      | different concrete strengths |

## Description

FROM:ttompson DATE:Tuesday, July 03, 2007 1:09:41 PM

I have a structure that is a 4 girder system. Girders G1 and G2 are entered and G3 and G4 are linked to G1 and G2. (G1 and G4 exterior girders, G2 and G3 interior girders).

I get symmetrical NSG DF results, but I've observed the output of the analyses are different. I've tracked it down to the BRASS data set being created for girders G3 and G4 are incorrect. They appear to be missing some of the DL.

Example:

For Girder G2

COMMENT DC1

LOAD-DESCR 2, 1, 0.00, DC1

4/19/2016 3:20:19 PM

HRS AASHTO

2378

**Complete Issue Information**

UNIFORM-DL1 1, 0.0000, 0.0350, 54.0000, 0.0350

But for Girder G3, these 3 lines of code are missing - and thus one gets different rating results with these missing deal load actions.

The only work-around that I can see is to unlink and copy all the girders so they are all defined.

FROM:ttompson DATE:Tuesday, July 03, 2007 1:50:51 PM  
same behaviour in 5.6 Beta

FROM:hlee DATE:7/6/2007 7:55:02 AM  
G3 is linked to G2. The loads entered in G2's Member Loads window should be exported to the engine for G3 NSG analysis. Currently, the loads in G3's Member Loads window (hidden) are exported for G3 NSG analysis. This causes the reported missing DL in G3 since there is no load entered in G3's Member Loads window. I suspect the m\_lpMemberDisp passed from the Analysis Progress dialog to the export is incorrect.

Another work around is to unlink G3, copy G2's member loads to G3, link G3 to G2, do the same for G4, and perform NSG analysis for the superstructure. Please note that this problem is not in standard analysis.

FROM:mordoobadi DATE:8/24/2007 3:07:51 PM  
I think the export should just verify if a girder member is linked. If it is linked to another member then it must get the loading from the linked member.

FROM:hlee DATE:9/12/2007 12:16:17 PM  
The suggested linking check is not needed to fix the bug. Updated Virtis Std LFD Engine, BRASS-GIRDER(STD) and MADERO exports to locate the correct girder member for NSG analysis. Resolved for 5.6 Release.

FROM:ttompson DATE:Tuesday, October 02, 2007 3:30:48 PM  
Appears to be resolved. BUt found new problem.

FROM:ttompson DATE:Tuesday, October 02, 2007 3:33:06 PM  
No new problem. Please accept this as fixed in Beta 6.

FROM:ssalata DATE:10/3/2007 11:09:39 AM  
Verified in 5.6 Beta 5.

Issue ID: 8000  
Subject: different concrete strengths

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Price, Adam 7/10/2007 4:09:54 PM  
Modified By: administrator 6/19/2008 4:26:50 PM

4/19/2016 3:20:20 PM

**HRS AASHTO**

2379

## Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

## History

| Primary Contact  | Status    | Priority | Category               |
|------------------|-----------|----------|------------------------|
| Duray, Jim       | New       | High     | Unknown<br>Enhancement |
| Kennelly, Krisha | Assigned  |          |                        |
| Kennelly, Krisha | Assigned  | High     | Enhancement            |
|                  | Suspended |          |                        |

## Contacts

| Name          | Company                    | Email 1                   | Phone 1      |
|---------------|----------------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT           | todd.thompson@state.sd.us | 605-773-3285 |
| Jim Duray     | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com     |              |

## Documents

| Name | Resource Identifier  | Description                                      |
|------|----------------------|--------------------------------------------------|
|      | 00027 - 29300040.xml | Bridge XML file, right after copying member alts |

## Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 8004.17065 | Assigned      | Copy Member Alternative - doesn't capture Member loads |

## Description

FROM:aprice DATE:Tuesday, July 10, 2007 12:09:54 PM

I am inputing a 3-span bridge into OPIS. I have different concrete strengths for each span. Each of these three strengths has its own corresponding stress limits. My file runs fine, but I am getting the error below:

ERROR: Stress limit concrete material does not match girder concrete material in span 1.

Is Opis capable of running different concrete strengths?

Thank you

FROM:aprice DATE:Tuesday, July 10, 2007 12:13:34 PM

4/19/2016 3:20:20 PM

HRS AASHTO

2380



**Complete Issue Information**

FROM:aprice DATE:Tuesday, July 10, 2007 12:13:52 PM

FROM:kkennelly DATE:7/16/2007 8:22:09 AM

The BRASS LRFD program does not support different concrete materials in different spans. The log file produced when you analyze the beam should contain the following message:

WARNING (High):

BRASS does not support different concrete materials for each span.  
The concrete material from the first span will be utilized.

The error message that you reported above is a Validation error message produced by Opis. It is telling you that on the Beam Details: Stress Limit Ranges tab you have specified for Span 1 a Stress Limit that contains a Concrete Material that is different from the Girder Concrete Material specified on the Beam Details: Span Details tab.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 8004                                                  |
| Subject: Copy Member Alternative - doesn't capture Member loads |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Thompson, Todd      | 7/11/2007 4:42:15 PM |
| Modified By: hlee                 | 6/10/2011 8:22:50 PM |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tthompson DATE:Wednesday, July 11, 2007 12:42:30 PM  
I had a 5 girder (Steel) bridge with G1 and G2 defined. With G3, G4, and G5 linked. We had an overheight hit, so I decided to unlink G3, G4, G5.

4/19/2016 3:20:20 PM

HRS AASHTO

2381

**Complete Issue Information**

I then copied G1 member alt to G5. And copied G2 to G3 and G4.

Everything looked ok - EXCEPT that the member loads (DC1) were NOT copied along with the rest of the member alternative data.

This may or may not be related to VI 7996.

But it is very troubling when you do a copy and NOT all of it copies over. COPY is one of the most powerful features of the application, but if one can not trust it - we have serious issues.

FROM:hlee DATE:7/12/2007 8:52:51 AM  
Making a copy of a member alternative will copy all the data belong to that member alternative. Member Loads sits above MEMBER ALTERNATIVES in the Bridge Workspace tree. Member Loads belongs to the member, not the member alternative. That's why Member Loads will not get copied when you copy member alternative. Incident 7996 describes a member linking problem in NSG analysis. Linking member is at the member level; all data (including Member Loads) below the member should be linked.

FROM:tthompson DATE:Monday, July 16, 2007 9:01:35 AM  
Ok.

Maybe need to revise this to an enhancement to COPY member loads.

FROM:jduray DATE:Thursday, July 19, 2007 3:19:05 PM

Issue ID: 8007  
Subject: Point of Interest Wizard

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Curtis, Beckie 7/13/2007 8:19:36 PM  
Modified By: administrator 6/19/2008 4:36:33 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          |          |

4/19/2016 3:20:20 PM

HRS AASHTO

2382

### Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
|                  | Resolved |      | Education |
|                  | Assigned |      |           |
| Duray, Jim       | New      | High | Unknown   |
| Kennelly, Krisha | Assigned |      | Education |
|                  | Resolved |      |           |
| Kennelly, Krisha | Resolved | High | Education |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 8012.17057 | Resolved      | Number of beams changes along length of superstructure |

### Description

FROM:rcurtis DATE:Friday, July 13, 2007 4:19:36 PM

In the attached file, I can generate POI for G1 using the wizard at the development points. However, for G2, when I try to generate the points of interest at the rebar development points, nothing happens.

FROM:kkennelly DATE:7/16/2007 8:45:47 AM

Member G2 is using Bar Mark Def A183. This Bar Mark Def does not have a Bar Size assigned to it. This is causing the calcs for the reinforcement dev lengths to fail. If you assign a Bar Size to that Bar Mark Def the wizard will work.

FROM:kkennelly DATE:7/16/2007 9:13:19 AM

Error message added for version 6.0 so user will know that an error occurred due to missing data.

FROM:rcurtis DATE:Monday, July 16, 2007 1:41:34 PM

Now that I have changed the bar size, the member will run. The shear spacing is the same as Member G1, however I get a rating of 0 for Member G2. I attempted to run in Virtis, however I get the following error:

Info - Virtis Std data file successfully exported.

Error - Unhandled exception in the analysis engine!

Error - Analysis failed!

FROM:kkennelly DATE:7/17/2007 9:03:58 AM

I think G2 is getting a shear rating of zero because there are no bottom rebars at Support 1 so the

4/19/2016 3:20:20 PM

HRS AASHTO

2383

**Complete Issue Information**

BRASS program computes the "d" value to compute the concrete shear capacity as zero. Comparing the Reinforcement Profile of G2 to G1 I think you want G2's Reinf Set 26 to start 0.58' to the LEFT of Support 1, right now it starts to the RIGHT of Support 1. Make that change and you will not get zero shear rating factor at the first support anymore.

Herman,  
The Virtis Std error appears to be an error with the array size.

FROM:hlee DATE:7/20/2007 1:58:22 PM  
The error is due to "THE NUMBER OF RC PROPRTIES RANGES EXCEEDS THE MAXIMUM OF 150" in the Virtis Std Engine analysis.  
This is a duplicate of Incident 7939.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 8012                                                  |
| Subject: Number of beams changes along length of superstructure |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Curtis, Beckie      | 7/17/2007 5:25:47 PM |
| Modified By: administrator        | 6/19/2008 4:36:33 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rcurtis DATE:Tuesday, July 17, 2007 1:25:48 PM  
I have a multi-span (34), pin and hanger structure with skewed beams. Over the course of the bridge, beams are gained and lost using floor beams at the pin and hangers. I was planning on modeling this as A girder system for the girders that remain constant throughout the bridge and then as girder lines for the beams that end prematurely. Is this the best workaround or are there other options?

4/19/2016 3:20:20 PM

HRS AASHTO

2384

**Complete Issue Information**

FROM:kkennelly DATE:7/24/2007 9:06:56 AM

That is your best option. There are no other workarounds to model this condition.

|                                       |
|---------------------------------------|
| Issue ID: 8015                        |
| Subject: Truss - Questionable results |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Armbrecht, Tim        | 7/18/2007 9:08:09 PM |
| Modified By: administrator          | 6/19/2008 4:36:33 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Bhanushali, Girish | Assigned |          | Bug      |

4/19/2016 3:20:21 PM

HRS AASHTO

2385

### Complete Issue Information

|                    |               |        |        |         |
|--------------------|---------------|--------|--------|---------|
|                    |               |        | Urgent |         |
|                    | Investigation |        |        |         |
| Duray, Jim         | New           | High   |        | Unknown |
| Bhanushali, Girish | Assigned      |        |        | Bug     |
|                    | Investigation |        |        |         |
|                    | Assigned      |        |        |         |
|                    |               |        | Urgent |         |
| Ihnat, Joseph      | Resolved      |        |        |         |
| Ihnat, Joseph      | Resolved      | Urgent |        | Bug     |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | TrsFrmSchemCrash-5.6.0Beta3<br>(0160343).xml |             |

### Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 8016.17053 | Resolved      | Virtis Crashes when Attempting to View Framing Plan Schematic for Truss Bridge |

### Description

FROM:tarmbrecht DATE:Wednesday, July 18, 2007 5:08:09 PM

I've been having my consultant do some in-depth investigation of the truss module with one of our bridges (file attached). He's getting some questionable results which we can't figure out. His points are as follows:

1. The tension capacity, which according to the program documentation, is the product of the net Area of a truss member and  $F_y$ , is being reported as significantly less than what one computes by hand. For example, in the referenced truss model, LOL2, with  $A_{net} = 46.4$  sq. in. and  $F_y = 50$  ksi, Tension Capacity should be 2320 kips. In the Virtis "Load Factor Rating Summary" it is reported as 580.1 kips. (Also, see comparison spreadsheets in the attached MS Excel file.)

2. Live load forces reported by in the Virtis "Detailed Truss Member Rating Results" range from approximately 34% to 44% less than the values listed on the construction plans and those generated

4/19/2016 3:20:21 PM

HRS AASHTO

2386

### Complete Issue Information

by the AASHTO BARS bridge rating program (which are virtually the same).

3. The subject truss was designed in 1991 using ASD for HS20 loading, including a 25psf allowance for future deck overlay, yet minimum inventory rating factors generated by the Virtis truss analysis, using LFD, for lower & upper chord members and compression diagonals range from 0.18 to 0.77. In comparison, AASHTO BARS, utilizing ASD, for the same members has rating factors ranging from 2.47 to 6.82.

Please advise. Thanks, Tim

FROM:gbhanushali DATE:7/25/2007 4:44:47 PM  
Part 1 - Issue regarding capacity is resolved. (for 5.6 beta Aug 07)

FROM:ssalata DATE:8/3/2007 2:16:46 PM  
Verified that Part 1 is fixed in latest debug build using Truss Training Example.

FROM:gbhanushali DATE:8/6/2007 2:16:16 PM  
Hi Tim,

Provided spread sheet has following members specified that don't exist or they don't show up in virtis truss model within attached bridge.

L0L2

L2L4

L4L6

U1U3

U3U5

U5U5'

Please advise.

After fixing part 1 (capacity) of this incident - virtis rating results now vary as follows: (refer to attached bitmap image)

Inv : 1.298 - 3.610

Op: 2.168 - 6.030

DLs still don't agree between BARS results and Virtis. This requires further investigation to see if BARS and Virtis Truss calculate the super structure dead load the same way (which may not be the case). LLoad disagreements still need to be investigated.

FROM:gbhanushali DATE:8/6/2007 3:37:04 PM

FROM:rmbest DATE:Monday, August 13, 2007 11:39:41 AM

Tim is out of the office so I will respond to this one.

The members mentioned above are just short hand for:

L0L2 is L0L1 & L1L2

L2L4 is L2L3 & L3L4

L4L6 is L4L5 & L5L6

U1U3 is U1U2 & U2U3

U3U5 is U3U4 & U4U5

U5U5' is U5U6 & U6U5'

4/19/2016 3:20:21 PM

HRS AASHTO

2387

**Complete Issue Information**

FROM:rmbest DATE:Monday, August 13, 2007 12:11:51 PM

FROM:gbhanushali DATE:10/16/2007 10:51:42 AM

Issue was fixed in Beta 4.

Please check if above issues still exist in the most latest Beta build sent out (5.6 beta 5)?

FROM:tarmbrecht DATE:Thursday, October 18, 2007 6:15:07 PM

Let's go ahead and close this one out. A number of issues were resolved, and the ones that were not, namely #2 & #3 listed above, were resubmitted in more detail in Incident 8208.

Accepted.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 8016                                                                          |
| Subject: Virtis Crashes when Attempting to View Framing Plan Schematic for Truss Bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 7/18/2007 9:18:28 PM |
| Modified By: administrator     | 6/19/2008 4:36:32 PM |
| Priority: Urgent               |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Wednesday, July 18, 2007 5:18:33 PM

For the attached file, a 1-span truss, when one attempts to view the framing plan schematic Virtis

4/19/2016 3:20:21 PM

HRS AASHTO

2388



**Complete Issue Information**

crashes.

FROM:jihnna DATE:8/10/2007 12:05:58 PM  
Fixed for 5.6.0

|                                     |
|-------------------------------------|
| Issue ID: 8022                      |
| Subject: error with splayed girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 7/19/2007 7:51:19 PM |
| Modified By: administrator     | 6/19/2008 4:36:32 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |

4/19/2016 3:20:21 PM

HRS AASHTO

2389

**Complete Issue Information**

|             |           |      |           |
|-------------|-----------|------|-----------|
|             | Duplicate |      |           |
| Lee, Herman | Duplicate | High | Unknown   |
| Duray, Jim  | New       | High | Unknown   |
| Lee, Herman | Assigned  |      |           |
| Duray, Jim  | New       |      |           |
| Lee, Herman | Assigned  |      |           |
|             | Resolved  |      | Education |
| Lee, Herman | Resolved  | High | Education |

**Contacts**

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S08.xml             |             |

**Tasks**

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8024.17045 | Resolved      | Parabolic Tee Beam Shear |

**Description**

FROM:rcurtis DATE:Thursday, July 19, 2007 3:51:20 PM

In attempting to run the superstructure titled "SB 1 thru 3 Beams A thru AD", I am getting an error for G1. The description in the log is not helpful to me in trying to trouble shoot.

FROM:hlee DATE:7/23/2007 8:39:06 AM

The error is related to Incident 7940 and 7913 since diaphragms, lateral bracings, and stiffeners are entered in the same Virtis Std LFD Engine command.

There is no work around for this error before the 5.6 Release.

|                                   |
|-----------------------------------|
| Issue ID: 8024                    |
| Subject: Parabolic Tee Beam Shear |
| Folder: /Virtis/Support Center    |

**Complete Issue Information**

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Curtis, Beckie | 7/20/2007 6:01:30 PM |
| Modified By: administrator   | 6/19/2008 4:36:32 PM |
| Priority: High               |                      |
| Category: Education          |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Help     |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Help     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 8026.17043 | Resolved      | Unit for Advanced standard live load distribution factor. |

**Description**

FROM:rcurtis DATE:Friday, July 20, 2007 2:01:30 PM

I am wondering how the "d" value is calculated for Shear. In the attached file, the girders have the same depth at analysis points 1.00 and 2.05. The rebar at these locations are the same distances from the bottom of the beam. However, at point 1.00 the output lists d as 38.75in and at 2.05 as 35.74in.

FROM:hlee DATE:7/24/2007 8:06:36 AM

The shear depth in BRASS-GIRDER is taken as the distance from the extreme compression fiber to the centroid of the reinforcement in the opposite face.

Fascia Girder

=====

For Analysis Point 100 (Span 1 - 0 ft), the exported cross section is Cross Section 1.

4/19/2016 3:20:22 PM

HRS AASHTO

2391

**Complete Issue Information**

```

# 20 COMMENT      Cross Section 1
# 350 XSECT-A      1
# 360 XSECT-B      21.0000, 21.0000, , 74.0000, 8.0000,
# 380 XSECT-D      0.0000, 0.0000, 3.0000, 3.0000, 0.0000, 0.0000
# 410 XSECT-G      5, 2.000, 4, 16.5000
# 410 XSECT-G      4, 1.019, 9, 2.5000
# 410 XSECT-G      1, 3.566, 9, 3.2500      <=====
Bottom
# 410 XSECT-G      4, 2.000, 4, 2.5000
# 410 XSECT-G      4, 6.000, 4, 6.2500
    
```

d = 42 - 3.25 = 38.75 in

For Analysis Point 205 (Span 1 - 45.29 ft), the exported cross section is Cross Section 69.

```

# 20 COMMENT      Cross Section 69
# 350 XSECT-A      69
# 360 XSECT-B      21.0000, 21.0000, , 74.0000, 8.0000,
# 380 XSECT-D      0.0000, 0.0000, 3.0000, 3.0000, 0.0000, 0.0000
# 410 XSECT-G      5, 2.000, 4, 16.5000
# 410 XSECT-G      4, 3.125, 9, 2.5000
# 410 XSECT-G      1, 5.000, 8, 10.7500      <=====
Bottom
# 410 XSECT-G      2, 1.563, 9, 7.0000      <=====
Bottom
# 410 XSECT-G      2, 3.125, 9, 7.0000      <=====
Bottom
# 410 XSECT-G      2, 3.125, 9, 7.0000      <=====
Bottom
# 410 XSECT-G      3, 7.813, 9, 3.2500      <=====
Bottom
# 410 XSECT-G      4, 2.000, 4, 2.5000
# 410 XSECT-G      4, 6.000, 4, 6.2500
    
```

Centroid =  $(5 \times 0.79 \times 10.75 + 1.563 \times 1 \times 7 + 3.125 \times 1 \times 7 + 3.125 \times 1 \times 7 + 7.813 \times 1 \times 3.25) / (5 \times 0.79 + 1.563 \times 1 + 3.125 \times 1 + 3.125 \times 1 + 7.813 \times 1)$   
 = 6.26 in

d = 42 - 6.26 = 35.74 in

Issue ID: 8026  
 Subject: Unit for Advanced standard live load distribution factor.

Folder: /Virtis/Support Center  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Lee, Herman 7/23/2007 5:45:11 PM  
 Modified By: administrator 6/19/2008 4:36:32 PM

**Complete Issue Information**

Priority: High  
Category: Help

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 8027.17042 | Resolved      | Virtis Question |

**Description**

FROM:hlee DATE:7/23/2007 1:42:21 PM  
Window has Wheels and Help has Lanes as unit. I think the unit is Wheels.

FROM:kkennelly DATE:9/25/2007 2:19:05 PM  
Help fixed for 5.6 and 6.0

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 8027           |
| Subject: Virtis Question |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 7/24/2007 2:01:28 PM |
| Modified By: administrator     | 6/19/2008 4:36:32 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnmat DATE:7/24/2007 10:03:11 AM  
Received via email (Bridgeware):

I am having some problems load rating a bridge using Virtis and was wondering if you had any advice and/or examples that would help find a solution.

The bridge is a 3 span, simple span bridge with 8 steel rolled girders. My problem is that I am unsure how to tell the software that my bridge consists of simple spans, not continuous spans over the supports. I did find an example which showed how to input a similar bridge with prestressed concrete girders, but that used the Beam Details tab under Member Alternatives, which is not an option for rolled steel girders. Thanks for your time,

4/19/2016 3:20:22 PM

HRS AASHTO

2394

**Complete Issue Information**

Evan Ashe  
Intern  
Dewberry  
Fairfax, VA 22031  
703.206.0829

FROM:hlee DATE:7/24/2007 1:41:52 PM  
Reply e-mail:

=====  
Evan,

If you have a superstructure with 3 spans, those 3 spans are continuous spans. What you need is 3 superstructures, each represents a simple span. Please see General Bridge Description topic in Virtis Help.

Herman Lee  
=====

|                                    |
|------------------------------------|
| Issue ID: 8029                     |
| Subject: Floorbeam-Stringer System |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Curtis, Beckie        | 7/24/2007 3:06:33 PM |
| Modified By: administrator          | 6/19/2008 4:36:32 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Duray, Jim         | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          |          |
|                    | Not Reproducible |          |          |
| Ordoobadi, Mehrdad | Not Reproducible | High     | Unknown  |

**Contacts**

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

## Complete Issue Information

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | sd_vo56b3_33100118.xml | 5.6 Beta 3  |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 8033.17036 | Resolved      | Problem with Floorbeam Length - GFS System |

### Description

FROM:rcurtis DATE:Tuesday, July 24, 2007 11:06:33 AM

I am attempting to add an overlay thickness to the attached bridge. Once I add the overlay, I am no longer able to save. The error I get is:

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmSuperStructMbrSpan (SaveOrder object 640).

Error updating database record set.

FROM:mordoobadi DATE:8/24/2007 10:43:04 AM

I am unable to reproduce this incident.

Issue ID: 8033

Subject: Problem with Floorbeam Length - GFS System

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thompson, Todd 7/25/2007 3:35:15 PM

Modified By: administrator 6/19/2008 4:36:31 PM

Priority: High

Category: Education

4/19/2016 3:20:23 PM

HRS AASHTO

2396



## Complete Issue Information

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |
| Kennelly, Krisha | Resolved           | High     | Unknown  |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier  | Description                                |
|------|----------------------|--------------------------------------------|
|      | sd_33100118.zip      | USe 10 Span 1654'-6", 2 Girder System (WB) |
|      | validation error.doc |                                            |
|      | stringer_error.doc   |                                            |

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 8035.17034 | Resolved      | Problem defining a Stringer Group Definition to a Stringer Unit |

### Description

FROM:ttompson DATE:Wednesday, July 25, 2007 11:35:22 AM  
After completing defining our floorbeam, we keep getting an error message:

End Distance is 23.00 FT  
Beam Distance is 24.00 FT  
Do you want to change the length?

As best as I can tell I can't find where Virtis would think that 23 ft would be a possible length.  
Everywhere I checked, it is 24 ft.  
Between main girders = 24 ft

We've pretty much completed the entire bridge, but it won't pass stringer reactions to the floorbeam and do an analysis with this mismatch in floorbeam length.

PS> We originally had this problem in 5.5, and then I tried it in 5.6 in case it might have resolved it's

4/19/2016 3:20:23 PM

HRS AASHTO

2397

**Complete Issue Information**

self between versions. I've attached the 5.6 Beta 3 of the structure.

FROM:ttthompson DATE:Wednesday, July 25, 2007 11:40:57 AM  
We are also NOT analyzing the main girders because of the limitations of BRASS.  
Our plan is to take the Floorbeam reactions, convert them to a uniform load and then apply that to a "normal" 2 girder system.

FROM:jihnata DATE:7/25/2007 12:49:19 PM  
Since the web must be defined over the entire beam, the window is checking for End Distances that are within one foot of the end of the beam.  
That is usually the right most portion of the web, but not in this particular case.  
You can just answer "No" to accept the data as it is.  
There is a separate request outstanding to always only check the right most End Distance.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 8035                                                           |
| Subject: Problem defining a Stringer Group Definition to a Stringer Unit |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Thompson, Todd      | 7/25/2007 3:54:30 PM |
| Modified By: administrator        | 6/19/2008 4:36:31 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:ttthompson DATE:Wednesday, July 25, 2007 11:54:35 AM  
We can't seem to assign String 6 - 235' (12 spans) to Stringer Unit 8.  
See error message - attached.

4/19/2016 3:20:23 PM

HRS AASHTO

2398

**Complete Issue Information**

We've checked, rechecked and the floorbeams appear to be located in the correct location.

Alternatively, we can't seem to assign a stringer definition to any stringer in Stringer Unit 8. See error messages - attached.

FROM:kkennelly DATE:7/30/2007 8:34:28 AM  
Can you attach an xml file of the bridge?

I can't be sure since I don't have your bridge but the error message about not being able to assign a stringer definition in Stringer Unit 8 because the stringer mbr length is zero sounds like you may not have a Stringer Group Definition assigned to Stringer Unit 8 on the Floor System Geometry window.

FROM:kkennelly DATE:9/25/2007 4:06:40 PM  
Problem fixed by using the user defined tolerance when checking the floorbeam mbr locations vs. where the stringer group definitions say floorbeams should be.

Problem assigning a stringer definition to the stringers in Unit 8 is fixed once the above fix lets you assign a Stringer Group Def to Unit 8.

Fixed for 5.6 and 6.0

|                         |
|-------------------------|
| Issue ID: 8037          |
| Subject: Hinge in Truss |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Curtis, Beckie       | 7/25/2007 7:15:05 PM |
| Modified By: administrator         | 6/19/2008 4:36:31 PM |
| Priority: High                     |                      |
| Category: Education                |                      |

**History**

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          |          |

4/19/2016 3:20:23 PM

HRS AASHTO

2399

**Complete Issue Information**

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Resolved  |      | Education   |
| Kennelly, Krisha | Resolved  | High | Education   |
| Duray, Jim       | New       | High | Unknown     |
|                  | Suspended |      | Enhancement |
| Duray, Jim       | Suspended | High | Enhancement |

**Contacts**

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 8039.17030 | Suspended     | Enhancement Request - Cover Plates with Schedule Based input steel girders |

**Description**

FROM:rcurtis DATE:Wednesday, July 25, 2007 3:15:05 PM

I see previous requests to add a hinge in a truss member, however no workarounds mentioned. Are there recommended workarounds for Trusses with suspended spans?

FROM:kkennelly DATE:7/26/2007 1:25:11 PM

We do not currently have any workarounds for trusses suspended spans.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 8039                                                                        |
| Subject: Enhancement Request - Cover Plates with Schedule Based input - steel girders |
| Folder: /Virtis/Support Center                                                        |

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Duray, Jim  |                      |
| Submitted By: Thompson, Todd | 7/27/2007 3:15:38 PM |
| Modified By: administrator   | 6/19/2008 4:36:31 PM |
| Priority: High               |                      |
| Category: Enhancement        |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 8044.17025 | Resolved      | Debonded Strands |

### Description

FROM:ttompson DATE:Friday, July 27, 2007 11:15:44 AM

I can't seem to find an enhancement on this, and it probably should be.

I don't see where you can add a coverplate on a steel plate girder that is defined using schedule based. You can add coverplates if it is defined as Cross Section Based. If we really want to promote schedule based for folks, we need to add all the capabilities that Cross Section based offer.

Or am I just missing where cover plates can be added on schedule based?

FROM:ttompson DATE:Friday, July 27, 2007 11:21:45 AM

FROM:jduray DATE:7/31/2007 12:49:19 PM

Cover plates on welded plate girders is not supported so this would be an enhancement as you suggest.

4/19/2016 3:20:24 PM

HRS AASHTO

2401

## Complete Issue Information

|                           |
|---------------------------|
| Issue ID: 8044            |
| Subject: Debonded Strands |

|                                 |                      |
|---------------------------------|----------------------|
| Folder: /Virtis/Support Center  |                      |
| Primary Contact: Lee, Herman    |                      |
| Submitted By: Triezenberg, Jeff | 7/30/2007 7:24:00 PM |
| Modified By: administrator      | 6/19/2008 4:36:31 PM |
| Priority: High                  |                      |
| Category: Education             |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jtriezenberg DATE:Monday, July 30, 2007 3:24:00 PM

Is there any way to have Virtis debond strands in the middle of the beam? I have a bridge where the strands on top have been debonded in the middle half of the span.

Thanks,  
Jeff

FROM:hlee DATE:8/1/2007 9:15:13 AM

Virtis doesn't support strands debonded in the middle of the beam.

4/19/2016 3:20:24 PM

HRS AASHTO

2402

## Complete Issue Information

Issue ID: 8060  
Subject: Truss results

Folder: /Virtis/Support Center  
Primary Contact: Bhanushali, Girish  
Submitted By: Curtis, Beckie 8/3/2007 8:04:15 PM  
Modified By: administrator 6/19/2008 4:36:30 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Unknown  |
| Bhanushali, Girish | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |
| Bhanushali, Girish | Resolved           | High     | Unknown  |

### Contacts

4/19/2016 3:20:24 PM

HRS AASHTO

2403

### Complete Issue Information

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | skewed girder.xml   |             |

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 8063.17006 | Resolved      | Varying deck width |

### Description

FROM:rcurtis DATE:Friday, August 03, 2007 4:04:16 PM  
I see that incident 8015 mentions questionable truss results.

I have a truss that we are trying to analyze that is also giving questionable results, see attached.  
Please advise if any of the information generated by this analysis is able to be used.

FROM:gbhanushali DATE:8/6/2007 1:43:22 PM  
Incident 8015 had three issues reported . Please let us know which parts of your results are questionable.

FROM:rcurtis DATE:Wednesday, August 08, 2007 10:57:36 AM  
The capacities of the members, for example, the controlling L2L3 do not match the Anet\*Fy value.

FROM:gbhanushali DATE:8/28/2007 12:23:24 AM  
This issue has been resolved in 5.6 beta (3 or 4) Aug. 07 - Under VI #8015  
Please refer to VI#8015 where same capacity related issue was reported.

|                             |
|-----------------------------|
| Issue ID: 8063              |
| Subject: Varying deck width |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 8/9/2007 12:25:02 PM |
| Modified By: administrator     | 6/19/2008 4:36:30 PM |
| Priority: High                 |                      |

4/19/2016 3:20:24 PM

HRS AASHTO

2404



## Complete Issue Information

Category: Education

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Ihnat, Joseph    |          |          |          |
| Ihnat, Joseph    | Assigned | High     | Unknown  |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Rebar Row Data Removed.xml |             |

## Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8064.17005 | Assigned      | Row Column being Deleted |

## Description

FROM:rcurtis DATE:Thursday, August 09, 2007 8:25:02 AM

In the attached structure, I am trying to model a beam who's spacing changes. Although I entered three different deck widths, Virtis is only using the smallest width, which is dramatically affecting the rating in the first span that actually has a larger deck width.

Is there a way to get Virtis to use the deck width at the location?

FROM:hlee DATE:8/27/2007 10:00:49 AM

I assume the structure in question is "SB Spans 1 thru 3 Beam AA (Beam AC similar but not exact)" and the question is for the Virtis Std LFD engine.

The structure in question is entered as girder line. Varying deck width is not supported for girder line definition.

4/19/2016 3:20:25 PM

HRS AASHTO

2405

**Complete Issue Information**

Issue ID: 8064  
Subject: Row Column being Deleted

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 8/9/2007 2:08:13 PM  
Modified By: administrator 6/19/2008 4:36:29 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Thursday, August 09, 2007 10:08:13 AM

Our County-Serial 082-029

In the attached bridge – I wanted to change the concrete material being used in the cross section. I added a new concrete material from the library.

Go to cross sections for girder 1

Change the concrete material to Class AAA for the pull down

Click apply and go to the Reinforcement tab – you will see all is ok (the row column is populate)

Click OK and then go right back into the same cross section – you will see that the Row column in the rebar tab is now blanked out.

FROM:jihnat DATE:8/9/2007 12:48:34 PM

When the window is first opened the values in the Row cells are "Bottom of Girder" and "Top of Girder", but the choices in the drop down list are "Bottom of Slab" and "Top of Slab".

Not sure yet why they don't match. But you can reselect "Bottom of Slab" and "Top of Slab" as a workaround.

4/19/2016 3:20:25 PM

HRS AASHTO

2406

## Complete Issue Information

|                         |
|-------------------------|
| Issue ID: 8065          |
| Subject: Error Question |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 8/10/2007 12:18:18 PM |
| Modified By: administrator       | 6/19/2008 4:36:29 PM  |
| Priority: High                   |                       |
| Category: Unknown                |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

4/19/2016 3:20:25 PM

HRS AASHTO

2407

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S-24-043.xml        |             |

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8068.17001 | Resolved      | multiple strand types in same span |

**Description**

FROM:jihnmat DATE:8/10/2007 8:20:35 AM  
Received via email (Bridgeware):

I got the following error while running a girder line analysis. I have attached an .xml file, I was running Span 5, Member No. 1. I have defined the section properties for the full length, so I am confused. Thank You.

----- Contents of BRASS Error File -----

File: C:\Program  
Files\AASHTOWARE\Virtis55\S-24-043\_(0WD)\Span\_5\No\_1\South\_Exterior\_INVENTOR  
Y\BRASS\_ASD\South\_Exterior\_INVENTORY.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: ENTORY\BRASS\_ASD\South\_Exterior\_INVENTORY.DAT

-----  
Error No.: 1103  
Type : Input Error  
Location : prgen.for  
\*\*\*\*ERROR\*\*\*\* A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS  
IN SPAN 1 SPAN POINT = 27  
RUN STOPPED.  
REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

----- End of Contents of BRASS Error File -----

Stephen Bartha  
Conley Associates  
214 Cambridge Street  
Boston, MA 02114  
Office: 617.742.5111  
Fax: 617.742.5333  
Cell: 508.395.2590

FROM:bgoodrich DATE:Wednesday, August 15, 2007 12:20:24 PM  
This appears to be the same as Incident 7917, which has been addressed. This error is not occurring in Version 5.6 beta 3.

### Complete Issue Information

FROM:jihnat DATE:8/17/2007 1:47:34 PM

I sent email explaining workaround.

In this bridge the Deck Profile length did not quite match span length. Deck is not mentioned in 7917. But this bridge runs in 5.6.0 (Beta 4).

|                                             |
|---------------------------------------------|
| Issue ID: 8068                              |
| Subject: multiple strand types in same span |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Curtis, Beckie      | 8/13/2007 1:58:59 PM |
| Modified By: administrator        | 6/19/2008 4:36:29 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:rcurtis DATE:Monday, August 13, 2007 9:58:59 AM

I am attempting to model a prestress beam where the fabricator changed the strands and used two different size strands in the same beam. Is there a way to model this?

FROM:kkennelly DATE:9/26/2007 8:18:55 AM

4/19/2016 3:20:25 PM

HRS AASHTO

2409

### Complete Issue Information

You cannot use two different size strands in a ps beam in Virtis/Opis.

|                                    |
|------------------------------------|
| Issue ID: 8073                     |
| Subject: Virtis Output Information |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 8/14/2007 1:55:09 PM |
| Modified By: administrator     | 6/19/2008 4:36:29 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:20:26 PM

HRS AASHTO

2410

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8097.16972 | Duplicate     | Virtis Engine - Beam Spacing |

**Description**

FROM:jihnat DATE:8/14/2007 9:57:44 AM  
Received via email (Bridgeware):

After I run the analysis for my bridge in Virtis and I look at the output, each load rating points out a specific "controlling point." Each controlling point has a specific number which some how relates to a location along the bridge.

For Example:

LOAD NO. 1: Truck: AASHTO H 20-S 16 Loading, 1944 Ed  
CONTROLLING POINT: 206.00 <-- <-- <--  
Limit State: STEEL GIRDER (FLEXURAL - STEEL STRENGTH)  
RATING FACTOR (pos): 2.56  
LOAD RATING: 92.05 (tons)

How do I determine the location along the bridge that relates to the controlling point?

Thank you for your help.

Amanda L. Harrell  
Structural Engineer  
Dewberry  
8401 Arlington Blvd.  
Fairfax, VA 22031  
703-206-0829

FROM:jihnat DATE:8/20/2007 1:55:57 PM  
2 represents 2nd span  
6 represents the 6th 10th point  
I emailed a response.

|                                       |
|---------------------------------------|
| Issue ID: 8097                        |
| Subject: Virtis Engine - Beam Spacing |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 8/20/2007 2:50:56 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:36:27 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Lee, Herman        |          |          |          |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FixNumBars.sql      |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 8098.16971 | Closed        | Report Tool Error with TrainingBridge2 |

### Description

FROM:jihnat DATE:8/20/2007 10:53:29 AM  
Received via email (Bridgeware):

I am trying to analyze a flared steel plate girder system using the Virtis LFD Analysis Engine. I have attached the .xml file for the bridge and the Virtis Engine Output for the first interior girder (Girder B). The Virtis Engine is incorrectly using 21.07 ft (6.421 m) for the beam spacing - see the Virtis Engine output .txt file line 67. The actual beam spacing varies from approximately 7 ft (2 m) at Abutment A to 8 ft (2.5 m) at Abutment B. The 21.07 ft spacing that the Virtis Engine is using is the beam spacing along the support, not perpendicular to the girders - see the framing plan detail in the Bridge Workspace

4/19/2016 3:20:26 PM

HRS AASHTO

2412



**Complete Issue Information**

file. Can you tell me how to fix this?

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer  
Phone: (616) 224-1500  
E-mail: dombrowski@williams-works.com  
Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

FROM:hlee DATE:9/10/2007 1:42:44 PM  
Duplicate of Incident 7758.

The bug is fixed and resolved for the 5.6 Release.  
I cannot think of any way to get around this issue until the 5.6 Release.

|                                                 |
|-------------------------------------------------|
| Issue ID: 8098                                  |
| Subject: Report Tool Error with TrainingBridge2 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 8/21/2007 12:04:13 PM |
| Modified By: administrator          | 6/19/2008 4:36:27 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jhnat DATE:8/21/2007 8:06:10 AM  
Open Training Bridge 2, Report Tool, open BWS Report for steel girders.abr, Generate, get error:

4/19/2016 3:20:26 PM

HRS AASHTO

2413

**Complete Issue Information**

08:05:04 AM - Line 3124 in source file .\UiReportToolBwsEngine.cpp.

Error processing attribute Num Bars Std for the DoSteelCrossSectionReinfSet class.

08:05:04 AM - Line 1059 in source file .\UiReportToolEngine.cpp.

GetIDsOfNames returned an error while searching for GetNumBarsStd (DISP\_E\_UNKNOWNNAME).

08:05:04 AM - Line 3518 in source file .\UiReportToolEngine.cpp.

FROM:jihnata DATE:8/21/2007 9:27:17 AM  
Getting same error in version 5.5. Changed project to Support Center.

FROM:hlee DATE:8/30/2007 3:53:38 PM  
Mehrddad, please apply the attached script to 5.6 and 6.0 databases. Need to include the script in migration also.

FROM:mordoobadi DATE:9/12/2007 10:05:11 AM  
SQL script applied to 5.6 and 6.0 databases. The changes will be included in 5.6 Beta 5 and 6.0 Alpha 4.

FROM:jihnata DATE:9/27/2007 11:08:14 AM  
OK in 5.6 Beta 5

|                                |
|--------------------------------|
| Issue ID: 8102                 |
| Subject: Variable depth T-Beam |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Triezenberg, Jeff  | 8/24/2007 12:38:56 PM |
| Modified By: administrator       | 6/19/2008 4:36:27 PM  |
| Priority: High                   |                       |
| Category: Unknown                |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Goodrich, Brian  | Assigned |      |         |
|                  | Resolved |      |         |
| Duray, Jim       | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      |         |
| Kennelly, Krisha | Assigned | High | Unknown |
| Lee, Herman      |          |      | Bug     |
|                  | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                           |
|------------|---------------|-------------------------------------------------------------------------------------------------------------------|
| 8103.16966 | Assigned      | Live load distribution factors computation should use link with member when checking for spread or adjacent beam. |

### Description

FROM:jtriezenberg DATE:Friday, August 24, 2007 8:38:57 AM

When running this structure, after exporting the bridge information to the BRASS engine, this error appears:

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\Virtis55\80180023000S080\Spans\_1\_\_2\_\_3\_\_AND\_4\G1\Fascia\_girder\BRASS\_LFD\Fascia\_girder.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: \G1\Fascia\_girder\BRASS\_LFD\Fascia\_girder.DAT

-----  
Error No.: 1200  
Type : Input Error  
Location : web\_gen.for

A web depth on span 4 could not be determined due to an invalid range. (iseg\_store = 0)

----- End of Contents of BRASS Error File -----

I can't figure out why span 4 is not a valid range. The span length match the superstructure definition. See the attached file. Only the fascia girder has been defined so far.

4/19/2016 3:20:27 PM

HRS AASHTO

2415

**Complete Issue Information**

FROM: bgoodrich DATE: Friday, August 31, 2007 11:10:19 AM

I was able to duplicate the error message when my units tolerances (in the Configuration Browser window) were set to 0.001 ft and 0.00001 inches. The last web range for span 4 was being exported as 42.94 ft instead of 42.9479 ft. Several of the bar marks are ending near the end of span 4, which creates several small ranges in that region. Virtis tries to resolve the short ranges with the units tolerances. When the tolerance is too small, this type of error occurs. I changed the tolerances to 0.01 ft and 0.0001 inches and the structure was analyzed.

FROM: jtrizeenberg DATE: Monday, September 17, 2007 2:34:15 PM

I was able to analyze the bridge, but the rating returns a zero. Do you get the same result? I've checked all the obvious places where I might have inputted the wrong units.

FROM: hlee DATE: 9/17/2007 3:04:38 PM

Please review the BRASS output at the controlling location to determine why the rating is zero. This may reveal the problem.

FROM: jtrizeenberg DATE: Wednesday, September 19, 2007 12:51:43 PM

I have attached a text file with the output at the controlling location. BRASS is showing  $\phi \cdot V_n = 0.6$  kips. It is also showing the concrete strength, web depth and web thickness as 3,000psi, 36in and 21in respectively. If  $V_c = 2 \cdot \sqrt{f'_c} \cdot b_w \cdot d$ , this shear capacity should be much higher. BRASS seems to be computing the capacity correctly in the next point of interest. I don't know why the capacity is being rated so close to zero at this point.

FROM: jtrizeenberg DATE: Wednesday, September 19, 2007 1:24:01 PM

I have also attached a new file for the bridge. This will ensure we are working from the same information.

FROM: bgoodrich DATE: Thursday, September 20, 2007 10:23:00 AM

I turned on the intermediate output for the left end of the beam. The shear depth reported is 0.251 inches, which appears to be why the shear capacity is so low. At the end of the beam, BRASS obtains the actions "d" away from the support, but it uses the section properties and reinforcement at the end of the beam. Based on the input, there does not appear to be any "developed" reinforcement in the bottom of the beam. Therefore, BRASS cannot calculate the shear depth.

FROM: hlee DATE: 9/20/2007 11:03:25 AM

Please check the end bearing locations and reinforcements input data. Below is copied from the FAQ.

=====  
=====

Why do I get a zero shear rating for a schedule based reinforced concrete bridge?

Virtis/Opis computes the required development length of flexural reinforcement and takes this development length into consideration when it creates cross sections for export to an analysis engine.

If

your reinforcement bars start at the first support line of the member or end at the last support line of the member, Virtis/Opis computes the percent of bar developed at the support line to be zero percent and the

4/19/2016 3:20:27 PM

HRS AASHTO

2416

**Complete Issue Information**

cross section that exists at these locations will have zero rebar. If no rebar exists, the analysis engine cannot compute the "d" distance from the extreme compression fiber to the centroid of the tension reinforcement. If the "d" value does not exist, the shear capacity of the beam cannot be computed. To solve this problem, first enter a value for the "End Bearing Locations" on the Member Alternative window. This is the distance from the end centerline of bearings to the physical end of the beam. Once this value is entered, you can start your reinforcement to the left of the first bearing and end it to the left of the last bearing. Then when Virtis/Opis will determine that the bars are partially developed at the end bearing lines and a "d" value can be computed.

An alternate solution to this problem is to specify the bar as "Fully Developed" on the Girder Profile: Reinforcement tab. This will cause Virtis/Opis to assume that the bar is fully developed along its entire length.

Another cause of this problem is the lack of shear reinforcement ranges being defined. Assign shear reinforcement definitions along the length of the member in the RC Shear Reinforcement Ranges window.

=====

Issue ID: 8103  
Subject: Live load distribution factors computation should use link with member when checking for spread or adjacent beam.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 8/24/2007 6:30:18 PM  
Modified By: hlee 3/2/2010 9:19:34 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:20:27 PM

HRS AASHTO

2417

**Complete Issue Information**

FROM:hlee DATE:8/24/2007 2:15:03 PM

To reproduce:

1. Open BID 10 (Example 7) Bridge Workspace.
2. Unlink G3 with G2.
3. Create a new PS I beam member alternative for G3 (Do not enter beam shape in Beam Details window).
4. Link G3 with G2.
5. Hit "Compute from Typical Section" button in G2 member alternative Live Load Distribution window will complain that "Beam shapes are not assigned to adjacent member alternatives!"

FROM: Herman Lee DATE: 3/2/2010 2:28:36 PM Eastern Standard Time  
Resolved for 6.2 Release.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 8106                                            |
| Subject: Continuous deck over non-continuous steel girder |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Triezenberg, Jeff   | 8/27/2007 12:34:05 PM |
| Modified By: administrator        | 6/19/2008 4:36:27 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:27 PM

HRS AASHTO

2418

**Complete Issue Information**

|                  |           |      |           |
|------------------|-----------|------|-----------|
| Duray, Jim       | New       | High | Unknown   |
| Kennelly, Krisha | Resolved  |      | Education |
| Duray, Jim       | New       | High | Unknown   |
|                  | Duplicate |      |           |
| Duray, Jim       | Duplicate | High | Unknown   |

**Contacts**

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 8107.16962 | Duplicate     | Incident 8060 |

**Description**

FROM:jtriezenberg DATE:Monday, August 27, 2007 8:34:06 AM

I have a situation where a steel plat girder is not continuous over a support (there are 2 bearings on the pier with a 2" gap between girders) However, the concrete deck above the pier is continuous. Is there any way to model this in Virtis?

FROM:kkennelly DATE:8/27/2007 3:25:31 PM

You cannot model steel beams as simple span for DL and continuous spans for LL in Virtis. You can only use such a model if you have prestressed beams.

|                        |
|------------------------|
| Issue ID: 8107         |
| Subject: Incident 8060 |

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Curtis, Beckie   | 8/27/2007 5:13:28 PM |
| Modified By: administrator     | 6/19/2008 4:36:27 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Beckie Curtis  | Michigan DOT     | CurtisR4@michigan.gov               | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | lrfr.xml            |             |

### Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 8108.16961 | Resolved      | LRFR`   |

### Description

FROM:rcurtis DATE:Monday, August 27, 2007 1:13:29 PM

I have not received any response to this incident request. Just bringing it to attention.

FROM:gbhanushali DATE:8/28/2007 12:28:01 AM

VI# 8060 and VI 8015 - both reporting similar issue regarding capacity.

4/19/2016 3:20:27 PM

HRS AASHTO

2420



## Complete Issue Information

|                |
|----------------|
| Issue ID: 8108 |
| Subject: LRFR` |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Curtis, Beckie     | 8/27/2007 5:14:14 PM |
| Modified By: administrator       | 6/19/2008 4:36:27 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:rcurtis DATE:Monday, August 27, 2007 1:14:14 PM

I am attempting to run a structure with LRFR. I'll attach the file. the error "Invalid analysis method requested!" Is shown. Could you let me know what steps I should be taking to run a structure LRFR?

I am trying to run Typical End Span, G3.

FROM:rcurtis DATE:Monday, August 27, 2007 2:04:37 PM

4/19/2016 3:20:28 PM

HRS AASHTO

2421

### Complete Issue Information

Also, when using the LFD Brass Engine, the plastic moment capacity at midspan for this structure is listed as 936.7k\*ft in the output. However,  $F_y * Z$  would be  $33 * 346 / 12 = 951.5k*ft$ . Any reason for this difference?

FROM:kkennelly DATE:8/27/2007 3:27:52 PM

Version 5.5 does not have an analysis engine for performing LRFR ratings. It only provides the user interface so you can enter LRFR data in anticipation of Version 5.6 having the BRASS LRFR analysis engine for LRFR ratings.

The plastic moment capacity question is being referred to Brian Goodrich.

FROM:bgoodrich DATE:Friday, August 31, 2007 11:36:04 AM

BRASS does not use the plastic section modulus or any other section properties from Virtis/Opis. BRASS calculates these properties based on the section dimensions, which does not include the small "fillets" at the flange/web interface. This causes a slight reduction in the plastic moment capacity in this particular structure.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 8114                                      |
| Subject: Sidewalk can not cantilever over the deck? |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 8/29/2007 6:04:24 PM |
| Modified By: administrator        | 6/19/2008 4:36:26 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
| Goodrich, Brian |          |          |          |
| Lee, Herman     | Resolved |          |          |

4/19/2016 3:20:28 PM

HRS AASHTO

2422

**Complete Issue Information**

|                  |           |      |             |  |
|------------------|-----------|------|-------------|--|
|                  | Resubmit  |      |             |  |
| Kennelly, Krisha | Assigned  |      |             |  |
| Duray, Jim       | New       | High | Unknown     |  |
|                  | Suspended |      | Enhancement |  |
| Duray, Jim       | Suspended | High | Enhancement |  |
|                  | Resolved  |      |             |  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8117.16952 | Suspended     | Files written by Virtis/Opis |

**Description**

FROM:dteal DATE:Wednesday, August 29, 2007 2:04:24 PM

Is it true that a sidewalk can not cantilever over the edge of a deck as shown in my input, plans and schematic (attached)?

When modeled the way I showed, the rail, parapet and sidewalk loads are not located on the structure?

What is the best way to model this situation?

FROM:hlee DATE:9/11/2007 9:07:28 AM

In the above model, the loads for the sidewalk and the rightmost rail and parapet are exported to the BRASS engine.

Dean, Are you concern about the moment induced by the rightmost rail and parapet?

Brian, Please check the export. I don't think the "700 Pedestrian Rail" should be exported for Member F since it's located outside Member F tributary area.

Loads in BRASS export for the right exterior girder (Member F):

```
=====
=
COMMENT WS Load = 0.1448 kcf X 0.1040 ft = 0.0151 ksf <=== WS (Uniformly to all girders)
```

**Complete Issue Information**

DECKC-LODG 0.150, 0.0151, 1.2302, 39.1239, 8.661

COMMENT Generic: 815 mm F-Shaped Barrier With Overlay <=== DC2 (Uniformly to all girders)  
DECKC-LODC 6, 0.3591, 0.4528, 2

COMMENT Generic: 815 mm Kansas Corral Rail W/O Curb <=== DC2 (Uniformly to all girders)  
DECKC-LODC 6, 0.2753, 39.6293, 2

COMMENT Parapet: Knee Wall 300mm x 855mm <=== DC1 (By tributary area)  
DECKC-LODC 6, 0.4143, 50.4429, 1

COMMENT Steel Railing: 700 Pedestrian Rail <=== DC1 (By tributary area)  
DECKC-LODC 6, 0.0112, 39.3914, 1

COMMENT Steel Railing: 1220 Pedestrian Rail <=== DC1 (By tributary area)  
DECKC-LODC 6, 0.0144, 50.3822, 1

COMMENT Sidewalk Load <=== DC1 (By tributary area)  
DECKC-LODU 3, 0.1032, 40.1083, 10.8268, 1

COMMENT Haunches <=== DC1 (By tributary area)  
LOAD-DESCR 1, 1, 0.00, Haunches  
UNIFORM-DL1 1, 0.0000, 0.0153, 93.5039, 0.0153  
UNIFORM-DL1 2, 0.0000, 0.0153, 155.8399, 0.0153  
UNIFORM-DL1 3, 0.0000, 0.0153, 155.8399, 0.0153  
UNIFORM-DL1 4, 0.0000, 0.0153, 116.4698, 0.0153

=====  
=

FROM: bgoodrich DATE: Saturday, September 15, 2007 12:57:41 AM  
The BRASS export does not filter the deck loads based on the tributary area. All the loads are sent to the engine, and the engine distributes the loads according to the method selected for each stage.

FROM: dteal DATE: Tuesday, October 02, 2007 9:59:52 AM  
Herman - to answer your question:  
I get a message from Virtis/Opis during validation that states -

Structure Definition: As Designed, but sidewalk loads arne't applied properly  
ERROR: Appurtenance not located on structure typical section at start of structure.  
ERROR: Appurtenance not located on structure typical section at end of structure.  
ERROR: Appurtenance not located on structure typical section at start of structure.  
ERROR: Appurtenance not located on structure typical section at end of structure.  
ERROR: Sidewalk not located on structure typical section at start of structure.  
ERROR: Sidewalk not located on structure typical section at end of structure.

I don't think this was a BRASS issue??

FROM: hlee DATE: 10/3/2007 11:21:11 AM  
During the validation, the locations of the sidewalk and rightmost rail and parapet are check against the deck. Validation will complain "not located on structure typical section" if any part of the sidewalk or appurtenance is located outside the width of the deck.

## Complete Issue Information

Since the loads for the sidewalk and the rightmost rail and parapet are exported to the BRASS engine correctly, the engine should pick up what you entered in the Structural Typical Section window.

FROM:dteal DATE:Wednesday, November 07, 2007 2:42:21 PM  
If everything is working correctly - why are we getting error messages?

FROM:kkennelly DATE:11/26/2007 2:53:42 PM  
Validation message changed from error to warning for version 6.0

FROM:dteal DATE:Tuesday, May 27, 2008 2:37:13 PM

|                                       |
|---------------------------------------|
| Issue ID: 8117                        |
| Subject: Files written by Virtis/Opis |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Duray, Jim      |                       |
| Submitted By: Ordoobadi, Mehrdad | 8/31/2007 2:45:46 PM  |
| Modified By: hlee                | 7/17/2014 12:27:58 PM |
| Priority: High                   |                       |
| Category: Enhancement            |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:mordoobadi DATE:8/31/2007 9:53:42 AM  
This issue came up in the Mass Highway user training last year.

One of the Mass Highway IT personnel indicated that it takes so much effort to maintain Virtis/Opis software on client machines in their organization.

4/19/2016 3:20:28 PM

HRS AASHTO

2425

**Complete Issue Information**

One of the problems that he mentioned was that their users normally have limited privileges on their machines and they cannot write to the folders under Program Files, but Virtis/Opis writes to folders in the Program Files/VirtisOpis folder. He suggested that Virtis/Opis should follow the Windows Logo program guidelines. The windows logo program suggests that the files written by an application should not be written to the program files folder instead they should be written to the user's My Documents folder. (e.g. "My Documents\Virtis Opis" folder)

This folder should probably be configurable so that it defaults to My Documents\Virtis Opis and can be changed to something else if needed. This option may be configured within Virtis/Opis installation or in User preferences or both.

FROM: Herman Lee DATE: 7/16/2014 10:58:58 AM Eastern Daylight Time  
Included in the Support for Windows 7 enhancement.

FROM: Herman Lee DATE: 7/17/2014 8:27:25 AM Eastern Daylight Time  
Implemented in version 6.3.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 8134                                              |
| Subject: Use of ellipsis in menu text is wrong/inconsistent |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Salata, Steve    | 9/7/2007 7:01:29 PM  |
| Modified By: administrator     | 6/19/2008 4:36:25 PM |
| Priority: Low                  |                      |
| Category: Internal             |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | Low      | Unknown  |
| Ihnat, Joseph   | Assigned |          | Internal |

4/19/2016 3:20:29 PM

HRS AASHTO

2426

### Complete Issue Information

|               |                    |      |          |
|---------------|--------------------|------|----------|
|               | Resolved           |      |          |
| Ihnat, Joseph | Resolved           | Low  | Internal |
| Lee, Herman   | New                | High | Unknown  |
|               | Information Needed |      |          |
|               | Resolved           |      |          |
| Lee, Herman   | Resolved           | High | Unknown  |

### Contacts

| Name           | Company           | Email 1             | Phone 1 |
|----------------|-------------------|---------------------|---------|
| Michael LeBeau | Bryant Associates | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description         |
|------|---------------------|---------------------|
|      | f04027.xml          |                     |
|      | f04027.bbd          | File in Version 5.2 |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 8138.16931 | Resolved      | Can not open/import .bbd file (ver 5.2) in ver 5.5 |

### Description

FROM:ssalata DATE:9/7/2007 3:00:17 PM

"..." in a menu item's text is meant for menu/buttons which display a dialog which prevents any further user input until that dialog is dismissed (modal dialogs).

List of menu items and their corrected text strings:

#### File

- New
  - New Folder...
- Open
- Save...
- Database Information...
- Restore...
- Revert...

#### Edit

#### Cut

- Paste...
- Delete...

4/19/2016 3:20:29 PM

HRS AASHTO

2427

## Complete Issue Information

Empty Deleted Bridges Folder...  
Find...  
Filter...

### Bridge

Check Out Authorizations  
  By Bridge...  
  By User...  
Rate...  
Rating Results...  
Bridge Rating Results...  
Analysis Settings  
Find...  
Report Tool  
Attachments...  
Simple Bridge Layout Wizard...  
Output  
Attachments...  
Analyze...  
Bridge Exchange  
  Import...  
  Batch Import...  
  Batch Export...

### Substructure

Analyze...  
Spec Check...  
Graph

### Window

Project Explorer  
Bridge Explorer  
Library Explorer  
Configuration Browser

### Help

About BRASS...  
  License Info...  
About Virtis/Opis/OpisSub...  
  License Info...

FROM:ssalata  DATE:9/10/2007 8:59:00 AM

FROM:jihnat  DATE:11/28/2007 1:14:27 PM  
Not really an Alpha Testing issue. Changed project to Support Center.

FROM:jihnat  DATE:6/11/2008 10:24:52 AM

4/19/2016 3:20:29 PM

HRS AASHTO

2428



## Complete Issue Information

Your explanation of the use of ellipsis is incorrect.

An ellipsis should be used when additional information is required to complete the command. For instance, an ellipsis should certainly not be used on Edit-Paste or Help-About. Whether or not a modal dialog appears is not the issue.

I did find that we were using the ellipsis in too many places. I've removed it from the following:

File-Open

View-Preferences

Everything under Bridge

Window-Explorers

Fixed for version 6.0

Issue ID: 8138

Subject: Can not open/import .bbd file (ver 5.2) in ver 5.5

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: LeBeau, Michael

9/11/2007 4:00:41 PM

Modified By: administrator

6/19/2008 4:36:25 PM

Priority: High

Category: Unknown

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:mlebeau DATE:Tuesday, September 11, 2007 12:00:42 PM

Please help. I would like to import/open an old bridge rating .bbd file (which was created in Virtis ver 5.2) in the Virtis 5.5. I have tried and it gave me an error message below

Unable to import bridge

The import file format version 5.2.0.3001 is incompatible with this version (5.5.0.3001) of the system.

4/19/2016 3:20:29 PM

HRS AASHTO

2429

**Complete Issue Information**

Please help,  
Thank you

FROM:hlee DATE:9/11/2007 3:31:34 PM  
Please attached the bbd file to this incident. We can migrate the bbd file to 5.5 for you.

FROM:mlebeau DATE:Tuesday, September 11, 2007 6:02:45 PM  
Thank you so much for you repid reply. The .bbd file has been attached

FROM:hlee DATE:9/12/2007 8:42:05 AM  
The migrated 5.5 XML file is attached.

FROM:mlebeau DATE:Wednesday, September 12, 2007 9:04:42 AM  
I got the file, batch imported and it works. Thank you so much. Just one question, when we want to open the old file which created in the previous version, we have to do this all the time?

FROM:hlee DATE:9/17/2007 8:27:23 AM  
Below is part of the "Import/Export Virtis/Opis Data" topic in Virtis/Opis Help. If you want to archive the bridges, follow Step 2 in the AASHTO BRIDGEWare Startup Guide to backup your database.

=====  
Data exported to a BBD file can be imported back into the AASHTO BridgeWare® database. The export function for BBD files is not intended for use as an archiving mechanism. The export function is intended for use of exchanging files between agencies or consultants but only within the same version of the database. The BBD export and import functions cannot be used from one version of Virtis/Opis to the next version of Virtis/Opis. For example, you cannot export a bridge from Version 2.1 and then import it into Version 3.0.

Data exported to an XML file can also be imported back into the AASHTO BridgeWare database. The export function for XML files is not intended for use as an archiving mechanism. This XML import/export feature was introduced for Version 5.4. Future versions of Virtis/Opis will provide a mechanism for exporting and importing XML files between versions of Virtis/Opis. For example, you will be able to export a bridge from Version 5.4 and then import it into Version 5.5 in the future.  
=====

Issue ID: 8146  
Subject: Steel girder with variable depth

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Triezenberg, Jeff 9/12/2007 10:17:32 PM  
Modified By: administrator 6/19/2008 4:36:24 PM  
Priority: High  
Category: Unknown

4/19/2016 3:20:29 PM

**HRS AASHTO**

2430

**Complete Issue Information**

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |
| Duray, Jim      | New    | High     | Unknown  |

**Contacts**

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 8147.16922 | New           | steel shape library |

**Description**

FROM:jtriezenberg DATE:Wednesday, September 12, 2007 6:17:32 PM

This bridge has a smaller girder hinged with a larger girder. I have two superstructure definitions; one for spans 1 and 2, and one for spans 3 and 4. Both definitions have the same change in girder depth but spans 1 and 2 give an error when BRASS analyzes it. Please help me to find what is wrong.

Thanks,  
Jeff Triezenberg

FROM:hlee DATE:9/13/2007 8:44:37 AM

I'm able to rate both "Spans 1 and 2" and "Spans 3 and 4" using BRASS LFD. What are the tolerance settings in your Configuration Browser System Defaults window? Could you describe the error you are getting or attach a screen capture or log file to this incident?

FROM:jtriezenberg DATE:Thursday, September 13, 2007 1:19:21 PM

After increasing the tolerances to 0.05 ft and 0.1 in, I still get two error messages:

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\Viridis55\03103034000S010\Spans\_1\_and\_2  
\Fascia\_Girder\Spans\_1\_and\_2\BRASS\_LFD\Spans\_1\_and\_2.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: der\Spans\_1\_and\_2\BRASS\_LFD\Spans\_1\_and\_2.DAT

**Complete Issue Information**

-----  
Error No.: 1200  
Type : Input Error  
Location : web\_gen.for

A web depth on span 1 could not be determined due to an invalid range. (iseg\_store = 0)

----- End of Contents of BRASS Error File -----

and:

Input Errors (1200) - Web segment range invalid

I increased the tolerances to 1 foot and 1 inch and the same error was still generated.

-Jeff

FROM:jtrizeberg DATE:Thursday, September 13, 2007 1:28:11 PM

FROM:hlee DATE:9/17/2007 10:25:49 AM

Try using the default tolerances (0.001 for ft and 0.00001 for in). I was able to rate both superstructure definitions with the default tolerances.

FROM:jtrizeberg DATE:Monday, September 17, 2007 1:46:01 PM

I was able to run the bridge with those tolerances. Thats odd that smaller tolerances allowed the structure to be rated.

|                                                |
|------------------------------------------------|
| Issue ID: 8147<br>Subject: steel shape library |
|------------------------------------------------|

|                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Duray, Jim<br>Submitted By: Jones, Daniel 9/13/2007 3:15:20 PM<br>Modified By: administrator 6/19/2008 4:36:24 PM<br>Priority: High<br>Category: Unknown |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:30 PM

**HRS AASHTO**

2432

## Complete Issue Information

### Contacts

| Name           | Company           | Email 1                             | Phone 1      |
|----------------|-------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc.  | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Michael LeBeau | Bryant Associates | unknown@unknown.com                 |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 8153.16916 | Resolved      | PS-Rating Result Summary for Serviceability-Concrete Tension |

### Description

FROM:rfulton DATE:Thursday, September 13, 2007 11:15:20 AM  
Found the following mistake in the steel library that needs to be corrected and users notified.

Old Steel Shapes: 33WF(CB331),33X11.5x130  
Description: 33WF(CB331),33X11.5x130 (Last Year Rolled 1950)

Error lx = 669 in4      Should be 6699 in4

FROM:hlee DATE:9/13/2007 1:57:19 PM  
Status changed to Support Center. Most likely we will release a Technical Note like TN0009 (Typographical errors in the historical steel shapes file, "old rolled shapes.xml").

Issue ID: 8153

Subject: PS-Rating Result Summary for Serviceability-Concrete Tension

4/19/2016 3:20:30 PM

HRS AASHTO

2433

**Complete Issue Information**

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: LeBeau, Michael    | 9/18/2007 4:02:28 PM |
| Modified By: administrator       | 6/19/2008 4:36:23 PM |
| Priority: High                   |                      |
| Category: Education              |                      |

**History**

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | New              | High     | Unknown  |
|                 | Not Reproducible |          |          |
| Lee, Herman     | Not Reproducible | High     | Unknown  |

**Contacts**

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State    | Summary               |
|------------|------------------|-----------------------|
| 8154.16915 | Not Reproducible | NSG Window in Library |

**Description**

FROM:mlebeau DATE:Tuesday, September 18, 2007 12:01:20 PM  
 I have Precast Deck Beam Superstructure. Is there a way to setup virtis and it give Rating Result Summary for Serviceability-Concrete Tension?  
 Thank you

FROM:hlee DATE:9/19/2007 11:01:14 AM  
 I assume the question refers to the BRASS LFD engine.

FROM:bgoodrich DATE:Thursday, September 20, 2007 11:16:51 AM  
 The BRASS LFD engine does not use the Stress Limits that are available in Virtis. Instead, the engine uses the "ASD Factors" located on the "Factors" tab or the "Member Alternative Description" window. The concrete tension factor under the "INVY" heading can be used to obtain the rating.

4/19/2016 3:20:30 PM

HRS AASHTO

2434

## Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 8154                 |
| Subject: NSG Window in Library |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 9/21/2007 3:40:00 PM |
| Modified By: administrator     | 6/19/2008 4:36:23 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:awaheed DATE:Friday, September 21, 2007 11:40:01 AM

There is no button to duplicate all wheels from one axle to another while entering data. What I mean, if several axles of a NSG vehicle are identical, there should be a way to duplicate similar axles simultaneously along with the wheel spacing and wheel loads. Currently if one duplicates an axle, the wheels on the axle do not get duplicated.

FROM:hlee DATE:9/21/2007 1:17:34 PM

4/19/2016 3:20:31 PM

HRS AASHTO

2435

**Complete Issue Information**

Assuming you have 5 axles entered. After you duplicate Axle 5, you need to select Axle 6 in the Wheels dropdown box to see the duplicated wheels data.

FROM:awaheed DATE:Monday, September 24, 2007 11:44:42 AM  
Thanks

|                                                 |
|-------------------------------------------------|
| Issue ID: 8155                                  |
| Subject: Difficulty defining floorbeam location |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: lhnat, Joseph    | 9/21/2007 6:53:23 PM |
| Modified By: administrator     | 6/19/2008 4:36:23 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Resolved |          | Bug      |
| Lee, Herman     | Resolved | High     | Bug      |

4/19/2016 3:20:31 PM

HRS AASHTO

2436



**Complete Issue Information**

**Contacts**

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Virtis_Screen2.jpeg |             |
|      | Virtis_Screen1.jpeg |             |

**Tasks**

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 8157.16912 | Duplicate     | NSG analysis at Operating level only also shows inventory level results |

**Description**

FROM:jihnat DATE:9/21/2007 2:55:12 PM  
Received via email (Bridgeware):

My name is Ai Fen Jimenez from Bryant Associates. I have trouble trying to define the floorbeam locations for my bridge. Attached is the bbd file of what I have inputted so far and I couldn't get Virtis to create the framing correctly. Also attached is the framing plan for the bridge. I keep on getting the error message that said "Unable to create a IDoFlrSystemMbrLocationList! Unknown exception occurred while trying to create a IDoFlrSystemMbrLocationList!".

Please take a look and let me know what is wrong. If you prefer to call me, my number is (617) 248-0300 ext. 2114. Thank you very much.

FROM:hlee DATE:9/21/2007 3:08:58 PM  
Bridgeware e-mail reply:

=====

====

Do you use the Floorbeam Location Wizard to generate the floorbeam locations in the Floorbeam Member Locations window? There is a defect in the Floorbeam Location Wizard in version 5.5, please see Incident 8142 (GFS Floorbeam Location Wizard Apparently Creates Erroneous Floorbeam Locations) for more information. A work around is to enter each floorbeam location manually in the Floorbeam Member Locations window.

=====

====

FROM:hlee DATE:9/24/2007 9:55:52 AM  
Ai Fen Jimenez e-mail reply:

4/19/2016 3:20:31 PM

HRS AASHTO

2437



### Complete Issue Information

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Lee, Herman     | Duplicate | High     | Unknown  |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
| Amjad Waheed  | Ohio DOT     | awaheed@dot.state.oh.us    | 614-752-9972 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8158.16911 | Duplicate     | Add new columns in bridge explorer |

### Description

FROM:awaheed DATE:Monday, September 24, 2007 11:47:02 AM

I analyzed a NSG permit load along with a legal load in adjacent lane. Both vehicles were defined as Operating vehicle. Advanced Rating Result Summary Report contains ratings for both inventory and operating levels. It should not show inventory level ratings if no inventory vehicle is defined.

FROM:hlee DATE:9/24/2007 3:11:43 PM

Related to Incident 7993.

## Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 8158                              |
| Subject: Add new columns in bridge explorer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 9/24/2007 4:03:56 PM |
| Modified By: administrator     | 6/19/2008 4:36:23 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
| Goodrich, Brian | Assigned | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | GFSLowRF-MainGirder-560B4<br>(0150017).xml |             |

## Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 8163.16906 | Assigned      | GFS Girder Member has low RF in BRASS LFD compared to BRASS ASD and LARS LFD |

## Description

FROM:awaheed DATE:Monday, September 24, 2007 12:03:57 PM  
Proposing to add following columns in the bridge explorer window.

1 - Bridge Rater of bridge analysis saved

4/19/2016 3:20:32 PM

HRS AASHTO

2440

**Complete Issue Information**

- 2 - Bridge data model type (single member girder line or 3D)
- 3 - Date of analysis

FROM:hlee DATE:9/24/2007 2:43:32 PM  
 Related to Incident 4238.

FROM:tarmbrecht DATE:Tuesday, September 25, 2007 10:00:18 AM  
 And 7960

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 8163                                                                        |
| Subject: GFS Girder Member has low RF in BRASS LFD compared to BRASS ASD and LARS LFD |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 9/25/2007 4:18:30 PM |
| Modified By: bgoodrich           | 7/16/2008 5:39:41 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Tuesday, September 25, 2007 12:18:30 PM

4/19/2016 3:20:32 PM

HRS AASHTO

2441

**Complete Issue Information**

File attached. The main girder (a built-up riveted plate girder) of the subject Girder-Floorbeam system has a BRASS LFD inventory rating factor of 0.284 for lane loading at rating point 3.0 and similar for truck loading @ 2.5. The BRASS ASD inventory RF for lane loading @ 3.0 is 1.092 and for truck loading @ 2.5 is 1.052. As a separate check, we note that Bentley's LARS software LFD controlling inventory RF is above 1.0. The bridge was originally designed ASD for HS20. Therefore it appears that the Virtis/BRASS LFD rating is questionable. (Note: We checked and this is not new to Virtis 5.6.0 (Beta 4).)

Note: The BRASS check for negative moment, AASHTO Std. Spec. Eqn. 10-100 where  $b/t \leq 24$  is said to fail. But,  $b = 16$  and  $t = 1.625$  so  $b/t = 9.85$  which is less than 24. It's possible that this may be the root of the problem.

FROM:hlee DATE:9/25/2007 1:52:24 PM  
I suspect this is related to Incident 8002 and 5218.

FROM:bgoodrich DATE:Tuesday, September 25, 2007 7:17:20 PM  
Herman is correct that this is the same issue as Incidents 5218 and 8002. I will forward to WYDOT.

FROM: Brian Goodrich DATE: 7/16/2008 1:39:41 PM Eastern Daylight Time  
One possible solution that has been discussed is for BRASS to allow input of user-defined capacities. This would address cases where the user does not agree with the implementation of the specifications within the BRASS engine.

Issue ID: 8164  
Subject: "n" Value Entry Field Not Present for Floor or Truss Line Superstructure Members

Folder: /Virtis/Support Center  
Primary Contact: lhnat, Joseph  
Submitted By: Armbrecht, Tim 9/25/2007 6:24:08 PM  
Modified By: administrator 6/19/2008 4:36:23 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          |          |

4/19/2016 3:20:32 PM

HRS AASHTO

2442

### Complete Issue Information

|                  |          |  |      |         |
|------------------|----------|--|------|---------|
| Ihnat, Joseph    |          |  |      |         |
| Lee, Herman      | New      |  | High | Unknown |
|                  | Assigned |  |      |         |
| Kennelly, Krisha |          |  |      | Bug     |
|                  | Resolved |  |      |         |
| Kennelly, Krisha | Resolved |  | High | Bug     |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Diaphragm.png                           |             |
|      | GFSCantChangeLength (560B4).xml         |             |
|      | Revised GFSCantChangeLength (560B4).xml |             |

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 8174.16895 | Resolved      | GFS/TFS – Can't Change Length |

### Description

FROM:tarmbrecht DATE:Tuesday, September 25, 2007 2:24:08 PM

For Floor Line and Truss Line superstructures there is no way to enter the "n" value in the Deck Profile window. This affects girder, floorbeam and stringer members. For Girder Line and System and Floor and Truss Systems the last data entry field under the Deck Concrete tab of the Deck profile window allows entry of the "n" value.

FROM:kkennelly DATE:10/8/2007 11:02:39 AM

Are you running more than 1 version of Virtis on your pc? Sometimes the column width gets corrupt in the registry when you have multiple versions installed.

FROM:tarmbrecht DATE:Tuesday, October 09, 2007 3:41:01 PM

No, we uninstall previous versions before installing the new version.

FROM:kkennelly DATE:10/15/2007 8:32:42 AM

4/19/2016 3:20:33 PM

HRS AASHTO

2443

**Complete Issue Information**

The column for the "n" entry is visible on my pc.

Is this occurring on all of your pc's or just 1?

FROM:tarmbrecht DATE:Monday, October 15, 2007 2:10:30 PM

Krishna, I attached an xml file. Two things:

1. Let's call this "not-reproducible". My consultant is getting the problem - I've seen it with my own eyes (see attached Word document). It is on his login on the PC that has the beta version installed. He is not getting the problem in 5.5, and I am not getting the problem in either 5.5 or with my login on the beta machine. I'm going to assume that this will work out when we install 5.6 on our production machines.

2. Note that for superstructure def. "spans D36-D39 (4-Sp. Cont.) GFS", there is no Deck Profile for the main girder "D2- S Girder". However, there are deck profiles for the other floor line superstructure definitions. This happens for either my consultant or me on both 5.5 and 5.6beta5.

FROM:kkennelly DATE:10/16/2007 9:42:24 AM

1. Not seeing the "n" column is marked "not reproducible".

2. The presence of the Deck Profile window in the tree for the Girder should be controlled by the "Main members support the deck" checkbox on the Structure Def window. That box is not checked in that structure def so the Deck Profile and Haunch Profile windows shouldn't show up. But when I do check that box I would expect to see the Deck and Haunch Profile windows appear in the BWS tree but they don't.

FROM:jihnat DATE:11/9/2007 1:22:06 PM

#2 fixed for Alpha Build 5.

FROM:tarmbrecht DATE:Tuesday, December 11, 2007 12:16:54 PM

Approved (Beta TAG 6.0)

|                                        |
|----------------------------------------|
| Issue ID: 8174                         |
| Subject: GFS/TFS – Can't Change Length |

|                                    |                      |
|------------------------------------|----------------------|
| Folder: /Virtis/Support Center     |                      |
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Armbrecht, Tim       | 9/28/2007 3:33:55 PM |
| Modified By: administrator         | 6/19/2008 4:36:22 PM |
| Priority: High                     |                      |
| Category: Bug                      |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:33 PM

HRS AASHTO

2444



## Complete Issue Information

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | GFSCantileverStrgrAnalError (550).xml   |             |
|      | GFSCantileverStrgrAnalError (560B4).xml |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 8176.16893 | Assigned      | Error message when analyzing cantilevered stringer |

### Description

FROM:tarmbrecht DATE:Friday, September 28, 2007 11:33:56 AM

In the example (GFSCantChangeLength(560B4).xml), which is to be a model of a Truss Floorbeam Stringer system, the second span was originally entered as 225.4661 ft (for a total length w/the end spans of 275.4661 ft) and the <OK> button was clicked. Diaphragm spacings were then entered but in doing so it was discovered that the center span length was incorrect. It was corrected to 244.8828 ft. (now w/a total bridge length of 294.8828 ft. When the user attempted to enter the diaphragm spacings and error message came up stating that the spacings could not be entered because the total length was 275.4661 ft., the former bridge length value.

FROM:hlee DATE:10/9/2007 3:24:06 PM

When the center span length changed from 225.4661 ft to 244.8828 ft, the reference line for each member didn't get updated correctly. Attached the diaphragm validation message with the previous total length.

FROM:kkennelly DATE:10/15/2007 9:38:22 AM

Existing bug in truss - charge to fixed price maintenance.

Truss is calling base class DoFloorSystemStructDef:SetSpanLength() which only works with girders and not trusses.

FROM:kkennelly DATE:10/15/2007 10:46:44 AM

Also made change to SetSupportLineSkew.

Fixed for 5.6

FROM:kkennelly DATE:10/15/2007 1:05:20 PM

Code change does not fix Tim's bridge. Somehow Tim's bridge has different span lengths for the left and right truss members. I've attached a revised version of Tim's bridge with both truss members at

4/19/2016 3:20:33 PM

HRS AASHTO

2445

## Complete Issue Information

294.8828'

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 8176                                              |
| Subject: Error message when analyzing cantilevered stringer |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 10/1/2007 3:39:43 PM |
| Modified By: mordoobadi             | 9/22/2009 7:19:50 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
|                    | Assigned |          |          |
| Ordoobadi, Mehrdad |          |          | Bug      |
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:tarmbrecht DATE:Monday, October 01, 2007 11:39:43 AM

In the Virtis v. 5.5.0 example (GFSCantileverStringerAnalysisError(550).xml), which is Truss Floorbeam Stringer system, the following error message is generated when attempting to analyze the stringers

4/19/2016 3:20:33 PM

HRS AASHTO

2446

**Complete Issue Information**

under "Stringer Unit 1 Layout"...

"Unknown error initiating member analysis!  
09:45:39 AM - Line 1071 in source file .\UiAnalysisProgressDlg.cpp."

These stringers have an 11.5625' simple span with a 4.25' cantilever.

After importing into v. 5.6.0 Beta 4 (GFSCantileverStringerAnalysisError(560B4).xml) and attempting to analyze, Virtis crashes.

FROM:hlee DATE:10/10/2007 2:32:08 PM  
CUiAnalysisProgressDlg::PopulateDeadLoadReactionObjects should consider cantilever stringer support when looking for floorbeam to populate stringer reactions.

```
Line 14773 // Support

        iSupportNum = pReaction->iEndFlag + pReaction->iSpan;
        FloorbeamMbrPtr = NULL;

        // Now find the corresponding floorbeam
        StringerMbrPtr->FirstSupportFloorbeam();
        for(int j = 0; j < iSupportNum; j++)
        {
            FloorbeamMbrPtr = StringerMbrPtr->GetNextSupportFloorbeam();
        }
```

FROM: Mehrdad Ordoobadi DATE: 9/15/2009 12:45:25 PM Eastern Daylight Time  
This was fixed when fixing issues VI 9185, 9312  
This is fixed in 6.1 Acceptance.

FROM: Tim Armbrecht DATE: 9/17/2009 2:07:25 PM Eastern Daylight Time  
Appears to be working correctly with the new dlls. Accepted.

Issue ID: 8177  
Subject: Prevent analysis of a truss from the Superstructure Definition on the model tree

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 10/1/2007 4:05:53 PM  
Modified By: administrator 6/19/2008 4:36:22 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:34 PM

HRS AASHTO

2447

### Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
| Lee, Herman | New       | High | Unknown     |
|             | Suspended |      | Enhancement |
| Lee, Herman | New       | High | Unknown     |
|             | Suspended |      | Enhancement |
|             | Discard   |      |             |
| Lee, Herman | Discard   | High | Enhancement |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 8178.16891 | Discard       | Provide a way to link one Stringer Unit Layout to another identical one |

### Description

FROM:tarmbrecht DATE:Monday, October 01, 2007 12:05:53 PM

Provide a way to prevent analysis of a Truss defined under Truss Floor System when the analysis is requested from the Superstructure Definition or higher on the model tree. This can already be done for all other member types.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 8178                                                                   |
| Subject: Provide a way to link one Stringer Unit Layout to another identical one |

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 10/1/2007 4:07:50 PM |
| Modified By: administrator     | 6/19/2008 4:36:22 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                 |
|------------|---------------|-----------------------------------------------------------------------------------------|
| 8179.16890 | Suspended     | GFS/TFS - Provide a way to link a Stringer Member to another identical Stringer Member. |

## Description

FROM:tarmbrecht DATE:Monday, October 01, 2007 12:07:50 PM

Provide a way to link one Stringer Unit Layout to another identical one. Currently, an extreme amount of repetition can be required in order to enter the STRINGER UNIT LAYOUT. This is, for example, the case when there are many stringer lines and many equivalent separate stringer units.

FROM:hlee DATE:10/1/2007 12:30:36 PM  
Tim, Have you tried the Stringer Unit Layout Wizard?

FROM:tarmbrecht DATE:Tuesday, October 02, 2007 9:50:57 AM  
Admittedly, we hadn't tried the Stringer Unit Layout Wizard, so we did yesterday. It works fine, but it seems like file size/space could be reduced by using member links, like we do with the girder system

4/19/2016 3:20:34 PM

HRS AASHTO

2449

**Complete Issue Information**

superstructures. This would be a benefit when some of these bridge models are taking 10-20 minutes to save (on one of our faster machines).

FROM:hlee DATE:4/30/2008 2:37:17 PM  
Discarded by TAG 12/07.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 8179                                                                                   |
| Subject: GFS/TFS - Provide a way to link a Stringer Member to another identical Stringer Member. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 10/1/2007 4:09:07 PM |
| Modified By: administrator     | 6/19/2008 4:36:22 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Monday, October 01, 2007 12:09:08 PM

Provide a way to link a Stringer Member to another identical Stringer Member.

## Complete Issue Information

Issue ID: 8180

Subject: GFS/TFS - Provide a way to link a Floorbeam Member to another identical Floorbeam Member.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

10/1/2007 4:10:36 PM

Modified By: administrator

6/19/2008 4:36:21 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |

4/19/2016 3:20:35 PM

HRS AASHTO

2451

## Complete Issue Information

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | GFS-TFSCk-outStrgrRateProblems (560B4).xml |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 8182.16887 | Resolved      | Girder/Truss-Fibm-Strgr Check-out/Rate Problems |

### Description

FROM:tarmbrecht DATE:Monday, October 01, 2007 12:10:37 PM

Provide a way to link a Floorbeam Member to another identical Floorbeam Member.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 8182                                           |
| Subject: Girder/Truss-Fibm-Strgr Check-out/Rate Problems |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrrecht, Tim       | 10/2/2007 1:57:08 PM |

4/19/2016 3:20:35 PM

HRS AASHTO

2452



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:36:21 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PSIBeam.png         |             |

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8184.16885 | Resolved      | Virtis input for PCBT-45 |

### Description

FROM:tarmbrecht DATE:Tuesday, October 02, 2007 9:57:08 AM

When the bridge model is not checked out, attempting to analyze a stringer in a Truss-Floorbeam-Stringer system generates the following error...

Unable to analyze Stringer Member Alternative: W24x94-NC  
01:38:00 PM - Line 890 in source file .\UiAnalysisProgressDlg.cpp.  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
01:38:00 PM - Line 887 in source file .\UiAnalysisProgressDlg.cpp.

Analysis of the main girder or truss and floorbeams proceeds as expected.

When only the Girder/Truss-Floorbeam-Stringer system Superstructure Definition is checked out, the following errors occur:

Stringer or Floorbeam analysis...

4/19/2016 3:20:35 PM

HRS AASHTO

2453

## Complete Issue Information

Unable to convert steel beam to BRASS cross sections!  
01:59:09 PM - Line 1242 in source file .\EngineExport.cpp.  
Error generating BRASS cross section commands!  
01:59:09 PM - Line 182 in source file .\BrassCrossSections.cpp.  
Unable to get cross section dimensions!  
01:59:09 PM - Line 1242 in source file .\EngineExport.cpp.  
Error filling BRASS cross section!  
01:59:09 PM - Line 7776 in source file .\BrassCrossSections.cpp.  
One or more web dimensions are zero or missing!  
01:59:09 PM - Line 1242 in source file .\EngineExport.cpp.  
One or more rolled beam flange dimensions are zero or missing!  
01:59:09 PM - Line 1242 in source file .\EngineExport.cpp.

Main Girder analysis...

Error generating LFD/ASD load commands!  
02:50:27 PM - Line 356 in source file .\BrassStdLoadControl.cpp.  
Error generating load group commands!  
02:50:27 PM - Line 455 in source file .\BrassLoadControl.cpp.  
Unable to compute average dead load of stringer unit!  
02:50:27 PM - Line 1242 in source file .\EngineExport.cpp.  
Error in the loads utility!  
02:50:27 PM - Line 953 in source file .\LoadsUtility.cpp.  
Nominal load of shape is not defined!  
02:50:27 PM - Line 4444 in source file .\DoSteelRolledBeamDef.cpp.

Truss analysis...

Nominal load of shape is not defined!  
02:00:46 PM - Line 4444 in source file .\DoSteelRolledBeamDef.cpp.  
Nominal load of shape is not defined!  
02:00:45 PM - Line 4444 in source file .\DoSteelRolledBeamDef.cpp.

FROM:mordoobadi DATE:1/18/2008 7:42:27 AM

Since the stringer dead load analysis updates records in the database, it is not allowed when the bridge is not checked out or when the bridge is being exchanged. This behavior is intended.

FROM:mordoobadi DATE:1/18/2008 7:54:58 AM

Structure Definition check-out issue:

- (1) When bridge is opened and the structure definition is checked out, and then an analysis is performed, the errors shown above occur.
- (2) If structure definition is checked out and then bridge is closed and reopened and analysis is performed the errors do not occur.

I noticed when doing scenario (1) the properties of existing steel shapes are all null except name and description.

FROM:mordoobadi DATE:1/18/2008 4:04:27 PM

I Found source of the problem in the Dm classes for sub-type tables.

4/19/2016 3:20:35 PM

HRS AASHTO

2454

**Complete Issue Information**

When a structure definition is checked out the the domain is cleared and bridge is read from the database again but some data (De objects) corresponding to mid and leaf-level sub-type tables is left behind and not cleared. That's what is causing the Analysis to fail; because the cross section dimensions are coming back as null; or when opening a steel shape all of the values in the steel shape window are empty.

FROM:mordoobadi DATE:1/22/2008 9:16:04 AM  
Code generation templates for sub-typed tables modified so that all data is cleared before a structure definition is checked out. Corresponding Dm classes generated.

FROM:mordoobadi DATE:1/22/2008 9:19:51 AM  
Fixed for 6.0.0 Beta 3.

Noticed a leak. Two DeDouble's leaked when checking out a structure definition. The leak was not due to recent changes (leaked since 2005).  
Leak is fixed in 6.0.0 Beta 3.

FROM:tarmbrecht DATE:Tuesday, January 22, 2008 10:00:31 AM  
Mehrdad,

I'd like to see a little more discussion about the check-out requirement here. If I want to run a bunch of structure analyses for a particular truck in a batch-type situation, I will not be checking out every structure to do this, I will be selecting all my structures from Bridge Explorer. There needs to be a better way to include these types of bridges in a batch analysis so that I can analyze them alongside the non-GFS structures.

Tim

|                                   |
|-----------------------------------|
| Issue ID: 8184                    |
| Subject: Virtis input for PCBT-45 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 10/4/2007 3:02:27 PM |
| Modified By: administrator     | 6/19/2008 4:36:21 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

4/19/2016 3:20:36 PM

HRS AASHTO

2455

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

|            |               |                             |
|------------|---------------|-----------------------------|
| Name       | Current State | Summary                     |
| 8193.16876 | Assigned      | PS1 Training Bridge Updates |

**Description**

FROM:jhnat DATE:10/4/2007 11:05:18 AM  
Received via email (Bridgeware):

I am using Virtis for the first time and am trying to load rate a Virginia standard PCBT-45". This bulb-tee shape is slightly different in the bottom flange than the prestressed I beam input that appears in the program. Do you have any suggestions on how to address this issue?

Jerry R. Varnon Jr.  
Senior Structural Engineer  
Dewberry  
8401 Arlington Boulevard  
Fairfax, Virginia 22031-4666  
703.849.0515

FROM:hlee DATE:10/4/2007 11:18:39 AM  
Reply e-mail:

=====

=====

You can copy the "AASHTO-PCI Bulb-Tee BT-54" from the library (see attached) and modify the bottom flange. Or you can entered the bulb-tee shape into the window directly. If the strand locations are different, you also need to modify the strand grid data in the third tab of the PS I Beam window.

=====

=====

FROM:hlee DATE:10/5/2007 3:22:43 PM  
Received via email (Bridgeware):

=====

=====

Thank you for responding to my question. I understand the options you have informed me of; however, the Virginia Standard PCBT-45 is different than the "AASHTO-PCI Bulb-Tee". It appears that there is an additional chamfer dimension added to the PCBT-45 located at the top of the bottom flange that I cannot account for in the Virtis program (see attachments

4/19/2016 3:20:36 PM

**HRS AASHTO**

2456

**Complete Issue Information**

for details of beam in question). I guess I was wondering if this issue had arisen previously and how it was handled.

=====

Reply e-mail:

=====

My suggestion is to enter A (see attached) as what is in the Virginia Standard and enter a B so the I and A of the beam are close to the Virginia Standard. You may also ask VDOT to see whether they have the beam in their Virtis Library. If they have one entered already, they can export the beam to a file and you can import it to your Virtis Library. I assume you are using Virtis for VDOT contract.

=====

Issue ID: 8193  
Subject: PS1 Training Bridge Updates

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Lee, Herman 10/8/2007 5:44:20 PM  
Modified By: xli 7/30/2008 12:53:02 PM  
Priority: High  
Category: Documentation

**History**

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Li, Xinmei      | Assigned | High     | Documentation |
| Li, Xinmei      | Assigned | High     | Documentation |
|                 | Resolved |          |               |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM:hlee DATE:10/8/2007 1:40:09 PM

The BWS screen capture on page PS1-8 needs to be updated. Tee and U Beams are missing from the tree.

G:\PROJ\VIRTIS\LONGTERM\Training\Originals - v5.5\PS1-SimpleSpanPSIBeamExample.pdf

FROM: Xinmei Li DATE: 7/30/2008 8:48:21 AM Eastern Daylight Time

Updated for 6.0 Training. Saved at

G:\PROJ\VIRTIS\LONGTERM\Training\Originals - v6.0\PS1-SimpleSpanPSIBeamExample.pdf

|                                    |
|------------------------------------|
| Issue ID: 8199                     |
| Subject: Questions on Virtis error |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Doerr, Gary      | 10/11/2007 3:16:24 PM |
| Modified By: administrator     | 6/19/2008 4:36:20 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |

4/19/2016 3:20:36 PM

**HRS AASHTO**

2458

### Complete Issue Information

|             |                  |      |           |
|-------------|------------------|------|-----------|
|             | Not Reproducible |      |           |
| Lee, Herman | New              | High | Unknown   |
|             | Assigned         |      |           |
|             | Resolved         |      | Education |
| Lee, Herman | Resolved         | High | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8205.16864 | Resolved      | Virtis Analysis Engine - DL Distribution |

### Description

FROM:jihnat DATE:10/11/2007 11:19:02 AM  
Received via email (Bridgeware):

I am trying to rate a girder floorbeam system and keep getting the following error:

-- Contents of BRASS Error File -----  
08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

File: C:\Program  
Files\AASHTOWARE\Virtis55\000000034121100\girder\_floor\_beam\_system\Floor  
beam\_1\end\_floorbeam\BRASS\_LFD\end\_floorbeam.ERR  
08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Fatal Error Encountered - Unexpected Termination  
08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Data File: m\_1\end\_floorbeam\BRASS\_LFD\end\_floorbeam.DAT  
08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

-----  
08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Error No.: 1886

4/19/2016 3:20:36 PM

HRS AASHTO

2459

**Complete Issue Information**

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Type : Input Error

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Location : Input Data File

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

**\*\*ERROR\*\*** On the BRACING-SCHEDULE command, the Spacing must be

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

evenly divisible into the Range Length +/- 0.01 ft.

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

----- End of Contents of BRASS Error File -----

08:42:25 AM - Line 2205 in source file .\AbxBrassEngine.cpp.

Could you give me an Idea where to look to solve this error? I've spent hours looking over my data and can't seem to find what needs to be fixed.

Gary L. Doerr PE  
Bridge Management Section  
Bridge Division  
NDDOT  
Phone 701-328-4844

FROM:gdoerr DATE:Thursday, October 11, 2007 11:51:28 AM

FROM:hlee DATE:10/15/2007 9:06:15 AM  
E-mail reply:

=====  
=====

I'm not able to reproduce the reported error. The error you are getting is most likely related to the tolerances set in your database. You can find the tolerance settings in the Configuration Browser's System Defaults folder. I used the default tolerances, which are 0.001 for ft and 0.00001 for in, when I tried to rate Floorbeam 1.

=====  
=====

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 8205<br>Subject: Virtis Analysis Engine - DL Distribution |
|---------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:20:37 PM

**HRS AASHTO**

2460



### Complete Issue Information

|                              |                       |
|------------------------------|-----------------------|
| Primary Contact: Lee, Herman |                       |
| Submitted By: Ihnat, Joseph  | 10/11/2007 6:53:00 PM |
| Modified By: administrator   | 6/19/2008 4:36:19 PM  |
| Priority: High               |                       |
| Category: Education          |                       |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
| Lathia, Hasmukh |          |          |           |
|                 | Resolved |          | Education |
| Lathia, Hasmukh | Resolved | High     | Education |

### Contacts

| Name           | Company      | Email 1                | Phone 1      |
|----------------|--------------|------------------------|--------------|
| Hasmukh Lathia |              | HLathia@mbakercorp.com |              |
| Beckie Curtis  | Michigan DOT | CurtisR4@michigan.gov  | 517-322-1186 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | First_Interior_Beam.dat |             |
|      | prestressed_beam.xml    |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 8206.16863 | Resolved      | Virtis vs Brass results, shear controlling |

### Description

FROM:jihnat DATE:10/11/2007 2:56:23 PM  
Received via email (Bridgeware);

Is it possible to override the Dead Load automatically calculated by the Virtis Engine for a girder with a user-defined Dead Load? I tried changing my file under "Superstructure Loads - DL Distribution" tab in Virtis to select "User-defined dead load" for both Stage 1 and Stage 2. I then entered my user-defined dead load under the "Member Loads" tab for the particular girder. However, when I run the analysis for load

4/19/2016 3:20:37 PM

HRS AASHTO

2461

**Complete Issue Information**

rating, it still seems to be using the dead load automatically calculated by the Virtis Engine.

CHRISTOPHER DOMBROWSKI, PE  
Phone: (616) 224-1500  
E-mail: dombrowski@williams-works.com  
Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

FROM:hlee DATE:10/15/2007 9:49:15 AM  
E-mail reply:

=====

When you select "User-defined dead load" in the DL Distribution tab of the Superstructure Loads window, ONLY those loads applied on the Structural Typical Section window will not be computed. If you have haunch defined for the member, haunch load will still be computed and exported as Stage 1 load. The loads you entered in the Member Loads window will be exported in the "Girder Dead Loads", not the DL1 and DL2 in the "Bridge Cross Section and Loading". You can check each computed loads in the analysis log.

Please let me know if you need more information.

=====

|                                                     |
|-----------------------------------------------------|
| Issue ID: 8206                                      |
| Subject: Virtis vs Brass results, shear controlling |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Lathia, Hasmukh |                       |
| Submitted By: Curtis, Beckie     | 10/12/2007 4:03:18 PM |
| Modified By: administrator       | 6/19/2008 4:36:19 PM  |
| Priority: High                   |                       |
| Category: Education              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 8207.16862 | Resolved      | Virtis Error |

### Description

FROM:rcurtis DATE:Friday, October 12, 2007 12:03:18 PM

I have run the attached structure in both Virtis and Brass. The results are very different, 0.44 vs 0.58 (brass and then Virtis respectively) for HS-20 Inventory.

Vcw is controlling, and so I don't believe that the  $M_{max}/M_{cr} \leq 1$  is the issue.

I know that Virtis uses transformed properties, but I am checking to see why the difference is so large as transformed sections are not supposed to create this large of a difference. I have created a hand check of just  $H/2$ . I have a number of issues that I differ from Virtis's calcs. First, I was wondering if you could tell me how Virtis is coming up with the transformed area ( $381.96 \text{ in}^2$ ). I am getting  $369 + (7-1) * 18 * .144 = 384 \text{ in}^2$ .

Is there anyway for me to print out greater detail of the Virtis intermediate calculations other than what is present in the standard output file?

FROM:hlee DATE:10/15/2007 8:50:00 AM

For the second question, to print out detail output:

1. Select Engine tab in the Analysis Settings window.
2. Select Virtis LFD in the dropdown and click Properties.
3. Select the Output Options tab.
4. Select "A Detailed rating abalysis" and click OK.

FROM:hlathia DATE:Monday, October 15, 2007 6:43:37 PM

For the first question, how transformed area is calculated:

$f'_c(\text{beam}) = 5.0 \text{ ksi}$

$E_s = 28000 \text{ ksi}$

$E_c = (150^{1.5})(33)(\text{SQRT}(5000))/1000 = 4286.82 \text{ ksi}$

$n = E_s/E_c = 6.53 = 6$  (taken as integer value)

Basic Beam Area =  $369 \text{ in}^2$

Transformed Area =  $369 + (6-1)(0.144)(18) = 381.96 \text{ in}^2$

The detailed output should provide sufficient information on how VSE calculates ratings of a PS beam.

Issue ID: 8207

Subject: Virtis Error

Folder: /Virtis/Support Center

Primary Contact: Ilnat, Joseph

Submitted By: Ilnat, Joseph

10/12/2007 4:38:14 PM

4/19/2016 3:20:37 PM

HRS AASHTO

2463

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:36:19 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Lee, Herman        | New      | High     | Unknown   |
| Bhanushali, Girish | Assigned |          | Bug       |
| Bhanushali, Girish | Assigned | High     | Bug       |
|                    | Resolved |          | Education |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                                           | Description |
|------|---------------------------------------------------------------|-------------|
|      | virtis_main_TrussTest_Main_(1-Sp_Warren_Thru_Truss)_W_GJB.pdf |             |
|      | TrussLLErrorResults-560Beta5().xls                            |             |
|      | TrussLLError-560Beta5.xml                                     |             |

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 8208.16861 | Assigned      | Virtis Truss Analysis Generates Questionable Results |

### Description

FROM:jihnat DATE:10/12/2007 12:39:11 PM  
From Rob Benschopf, TN DOT:

Trying to rate the attached bridge, get this error:

Error converting Virtis/Opis steel cross sections or schedules to 'general' cross sections!  
12:35:53 PM - Line 8885 in source file .\EngineExport.cpp.

4/19/2016 3:20:37 PM

HRS AASHTO

2464

**Complete Issue Information**

Error retrieving data for generated cross section at 121.50 ft  
12:35:53 PM - Line 3215 in source file .\DoGirderMbrAlt.cpp.

Error in DoSuperStructSpngMbrAlt::FillCrossSectionFromXSecInput(!)  
12:35:53 PM - Line 7927 in source file .\DoGirderMbrAlt.cpp.

Cover plate steel material not the same for start and end cross sections of user input range!  
Cannot set the cover plate steel material id for generated cross section at 121.50 ft  
12:35:53 PM - Line 5482 in source file .\DoSuperStructSpngMbrAlt.cpp.

FROM:jihnata DATE:10/12/2007 12:43:34 PM  
On the Bottom Cover Plate of the cross section "D tall", the Relative Position is 2.  
I noticed the bridge will run if I change this to 1.  
The GUI and/or Domain should probably check for this.

FROM:jihnata DATE:2/13/2008 10:51:49 AM  
I've added a check for this to the cross section cover plate window.  
Fixed for version 6.0.0

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8208                                                |
| Subject: Virtis Truss Analysis Generates Questionable Results |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Bhanushali, Girish |                       |
| Submitted By: Armbrecht, Tim        | 10/12/2007 7:03:34 PM |
| Modified By: tarmbrecht             | 9/14/2009 3:25:13 PM  |
| Priority: High                      |                       |
| Category: Education                 |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:tarmbrecht DATE:Friday, October 12, 2007 3:03:34 PM

We're not sure, but this may be related to Incident 8015. The Virtis truss analysis appears to be generating live load values that are approximately double of what they should be.

This conclusion was arrived at by comparison with values listed on the plans for a 12 panel 1-span Warren thru truss designed in 1991. As an additional check, the truss was also modeled in AASHTO PC-BARS, which generated nearly identical live load values as in the plan table. Dead loads and member capacities were in reasonable agreement for all three sources.

Excel spreadsheets with supporting analysis results are attached as well as the Virtis v. 5.6.0 Beta 5 export of the subject truss.

FROM: Girish Bhanushali DATE: 9/11/2009 10:30:45 AM Eastern Daylight Time

Live Load distribution factors in the Virtis Truss command should be entered as Lane. This is indicated in the commnad language manual under command 6.16.

Your truss input file has following values:

LLDistribution  
OneLane 1.7348 1.7348  
MultiLane 3.5873 3.5873

Above values should be entered as:

LLDistribution  
OneLane 0.8674 0.8674 // Lane based  
MultiLane 1.79365 1.79365 // Lane based

After correcting your above input : Rating factors matched with PC-BARS:

As an example following are the New Reported results for :

U5 L6 member

-----

Virtis RF = 3.16  
AASHTO PC\_BARS = 3.159 // from your spreadsheet  
User Calc. = 3.157 // from your spreadsheet

U5 L6 member Live Load = 57.5kips which is consistent in getting 3.16 Rating Factors (based on the RF formula in Method of solution) as shown below:

$$\text{RF} = \frac{978.30 - (1.3 \times 130.85)}{2.17 \times 57.5 \times 1.14 \times 1.79365 \times 1.0} = 3.1677$$

Similarly, member L0L1 (your spreadsheet shows this member as an L0L2):

Virtis RF = 3.91 (w/ Impact = 1.09)  
PC\_Bars = 3.886 (w/ Impact = 1.10)  
User Calc = 3.889  
Plan table - User Calc = 3.286

4/19/2016 3:20:38 PM

HRS AASHTO

2466

**Complete Issue Information**

Live Load actions reported by virtis are correct as they are arriving to the RF matching with all other software reported in spreadsheet.

Results summary Report PDF Attached.

FROM: Tim Armbrecht DATE: 9/14/2009 11:25:12 AM Eastern Daylight Time  
Girish, I can accept this explanation and as long as it's spelled out in the manual, OK.

However, I think it's important to note that there is an inherent inconsistency with the program when we need to use axle (or lane, as you put it) fraction for the truss module, but wheel fraction everywhere else in the program. This is the kind of thing that we should be avoiding in the big picture because it creates confusion among the users, and as a result, the credibility of the developer takes a hit.

I suggest the development team take a look at this and consider making LL distribution input consistent throughout the program.

|                                    |
|------------------------------------|
| Issue ID: 8213                     |
| Subject: Relating to Incident 8206 |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Curtis, Beckie     | 10/16/2007 3:09:21 PM |
| Modified By: administrator       | 6/19/2008 4:36:18 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status   | Priority | Category         |
|-----------------|----------|----------|------------------|
| Lee, Herman     | New      | High     | Unknown          |
| Lathia, Hasmukh | Assigned |          |                  |
| Goodrich, Brian |          |          | Education<br>Bug |
|                 | Resolved |          |                  |
| Goodrich, Brian | Resolved | High     | Bug              |

**Contacts**

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Hasmukh Lathia |                  | HLathia@mbakercorp.com              |              |

4/19/2016 3:20:38 PM

HRS AASHTO

2467

### Complete Issue Information

|               |              |                       |              |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |
|---------------|--------------|-----------------------|--------------|

### Documents

| Name | Resource Identifier                         | Description |
|------|---------------------------------------------|-------------|
|      | TrussAnalProblem-560-Beta5<br>(0900001).xml |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 8228.16841 | Assigned      | Truss analysis problems |

### Description

FROM:rcurtis DATE:Tuesday, October 16, 2007 11:09:22 AM

1. In my bridge I am using 145 plf for the concrete weight, which gives a E of 4.074 ksi. So  
Econc/Esteel = 28.5 / 4.074 = 6.996  
Even in this case Virtis will use n = 6 instead of rounding to 7?

2. In looking at the data, I believe that Virtis is using fpc = 202.5psi for the equation  
 $V_{cw} = (3.5 \cdot \sqrt{f_c}) + 0.3 \cdot f_{pc} \cdot b_w \cdot d + V_p$

Using the other numbers that I find in the Virtis output, I find

Pe=313.1  
A=381.96  
I=52539  
ync=15.451  
ycom=32.487  
enc=10.784  
Mdl=48.2 (k\*ft)=578.4kip\*in

and I calculate

$$f_{pc} = 313.1/381.96 - 313.1 \cdot 10.784 \cdot (32.487 - 15.451) / 52539 + 578.4 \cdot (32.487 - 15.451) / 52539 = -87 \text{ psi}$$

This number matches closely with the result from Brass. However, Virtis has 202.5 psi. Could you tell me how Virtis is calculating this number?

I am including a portion of the Virtis output.

FROM:hlathia DATE:Tuesday, October 16, 2007 8:09:06 PM

Response to item 1:

Concrete weight is hard coded as 150 lbs/cft. Hence Ec value is slightly different. Modular ratio Es/Ec is taken as an integer value and not as nearest whole integer. These are coming from PennDOT's PS3 program. These two values can be revised if necessary.

4/19/2016 3:20:38 PM

HRS AASHTO

2468



**Complete Issue Information**

Response to item 2:

Since composite section N.A. lies in the flange, fpc is calculated at the junction of web and flange  
Use  $y=D-T2-B3=27$

Also, Mdl reported in the detailed output is  $=47.4 (k*ft)=568.8kip*in.$

Using above values, fpc is calculated as

$$fpc = 313.1/381.96 - 313.1*10.784*(27-15.451)/52539 + 568.8*(27-15.451)/52539$$
$$= 0.2025 \text{ ksi} = 202.5 \text{ psi (as reported by Virtis StdEngine)}$$

FROM:rcurtis DATE:Thursday, October 18, 2007 7:47:15 AM

Thanks for the clarification. Is this NA check present in the Brass Engine? If not, will it be added in the future?

FROM:bgoodrich DATE:Monday, October 22, 2007 2:41:53 PM

BRASS Problem Log 757 has already been assigned to calculate fpc based on the location of the N.A.

FROM:bgoodrich DATE:Wednesday, June 04, 2008 10:32:36 PM

The fpc calculation has been corrected in BRASS-GIRDER(STD) Version 6.0.1.

|                                  |
|----------------------------------|
| Issue ID: 8228                   |
| Subject: Truss analysis problems |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Bhanushali, Girish |                        |
| Submitted By: Armbrecht, Tim        | 10/18/2007 10:07:35 PM |
| Modified By: tarmbrecht             | 6/17/2010 4:39:51 PM   |
| Priority: High                      |                        |
| Category: Bug                       |                        |

**History**

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Lee, Herman        | New              | High     | Unknown  |
| Bhanushali, Girish | Assigned         |          | Bug      |
| Bhanushali, Girish | Assigned         | High     | Bug      |
|                    | Investigation    |          |          |
|                    | Not Reproducible |          |          |
|                    | Closed           |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8229.16840 | Resolved      | Error opening Strand Layout window |

### Description

FROM:tarmbrecht DATE:Thursday, October 18, 2007 6:07:35 PM

This model produces reasonable results when section SecL29U29 is entered as AngleBox w/only one flange plate but, when entered as NonDetailed the dead load forces in all of the members are shown in the Rating Results Report as "-1.#J" and, when entered as AngleBox w/multiple wed plates no live load forces are generated. The problem entries is in the attached export under "East Truss" w/the NonDetailed called SecL29U29 and the problem AnglBox called SecL29U29-x. The properly functioning (as far as this issue is concerned) truss is described under "West Truss".

In addition, please verify the impact factors. The impact factors output for members L14U14 & L29U29 is 1.30, while for corresponding member L14pU14p they are 1.09 (compr.)/1.30 (tens.) & for L29pU29p it is 1.09. We think that for L29U29 it should be 1.09 and for L14U14 it should be ~1.14 for both compr. & tens. and for L14pU14p it should be 1.09 for both.

FROM: Girish Bhanushali DATE: 9/14/2009 10:47:30 AM Eastern Daylight Time  
This truss can not be analyzed since it is statically instable. Validation check may not have existed in the past to check for truss stability condition.  
In current version analysis does not run.

FROM: Tim Armbrecht DATE: 9/15/2009 12:09:59 PM Eastern Daylight Time  
This incident is not an issue with us anymore. We can get the truss the run, and Virtis produces acceptable results. Not sure why it's statically unstable on your end. As far as I'm concerned, this incident is resolved. Please go ahead and close it.

FROM: Girish Bhanushali DATE: 9/21/2009 10:13:34 AM Eastern Daylight Time  
Validation message came up while using the attached xml file.

Thanks.

|                                             |
|---------------------------------------------|
| Issue ID: 8229                              |
| Subject: Error opening Strand Layout window |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:20:39 PM

HRS AASHTO

2470

### Complete Issue Information

|                                     |                       |
|-------------------------------------|-----------------------|
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 10/19/2007 6:28:07 PM |
| Modified By: administrator          | 6/19/2008 4:36:17 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

### History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Bhanushali, Girish | Assigned | High     | Unknown<br>Bug |
| Bhanushali, Girish | Assigned | High     | Bug            |
| Ihnat, Joseph      | Resolved |          | Bug - GUI 2    |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                 |
|------------|---------------|-----------------------------------------------------------------------------------------|
| 8234.16835 | Assigned      | Ctrl+Home and Ctrl+End should update the line number in the truss command input window. |

### Description

FROM:jihnat DATE:10/19/2007 2:25:21 PM

With Check-in/Check-out enabled, open PCITrainingBridge3.

Checkout only the structure def, then try to open Stand Layout, get error:

Error occurred while determining the type of beam.

02:24:24 PM - Line 1840 in source file .\SchematicPsCrossSectionView.cpp.

Do the same with PCITrainingBridge1, get a different error:

Unknown exception error occurred.

02:27:09 PM - Line 2645 in source file .\SchematicPsCrossSectionView.cpp.

Works OK if you check out the entire bridge, or if nothing checked out.

4/19/2016 3:20:39 PM

HRS AASHTO

2471

**Complete Issue Information**

I didn't try the other bridges.

FROM:mordoobadi DATE:1/22/2008 9:40:54 AM  
This seems to be related to incident 8182.

FROM:mordoobadi DATE:1/22/2008 9:47:40 AM  
Works fine after fixing incident 8182.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 8234                                                                                   |
| Subject: Ctrl+Home and Ctrl+End should update the line number in the truss command input window. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Lee, Herman      | 10/24/2007 1:27:23 PM |
| Modified By: jihnat            | 4/30/2010 2:22:34 PM  |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 6/25/2009 8:37:08 AM Eastern Daylight Time  
Note to developer: May need to derive a control from CEdit in order to handle these keystrokes.

FROM: Joseph Ihnat DATE: 10/14/2009 1:28:14 PM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 10:22:38 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

4/19/2016 3:20:39 PM

HRS AASHTO

2472

## Complete Issue Information

Issue ID: 8242

Subject: Wrong AASHTO Spec Referenced

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

10/26/2007 3:55:14 PM

Modified By: administrator

6/19/2008 4:36:17 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |

4/19/2016 3:20:39 PM

HRS AASHTO

2473

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
|                  | Closed   |      |         |
| Ihnat, Joseph    | Closed   | High | Unknown |
| Lee, Herman      | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      |         |
|                  |          |      | Bug     |
| Kennelly, Krisha | Assigned | High | Bug     |
|                  | Resolved |      |         |
|                  | Closed   |      |         |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | deck panel.xml      |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 8243.16826 | Assigned      | Deck Panel Error Validation Message |

### Description

FROM:dteal DATE:Friday, October 26, 2007 11:55:14 AM  
Member Alt Description – Engine tab – BRASS LFD  
Miscellaneous tab – middle of the GUI references AASHTO 9.16.2.1.1  
This is the wrong Std Spec  
It should be AASHTO 9.16.1.2

The “Help” is also wrong

Error is pre 5.6, it was wrong in 5.5

FROM:jihnate DATE:11/29/2007 2:47:28 PM  
I'm not able to find this. Please attach a screen shot.

FROM:dteal DATE:Friday, November 30, 2007 3:57:33 PM

FROM:dteal DATE:Friday, November 30, 2007 4:07:31 PM

4/19/2016 3:20:39 PM

HRS AASHTO

2474

**Complete Issue Information**

Screen shot added

FROM:jihnat DATE:12/3/2007 1:46:18 PM

Screen shot says "Should be 9.16.2.1.2", we concur. Probably mistyped above.  
Fixed in version 6.0.0 (Beta Build 1).

FROM:dteal DATE:Tuesday, May 27, 2008 2:29:17 PM  
Accepted in Beta 3

|                                              |
|----------------------------------------------|
| Issue ID: 8243                               |
| Subject: Deck Panel Error Validation Message |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 10/26/2007 8:03:58 PM |
| Modified By: kkennelly            | 7/2/2008 2:13:54 PM   |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, October 26, 2007 4:03:58 PM

I got an error message I don't understand and don't know how to resolve it.  
It is on a concrete prestressed girder system  
When I validate it get the following message:  
"EROR: Deck panel ranges not defined for entire structure definition length"  
Bridge is attached

FROM: Krisha Kennelly DATE: 6/23/2008 3:48:59 PM Eastern Daylight Time

Deck panels are not exposed in Virtis. Somehow the length of the deck panel in your bridge is less

4/19/2016 3:20:40 PM

HRS AASHTO

2475

**Complete Issue Information**

than that of the structure def. It should exactly equal the struct def length. That is why you are getting this message.

Workaround: To fix the data mismatch you can do the following: Open the Structure Definition window, change the length of Span 3 from 82 to 92 feet. Click OK, reopen the window, change the length of Span 3 from 92 back to 82 feet.

I don't know how the bad data got into your bridge but for 6.0 Beta 5 I have added code to the domain to ensure that the deck panel length matches the structure def length when you add a span, delete a span or change a span length. I think that will prevent this problem from occurring in the future. Note that the fix for 6.0 Beta 5 does not fix the data in your bridge, you have to follow the workaround listed above to fix your data.

FROM: Dean Teal DATE: 7/1/2008 3:22:03 PM Eastern Daylight Time  
Accepted in beta 4

|                                                |
|------------------------------------------------|
| Issue ID: 8245                                 |
| Subject: 4 Prestress Input Enhancements Needed |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Duray, Jim    |                        |
| Submitted By: Teal, Dean       | 10/30/2007 11:48:47 AM |
| Modified By: administrator     | 6/19/2008 4:36:16 PM   |
| Priority: High                 |                        |
| Category: Enhancement          |                        |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      |           |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

**Contacts**

4/19/2016 3:20:40 PM

HRS AASHTO

2476



### Complete Issue Information

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8246.16823 | Resolved      | Help for Girder Member Span Length |

### Description

FROM:dteal DATE:Tuesday, October 30, 2007 7:48:48 AM

1. Copy Girders – (not girder lines but girders in the same line)

Many times PS girders are identical like 75-4@90-75

Enter 4 - 90 foot identical girders is a waste of time

2. If we can't copy girders, then at least make it possible to copy the stirrup ranges from one girder to another.

3. Radio button to extend stirrups into the slab. The button could be "Extend All" (new) or Extend Selected" (existing method).

4. Horizontal Shear reinforcement – option to space the horizontal shear bars with the vertical shear bars (usually do it that way).

Issue ID: 8246

Subject: Help for Girder Member Span Length

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Ihnat, Joseph

10/30/2007 12:27:20 PM

Modified By: administrator

6/19/2008 4:36:16 PM

Priority: High

4/19/2016 3:20:40 PM

HRS AASHTO

2477

## Complete Issue Information

Category: Documentation

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          |           |
| Ihnat, Joseph   | Resolved |          | Education |
| Ihnat, Joseph   | Resolved | High     | Education |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00044 - 25125031000B011.xml |             |

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8248.16821 | Resolved      | Error rating exterior grders |

## Description

FROM:jihnat DATE:10/30/2007 8:25:31 AM

The Help for Member window states that the span length for Girder System is the value entered in Structure Def window.

This should be clarified to state it is calculated from that value and the Framing Plan.

The Structure Def span length and Member span length may differ in decimal positions.

FROM:jihnat DATE:10/30/2007 10:11:03 AM

Structure Typical Section numbers are also apparently used in the calculation.

FROM:hlee DATE:11/6/2007 2:04:10 PM

Resolved for 6.0 Release.

**Complete Issue Information**

Issue ID: 8248  
Subject: Error rating exterior grders

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Dombrowski, Chris 10/30/2007 4:45:43 PM  
Modified By: administrator 6/19/2008 4:36:16 PM  
Priority: High  
Category: Education

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:10/30/2007 12:45:25 PM  
Received via email (Bridgewater):

----- Contents of BRASS Error File -----  
File: C:\Program Files\AASHTOWARE\VirtisOpis55\25125031000B011\Span\_1\_(Simple\_Span)  
\Beam\_R\Girder\_1W\BRASS\_LFD\Girder\_1W.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: pan)\Beam\_R\Girder\_1W\BRASS\_LFD\Girder\_1W.DAT

-----  
Error No.: 1103  
Type : Input Error  
Location : prgen.for  
\*\*\*\*ERROR\*\*\*\* A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN  
1 SPAN POINT = 1

4/19/2016 3:20:40 PM

HRS AASHTO

2479

**Complete Issue Information**

RUN STOPPED.  
REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

----- End of Contents of BRASS Error File -----

Input Errors (1103) - Cross-section area less than or equal to zero  
12:46:36 PM - Line 2458 in source file .\DoMemberResults.cpp.

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer  
Phone: (616) 224-1500  
E-mail: dombrowski@williams-works.com  
Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

FROM:jihnat DATE:10/31/2007 8:29:04 AM  
As a workaround, I was able to get the bridge to run by changing the inch Tolerance to 0.01  
The exact cause of the error is still unknown.

FROM:jihnat DATE:10/31/2007 8:56:03 AM  
In the Deck Profile - Deck Concrete tab, the Start and End flange widths needed to be reentered or recomputed.

|                              |
|------------------------------|
| Issue ID: 8249               |
| Subject: Truck train loading |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Triezenberg, Jeff   | 10/31/2007 1:33:45 PM |
| Modified By: administrator        | 6/19/2008 4:36:16 PM  |
| Priority: High                    |                       |
| Category: Education               |                       |

**History**

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Lee, Herman      | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          | Education |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | High     | Education |

**Contacts**

4/19/2016 3:20:41 PM

HRS AASHTO

2480

### Complete Issue Information

| Name             | Company                 | Email 1                       | Phone 1      |
|------------------|-------------------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems             | jstriezenberg@transystems.com | 517-332-9632 |
| Herman Lee       | Michael Baker Jr., Inc. | hlee@mbakercorp.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 8251.16818 | Resolved      | Keyboard entry in Strand Layout window. |

### Description

FROM:jtriezenberg DATE:Wednesday, October 31, 2007 9:33:46 AM

Is there any way to use a train of trucks with a given spacing for the live load? A uniform lane load could be used for this, but the adjacent lanes need to have truck loading, not lane loading. Is there any way to have lane loading in one lane and truck loading in another lane? This is required by the DOT for spans over 200 ft.

Regards,  
Jeff Triezenberg

FROM:kkennelly DATE:11/5/2007 11:43:24 AM  
There is currently no way to specify these items in Virtis.

|                                                  |
|--------------------------------------------------|
| Issue ID: 8251                                   |
| Subject: Keyboard entry in Strand Layout window. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 11/1/2007 1:56:36 PM |
| Modified By: administrator     | 6/19/2008 4:36:16 PM |
| Priority: High                 |                      |

4/19/2016 3:20:41 PM

HRS AASHTO

2481

## Complete Issue Information

Category: Bug - GUI 2

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
| Goodrich, Brian |          |          | Education |
| Lee, Herman     | Resolved |          |           |
| Lee, Herman     | Resolved | High     | Education |

## Contacts

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S05.xml             |             |

## Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8255.16814 | Resolved      | Prestressed beam trouble |

## Description

FROM:hlee DATE:Thursday, November 01, 2007 9:56:46 AM

User can add and remove a strand with the spacebar, but the cg and number of strands will not get updated.

FROM:hlee DATE:Thursday, November 01, 2007 10:53:58 AM

Using keyboard Tab to navigate will turn the checkbox to a button in the Floor System Geometry window.

FROM:jihnat DATE:11/12/2007 3:05:07 PM

First problem is fixed for version 6.0.0 (Alpha Build 5)

Second problem appears to have been fixed in version 5.6.0

4/19/2016 3:20:41 PM

HRS AASHTO

2482

**Complete Issue Information**

|                                   |
|-----------------------------------|
| Issue ID: 8255                    |
| Subject: Prestressed beam trouble |

|                                 |                      |
|---------------------------------|----------------------|
| Folder: /Virtis/Support Center  |                      |
| Primary Contact: Lee, Herman    |                      |
| Submitted By: Triezenberg, Jeff | 11/2/2007 1:21:28 PM |
| Modified By: administrator      | 6/19/2008 4:36:16 PM |
| Priority: High                  |                      |
| Category: Education             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jtriezenberg DATE:Friday, November 02, 2007 9:21:29 AM  
I'm having trouble rating this 2 span spread box beam bridge. Both the BRASS and Virtis engines return ratings of 0.0. The dead loads and live loads seem to be within reasonable limits. The problem may be because there are 2 nodes within 5 cm of each other near the end of span 1. If this is the case, can I eliminate one of those nodes?

See the attached file.

-Jeff Triezenberg

FROM:hlee DATE:11/6/2007 8:53:17 AM  
I reviewed your bridge. Do you have a row of deck reinforcement from start of span 2 with length equal to 6.95 m?  
The question is being referred to Brian Goodrich.

4/19/2016 3:20:41 PM

HRS AASHTO

2483

**Complete Issue Information**

FROM:jtrizeberg DATE:Wednesday, November 07, 2007 7:33:53 AM  
Sorry, that reinforcement is supposed to be 13.9m long. I've changed the length and now I'm getting reasonable results. Thanks.

|                                               |
|-----------------------------------------------|
| Issue ID: 8256                                |
| Subject: Help with the Virtis Program (Hinge) |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 11/2/2007 5:55:00 PM |
| Modified By: administrator     | 6/19/2008 4:36:16 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 8258.16811 | Closed        | Can Not Delete a member Alt |

**Description**

FROM:jihnat DATE:11/2/2007 1:56:06 PM  
Received via email (Bridgeware):

I am trying to do a bridge rating with the Virtis program and I'm having some trouble. It is a 3 span steel structure with a hinge just inside of each pier line on the center span. It is not recognizing the hinge and locates the critical point just inside the hinge with bending being critical. I'm sure that really isn't the case, so I think the Virtis model isn't correct and isn't modeling the hinge correctly. I'm sure its my fault and I'm wondering if you have an example with a hinge in the steel girder that I could use as a guide?

Danton Bean, PE  
Lead Engineer  
PB  
6100 Uptown Blvd. NE, Suite 700  
Albuquerque, NM 87110  
Direct: 505-878-6548

FROM:hlee DATE:11/5/2007 12:18:14 PM  
Reply e-mail:

=====  
=====

Hi Danton,

Attached is a Pin and Hanger Example using the BRASS LFD Engine. Please let me know if you need more information.

Herman Lee

=====  
=====

|                                      |
|--------------------------------------|
| Issue ID: 8258                       |
| Subject: Can Not Delete a member Alt |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 11/5/2007 5:31:59 PM |
| Modified By: administrator          | 6/19/2008 4:36:15 PM |

4/19/2016 3:20:42 PM

**HRS AASHTO**

2485

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8260.16809 | Resolved      | Editable tree items in Spec Check Viewer |

### Description

FROM:dteal DATE:Monday, November 05, 2007 12:31:59 PM  
In the attached bridge  
Second Superstructure Definition "Schedule Based LRFD Design"  
Member "2 1/2" clear to Top Steel"  
First Member Alt (To be Deleted)

When I try to delete this Member Alt I get the following error message  
Unable to save Bridge data!  
11:28:06 AM - Line 884 in source file .\UiBWSDoc.cpp.

FROM:dteal DATE:Monday, December 10, 2007 10:53:34 AM  
I can't do it in version 6.0 beta 1

FROM:mordoobadi DATE:1/22/2008 3:38:26 PM  
There seems to be a kind of dependency between the two member alternatives. If I remove the second member alt then save and then remove the first member alt and save, it saves successfully.

FROM:mordoobadi DATE:1/22/2008 4:40:21 PM  
May be related to the order of primary key columns in abw\_anal\_pt\_reinf\_conc table.

4/19/2016 3:20:42 PM

HRS AASHTO

2486

## Complete Issue Information

The order is:

bridge\_id  
anal\_pt\_id  
struct\_def\_id  
super\_struct\_mbr\_id  
super\_struct\_spng\_mbr\_alt\_id

The anal\_pt\_id must be the last PK column in this table. Note that the Dm code is generated. In the generated code there are functions like FindDeObject() that have arguments which have the same order as the table primary keys. If a function in another generated object calls this FindDeObject with its expected column order that is different, it may cause unexpected issues.

FROM:mordoobadi DATE:1/23/2008 9:18:48 AM  
Follow these steps to duplicate this incident in 6.0.0 Beta 2.

- 1 - Open RCTrainingBridge1
- 2 - Go to 2nd Structure Def "Schedule Based RC Structure" Member G2 Member Alt "Schedule Based Tee" add 10 Points of interest
- 3 - Copy the member alt to same member
- 4 - Go to Member G2 and select the new (copied) member alt as current and existing.
- 5 - Save the bridge and close BWS.
- 6 - Open the bridge and delete the first member alt (2nd Structure Def "Schedule Based RC Structure" Member G2 Member Alt "Schedule Based Tee")
- 7 - Save and get the error:  
Unable to save Bridge data!  
09:37:54 AM - Line 884 in source file .\UiBWSDoc.cpp.

FROM:mordoobadi DATE:1/23/2008 11:10:03 AM  
Duplicate of incident 8382

FROM:mordoobadi DATE:1/23/2008 3:46:21 PM  
Verified that the order of columns (as described above) is not the source of this problem.

FROM:mordoobadi DATE:1/23/2008 3:58:11 PM  
The problem was that in the copied member alt the data in the analysis point development tab were referring to the beam def of the original member alt.

Deleting of the original member alt failed because the copied member alt was referring to some data in it.

FROM:mordoobadi DATE:1/23/2008 4:02:28 PM  
Changed GUI code for copying member alt to copy the beam definition before copying the member alt. Before it copied member alt and then the beam definition.

FROM:mordoobadi DATE:1/23/2008 4:49:02 PM  
The following SQL command will identify the list of problem records in the database.

```
SELECT bridge_id, struct_def_id, super_struct_mbr_id, super_struct_spng_mbr_alt_id, COUNT(*)
FROM abw_anal_pt_conc_reinf APCR
WHERE APCR.spng_mbr_def_id <>
      (SELECT MA.spng_mbr_def_id
```

4/19/2016 3:20:42 PM

HRS AASHTO

2487

**Complete Issue Information**

FROM abw\_super\_struct\_spng\_mbr\_alt MA  
WHERE MA.bridge\_id = APCR.bridge\_id AND MA.struct\_def\_id =  
APCR.struct\_def\_id AND  
MA.super\_struct\_mbr\_id = APCR.super\_struct\_mbr\_id AND  
MA.super\_struct\_spng\_mbr\_alt\_id = APCR.super\_struct\_spng\_mbr\_alt\_id)  
GROUP BY bridge\_id, struct\_def\_id, super\_struct\_mbr\_id, super\_struct\_spng\_mbr\_alt\_id  
ORDER BY bridge\_id, struct\_def\_id, super\_struct\_mbr\_id, super\_struct\_spng\_mbr\_alt\_id;

FROM:mordoobadi DATE:1/24/2008 1:18:56 PM

Here are the results

From: Janette McGrath  
Sent: Thursday, January 24, 2008 9:37 AM  
To: Dean Teal  
Subject: RE: VI Incident 8258

BRIDGE\_ID STRUCT\_DEF\_ID SUPER\_STRUCTURE\_MBR\_ID SUPER\_STRUCTURE\_SPNG\_MBR\_ALT\_ID  
COUNT(\*)

4473 2 1 2 15

FROM:mordoobadi DATE:1/24/2008 1:20:31 PM

The results indicate that the problem is minimal on your database. Only one member alt has this problem. That is a member alt in bridge with BID = 4473. The bridge export that was attached to the incident 8258 seems to be for the same bridge. This problem can be fixed by removing some points of interest from the copied member alt

Schedule Based LRFD Design, 1 Ft Strip / 2 1/2" Clear To TOp Steel / Interior 1' Strip (E) (C)

Please remove the user defined (UD) Points of Interest from the member alt (there are four of them) :

- Span 1 - 46.5000000 - Right - UD
- Span 2 - 1.50000000 - Right - UD
- Span 2 - 62.5000000 - Right - UD
- Span 3 - 1.50000000 - Right - UD

and then save the bridge. Add the above four points of interest manually. Now you should be able to remove the first member alt.

Please note that this will fix bridge with BID = 4473 only. If you copy another schedule based reinforced concrete member alternative that has Points of Interest, the copied member alt will have the same issue. This problem is fixed in 6.0.0 Beta 3. We should probably consider fixing this issue in a 5.6 service pack.

FROM:dteal DATE:Friday, January 25, 2008 7:35:36 AM  
Accepted

4/19/2016 3:20:42 PM

HRS AASHTO

2488

## Complete Issue Information

FROM:mordoobadi DATE:2/25/2008 1:19:22 PM  
Created a new software tool "POI Integrity Scanner" that Reports the list of corrupt records. Data contained in the corrupt rows are part of this report. The tool can also remove the corrupt records.

FROM:mordoobadi DATE:2/28/2008 9:34:54 AM  
This tool should be provided as part of 5.6 Service Pack 1.

FROM:mordoobadi DATE:3/18/2008 9:35:44 AM  
This is fixed in 5.6.1.

Added code to warn the user if there are bridges in the database that have point of interest integrity issues and advise them to run the "POI Integrity Scanner" to review and correct the issues.

Also changed the domain to correct the bad data when a bridge is retrieved from the database.

FROM:xli DATE:4/7/2008 10:00:53 AM  
Tested with 6.0 Beta 3, problem is resolved.  
Used RCTraingingBridge1, followed the steps Mehrdad posted above to duplicate the incident, bridge can be saved with no problem.

|                                                   |
|---------------------------------------------------|
| Issue ID: 8260                                    |
| Subject: Editable tree items in Spec Check Viewer |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: lhnat, Joseph   |                      |
| Submitted By: Ordoobadi, Mehrdad | 11/9/2007 2:25:31 PM |
| Modified By: administrator       | 6/19/2008 4:36:15 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

4/19/2016 3:20:42 PM

HRS AASHTO

2489

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:mordoobadi DATE:11/9/2007 9:25:07 AM

The tree items in the specification check viewer can be edited. If a selected tree item is clicked its label goes to edit mode. The tree items should not be editable.

This happens for both super structure and substructure.

FROM:jihnmat DATE:11/29/2007 12:26:46 PM

Fixed in version 6.0.0

Issue ID: 8265

Subject: Virtis Error

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Dombrowski, Chris

11/12/2007 8:14:52 PM

Modified By: administrator

6/19/2008 4:36:15 PM

Priority: High

Category: Bug

4/19/2016 3:20:42 PM

HRS AASHTO

2490

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          | Education |
|                 | Resolved |          |           |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 8266.16803 | Resolved      | Truss limitations in 5.5 and 5.6 releases |

### Description

FROM:jihnat DATE:11/12/2007 3:17:43 PM  
Received via email (Bridgeware):

I am getting several error messages when I run an analysis using the Virtis Engine. I have just upgraded to Virtis version 5.6. I have attached the .xml file.

Beams A and C seem to run fine.

For Beam B, the analysis runs but when I try to use the Bridge\Report Tool\LFD Analysis Output I get a message that says "An invalid argument was encountered".

For Beams D, E, and F, I get errors when I try to run the analysis. Please see the attached .pdf files for the error text printout.

I tried changing the tolerance for Beams D, E, and F but I still got the same error message.

Can you tell me how to fix this file so that it will run?

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer  
Phone: (616) 224-1500  
E-mail: dombrowski@williams-works.com

4/19/2016 3:20:42 PM

HRS AASHTO

2491

**Complete Issue Information**

Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

FROM:jihnna DATE:11/12/2007 3:57:14 PM  
More from Chris:

I was able to fix the errors for Beams D, E, and F. The span lengths were incorrect for the live load distribution factors, so after those were corrected I was able to run the beams. However, I am still getting the error with the report tool for Beams B and G.

FROM:hlee DATE:11/13/2007 1:58:14 PM  
Content of e-mail reply:

=====  
=====  
For the LFD Analysis Output problem, a workaround for now is to change the ft tolerance to 0.0012. Please make sure you change the focus to other input in the Tolerance tab for updating the meter tolerance before you hit the Save button.  
=====  
=====

Rating Results Summary also has the same defect.  
Resolved for 6.0 Release.

Issue ID: 8266  
Subject: Truss limitations in 5.5 and 5.6 releases

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Obeidat, Khalid 11/13/2007 3:17:44 PM  
Modified By: administrator 6/19/2008 4:36:15 PM  
Priority: High  
Category: Education

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:20:43 PM

HRS AASHTO

2492



## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 8267.16802 | Suspended     | System Defaults Need to be Added |

### Description

FROM:kobeidat DATE:Tuesday, November 13, 2007 10:17:44 AM

Can you list the limitations on truss in releases 5.5 and 5.6? where are those limitations listed? we have 5.5 and we would like to know what are the limitations on use for trusses and what limitations will be eliminated in 5.6  
When will 5.6 be released?

FROM:hlee DATE:11/13/2007 10:45:55 AM

The limitations are listed in the last topic of the Truss Method of Solution Manual.  
The Truss Command Language User Manual and Truss Method of Solution can be accessed from the Virtis Truss window's help topic (Open the Truss window and click F1).

5.6 had been released. We shipped out 5.6 Release CD last Thursday.

Issue ID: 8267

Subject: System Defaults Need to be Added

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

11/13/2007 5:28:47 PM

Modified By: hlee

6/10/2009 2:25:20 PM

4/19/2016 3:20:43 PM

HRS AASHTO

2493

## Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

## History

| Primary Contact | Status   | Priority | Category  |           |
|-----------------|----------|----------|-----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |           |
|                 | Assigned |          |           |           |
|                 | Resolved |          |           | Education |
|                 | Closed   |          |           |           |
| Lee, Herman     | Closed   | High     | Education |           |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 8269.16800 | Closed        | Sharing Parameters and System Defaults |

## Description

FROM:dteal DATE:Tuesday, November 13, 2007 12:28:47 PM

Is it possible to add more choices to the system defaults that currently available in the Config. Browser. At least then if designers don't select the agency suggested engine settings they will be correct by default.

1. Member Alt. Properties In Prestress, LFD and LRFD, be able to set the Prestressing Modeling Method to Centerline of simple span bearing or Centerline of final supports.
2. Member Alt. Properties In Steel, LRFD Misc Tab, the two check boxes at the top – these should be options set by agency defaults too.

FROM:dteal DATE:Tuesday, December 11, 2007 9:19:03 PM  
There may be some more that should be included -

FROM: Herman Lee DATE: 6/10/2009 10:18:48 AM Eastern Daylight Time  
See also 8383.

4/19/2016 3:20:43 PM

HRS AASHTO

2494

**Complete Issue Information**

|                                                 |
|-------------------------------------------------|
| Issue ID: 8269                                  |
| Subject: Sharing Parameters and System Defaults |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 11/13/2007 8:20:04 PM |
| Modified By: administrator     | 6/19/2008 4:36:15 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Tuesday, November 13, 2007 3:20:05 PM

When you have consulting firms working for your state agency – is there anyway to share information found in the Config. Browser used by our DOT. Namely, the Parameters and system Defaults?

FROM:hlee DATE:11/13/2007 3:28:01 PM

Currently, there is no way to export the Parameters and System Defaults in one database and import to another database.

Dean, do you want to change this to an enhancement request?

FROM:dteal DATE:Tuesday, November 13, 2007 4:09:19 PM

Herman - it was just a question  
go ahead and close this incident

4/19/2016 3:20:43 PM

HRS AASHTO

2495

**Complete Issue Information**

FROM:dteal DATE:Tuesday, June 17, 2008 12:14:22 PM

|                                      |
|--------------------------------------|
| Issue ID: 8272                       |
| Subject: DB Migration Wizard message |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 11/14/2007 1:44:28 PM |
| Modified By: administrator          | 6/19/2008 4:36:15 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:20:44 PM

HRS AASHTO

2496

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8277.16792 | Resolved      | Live load distribution factors |

### Description

FROM:jihnat DATE:11/14/2007 8:44:41 AM

Trying to migrate a pre-5.1.1 database with the version 5.6.0 Migration Wizard gives the following message:

-----  
VirtisOpisDBMigrationWizard  
-----

Unable to migrate the database to Virtis/Opis version 5.3.1.

Please migrate your database to Virtis/Opis version 5.1.1,  
then proceed with the migration to version 5.3.1.

-----  
OK  
-----

Message should reflect the current version, not "5.3.1".

FROM:mordoobadi DATE:1/8/2008 4:08:28 PM

Fixed for 6.0.0 Beta 2.

FROM:jihnat DATE:4/14/2008 10:39:19 AM

OK in 6.0.0 Beta 3

Issue ID: 8277

Subject: Live load distribution factors

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Triezenberg, Jeff

11/15/2007 4:33:50 PM

Modified By: administrator

6/19/2008 4:36:14 PM

Priority: High

Category: Bug

### History

4/19/2016 3:20:44 PM

HRS AASHTO

2497

### Complete Issue Information

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
| Lathia, Hasmukh |          |          |           |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name             | Company     | Email 1                       | Phone 1      |
|------------------|-------------|-------------------------------|--------------|
| Hasmukh Lathia   |             | HLathia@mbakercorp.com        |              |
| Jeff Triezenberg | TranSystems | jstriezenberg@transystems.com | 517-332-9632 |

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | 8278_Girder_A_prime_Correct<br>ed.out |             |
|      | 8278_Girder_A_prime_Correct<br>ed.dat |             |
|      | flared girder.xml                     |             |
|      | Girder_A_prime.OUT                    |             |
|      | Girder_A_prime.dat                    |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 8278.16791 | Resolved      | Flared Girder Analysis |

### Description

FROM:jtriezenberg DATE:Thursday, November 15, 2007 11:33:51 AM

Virtis seems to be inconsistent in how it calculates the standard LFD live load distribution factors. Try this:

In the EB superstructure open girder G2

Have Virtis compute the live load from the typical section for G2

Open girder G3

Have Virtis compute the live load from the typical section for G3

Go back to girder G2

4/19/2016 3:20:44 PM

HRS AASHTO

2498

**Complete Issue Information**

Have Virtis compute the live load from the typical section for G2  
See how the factors change.

Is there an explanation or any sample calcs for how Virtis calculates these LFD distribution factors.

Regards,  
Jeff Triezenberg.

FROM:hlee DATE:11/16/2007 10:50:49 AM  
Fixed a bug in variable initialization. This bug is only in the Release version.  
Resolved for 6.0 Release.

Virtis Help has some explanation on how Virtis calculates LFD distribution factors. Open the Live Load Distribution window and click F1 for the Help.

|                                 |
|---------------------------------|
| Issue ID: 8278                  |
| Subject: Flared Girder Analysis |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Lee, Herman    |                       |
| Submitted By: Triezenberg, Jeff | 11/16/2007 1:13:38 PM |
| Modified By: administrator      | 6/19/2008 4:36:14 PM  |
| Priority: High                  |                       |
| Category: Education             |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jtriezenberg DATE:Friday, November 16, 2007 8:13:39 AM  
In analyzing this flared steel bridge, girder G2 of Spans 3 and 4 gives an error.

4/19/2016 3:20:44 PM

HRS AASHTO

2499

**Complete Issue Information**

\*\*\*\* Analysis Engine Errors. \*\*\*\*

Structural Analysis Error (2410) - Input or computational error encountered.  
Internal Error (1) - Invalid index

This error is not very specific and I can't find the cause. This girder is exactly the same as the girders below it.

Thanks,  
Jeff Triezenberg

FROM:hlee DATE:11/21/2007 9:21:27 AM  
Attached Virtis Std Engine input and output files.

FROM:hlathia DATE:Wednesday, November 21, 2007 5:42:19 PM  
The Live Load Distribution Factor Ranges entered for Moment, Shear and Deflections (58.12) are not equal to Span Length (58.13) for span 2. Check if the Export has any thing to do with this. Corrected input and output files are attached..The error message should be more specific and included in the next release of Std Engine.

FROM:jtriezenberg DATE:Monday, November 26, 2007 9:09:19 AM  
The span lengths inputted in the Superstructure Definition are 158 ft and 58.125 ft for a total of 216.125 ft. This length was entered into the Live Load Distribution tab. An error occurs unless the length entered into the Live Load tab is changed to 216.13 ft.

FROM:hlee DATE:11/26/2007 10:05:35 AM  
Although G2 is parallel to the superstructure reference line and all support skews are the same, G2 span lengths are computed based on the framing plan and typical section. The computed span lengths are shown in the Member window. The total length is 216.125094 ft.

Issue ID: 8279  
Subject: Girder analysis consistency

Folder: /Virtis/Support Center  
Primary Contact: Goodrich, Brian  
Submitted By: Triezenberg, Jeff 11/16/2007 2:53:17 PM  
Modified By: administrator 6/19/2008 4:36:14 PM  
Priority: High  
Category: Unknown

**History**

4/19/2016 3:20:44 PM

HRS AASHTO

2500



### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Lee, Herman     | Assigned | High     | Unknown  |
| Ihnat, Joseph   |          |          | Bug      |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | PedestrianLoad_BRASS_LRFD.png |             |
|      | PedestrianLoad_BRASS_LFD.png  |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 8281.16788 | Resolved      | Unable to view Pedestrian Live Load Action tabular report. |

### Description

FROM:jtriezenberg DATE:Friday, November 16, 2007 9:53:17 AM

In the attached bridge, I defined the fascia girder, then copied the definition to the other fascia girder. All inputs are the same for the two girder definitions. The only difference is that a 5 lb/ft load was applied to the second girder. In rating these, the BRASS engine shows the first girder to rate much lower than the second.  $\Phi^*M_n$  is calculated 20% lower although the inputs are the same. Can you provide some insight as to why this should be happening?

Thanks,  
Jeff Triezenberg

FROM:bgoodrich DATE:Monday, November 19, 2007 1:31:49 PM

Due to the skew, the unbraced lengths for the two fascia girders are different. At the interior support (200 POI in BRASS), BRASS determines the section to be non-compact and partially braced, so AASHTO Article 10.48.4 is applicable. Ultimately, BRASS uses AASHTO Equation 10-103c to determine the moment capacity. The intermediate output for the 200 POI can be turned on to see the bracing and compactness checks.

FROM:bgoodrich DATE:Monday, December 10, 2007 4:36:47 PM  
E-mail from Jeff Triezenberg:

4/19/2016 3:20:44 PM

HRS AASHTO

2501

**Complete Issue Information**

Brian,  
This seems to be the only reason that the 2 beams could have different ratings. I agree.

-JT

FROM:bgoodrich DATE:Monday, December 10, 2007 4:37:17 PM  
Closed.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 8281                                                      |
| Subject: Unable to view Pedestrian Live Load Action tabular report. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: lhnat, Joseph |                       |
| Submitted By: Lee, Herman      | 11/19/2007 7:10:53 PM |
| Modified By: administrator     | 6/19/2008 4:36:14 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:hlee DATE:11/19/2007 2:01:48 PM  
To reproduce:

1. Open TrainingBridge1 BWS.
2. Enter 700 lb/ft pedestrian load in G1 Member window.
3. Perform BRASS LFD rating or BRASS LRFD design review.
4. Unable to switch to Pedestrian Load in the tabular report. See attached.

FROM:hlee DATE:11/19/2007 3:58:03 PM  
The resolution for Incident 8118 causes the problem described above.

4/19/2016 3:20:45 PM

HRS AASHTO

2502

## Complete Issue Information

Developer's Note: I don't have this problem if the following 3 lines are commented at the beginning of OnSelchangeComboThree in UiMemberResultsReportView.cpp.

```
CComboBox* pComboBox = (CComboBox*) GetDlgItem(IDC_COMBO3);  
int index = (short) pComboBox->GetItemData(pComboBox->GetCurSel());  
pComboBox->GetLBText(index, m_sComboThreeSelection);
```

FROM:jihnat DATE:11/21/2007 9:32:51 AM  
Backed out 8118.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 8285                                          |
| Subject: Truck Templates and Advanced Tab in Virtis 5.6 |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Lee, Herman    |                       |
| Submitted By: Dombrowski, Chris | 11/20/2007 8:35:31 PM |
| Modified By: administrator      | 6/19/2008 4:36:14 PM  |
| Priority: High                  |                       |
| Category: Bug                   |                       |

### History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Lee, Herman        | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          |          |
| Lee, Herman        | Not Reproducible |          | Bug      |
| Lee, Herman        | Not Reproducible | High     | Bug      |

4/19/2016 3:20:45 PM

HRS AASHTO

2503

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 8286.16783 | Assigned      | Single Lane loaded set in migrated template. |

### Description

FROM:jihnat DATE:11/20/2007 3:39:05 PM  
Received via email (Bridgeware):

I have upgraded to Virtis 5.6. When I try running a truck template containing 10 trucks that was created in Virtis 5.5, the LFD Analysis Output Report only shows 8 trucks. Why doesn't it print the other 2 trucks? Virtis still shows 10 trucks under the Analysis Settings and does not give me any errors when I try to run all 10.

Also, is there a way to get the LFD Analysis Output to show "single lane" instead of "as requested" under the Lane heading? When I selected the single lane loading under the "Advanced" Tab in the Analysis Settings, it does not show up on the output anywhere.

I have attached sample output from a bridge run in 5.6 (S11) and a previous bridge run in 5.5 (R02) using the same template.

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer  
Phone: (616) 224-1500  
E-mail: dombrowski@williams-works.com  
Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

FROM:mordoobadi DATE:12/4/2007 10:34:04 AM  
The analysis settings are the same between 5.5 and 5.6, so the the problem is not migration.

FROM:hlee DATE:12/13/2007 10:10:16 AM  
I'm not able to reproduce what you described. My 5.6 LFD Analysis Output Report shows 10 trucks for the truck template I created in 5.5.  
There is no way to show "single lane" instead of "as requested" under the Lane heading in the LFD Analysis Output Report.

---

4/19/2016 3:20:45 PM

HRS AASHTO

2504

**Complete Issue Information**

Issue ID: 8286

Subject: Single Lane loaded set in migrated template.

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Teal, Dean

11/21/2007 1:47:09 PM

Modified By: mordoobadi

5/18/2010 12:47:09 PM

Priority: High

Category: Bug

**History**

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Lee, Herman        | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          | Bug      |
| Ordoobadi, Mehrdad | Assigned         | High     | Bug      |
|                    | Not Reproducible |          |          |
|                    | Accepted         |          |          |
|                    | Closed           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 8287.16782 | Assigned      | Rating Method changed on migrated template |

**Description**

FROM:jihnat DATE:11/21/2007 8:49:31 AM

This was broken out from 6050. Documents are attached to that incident.

4/19/2016 3:20:45 PM

HRS AASHTO

2505

**Complete Issue Information**

I'm assuming this is an Oracle database

On two of my Vehicle Properties Templates – each one containing 8 trucks – all were all set to single lane loaded (every one of them) –

FROM:mordoobadi DATE:1/16/2008 2:16:12 PM  
The original incident was reported in 5.2.0.

FROM:hlee DATE:1/29/2008 11:59:45 AM  
Although Incident 6050 was reported for 5.2, the comment is for 5.6 release.

FROM: Mehrdad Ordoobadi DATE: 11/12/2009 9:58:09 AM Eastern Standard Time  
Related Incidents: 6050, 4731

FROM: Mehrdad Ordoobadi DATE: 11/12/2009 10:15:35 AM Eastern Standard Time  
I reviewed all of the migration scripts since 4.0 and did not find any change that sets the single lane indicator to true.  
I also verified that the values in the single lane loaded field display correctly in the window (tested in version 6.1).

FROM: Dean Teal DATE: 5/18/2010 8:44:29 AM Eastern Daylight Time  
Please Close  
I verified that we longer have an issue in 6.1 and 6.2 beta 1

|                                                     |
|-----------------------------------------------------|
| Issue ID: 8287                                      |
| Subject: Rating Method changed on migrated template |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 11/21/2007 1:48:41 PM |
| Modified By: mordoobadi             | 5/18/2010 12:48:11 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 8293.16776 | Duplicate     | Virtis 5.6 Report Generator |

**Description**

FROM:jihnat DATE:11/21/2007 8:52:03 AM

This was broken out from 6050. Documents are attached to that incident.  
I'm assuming this is an Oracle database.

In the Analysis setting, my templates used the LFD Rating Method. My Girder Bridges template retained this rating method but my Slab Bridges template got changed to the Member Alt. rating method – I have no idea why??

FROM:mordoobadi DATE:1/16/2008 2:14:54 PM

The original incident was reported in version 5.2.0.

FROM:hlee DATE:1/29/2008 1:03:36 PM

Although Incident 6050 was reported for 5.2, the comment is for 5.6 release.

FROM: Mehrdad Ordoobadi DATE: 11/12/2009 10:34:07 AM Eastern Standard Time

I reviewed all of the migration scripts since 4.0 and did not find any change that changes the existing values in the analysis\_method\_type field in table abw\_analysis\_event\_template.  
They may have changed through the user interface.

FROM: Dean Teal DATE: 5/18/2010 8:45:20 AM Eastern Daylight Time

Please close

I verified that we have no issues in 6.1 and 6.2 beta 1

|                                      |
|--------------------------------------|
| Issue ID: 8293                       |
| Subject: Virtis 5.6 Report Generator |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Ihnat, Joseph    | 11/26/2007 2:10:08 PM |
| Modified By: administrator     | 6/19/2008 4:36:13 PM  |
| Priority: High                 |                       |

4/19/2016 3:20:46 PM

**HRS AASHTO**

2507

## Complete Issue Information

Category: Unknown

## History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Lee, Herman     | New       | High     | Unknown       |
| Goodrich, Brian | Assigned  |          | Bug           |
| Goodrich, Brian | Assigned  | High     | Bug           |
|                 | Suspended |          | Enhancement   |
|                 |           |          | Enhance BRASS |

## Contacts

| Name             | Company          | Email 1                             | Phone 1      |
|------------------|------------------|-------------------------------------|--------------|
| Brian Goodrich   | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Jeff Triezenberg | TranSystems      | jstriezenberg@transystems.<br>com   | 517-332-9632 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S02 Multi Lane.pdf  |             |
|      | S02.xml             |             |
|      | S02 Single Lane.pdf |             |

## Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 8297.16772 | Assigned      | Single Lane/Multi Lane |

## Description

FROM:jihnat DATE:11/26/2007 9:13:30 AM  
Received via email (Bridgeware):

Is there any way to generate an .xml LRFR Analysis Output instead of an LFD Analysis Output in VIRTIS 5.6?

Also, is there a way to view a summary output file that corresponds to the FDOT LRFR Summary Tables (particularly the table for prestressed concrete bridges)? In other words, is it possible to view a summary of the controlling moment and shear DF for each limit state.

4/19/2016 3:20:46 PM

HRS AASHTO

2508



**Complete Issue Information**

<http://www.dot.state.fl.us/structures/CADD/standards/CurrentStandards/LRFRsummaryTables.pdf>

Patrick D. Mulhearn, E.I.  
Structures Design  
Kisinger Campo and Associates, Corp.  
2203 N. Lois Ave., Suite 1200  
Tampa, FL 33607  
Phone: 813-871-5331 ext. 353  
pmulhearn@kisingercampo.com

FROM:hlee DATE:11/26/2007 10:37:01 AM  
Duplicate of Incident 8204.

|                                 |
|---------------------------------|
| Issue ID: 8297                  |
| Subject: Single Lane/Multi Lane |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Triezenberg, Jeff  | 11/26/2007 4:54:17 PM  |
| Modified By: hlee                | 10/16/2011 10:51:30 PM |
| Priority: High                   |                        |
| Category: Enhance BRASS          |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jtriezenberg DATE:Monday, November 26, 2007 11:54:18 AM  
In order to run a single lane of trucks I've checked the single lane box in the advanced button in the Analysis Settings window. The single lane with impact generated here does not match the single lane with impact generated when the box is not checked. This seems to be repeatable for any multi-girder

4/19/2016 3:20:46 PM

HRS AASHTO

2509

## Complete Issue Information

bridge. See the attached output.

Also, is it possible to have the report tool show that the single lane option has been chosen in the Analysis settings? Somebody reviewing the output should be able to know if "As Requested" refers to single lane or multi-lane.

Thanks,  
Jeff Triezenberg

FROM:hlee DATE:11/26/2007 1:44:16 PM  
Looks like only the operating numbers are not matching.

FROM:jtriezenberg DATE:Thursday, December 13, 2007 8:57:18 AM  
Any resolution?

FROM:bgoodrich DATE:Thursday, December 13, 2007 1:23:50 PM  
I'm trying to identify the source of the problem. I don't have a resolution yet.

FROM:bgoodrich DATE:Thursday, December 13, 2007 3:58:40 PM  
I finally determined why there are different results for the various permutations of single/multi lane loaded and with/without impact depending on whether a vehicle is marked as single lane or not. When we implemented these permutations in the BRASS engine to send back to Virtis, we (the Virtis development team) made one major assumption – that the rating factor would vary linearly with the applied live loads. While the live load actions vary linearly with the applied live load, the capacity may not always be constant.

The P/S shear capacity is a function of shear concurrent with maximum moment. The two different runs have different shear capacities and therefore result in different normalized rating factors (with distribution and impact removed). For this structure, a 5% difference in shear capacity is causing this difference. We wouldn't have this problem if all capacities were independent of the load effects.

Jim - What would you like to do about this? Document this limitation in the help? Make multiple runs? Does anyone have other ideas?

FROM:bgoodrich DATE:Friday, December 14, 2007 11:08:11 AM  
E-mail from Jeff Triezenberg:

So, which one has the error? Does the linear interpolation occur when the single lane option is selected or when un-selected?

FROM:bgoodrich DATE:Friday, December 14, 2007 11:08:39 AM  
The rating factors are scaled linearly for both ways. I consider both ways incorrect because the capacity is based on the load effect, which includes one particular distribution factor and impact, i.e., the "As requested" values.

FROM: Herman Lee DATE: 5/6/2010 6:04:55 PM Eastern Daylight Time  
Enhancement to make multiple runs for various permutations of single/multi lane loaded and with/without impact.

4/19/2016 3:20:46 PM

HRS AASHTO

2510

## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 8305                           |
| Subject: Memory leak after LRFR Analysis |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 11/27/2007 6:33:40 PM |
| Modified By: administrator          | 6/19/2008 4:36:12 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 8308.16761 | Resolved      | BRASS Export doesn't need to load Fortran libraries |

## Description

FROM:jihnat DATE:11/27/2007 2:22:40 PM

It appears that CDoSysLrfrLoadGroupList allocates CDmSysLrfrLoadGroupList, not getting cleaned up.

FROM:mordoobadi DATE:1/24/2008 1:25:07 PM

Fixed for 6.0.0 Beta 3. (Project AbxBass)

FROM:mordoobadi DATE:1/24/2008 2:15:37 PM

CDoSysLrfrLoadGroupList::Create was called multiple times. That's the reason the code leaked.

4/19/2016 3:20:47 PM

HRS AASHTO

2511

## Complete Issue Information

Issue ID: 8308

Subject: BRASS Export doesn't need to load Fortran libraries

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Ihnat, Joseph

11/28/2007 7:19:36 PM

Modified By: administrator

6/19/2008 4:36:12 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:11/28/2007 2:21:03 PM

The BRASS DLLs that were shipped with version 5.6 appear to be statically linked.

4/19/2016 3:20:47 PM

HRS AASHTO

2512

**Complete Issue Information**

Brian, please remove the export code that loads the Fortran runtime libraries, then assign back to me so I can remove the libraries from the installation.

FROM: bgoodrich DATE: Thursday, December 13, 2007 12:30:55 PM  
The BRASS export has been modified. The code that loads the Fortran libraries was commented out.

|                                   |
|-----------------------------------|
| Issue ID: 8329                    |
| Subject: VirtisOpis through truss |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 12/7/2007 3:08:43 PM |
| Modified By: xli               | 7/30/2008 1:12:41 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:20:47 PM

HRS AASHTO

2513

### Complete Issue Information

|                    |          |      |           |
|--------------------|----------|------|-----------|
| Bhanushali, Girish | Assigned |      |           |
| Lee, Herman        |          |      |           |
| Duray, Jim         | New      | High | Unknown   |
| Ihnat, Joseph      | Resolved |      | Education |
| Ihnat, Joseph      | Resolved | High | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 8332.16737 | Resolved      | Spec check tool bar button is disabled after unmark read-only |

### Description

FROM:jihnats DATE:12/7/2007 10:11:03 AM

Received via email (Bridgeware):

I have been working on the attached problem of a through truss.

<<00125 - 0119\_BW.xml>>

Please examine the part of the problem called Bridge 119.

When I get the LFD rating for an HS-20 truck, the software gives me an Inventory RF of 0.098, and an Operating RF of 0.164.

It lists the weakest link as L3U3, and the failure mode as axial compression.

A sketch of the member is shown below.

<<AutoCAD Drawing>>

Radius of gyration = square root [moment of inertia/area]=sq rt[102/8.82]=3.4 in.

From the Highway Bridges Manual, the acceptable stress for short columns in compression is:

$$FCR = F_y [1 - (F_y / 472E)(KLC/r)^2] = 30 \text{ksi} [1 - (.0000262)(1.0 \times 411 \text{ in} / 3.4)^2]$$

$$FCR = 18.51 \text{ ksi}$$

$$PCR = .85 \times 181.51 \times 8.82 \text{ sq in} = 139 \text{ kips in compression}$$

I then created a StaadPro model of the truss, and ran two HS-20 trucks across the bridge, using load factors of 1.3 for the dead loads, and 2.171 for the live loads.

4/19/2016 3:20:47 PM

HRS AASHTO

2514

**Complete Issue Information**

The largest compressive load that L3U3 saw was 13.6 kips, considerably less than the previously computed critical load.

How is VirtisOpis calculating the capacity of those members, and where in the output are the capacities listed? At this point, I am unable to verify the VirtisOpis ratings.

Bernie Weinstein, P.E.  
NMDOT - Bridge Design  
505-827-0983  
bernard.weinstein@state.nm.us

FROM:hlee DATE:12/14/2007 1:00:29 PM  
E-mail reply:

=====  
Hi Bernie,

Member capacities are listed in the Rating Results Report and Virtis Truss Method of Solution Manual Section 1.4 describes how Virtis computes those capacities.

I reviewed your truss model and the rating results. There are 2 issues in the truss model.

1. The effective length factor (K) in the DefaultEndConnection command is entered as 0.75. Virtis incorrectly read and set the factor to 0. That's why you don't see any compression capacities in the report. A work around is not to enter the factor in the DefaultEndConnection command. Since the end connection type is Riveted, Virtis will default to 0.75 internally.
2. In the two NonDetailed member cross sections, Izz, Iyy, Szz and Syy are not entered. The moment of inertia is required to correctly computes the compression capacity. Those entries should be required in the NonDetailed member cross section.

Please let me know if you need more information.

Herman Lee

=====

FROM:hlee DATE:12/14/2007 2:07:39 PM  
#1 is fixed.

FROM:hlee DATE:12/17/2007 8:08:48 AM  
#2 is fixed.  
Resolved for 6.0 release.

FROM: Xinmei Li DATE: 7/30/2008 8:52:24 AM Eastern Daylight Time  
Reran the attached bridge with 6.0 release.  
#1 is fixed, L3U3 compressive capacity is 168.4kips, maximum compressive load is 12.56kips.  
#2 is fixed.

Issue ID: 8332  
Subject: Spec check tool bar button is disabled after unmark read-only

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 12/7/2007 7:36:01 PM |
| Modified By: administrator     | 6/19/2008 4:36:11 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
| Duray, Jim      |          |          |          |
| Ihnat, Joseph   |          |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 8339.16730 | Resolved      | Spec check window behavior |

## Description

FROM:hlee DATE:12/7/2007 2:12:08 PM

To reproduce:

1. Use RCTrainingBridge1 Structure Definition #1 G1 member
2. Change the engine to Opis LRFD
3. Mark the member alt read-only
4. Select G1 member alt, perform analysis, and view spec check
5. Unmark read-only
6. Select G1 member alt, spec check tool bar button is disabled

FROM:jihnmat DATE:12/17/2007 10:46:23 AM

4/19/2016 3:20:48 PM

HRS AASHTO

2516



### Complete Issue Information

This is a side effect of the BWS tree being refreshed.  
The same thing happens if you run BRASS LRFD and then checkout the bridge.

|                                     |
|-------------------------------------|
| Issue ID: 8339                      |
| Subject: Spec check window behavior |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Lee, Herman      | 12/10/2007 2:05:52 PM |
| Modified By: administrator     | 6/19/2008 4:36:10 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:12/10/2007 9:03:27 AM

To reproduce:

1. Use RCTrainingBridge1 Structure Definition #1 G1 member
2. Switch engine to Opis LRFD
3. Perform analysis
4. Open Spec Check Detail for Biaxial Flexure at 0.0 ft

4/19/2016 3:20:48 PM

HRS AASHTO

2517

**Complete Issue Information**

- 5. Open "Cross Section A" Cross Sections window
- 6. Hit Apply, Spec Check window will refresh and display Spec Check Detail for Poisson's Ratio

Spec Check window will not refresh if repeating the same step for the Live Load Distribution window.

FROM:jihnata DATE:12/11/2007 1:06:42 PM

The cross section window calls UpdateAllViews, the LLD window does not.  
Not sure if this is a bug or not. The "old" spec check detail behaves the same way.

FROM:jduray DATE:3/11/2008 6:23:43 PM

We should discuss this.

FROM:jihnata DATE:3/12/2008 2:23:08 PM

Changed project to Support Center.  
Spec Check window should not refresh in response to the Cross Section window's Apply.  
Fixed in version 6.0.0

|                                         |
|-----------------------------------------|
| Issue ID: 8356                          |
| Subject: Live Load Distribution Factors |

|                                 |                        |
|---------------------------------|------------------------|
| Folder: /Virtis/Support Center  |                        |
| Primary Contact: Lee, Herman    |                        |
| Submitted By: Triezenberg, Jeff | 12/11/2007 12:49:21 PM |
| Modified By: administrator      | 6/19/2008 4:36:09 PM   |
| Priority: High                  |                        |
| Category: Education             |                        |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name          | Company            | Email 1                        | Phone 1      |
|---------------|--------------------|--------------------------------|--------------|
| Tim Armbrecht | Illinois DOT       | tim.armbrecht@illinois.gov     | 217-782-6266 |
| Ed Baumann    | Purcell Associates | ebaumann@purcellassociates.com | 617-288-0900 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2VehiclesImport.png |             |
|      | 2Vehicles.png       |             |
|      | NSGVehicles.xml     |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8358.16711 | Closed        | problem with NSG vehicle import |

### Description

FROM:jtriezenberg DATE:Tuesday, December 11, 2007 7:49:22 AM

When using the simplified input there are two inputs for shear, shear at the supports and shear along the girder. When using the advanced input, there is only one place to input shear. Does Virtis use this for shear at the supports or shear along the girder?

Thanks,  
Jeff Triezenberg

FROM:hlee DATE:12/11/2007 1:12:06 PM

The advanced method of input allows you to describe the distribution factors in ranges along the length of the member. You could enter a range of shear distribution factor for "shear at support" and another range for "shear along the girder".

Issue ID: 8358

Subject: problem with NSG vehicle import

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrrecht, Tim

12/11/2007 3:36:28 PM

4/19/2016 3:20:49 PM

HRS AASHTO

2519

**Complete Issue Information**

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:36:09 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |

**Contacts**

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 8366.16703 | Suspended     | Registration of dll's and registry information is version dependent. (enhancement) |

**Description**

FROM:tambrecht DATE:Tuesday, December 11, 2007 10:36:29 AM

I just had someone from work email me the attached xml file that contains NSG vehicles. When I tried to import into 5.6, I get this message.

Unable to validate xml file  
 Unable to obtain export file header information  
 Invalid xml file encountered.

FROM:hlee DATE:12/13/2007 9:33:37 AM

I'm not able to reproduce above message. Attached vehicle import screen captures. Please ask the user to try the NSG vehicles import again.

FROM:tambrecht DATE:Thursday, December 13, 2007 4:26:46 PM

My bad - I figured out what I did wrong. Can close this incident.

4/19/2016 3:20:49 PM

HRS AASHTO

2520

## Complete Issue Information

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 8366                                                                              |
| Subject: Registration of dll's and registry information is version dependent. (enhancement) |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Jensen, Paul     | 12/11/2007 4:52:59 PM |
| Modified By: administrator     | 6/19/2008 4:36:08 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:pjensen DATE:Tuesday, December 11, 2007 11:53:39 AM

This is a request to change the process to register the product by version so that a user can run two versions at the same time. I appears to be a registration issue.

thanks

## Complete Issue Information

Issue ID: 8375

Subject: Incorrect end distance checking in the Live Load Distribution window.

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Lee, Herman

12/12/2007 4:08:41 PM

Modified By: administrator

6/19/2008 4:36:07 PM

Priority: High

Category: Education

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Ihnat, Joseph   | Assigned | High     | Bug       |
|                 | Resolved |          | Education |
| Ihnat, Joseph   | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:20:49 PM

HRS AASHTO

2522

**Complete Issue Information**

|                                     |
|-------------------------------------|
| EndDistance.png<br>226771B-2007.xml |
|-------------------------------------|

**Tasks**

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 8379.16690 | Suspended     | Provide another DL distribution method based on percentages of load |

**Description**

FROM:hlee DATE:12/12/2007 10:54:51 AM  
Submitted on behalf of Anna Lager, Haks Engineering.

"Span 1 flared" superstructure definition's G1 member in the attached bridge.

See attached screen capture for the end distance checking.

FROM:jihnate DATE:12/12/2007 1:18:35 PM  
Program is actually working as designed. End Distances within one foot of the end of the beam are flagged for user verification. Many windows have this extra check.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 8379<br>Subject: Provide another DL distribution method based on percentages of load |
|------------------------------------------------------------------------------------------------|

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Duray, Jim       | 12/13/2007 2:41:35 PM |
| Modified By: hlee              | 7/16/2014 2:54:38 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

4/19/2016 3:20:49 PM

HRS AASHTO

2523

### Complete Issue Information

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Lee, Herman     | Suspended | High     | Enhancement    |
| Lee, Herman     | New       | High     | Unknown        |
| Goodrich, Brian | Assigned  |          |                |
|                 |           |          | Bug - Export 1 |
|                 |           |          | Bug - Export 2 |
|                 | Resolved  |          |                |
| Goodrich, Brian | Resolved  | High     | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | virtis.doc            |             |
|      | 00026 - W-007-002.xml |             |
|      | G2-output.txt         |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8381.16688 | Resolved      | Virtis Program - wearing surface density |

### Description

FROM:jduray DATE:12/13/2007 9:43:58 AM

There are numerous requests to handle DL distribution in various ways. A general approach would be to allow the user to input the percentage of the load to be applied to each longitudinal member.

FROM: Jim Duray DATE: 10/23/2009 3:59:16 PM Eastern Daylight Time

FROM: Herman Lee DATE: 7/16/2014 10:49:40 AM Eastern Daylight Time  
Duplicate of Incident 10161.

4/19/2016 3:20:50 PM

HRS AASHTO

2524



## Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 8381                                    |
| Subject: Virtis Program - wearing surface density |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Ihnat, Joseph      | 12/17/2007 8:10:24 PM |
| Modified By: administrator       | 6/19/2008 4:36:07 PM  |
| Priority: High                   |                       |
| Category: Bug - Export 2         |                       |

## History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
|                 | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Suspended          |          |             |
| Duray, Jim      | Suspended          | High     | Enhancement |

## Contacts

| Name          | Company                        | Email 1                   | Phone 1       |
|---------------|--------------------------------|---------------------------|---------------|
| Dean Teal     | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| Todd Thompson | South Dakota DOT               | todd.thompson@state.sd.us | 605-773-3285  |

## Documents

| Name | Resource Identifier | Description                                                       |
|------|---------------------|-------------------------------------------------------------------|
|      |                     | Example for control options for mbr alt and analysis settings.pdf |

## Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 8383.16686 | Suspended     | Engine Tab Options for Opis LRFD Properties |

**Complete Issue Information**

**Description**

FROM:jihnat DATE:12/17/2007 3:14:10 PM  
Received via email (Bridgeware):

I have noticed a problem with the virtis input section that deals with wearing surface density input in the Structural Typical Section. When the density is input in pcf the output results are incorrect. Please inform me of the correct way of inputting the density.

Morteza Najafabadi, P.E.  
Senior Structural Engineer  
AI Engineers  
(860) 635-7740  
mnajafabadi@aiengineers.com

FROM:hlee DATE:12/18/2007 2:00:28 PM  
Received via email (Bridgeware):

I have attached a word document with the wearing surface density field circled. The unit asked for is pcf, but that would produce erroneous result at the output. Please indicate how this field is to be input. Thanks.

Received via email (Bridgeware):

I have included the XML file and the output showing the wearing surface load for girder G2 to be 0.116k/ft. Hand calculation produces a load of 0.231 kip/ft. Please indicate how this number should be input. Thanks.

FROM:bgoodrich DATE:Wednesday, December 19, 2007 3:20:45 PM

The second travelway is not being considered when determining the overall travelway boundaries for BRASS. The export assumed the distance to the right was greater than the distance to the left when it searched for the overall travelway boundaries. The export must be modified to either detect when the right distance is less than the left distance and issue an error message OR the export must be modified to look at both the left and the right distances when determining the overall travelway width for BRASS.

A workaround would be to define Travelway 2 locations with the distance to the left as 0 ft and the distance to the right as 15 ft rather than 15 ft to the left and 0 ft to the right.

FROM:bgoodrich DATE:Tuesday, February 12, 2008 12:36:42 PM

The CBrassCmd::GetTravelWayLocations export function has been revised to check both the left and right edges of each travelway when determining the BRASS travelway. A warning was also added when the left edge is greater than the right edge. Fixed for version 6.0.0.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 8383<br>Subject: Engine Tab Options for Opis LRFD Properties |
|------------------------------------------------------------------------|

|                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Duray, Jim<br>Submitted By: Teal, Dean<br>12/18/2007 12:54:56 PM |
|---------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:20:50 PM

HRS AASHTO

2526

## Complete Issue Information

Modified By: hlee

6/10/2009 2:25:22 PM

Priority: High

Category: Enhancement

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    |          |          | Support  |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 8386.16683 | Assigned      | PS Default Setting in 5.5 Overlooked |

## Description

FROM:dteal DATE:Tuesday, December 18, 2007 7:54:57 AM

When using engines like BRASS or Virtis Std engines for both LFD and LRFD we have engine tabs to set agency preferences. With Opis LRFD engine there are no engine properties settings. I had a short discussion with Jim about this and if I remember correctly he didn't want any options or engine settings. That would restrict designers from using options provided in the LRFD specification or rules set by individual agencies.

In concrete we are missing:

Under the Member Alt Engine Properties:

Load sequence, Element Type, Wheel advancement, POI controls, spec checker output on/off and Load Combination output.

Under the Analysis Event Engine Properties:

Main output options and Intermediate Output Options

4/19/2016 3:20:50 PM

HRS AASHTO

2527

## Complete Issue Information

If this line of thought continues, when we do Prestressed we will be missing the same options as reinforced concrete plus:

Under the Structure Def Engine Properties:  
LL Distribution

Under the Member Alt Engine Properties:  
Prestressed modeling method (very important)

And in steel we will be missing the same options as reinforced concrete plus:

Under the Structure Def Engine Properties:  
LL Distribution

Under the Member Alt Engine Properties:  
The miscellaneous tab that contains info on appendix 6 usage, Plastic Moment analysis and Compactness at the pier

FROM:dteal DATE:Thursday, December 20, 2007 1:33:46 PM

For Concrete:

In the view analysis report, being you can't tell it 10th points or user defined points, you get them all.

Makes digging out values much more difficult.

The same is true with the Report tool LRFD Analysis Output – many more values are printed, filling up the report, being you don't have any control.

FROM:dteal DATE:Thursday, December 20, 2007 2:38:49 PM

User defined points are important to check your steel cutoffs and area of steel required. Tenth points are used for most all other things that refer to points on the bridge (dead load and live load deflections, design of camber boards and haunch boards.

Sure would be nice if they all (user pts and 10th pts) didn't show up in one big ugly report.

FROM:jduray DATE:1/2/2008 8:14:24 AM

What I suggested to the Beta testers is that we try to eliminate the engine data for the AASHTO LRFD engine. I believe our goal should be (we need to discuss this with the TF) to make Opis as easy to use as possible. I think the engine data as it presently exists works well for third-party engines. But I would like to see the Opis UI optimized for use of the AASHTO FE engine and spec-checker. If possible, all data, output and processing control should be out in the open for users to easily see and configure instead of being "hidden" on an engine data tab.

Load Sequence - I don't think BRASS does anything with this for RC since cross section properties do not vary by load type. - Not necessary for Opis.

Element Type - No option for Opis - always uses stepped.

Wheel Advancement increment - BRASS steps the vehicle across the member at a user-defined increment - Opis loads the peaks of the infl line and therefore does not use an increment.

LL Dist - Cross section code - Opis determines this automatically.

POI Control - Opis always generates at tenth points, user-defined points and at concrete and reinforcement change points. We (Baker staff) have discussed the possibility of allowing the user to select points for spec-checking. This would allow for a reduced number of spec-check locations (for

4/19/2016 3:20:50 PM

HRS AASHTO

2528

**Complete Issue Information**

preliminary design). It could also facilitate a design process where the user focuses on experience-based locations first (locations of maximum/minimum actions) for determining reinforcement requirements.

Where would you like to control the POI output - for the mbr alt or for the event?

Spec-check and load combination output - why would the user want to turn these off?

As far as the reporting goes, I would like for the TAG to let us know which reports we are currently producing they would like to be able to disable. We can then decide the best way to handle that. There are some very large files being produced that should be optional. Are there others?

FROM:jduray DATE:1/2/2008 9:04:12 AM  
Attached are two mockups for reporting and control options.

FROM:jduray DATE:1/2/2008 10:16:08 AM

FROM:dteal DATE:Thursday, January 17, 2008 3:38:48 PM  
This looks like the right direction, a pick list  
Will agency controls be located here also (prestressed and steel)

FROM:ttompson DATE:Tuesday, January 22, 2008 9:51:14 AM  
Mr Rober Fulton suggested the following to me:  
"Need to be able to choose shear method for ASD/LFD as well as LRFD."

FROM:jduray DATE:4/15/2008 10:59:52 AM  
Delay for 6.1.

FROM: Herman Lee DATE: 6/10/2009 10:17:08 AM Eastern Daylight Time  
See also 8267.

Issue ID: 8386  
Subject: PS Default Setting in 5.5 Overlooked

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Teal, Dean 12/20/2007 12:53:24 PM  
Modified By: hlee 10/21/2010 10:04:40 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|





**Complete Issue Information**

|             |          |      |               |
|-------------|----------|------|---------------|
| Lee, Herman |          |      |               |
| Lee, Herman | New      | High | Unknown       |
|             | Assigned |      | Documentation |
|             | Resolved |      | Bug           |
| Lee, Herman | Resolved | High | Bug           |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 8406.16663 | Resolved      | Results Graph |

**Description**

FROM:jihnat DATE:12/27/2007 10:28:33 AM

The Startup Guide section on Technical Support lists email, phone number and web site of Cambridge Systematics for Pontis technical support.

FROM: Herman Lee DATE: 11/6/2008 8:27:52 AM Eastern Standard Time  
Resolved for 6.0 Release.

|                        |
|------------------------|
| Issue ID: 8406         |
| Subject: Results Graph |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Maberry, Steven  | 1/9/2008 12:56:46 PM |
| Modified By: administrator     | 6/19/2008 4:36:05 PM |

4/19/2016 3:20:51 PM

HRS AASHTO

2532



**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: Bug  |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00820 - _6758.xml   |             |
|      | 01284 - 72008.xml   |             |
|      | error.pdf           |             |
|      | 5.5 Ratings.png     |             |
|      | 00188 - _9311.xml   |             |
|      | 01330 - 27769.xml   |             |
|      | 00823 - _6842.xml   |             |
|      | 00634 - _9727.xml   |             |

**Tasks**

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 8407.16662 | Resolved      | V5.6 vs V5.5 |

**Description**

FROM:jihnat DATE:1/9/2008 8:00:32 AM  
 Received via email (Bridgeware):

In the HELP for the RESULTS GRAPH, the second paragraph states:

"In the lower left-hand corner of the window, several different types of results are listed. These include moment, shear, and axial, as well as dead load, live load, capacity, and critical. Check the box corresponding with the desired graph."

We have looked for a "Capacity" box to check-can't find it. Could you

4/19/2016 3:20:51 PM

HRS AASHTO

2533

**Complete Issue Information**

enlighten us as to where it is or what we are missing?

Steven Maberry, NMDOT

FROM:hlee DATE:1/9/2008 11:13:28 AM  
Reply e-mail:

It's a mistake in the Help. We'll correct the Help in the next release.

FROM:hlee DATE:2/14/2008 9:53:13 AM  
Updated Virtis/Opis Help. Resolved for 6.0 Release.

|                       |
|-----------------------|
| Issue ID: 8407        |
| Subject: V5.6 vs V5.5 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 1/9/2008 1:05:23 PM  |
| Modified By: administrator     | 6/19/2008 4:36:04 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:1/9/2008 8:08:57 AM  
Received via email (Bridgeware):

We are testing new version 5.6 of virtis. About 50 bridges have been tested in V5.6. There are about 10% bridges did not run in V5.6. I attached v5.5 version inputs for these bridges and the error message from V5.6. Please advise how to fix them. We do not want to open each of them to change the inputs

4/19/2016 3:20:51 PM

HRS AASHTO

2534

**Complete Issue Information**

since we have over 3000 bridges in our data base and 10% is just too much.

Yihong Gao, PE  
Design Engineer  
Bridge Office  
Minnesota Department of Transportation  
Tel: (651)366-4492

FROM:hlee DATE:1/9/2008 1:50:29 PM  
Reply e-mail:

I rated the 6 bridges in 5.5. There are 18 member alternatives, only 5 can be rated in 5.5 (see attached). If you have separate production and testing databases, make sure the tolerances set in System Defaults are the same.

Issue ID: 8414  
Subject: Unable to save Bridge data.

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Lee, Herman 1/14/2008 4:39:37 PM  
Modified By: administrator 6/19/2008 4:36:04 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Unknown  |

## Complete Issue Information

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | VIRTIS Message 1.doc |             |
|      | VIRTIS Message 2.doc |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 8420.16649 | Closed        | Informational messages when attempting to open a structure |

### Description

FROM:hlee DATE:1/14/2008 11:38:10 AM

To reproduce:

1. Open RCTrainingBridge1 BWS.
2. Delete "Schedule Based RC Structure" superstructure definition
3. Get following system error when trying to save the bridge.

Unable to save Bridge data!

11:40:54 AM - Line 884 in source file .\UiBWSDoc.cpp.

FROM:mordoobadi DATE:1/15/2008 10:40:28 AM

It appears that both the superstructure definition 2 "Schedule Based RC Structure" and the bridge alternative are using the same reference line in this bridge.

The save fails because when the function GetModificationStatus() is called it cannot find the bridge alternative's reference line. The reference line was deleted when structure def was deleted.

FROM:mordoobadi DATE:1/15/2008 2:03:57 PM

I investigated the domain source code that's called when a super structure definition and a bridge alternative are created and they both create new Reference Lines (see below)

```
BOOL CDoStructDef::Create(LPDISPATCH pBridgeDisp, LPDISPATCH pParentDisp, CDeStructDef* pDeStructDef)
```

```
{
```

```
...
```

```
    if (IFkRefLineId == 0) // No reference line
```

```
    {
```

```
        if (!(pDeRefLine = pDmRefLine->AddNewDeObject()))
```

```
        {
```

```
            ADD_ERROR(CSysError::system, IDS_ERR_SYS_ADD_NEW_DEOBJECT);
```

```
            return FALSE;
```

```
        }
```

4/19/2016 3:20:52 PM

HRS AASHTO

2536

## Complete Issue Information

```
        if (!pDeRefLine->m_petypLineTypeCom->SetValue(TYP_REFLINE_STRAIGHT))
        {
            ASSERT(FALSE);
            return FALSE;
        }

        if (!pDeStructDef->m_peiFkBridgeRefLineIdCom->SetValue(
            pDeRefLine->m_peiFkBridgeRefLineIdCom->GetValue()))
        {
            return FALSE;
        }
    }
}
```

STDMETHODIMP\_(BOOL) CDoBridgeAlt::XDoDataControlCom::Create(long IObjectId, LPDISPATCH pBridgeDisp, LPDISPATCH pParentDisp)

```
{
...
    if (IFkRefLineId == 0) // No reference line
    {
        if (!(pDeRefLine = pDmRefLine->AddNewDeObject()))
        {
            ADD_ERROR(CSysError::system, IDS_ERR_SYS_ADD_NEW_DEOBJECT);
            return FALSE;
        }

        if (!pDeRefLine->m_petypLineTypeCom->SetValue(TYP_REFLINE_STRAIGHT))
        {
            ASSERT(FALSE);
            return FALSE;
        }

        if (!pThis->m_pData->m_peiFkBridgeRefLineIdCom->SetValue(
            pDeRefLine->m_peiFkBridgeRefLineIdCom->GetValue()))
        {
            return FALSE;
        }
    }
}
```

They do not reuse old/existing reference lines.

FROM:mordoobadi DATE:1/16/2008 9:39:22 AM

The new structure definition was added in version 5.2 in 2004. At that time the new structure definition's reference line ID was 3 and now it is 2. So I think that the data in the database was edited by hand.

FROM:mordoobadi DATE:1/16/2008 11:23:05 AM

I verified that the utility program UpdateReferenceLines.EXE (Migration from 5.2 to 5.3) is not responsible for this.

4/19/2016 3:20:52 PM

HRS AASHTO

2537

## Complete Issue Information

FROM:mordoobadi DATE:1/16/2008 11:57:55 AM

Data in the database updated to use separate reference lines for bridge alt and second struct def.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 8420                                                      |
| Subject: Informational messages when attempting to open a structure |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 1/16/2008 5:10:09 PM |
| Modified By: administrator          | 6/19/2008 4:36:04 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
|                    | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:tarmbrecht DATE:Wednesday, January 16, 2008 12:10:09 PM

This probably can't be duplicated on your end because I can't duplicate it nor can my consultant. However, two guys in my unit are consistently getting these messages (attached) when they try to open structures in Virtis. It doesn't appear to be fatal, as they close out the message and the structure

4/19/2016 3:20:52 PM

HRS AASHTO

2538

### Complete Issue Information

opens. However, would you happen to know why the message may appear? Is there something that needs to be done on my guys' machines?

FROM:mordoobadi DATE:1/16/2008 2:10:04 PM

Ask your system administratot to check their file access permissions on the folder where Virtis/Opis is installed. They should be able to write to that folder.

FROM:tarmbrecht DATE:Wednesday, January 16, 2008 4:36:49 PM

We just figured that out. Thanks. Please close this incident.

|                                   |
|-----------------------------------|
| Issue ID: 8430                    |
| Subject: Report Tool Header Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 1/18/2008 5:48:47 PM |
| Modified By: mordoobadi        | 7/23/2008 8:00:31 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |
|                 | Closed   |          |          |

### Contacts

| Name      | Company         | Email 1        | Phone 1       |
|-----------|-----------------|----------------|---------------|
| Dean Teal | Kansas Dept. of | teal@ksdot.org | (785)291-3001 |

4/19/2016 3:20:52 PM

HRS AASHTO

2539

## Complete Issue Information

Transportation

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8446.16623 | Assigned      | Can't print just the first page |

## Description

FROM:dteal DATE:Friday, January 18, 2008 12:48:47 PM

When you view a spec (for printing) with the report tool it will place a header (title) which includes the location. (.xml attached)

The header indicates the location is 5.7 ft

The actual location is 5.75 ft

Shouldn't the head location be accurate and display 2 decimals?

FROM:jduray DATE:1/23/2008 8:37:27 AM

What are we doing for the BRASS spec-viewer? Does the object we get the location have a string formatted to 1 decimal place or a double?

FROM:jhnat DATE:1/23/2008 11:03:27 AM

This is common code. Same thing happens with BRASS.

Changed project to Support Center and fixed for version 6.0.0 (Beta Build 3).

FROM: Dean Teal DATE: 7/1/2008 3:16:13 PM Eastern Daylight Time

Accepted in Beta 4

Issue ID: 8446

Subject: Can't print just the first page

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Ihnat, Joseph

1/25/2008 2:41:46 PM

Modified By: jhnat

4/30/2010 4:41:52 PM

Priority: High

Category: Bug

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:53 PM

HRS AASHTO

2540



### Complete Issue Information

|             |          |      |           |
|-------------|----------|------|-----------|
| Lee, Herman | New      | High | Unknown   |
| Lee, Herman | New      | High | Unknown   |
|             | Resolved |      | Education |
| Lee, Herman | Resolved | High | Education |

### Contacts

| Name            | Company                         | Email 1                | Phone 1      |
|-----------------|---------------------------------|------------------------|--------------|
| William Metcalf | Louisiana Dept of Trans & Devel | William.Metcalf@la.gov | 225-379-1741 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 061160.xml          |             |

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 8449.16620 | Resolved      | question about NSG |

### Description

FROM:jihnat DATE:1/25/2008 9:39:59 AM  
Reported by George Khury, B&H Engineering.  
This is new to version 5.6, version 5.5 worked OK.

Rate a bridge then view Analysis Results (Rating Results Summary).  
File/Print, then select to print pages 1 to 1. The entire document will print.  
If you select to print pages 2 to 2, only page 2 will print.

BWS View does the same thing.

FROM:jihnat DATE:1/25/2008 3:21:43 PM  
This may be a bug in VS 2005. Opened incident with Microsoft, SRX080125600342.

FROM:jihnat DATE:1/30/2008 7:37:23 AM  
This also affects Schematics.

FROM:jihnat DATE:5/2/2008 2:57:35 PM  
This is supposed to be fixed in VS 2008. There's no hot fix for VS 2005.

FROM: Joseph Ihnat DATE: 11/5/2009 10:45:28 AM Eastern Standard Time  
Working OK in the VS 2008 build of Virtis 6.2 Dev. Build 1.  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:41:58 PM Eastern Daylight Time

4/19/2016 3:20:53 PM

HRS AASHTO

2541

**Complete Issue Information**

Verified - 6.2 alpha 4

|                             |
|-----------------------------|
| Issue ID: 8449              |
| Subject: question about NSG |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Metcalf, William | 1/29/2008 10:17:02 PM |
| Modified By: administrator     | 6/19/2008 4:36:01 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:wmetcalf DATE:Tuesday, January 29, 2008 5:17:02 PM  
 Can a NSG analysis be done for a bridge that does not have parallel bents?

FROM:hlee DATE:1/30/2008 9:03:30 AM  
 Yes

FROM:wmetcalf DATE:Wednesday, January 30, 2008 9:47:27 AM  
 Ok in the following Bridge the when I try to run the structure who's BRIDGE ALTERNATIVE is 'structure 3' corresponding to the SUPERSTRUCTURE DEFINITON 'Girder System 42' (Steel Beam)' I get the following error :

Unable to run FE engine for 3D model.  
 08:51:25 AM - Line 2076 in source file .\AbxVirtisDistFactEngine.cpp.

Error performing finite element analysis!

4/19/2016 3:20:53 PM

HRS AASHTO

2542

**Complete Issue Information**

08:51:25 AM - Line 637 in source file .\AbaFiniteElementEngine.cpp.

\*\*\*FEA ERROR - Modulus of elasticity for beam element 79 is 0..

08:51:25 AM - Line 892 in source file .\ModelBuilder\ModelBuilderFeModel.cpp.

Bah im not sure how to attach the file if you let me know I will put it up

FROM:wmetcalf DATE:Wednesday, January 30, 2008 10:16:38 AM  
Edit I figured it out so i attached the file

FROM:hlee DATE:1/31/2008 10:24:57 AM  
The NSG problem is entered in Incident 8451.

|                      |
|----------------------|
| Issue ID: 8451       |
| Subject: NSG problem |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Metcalf, William    | 1/31/2008 2:48:20 PM |
| Modified By: administrator        | 6/19/2008 4:36:01 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

**Contacts**

| Name            | Company                         | Email 1                | Phone 1      |
|-----------------|---------------------------------|------------------------|--------------|
| William Metcalf | Louisiana Dept of Trans & Devel | William.Metcalf@la.gov | 225-379-1741 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:20:53 PM

**HRS AASHTO**

2543

## Complete Issue Information

|               |                          |
|---------------|--------------------------|
| 061160.xml    |                          |
| VEH.xml       | Vehicle File             |
| B004871.xml   | Bridge File              |
| RR.gif        | Left & Right             |
| RR-C(1).gif   | Centered                 |
| Results#2.gif | Second Structure Results |
| B005318.xml   | Second Structure         |

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 8462.16607 | Resolved      | NSG - Advanced Analysis DF |

## Description

FROM:wmetcalf DATE:Thursday, January 31, 2008 9:48:20 AM

Ok in the following Bridge the when I try to run the structure who's BRIDGE ALTERNATIVE is 'structure 3' corresponding to the SUPERSTRUCTURE DEFINITON 'Girder System 42' (Steel Beam)' I get the following error :

Unable to run FE engine for 3D model.  
08:51:25 AM - Line 2076 in source file .\AbxVirtisDistFactEngine.cpp.

Error performing finite element analysis!  
08:51:25 AM - Line 637 in source file .\AbaFiniteElementEngine.cpp.

\*\*\*FEA ERROR - Modulus of elasticity for beam element 79 is 0..  
08:51:25 AM - Line 892 in source file .\ModelBuilder\ModelBuilderFeModel.cpp.

FROM:kkennelly DATE:1/31/2008 2:24:59 PM

The NSG analysis is not running due to an error in your input. For members G1, G2, and G3 the Deck Profile is only defined for the first 42' but the actual member lengths are 53.67', 49, and 44.33'. The NSG analysis creates shells for the deck but there is no deck defined after 42' for these 3 members so it is failing.

Revise the lengths on the Deck Profile: Deck Concrete tab of these 3 members to match the member lengths and the NSG analysis will run.

Virtis should have a better error message to inform the user of the input problem.

FROM:kkennelly DATE:1/31/2008 2:45:34 PM

|                                     |
|-------------------------------------|
| Issue ID: 8462                      |
| Subject: NSG - Advanced Analysis DF |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:20:54 PM

HRS AASHTO

2544

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Jones, Daniel  | 2/8/2008 9:01:09 PM  |
| Modified By: administrator   | 6/19/2008 4:36:00 PM |
| Priority: High               |                      |
| Category: Education          |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Schematics Error.xml |             |
|      | Schematics Error.JPG |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8466.16603 | Closed        | Error in Schematics – Rebar Dimensioning |

### Description

FROM:rfulton DATE:Friday, February 08, 2008 4:01:09 PM

Not Robert Fulton but Daniel Jones. I ran the NSG advanced analysis on a RCDG that is a symmetrical simple span structure. I placed standard vehicles at both the center position and the left / right combination. I was thinking in each instance the results (DF) would be identical for the outside girders but this was not the case. Thank you.

FROM:hlee DATE:2/14/2008 3:25:23 PM

There is a 30 degrees skew at the start and end of the structure. If you lowered the Vehicle longitudinal increment in the Superstructure window's Vehicle Path tab, G1 and G3 distribution factors will be the

4/19/2016 3:20:54 PM

HRS AASHTO

2545

**Complete Issue Information**

same for centered path. The G1 distribution factor for left path will be equal to the G3 distribution factor for right path and the G3 distribution factor for left path will be equal to the G1 distribution factor for right path.

FROM:rfulton DATE:Friday, February 15, 2008 12:14:25 PM

Yes, I did not notice the structure had a skew. I have submitted another structure that shows the DFs to be off when the span is actually symmetric. The same vehicles were used. Thank you.

FROM:hlee DATE:2/15/2008 1:44:11 PM

The vehicle is loaded on the left edge of the travelway. G1 distribution factor will not be the same as G4 distribution factor.

FROM:rfulton DATE:Tuesday, February 19, 2008 9:44:37 AM

But I have both travelways loaded with the exact same vehicle in each. One is in the "LEFT" position while the other adjacent identical vehicle is positioned as "RIGHT". If I read the definition of LEFT and RIGHT for the vehicle positions in HELP then G1 and G4 have a vehicle the same distance laterally from each girder. Therefore G1 and G4 should have the same distribution factor.

FROM:hlee DATE:2/21/2008 1:59:45 PM

In Virtis Help "Superstructure: Vehicle Path" topic:

=====  
Adjacent Vehicle Path Type

Select the type of the vehicle path for the adjacent vehicle if one exists. If an adjacent vehicle should not be considered concurrently with the non-standard gage vehicle, select "None". The location is specified relative to the NSG vehicle. The adjacent vehicle is placed a passing distance away from the NSG vehicle as shown in the diagrams below.

=====

The location of the adjacent vehicle is relative to the NSG vehicle. In you case, the adjacent vehicle is placed to the right of the NSG vehicle, not the right edge of the travelway.

Issue ID: 8466  
Subject: Error in Schematics – Rebar Dimensioning

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 2/13/2008 5:47:10 PM  
Modified By: administrator 6/19/2008 4:36:00 PM  
Priority: High  
Category: Unknown

**History**

4/19/2016 3:20:54 PM

HRS AASHTO

2546

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name     | Resource Identifier | Description |
|----------|---------------------|-------------|
| Save.png |                     |             |

**Tasks**

| Name       | Current State | Summary                                                                                       |
|------------|---------------|-----------------------------------------------------------------------------------------------|
| 8467.16602 | Resolved      | Save button shouldn't be enabled when Analysis Settings window is opened from Bridge Explorer |

**Description**

FROM:dteal DATE:Wednesday, February 13, 2008 12:47:10 PM

See the attached jpg for a visual description.

When doing a RC slab we extend the bars past centerline of bearing on both ends. The bars start 1' before and extend 1' past the slab CL bearing.

In this case, on the right side we have a bar that starts in span #2 with 12'9" still in span #2, goes through span #3 and ends 1 foot right of the right abutment CL bearing.

The schematic shows the bar in span 2 as 12'9" and does not show any part of the bar in span 3. On the right side the dimension shows it 37' left of the abutment (which is wrong).

If 100% of the bar was in span 3 it would draw it correctly. But when the bar appears in 2 spans, it is drawn incorrectly.

The Reinforcement tab shows the S1 Right bar correctly in the table.

FROM:jihnat DATE:2/15/2008 2:58:52 PM  
Fixed in version 6.0.0

FROM:dteal DATE:Tuesday, May 27, 2008 2:20:27 PM  
Accepted in beta 3

FROM:jihnat DATE:5/27/2008 2:42:40 PM  
Track field Accepted by dteal.

## Complete Issue Information

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 8467                                                                                         |
| Subject: Save button shouldn't be enabled when Analysis Settings window is opened from Bridge Explorer |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 2/14/2008 8:54:57 PM |
| Modified By: administrator     | 6/19/2008 4:36:00 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 8470.16599 | Resolved      | Memory leak in PS Profile schematic |

## Description

FROM:hlee DATE:2/14/2008 3:56:12 PM  
Please see attached.

FROM:jihnat DATE:2/15/2008 11:58:15 AM  
Noticed same behavior with Report Tool, Analysis Events Summary and Access Privileges windows.  
Fixed in version 6.0.0

4/19/2016 3:20:54 PM

HRS AASHTO

2548



## Complete Issue Information

Issue ID: 8470  
Subject: Memory leak in PS Profile schematic

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph                      2/19/2008 12:19:28 PM  
Modified By: administrator                      6/19/2008 4:35:59 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat    DATE:2/19/2008 7:23:42 AM  
Open PCITrainingBridge1, open PS Profile schematic, close Virtis.

4/19/2016 3:20:55 PM

HRS AASHTO

2549

## Complete Issue Information

FROM:jihnat DATE:2/19/2008 3:40:48 PM  
Fixed for version 6.0.0

Issue ID: 8471

Subject: Deck Profile: "Compute from Typ. Section" button not working for Splayed Girders

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Boukamp, Sabine 2/20/2008 8:13:26 PM

Modified By: administrator 6/19/2008 4:35:59 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:20:55 PM

HRS AASHTO

2550

### Complete Issue Information

|               |          |      |         |
|---------------|----------|------|---------|
| Ihnat, Joseph | Assigned |      |         |
|               | Resolved |      |         |
| Duray, Jim    | Assigned | High | Unknown |
| Lee, Herman   |          |      | Bug     |
| Lee, Herman   | Assigned | High | Bug     |
| Li, Xinmei    | Resolved |      |         |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 05734_TNC_SRM.xml   |             |
|      | RC Tee Web.jpg      |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8482.16587 | Assigned      | RC Tee web depth interpretation |

### Description

FROM:sboukamp DATE:Wednesday, February 20, 2008 3:13:26 PM  
During testing Virtis Std. Engine V6.0.0.0, I created a splayed girder bridge to verify that the effective slab width can be entered for rating analysis (VI 6954).

I noticed, that the "Compute from Typ. Section" button displays the "Compute Deck Profile from Structure Typical Section" window, but no action follow it.  
An xml file of a splayed girder bridge example is attached.

FROM:jihnat DATE:2/21/2008 8:37:02 AM  
I think it's because the girder profile is not defined, not because the girders are splayed.  
Need REPORT\_ERROR to be called.

FROM:sboukamp DATE:Thursday, February 21, 2008 10:00:36 AM  
I agree: After entering the Girder Profile, the compute button worked correctly.

FROM:jihnat DATE:2/21/2008 11:20:03 AM  
Changed project to Support Center.  
Added call to REPORT\_ERROR for version 6.0.0

4/19/2016 3:20:55 PM

HRS AASHTO

2551

**Complete Issue Information**

|                                          |
|------------------------------------------|
| Issue ID: 8482                           |
| Subject: RC Tee web depth interpretation |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Maberry, Steven  | 2/29/2008 3:24:24 PM |
| Modified By: hlee              | 5/27/2009 8:41:16 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |
|                 | Closed   |          |          |

**Contacts**

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 8488.16581 | Resolved      | Help Topic Description for a Column |

**Description**

FROM:hlee DATE:2/29/2008 10:19:13 AM  
Submitted on behalf of Steve Maberry, NMDOT. Received via bridgeware e-mail.

A bridge export file (from Virtis Version 5.6.0) and a JPEG illustrate a

4/19/2016 3:20:55 PM

HRS AASHTO

2552

## Complete Issue Information

significant trap.

See model SUPERSTRUCTURE DEFINITIONS ... MEMBERS ... G2 ... Interior Beam ... Girder Profile: Section & Web

Most engineers will generally consider the "Web" of a "Tee" to consist of the length from the bottom of the top flange to the bottom of the beam. BRASS appears to consider that to be the case as well (see JPEG).

Virtis apparently interprets the web depth to be from the TOP of the flange to the bottom of the beam. We found no instructions illustrating this non-standard interpretation.

We find this to be a dangerous invitation to making a modeling blunder.

FROM:jduray DATE:Thursday, March 06, 2008 8:45:53 PM

FROM: Tim Ambrecht DATE: 7/11/2008 10:24:21 AM Eastern Daylight Time  
My consultants have just noticed this as well. This is taken from the email of one of them:

What is measurement that should be entered for "Depth" for RC Tee-beams ("Web" tab under "Girder Profile" for "Reinforced Concrete Tee"). Is it from bottom of beam to bottom of the deck or to the top of the deck?

Suggestion: This should be described in Help and shown in the cross-section diagram under the "Section" tab under Girder Profile. (This is such a simple fix that there should still be time to do this under the v. 6.0 development.)

FROM: Xinmei Li DATE: 11/4/2008 4:09:28 PM Eastern Standard Time  
Help is updated.

FROM: Herman Lee DATE: 5/27/2009 3:49:14 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

Issue ID: 8488

Subject: Help Topic Description for a Column

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:20:56 PM

HRS AASHTO

2553

### Complete Issue Information

|                          |                      |
|--------------------------|----------------------|
| Submitted By: Teal, Dean | 3/4/2008 6:49:00 PM  |
| Modified By: mordoobadi  | 7/23/2008 7:50:45 PM |
| Priority: High           |                      |
| Category: Unknown        |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Goodrich, Brian  | Assigned |          | Bug      |
| Goodrich, Brian  | Assigned | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Beckie Curtis  | Michigan DOT     | CurtisR4@michigan.gov               | 517-322-1186 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | parabolic tee.xml    |             |
|      | vi 8496 in 6 3 1.png |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 8496.16573 | Assigned      | parabolic tee beam in LRFR |

### Description

FROM:dteal DATE:Tuesday, March 04, 2008 1:49:00 PM  
In the Help topic for View/Compute Column Stiffness

There are 2 items:

Depth at Top and Depth at Bottom

They state – Enter the column depth at the top (bottom) of the column.

If using Circular columns, depth is rather ambiguous and confusing.

Shouldn't this state – Enter the column depth or diameter at the top (bottom) of the column.

4/19/2016 3:20:56 PM

HRS AASHTO

2554

## Complete Issue Information

And this is repeated in the Help Topic for Structure Framing Plan Details: Frame Connections Instead of Depth at Top (Bottom) it is called out as Top depth and bottom Depth (not being consistent with the other help topic nomenclature.

This is stated as – Enter the column depth at the top (bottom) of the column

It should be stated as – Enter the column depth or diameter at the top (bottom) of the column

FROM:jihnat DATE:3/5/2008 1:52:17 PM

Changed project to Support Center.

Fixed for version 6.0.0

FROM: Dean Teal DATE: 7/1/2008 3:27:48 PM Eastern Daylight Time

Accepted in beta 4

|                                     |
|-------------------------------------|
| Issue ID: 8496                      |
| Subject: parabolic tee beam in LRFR |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Curtis, Beckie      | 3/7/2008 3:01:14 PM  |
| Modified By: kkennelly            | 5/29/2012 3:57:56 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:rcurtis DATE:Friday, March 07, 2008 10:01:14 AM

The attached structure runs in Brass LFR. However, when trying to compare results to Brass LRFR the following error is generated:

Fatal Error Encountered - Unexpected Termination

4/19/2016 3:20:56 PM

HRS AASHTO

2555

**Complete Issue Information**

Data File: C:\Program Files\AASHTOWARE\Viridis56\11017000S074\Tee\_Beam\G2  
\Interior\_Beam\BRASS\_LRFR\Interior\_Beam.DAT

-----  
Error No.: 1203  
Type : Input Error  
Location : prop\_gen.for (property\_generate)

A web depth on span 2 was computed based on parabolic or elliptical equations, however, it is not equal to the web depth input by the user at this location. This error occurs at the junction of two "continuous" parabolic or elliptical segments.  
Distance = 12.000 (in,mm)  
Web depths (in,mm): Computed = 51.217258 Input = 51.520000

There is no user input at 1-ft in span 2. Not sure what is going wrong here.

FROM: bgoodrich DATE: Wednesday, March 11, 2008 10:20:00 AM  
My preliminary investigation did not turn up any sources for the problem; however, I was able to duplicate the problem.

FROM: Brian Goodrich DATE: 7/16/2008 8:02:37 PM Eastern Daylight Time  
I found a the source of the issue. The span commands generated for span 2 have slight discontinuities in the web depth between the end of one range and the start of the next. BRASS uses these discontinuities to tell when consecutive web ranges belong to the same parabolic web profile. The ranges on each side of 142.4700" is where the first web depth discontinuity occurs (34.3900" vs. 34.3869"). See the block of commands below:

COMMENT Span 2  
SPAN-GENERAL-LENGTH 2, 765.0000  
SPAN-GENERAL-SEGMENT 2, 52.0000, L, 9.0000, 52.0000  
SPAN-GENERAL-SEGMENT 2, 52.0000, P-, 9.4500, 51.9278  
SPAN-GENERAL-SEGMENT 2, 51.9278, P-, 12.0000, 51.5200  
SPAN-GENERAL-SEGMENT 2, 51.5200, P-, 49.9800, 45.7780  
SPAN-GENERAL-SEGMENT 2, 45.7780, P-, 51.2580, 45.5956  
SPAN-GENERAL-SEGMENT 2, 45.5956, P-, 52.5300, 45.4147  
SPAN-GENERAL-SEGMENT 2, 45.4147, P-, 108.0000, 38.2041  
SPAN-GENERAL-SEGMENT 2, 38.2041, P-, 117.2580, 37.1295  
SPAN-GENERAL-SEGMENT 2, 37.1295, P-, 120.0000, 36.8183  
SPAN-GENERAL-SEGMENT 2, 36.8183, P-, 132.0000, 35.4945  
SPAN-GENERAL-SEGMENT 2, 35.4945, P-, 142.4700, 34.3900  
SPAN-GENERAL-SEGMENT 2, 34.3869, P-, 154.5000, 33.1792  
SPAN-GENERAL-SEGMENT 2, 33.1792, P-, 174.0000, 31.3487  
SPAN-GENERAL-SEGMENT 2, 31.3487, P-, 183.0000, 30.5591  
SPAN-GENERAL-SEGMENT 2, 30.5565, P-, 183.2580, 30.5369  
SPAN-GENERAL-SEGMENT 2, 30.5369, P-, 195.0300, 29.5579  
SPAN-GENERAL-SEGMENT 2, 29.5579, P-, 196.5000, 29.4399  
SPAN-GENERAL-SEGMENT 2, 29.4399, P-, 201.0000, 29.0842  
SPAN-GENERAL-SEGMENT 2, 29.0842, P-, 201.2580, 29.0641  
SPAN-GENERAL-SEGMENT 2, 29.0641, P-, 237.0300, 26.5508  
SPAN-GENERAL-SEGMENT 2, 26.5508, P-, 240.0000, 26.3669

4/19/2016 3:20:56 PM

HRS AASHTO

2556



### Complete Issue Information

SPAN-GENERAL-SEGMENT 2, 26.3669, P-, 256.5000, 25.4141  
SPAN-GENERAL-SEGMENT 2, 25.4141, P-, 257.7420, 25.3472  
SPAN-GENERAL-SEGMENT 2, 25.3472, P-, 258.0000, 25.3333  
SPAN-GENERAL-SEGMENT 2, 25.3333, P-, 297.0300, 23.5710  
SPAN-GENERAL-SEGMENT 2, 23.5710, P-, 382.5000, 22.0000

The girder member alternative functions ResetReinfConcChangePointGeneration and GenerateReinfConcCrossSectionInfo are used to obtain the equivalent cross section and range objects, i.e., the web depths. I believe this is where the differences in the web depth are coming from.

FROM: Brian Goodrich DATE: 7/9/2009 9:51:57 AM Mountain Daylight Time  
Krisha - The domain functions are providing the web depths and ranges to the export. Why are the discontinuities showing up at 142.4700" and 183.0000"? Can the domain functions be corrected?

FROM: Krisha Kennelly DATE: 5/29/2012 11:25:45 AM Eastern Daylight Time  
G1 and G2 both run to completion for BRASS LRFR in version 6.3.1. See attached file for rating comparison between BRASS and AASHTO LRFR engines for G2.

|                                               |
|-----------------------------------------------|
| Issue ID: 8499                                |
| Subject: Error message when saving a new file |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Obeidat, Khalid       | 3/12/2008 7:00:50 PM |
| Modified By: administrator          | 6/19/2008 4:35:57 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Unknown  |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

4/19/2016 3:20:56 PM

HRS AASHTO

2557

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10052.xml           |             |
|      | 0161154prop.xml     |             |

### Tasks

| Name       | Current State | Summary                                                                                                         |
|------------|---------------|-----------------------------------------------------------------------------------------------------------------|
| 8503.16566 | Resolved      | Significant Difference between BRASS & Virtis Std. Engine for Negative Moment Capacity in Composite Wide-flange |

### Description

FROM:kobeidat DATE:Wednesday, March 12, 2008 3:03:25 PM

We are obtaining the attached error message when saving a new file. The xml file is included also. Please advise

FROM:mordoobadi DATE:3/13/2008 1:40:14 PM

The error indicates that the Oracle database has limited resources for the Virtis/Opis schema. Please check with your Oracle database administrator and give him the error description:

ORA-01536: space quota exceeded for tablespace 'VRT1'

|                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 8503                                                                                                           |
| Subject: Significant Difference between BRASS & Virtis Std. Engine for Negative Moment Capacity in Composite Wide-flange |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 3/13/2008 9:14:52 PM |
| Modified By: administrator     | 6/19/2008 4:35:57 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:57 PM

HRS AASHTO

2558

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Lee, Herman      | New      | High | Unknown |
| Lee, Herman      | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      | Bug     |
| Kennelly, Krisha | Assigned | High | Bug     |
| Goodrich, Brian  | Resolved |      |         |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 8504.16565 | Assigned      | Superimposed Dead Load Distribution on Non-composite Concrete Beam Superstructures |

### Description

FROM:tarmbrecht DATE:Thursday, March 13, 2008 5:14:52 PM

RE: 0161154prop.xml

For a wide flange member in the subject bridge model, the factored moment strength at a pier support is significantly greater for BRASS than for Virtis Standard Engine and also MDX. The factored strengths at the first (and last) interior supports are as follows:

Virtis Standard Engine – 2060 ft-k

MDX – 2093 ft-k

BRASS – 2364 ft-k

Also, the MDX bending strength at .8 & .9 of the first span is virtually identical to the BRASS value at the pier support (2364 ft-k).

FROM:hlee DATE:3/18/2008 1:33:12 PM

Tim - Are you requesting us to validate the factored moment strength at pier supports for the BRASS, Virtis Std Engine or both engines?

FROM:tarmbrecht DATE:Tuesday, March 18, 2008 4:56:26 PM

4/19/2016 3:20:57 PM

HRS AASHTO

2559

## Complete Issue Information

I guess both, though it appears that BRASS is off in this case, since the other two engines have similar numbers. We'd like to know the reason for the difference. We had reported the BRASS-calculated rating to our Design Section, which indicated that the consultant's design was sufficient (>HS20). However, a subsequent check with MDX showed that the bridge was deficient(<HS20), and a followup check with VSE confirmed MDX's result. This caused some trouble because Design wants to know which answer they should report to the consultant - that it was a good design or a bad design. Note that we did not change the file between the check for BRASS and the check for VSE. Seems like the same file should produce the same (or similar) numbers despite using two different engines.

FROM:hlee DATE:3/19/2008 3:16:18 PM

Brian, please take a look first and assign to me after you are done.

FROM:bgoodrich DATE:Thursday, March 20, 2008 3:27:43 PM

I ran the structure with BRASS LFD and found the moment capacity of 2364 ft-kips over the interior supports. Over the piers, the structure is non-composite. BRASS is calculating the moment capacity as the plastic moment. I think the other engines might be limiting the moment capacity to yield. I do not see any way to limit the moment capacity to the yield moment in BRASS LFD for a non-composite section.

FROM:bgoodrich DATE:Thursday, March 20, 2008 5:46:55 PM

E-mail from Tim:

Brian,

Thanks for the reply. Isn't there a checkbox in Virtis that determines whether the section is compact over the piers? Or isn't that carried over to BRASS?

If it's non-compact, the plastic moment shouldn't be used. The other two programs treat the section as non-compact, can you determine why BRASS thinks it's compact?

Thanks, Tim

FROM:bgoodrich DATE:Thursday, March 20, 2008 5:47:33 PM

I put a point of interest at the first interior support (200 POI to BRASS) and turned on the detailed output for BRASS. The girder at this point is non-composite and passes all the compactness checks. The pier compactness setting you mentioned is only used when the section is composite.

Herman – How is VSE coming up with a non-compact section? One of the bracing checks was close in BRASS. Could there be a difference in moments that is causing the compactness checks to not be satisfied in VSE.

Right Unbraced Length:

Input Parameters:

Lb = 16.437 (ft) M1 = -513.32 (ft-kips) Fy = 50040. (psi)  
ry = 3.258 (in) Mu = 2364.39 (ft-kips) M1/Mu = 0.2171

Calculated Value : Lb/ry = 60.5488

AASHTO Limit : [3.6 - 2.2(M1/Mu)] \* 10E6 / Fy = 62.3975

Return Code : Pass

4/19/2016 3:20:57 PM

HRS AASHTO

2560

**Complete Issue Information**

FROM:hlee DATE:3/21/2008 11:18:23 AM

I reviewed the BRASS and VSE outputs for the first interior support in the "2 - 1st N Int" member. VSE reported the section at Span 2 - 0 ft (BRASS 200 POI) as compact. However, the section at Span 2 - 21.65 ft (BRASS 203 POI) is reported as non-compact due to failed bracing check. Since VSE assumes that the plastic moment capacity can only be used for the calculation of ratings if all sections over the entire length of the member (whether composite or non-composite) qualify as compact sections, the plastic moment capacity is not used at Span 2 - 0 ft. I believe BRASS also reported the section at Span 2 - 21.65 ft as non-compact.

FROM:hlee DATE:4/3/2008 11:25:25 AM

Since there is no more comments on the investigation, the status is changed to Resolved.

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 8504                                                                              |
| Subject: Superimposed Dead Load Distribution on Non-composite Concrete Beam Superstructures |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 3/13/2008 9:18:43 PM |
| Modified By: tarmbrecht          | 6/18/2010 2:06:25 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:tarmbrecht DATE:Thursday, March 13, 2008 5:18:44 PM

It is common bridge design practice to distribute dead loads added after the concrete deck has cured equally to all supporting longitudinally beams. Such practice is permitted by the AASHTO Std. Spec.

4/19/2016 3:20:57 PM

HRS AASHTO

2561

## Complete Issue Information

for Highway Bridges 17th Ed. – 2002, 3.23.2.3.1.1 where it is stated "...Curbs, railings and wearing surface, if placed after the slab has cured, may be distributed equally to all roadway stringers or beams." We refer generically to such load as "Superimposed Dead Loads" or SDL.

For composite deck steel or concrete beam bridges Virtis refers to these SDL's as "Stage 2 Dead Loads". As such their distribution to the beams is appropriately defaulted to be "Uniformly to all girders". Likewise for non-composite steel beam & reinforced concrete bridge models the SDL's, if defined by the user as "Composite (long-term) (Stage 2)", are treated by the Virtis/BRASS analysis as being distributed to all girders. This all is correct.

However, for prestressed concrete box beams and non-composite prestressed I-beams the SDL's cannot be defined to Virtis so that they will be equally distributed to all beams. This capability only exists for beams made composite with the deck slab. Article 3.23.2.3.1.1, referenced above, applies to all bridges with longitudinal beams, not just those that with composite decks.

Therefore, Virtis should be modified so that the SDL's, as referred to in Article 3.23.2.3.1.1, can be equally distributed to all beams in all longitudinal beam & stringer type superstructures just like they already are for steel & reinforced concrete composite & non-composite beams. Whether the resultants from these loads are ultimately reported as Stage 1, 2 or 3 is of no consequence for rating purposes. What is important is that they can be distributed equally to all beams.

FROM: Krisha Kennelly DATE: 6/22/2008 4:33:15 PM Eastern Daylight Time  
The distribution of appurtenances to the beams occurs in the export to each engine.

To test what is being done for the Virtis STD engine I checked BID10, G1. I removed the checkboxes on the Shear Reinf Range window so that the shear reinf doesn't extend into deck thus making the beam noncomposite. The Virtis STD engine distributes the parapets equally to all girders as requested for the Stage 2 DL. So I don't think the export for the Virtis STD engine needs modified.

I tried to do the same for the BRASS LFD engine. The export to the BRASS LFD engine is applying the appurtenance load entirely to the ext beam which is the selection for the Stage 1 DL.

I think this incident is a request to modify the export to BRASS LFD/LRFD. If the appurtenance load is applied to Stage 2 for non-composite PS beams, the export should distribute the load as per the Stage 2 selection in Virtis and then assign it to Stage1.

FROM: Brian Goodrich DATE: 6/23/2008 1:05:45 PM Eastern Daylight Time  
This issue is a duplicate of 7280.

FROM: Brian Goodrich DATE: 8/28/2009 9:24:35 AM Mountain Daylight Time  
Stage 2 deck loads that are to be uniformly distributed are now handled by the BRASS export for non-composite P/S beams in the same manner as was implemented for R/C beams.

FROM: Herman Lee DATE: 5/7/2010 9:42:15 AM Eastern Daylight Time  
Resolved in 6.1 Release.

4/19/2016 3:20:57 PM

HRS AASHTO

2562

## Complete Issue Information

FROM: Tim Armbrecht DATE: 6/18/2010 10:06:25 AM Eastern Daylight Time  
Accepted.

|                                          |
|------------------------------------------|
| Issue ID: 8505                           |
| Subject: Truss Reports Can't be Produced |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 3/13/2008 9:20:45 PM |
| Modified By: administrator     | 6/19/2008 4:35:57 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
| Ihnat, Joseph   | Resolved |          | Education |
| Ihnat, Joseph   | Resolved | High     | Education |

## Contacts

| Name           | Company      | Email 1                                                                    | Phone 1       |
|----------------|--------------|----------------------------------------------------------------------------|---------------|
| Gale Barnhill  | Earth Tech   | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>       | (402)363-9515 |
| Tim Armbrecht  | Illinois DOT | <a href="mailto:tim.armbrecht@illinois.gov">tim.armbrecht@illinois.gov</a> | 217-782-6266  |
| Hasmukh Lathia |              | <a href="mailto:HLathia@mbakercorp.com">HLathia@mbakercorp.com</a>         |               |

## Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | TrussRptProb(0013417).xml |             |

## Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8505.16564 | Resolved      | Truss Reports Can't be Produced |

## Description

FROM:tarmbrecht DATE:Thursday, March 13, 2008 5:20:45 PM

4/19/2016 3:20:57 PM

HRS AASHTO

2563

**Complete Issue Information**

The "Dead Load Analysis Report", "Member Section Property Report" & "Rating Results Report" can not be viewed. After running the analysis they are listed when, under the "Bridge" menu item, "Output..." is selected but when one attempts to open them nothing happens. Refer to v.5.6.0 export file, "TrussRptProb(0013417).xml".

FROM:gbarnhill DATE:Thursday, March 13, 2008 5:23:56 PM  
I have the same problem with the Truss output xml files created. They will not open within Virtis. If I navigate to the folder where they are saved, I can open them from there. I think we had this problem at the User Group meeting and determined there is an add-on for Microsoft Internet Explorer that's needed, but it's never been documented.

FROM:jihnat DATE:3/14/2008 7:13:48 AM  
Internet Explorer may not be the associated application for opening xml files on your system.  
To fix:  
1) Right-click on an xml file in Windows Explorer.  
2) Select Open With - Choose Program  
3) select IE in the list, also check "Always use the selected program..."

FROM:gbarnhill DATE:Friday, March 14, 2008 1:28:59 PM  
OK, that worked, I'm fixed.

FROM:tambrecht DATE:Friday, March 14, 2008 2:13:35 PM  
We're good too - thanks.

FROM:jihnat DATE:3/14/2008 3:18:41 PM  
I've added this to the Virtis/Opis FAQ for version 6.0.0

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 8506                                               |
| Subject: Calculation of Multi-lane LLDF for Multi-beam Decks |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 3/17/2008 9:23:54 PM |
| Modified By: administrator     | 6/19/2008 4:35:57 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Lee, Herman     | Duplicate | High     | Unknown  |

4/19/2016 3:20:57 PM

**HRS AASHTO**

2564



## Complete Issue Information

---

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 00027 - 002550AAA.xml |             |
|      | 002550AAA.pdf         |             |
|      | Truss_1.log           |             |

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 8509.16560 | Resolved      | Deck truss bridge |

### Description

FROM:tarmbrecht DATE:Monday, March 17, 2008 5:23:54 PM

RE: PSMultibmLLDFCalc-560B5().xml

In the referenced bridge model, a 1-span multi-beam PS concrete box beam structure with split roadways of 36'-9" (WB) and 27'-1" (EB) (5-lanes total), it appears that Virtis is calculating the multi-lane live-load distribution factor as if it only had two lanes.

The user calculated values, from AASHTO Std. Specs, 17th Ed., for 5, 2 & 1 lanes, respectively are 0.5464, 0.5313 & 0.5265. The Virtis computed values are 0.5315 for multi-lane and 0.5237 for single lane. These values correspond to the user calculated values for 2 lanes and 1 lane. The multi-lane value should be for 5 lanes however.

FROM:hlee DATE:3/18/2008 3:13:44 PM

I think this is a duplicate of Incident 8439. We will use the attached bridge to test the fix for 8439.

Issue ID: 8509

Subject: Deck truss bridge

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

4/19/2016 3:20:58 PM

HRS AASHTO

2565

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Ihnat, Joseph | 3/18/2008 7:34:09 PM |
| Modified By: administrator  | 6/19/2008 4:35:56 PM |
| Priority: High              |                      |
| Category: Education         |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Ihnat, Joseph    | Resolved |          |          |
|                  | Closed   |          |          |
| Ihnat, Joseph    | Closed   | High     | Unknown  |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Incorrect Parameter.JPG |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 8511.16558 | Closed        | Fatigue Truck and Incorrect Parameter |

### Description

FROM:jihnat DATE:3/18/2008 3:38:19 PM  
Received via email (Bridgeware):

I have a deck truss bridge. The typ. sec. is attached along with the log file for the truss analysis. The error message says "couldn't find panel point at floorbeam location 0.00." There is no panel point at that location since the floorbeam is cantilevered. Am I missing something??

Thanks for your assistance

4/19/2016 3:20:58 PM

HRS AASHTO

2566

**Complete Issue Information**

Frederick E. Swindle, P.E.  
\*\*\*\*\*Senior Structural Engineer  
thompsonENGINEERING,INC.  
2970 Cottage Hill Road, Suite 190  
Mobile, Alabama 36606  
251.378.6120

FROM:hlee DATE:3/19/2008 1:47:43 PM  
Reply e-mail:

Virtis assumes each floorbeam location has a corresponding panel point. A work around is to delete Bm1 and Bm31 in the Floorbeam Member Locations window. Please make sure all applied dead loads to the truss are what you expected in the Dead Load Analysis Report.

|                                                |
|------------------------------------------------|
| Issue ID: 8511                                 |
| Subject: Fatigue Truck and Incorrect Parameter |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 3/19/2008 2:59:48 PM |
| Modified By: administrator     | 6/19/2008 4:35:56 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Wednesday, March 19, 2008 10:59:48 AM  
File used – TrainingBridge1  
LRFD Analysis with Fatigue Truck

**Complete Issue Information**

In 5.6 I get an error message, (attached) I don't get the error in 6.0 beta  
Has this been this way for a while and we missed it or did something change

Using the HL93 Design Review Template  
After the analysis go to Analysis Results, Live Load Actions and select the LRFD fatigue Truck (US)  
You get an error message that states "The Parameter is incorrect"

I uninstalled and reinstalled 5.6, I used the provided database and TrainingBridge1 and still get the error.  
I tried the same thing in 6.0 beta and don't get the error??

FROM:jihnat DATE:3/27/2008 9:20:50 AM  
Changed project to Support Center.  
This looks like 8281. A bug was introduced in version 5.6 and is fixed in version 6.0

FROM:dteal DATE:Thursday, March 27, 2008 11:21:24 AM  
VI 8281 is about pedestrian loads - I dont' get the relationship??

FROM:jihnat DATE:3/27/2008 12:47:51 PM  
It's the same window and the same error message (just a different way to produce it).  
I've stepped through the code and your error is in the same code.

FROM:dteal DATE:Tuesday, May 27, 2008 2:11:15 PM

FROM:jihnat DATE:5/27/2008 2:41:57 PM  
Track field Accepted by dteal.

Issue ID: 8514  
Subject: Brass/Virtis results do not agree

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Curtis, Beckie 3/19/2008 5:34:25 PM  
Modified By: administrator 6/19/2008 4:35:56 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |

4/19/2016 3:20:59 PM

HRS AASHTO

2568

### Complete Issue Information

|             |          |      |     |
|-------------|----------|------|-----|
| Lee, Herman | Resolved | High | Bug |
|-------------|----------|------|-----|

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | lfr analysis.xml    |             |

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 8519.16550 | Resolved      | LRFR Analysis Error |

### Description

FROM:rcurtis DATE:Wednesday, March 19, 2008 1:34:25 PM

In the attached bridge, please see Superstructure "NB Spans 35 to 37". There appear to be two different issues.

1. Shear is controlling in the Virtis engine for beams M, J, and L. Looking at the output, it appears Virtis is treating Span 3 at 0% as being unstiffened even though stiffeners are provided in the input. This is not a simple end and so Eq. 10-119 should not apply.

2. Top Steel is controlling at span 2 at 40% for beams K, MA, and N. It seems that Virtis is treating these sections as non-composite. I generated the deck section using the "Compute from Typical Section" Button, and I have shear connectors added at this location.

FROM:rcurtis DATE:Wednesday, March 19, 2008 1:45:16 PM

Also, I tried to modify the deck input to be one section. When I tried to run Virtis engine next I got this error:

Internal Errors (1) - Invalid index

Structural Analysis Errors (2410) - Input or computational error encountered.

Input Errors (1135) - Girder member properties entered out of sequence.

FROM:hlee DATE:3/26/2008 11:03:27 AM

Both #1 and Input Errors are defects in the 5.6 release. For #2, Virtis Std Engine is treating the section at 40% of Span 2 as composite.

Resolved for 6.0 Release.

|                              |
|------------------------------|
| Issue ID: 8519               |
| Subject: LRFR Analysis Error |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:20:59 PM

HRS AASHTO

2569

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Curtis, Beckie | 3/21/2008 2:47:48 PM |
| Modified By: administrator   | 6/19/2008 4:35:56 PM |
| Priority: High               |                      |
| Category: Education          |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Lee, Herman     | Duplicate | High     | Unknown  |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description                 |
|------|---------------------|-----------------------------|
|      |                     | error generating report.xml |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 8526.16543 | Duplicate     | Error in report table |

### Description

FROM:rcurtis DATE:Friday, March 21, 2008 10:47:48 AM

In trying to run G2 of the attached structure using BRASS LRFR, I get the following error:

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\Virtis56\41141132000S060\S06-41132\G2  
\Interior\_Girder\BRASS\_LRFR\Interior\_Girder.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program Files\AASHTOWARE\Virtis56\41141132000S060\S06-41132\G2  
\Interior\_Girder\BRASS\_LRFR\Interior\_Girder.DAT

-----  
Error No.: 1301  
Type : Input Error  
Location : posgen.for (posgen)

4/19/2016 3:20:59 PM

HRS AASHTO

2570

**Complete Issue Information**

\*\*\*\* ERROR \*\*\*\*

Increment of load movement across structure is too small. Decrease the Wheel Advancement Denominator (wheel\_adv) for influence functions, see Parameter 7 on LOAD-LIVE-CONTROL command. (wheel\_adv = 100.00)

----- End of Contents of BRASS Error File -----

FROM:hlee DATE:3/21/2008 2:39:40 PM

I'm able to run G2 after I decreased the Wheel advancement increment from 100 to 80.

To change the Wheel advancement increment:

1. Open "Interior Girder" Member Alternative window.
2. Select the Engine tab.
3. Select BRASS LRFR in the Configure engine properties box and click on the Properties button.
4. Change the Wheel advancement increment to a smaller number and click on the OK button to save the changes.

Following is copied from BRASS help on Wheel advancement increment:

Parameter 7 is used to move the unit load across the bridge spans. It computes the length to move the load as 1/100 of the length of the shortest span. If the shortest span is very small, problems could arise. For example, if the shortest span is 12 feet and the Advancement Denominator is 100, BRASS marches the truck across ALL top spans at an interval of 12/100 - 0.12 feet = 1.44 inches. Because BRASS is a finite element analysis engine, as the elements get smaller and smaller (i.e. 0.12 feet), the elements themselves become infinitely rigid. Thus, if a short span is input, the user needs to reduce the Wheel Advancement Denominator.

|                                |
|--------------------------------|
| Issue ID: 8526                 |
| Subject: Error in report table |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 3/27/2008 2:15:23 PM |
| Modified By: administrator     | 6/19/2008 4:35:55 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:20:59 PM

HRS AASHTO

2571

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | xml error.xml       |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 8527.16542 | Resolved      | XML not Displaying for NSG |

### Description

FROM:rcurtis DATE:Thursday, March 27, 2008 10:15:23 AM

In the attached structure, I get the error "The parameter is incorrect" when I try to view the live load actions of the last live load in the list in the report table. I have run it a couple of times with different live loads, and it didn't matter.

FROM:jihnat DATE:3/27/2008 11:14:27 AM

Same as 8511 and 8281. Fixed for version 6.0

Issue ID: 8527

Subject: XML not Displaying for NSG

4/19/2016 3:21:00 PM

HRS AASHTO

2572



**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 3/27/2008 3:17:34 PM |
| Modified By: hlee              | 7/2/2008 2:15:42 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name        | Company | Email 1             | Phone 1 |
|-------------|---------|---------------------|---------|
| Eric Lantzy | NYS DOT | unknown@unknown.com |         |

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | VO file for Bridge 119.xml |             |

**Tasks**

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 8539.16530 | Resolved      | Cable members |

**Description**

FROM:dteal DATE:Thursday, March 27, 2008 11:17:36 AM

For the attached bridge, structure #3, which is a 3 span prestressed with 6 girder lines.

Ran a NGS analysis to completeing (15 minutes on my pc)

When I select to view the Advanced Rating Results Summary Report I get the error you see below. I tried this on 2 different pc's and got the same message. I am able to do NSG analysis on other structures and view the report – just not from this bridge (unit #3)

Copy of error message:

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

4/19/2016 3:21:00 PM

HRS AASHTO

2573

**Complete Issue Information**

Whitespace is not allowed at this location. Error processing resource 'file:///C:/Program Files/AASHTOWARE/VirtisOpis56/058...

<Bridge>WWCC, PBMC Sk 0 , US-36 HWY over Big Blue River & </Bridge>

FROM:dteal DATE:Thursday, March 27, 2008 12:12:12 PM  
Same error for Unit #2 in the attached bridge

FROM:jihnate DATE:3/27/2008 1:40:36 PM  
A workaround is to edit the xml file and change the "&" (there's only one) to "&amp;"  
The ampersand in the bridge name is causing this. However, the other xml reports are already being generated with "&amp;" instead of "&"

FROM:dteal DATE:Thursday, March 27, 2008 3:56:13 PM  
In researching what character NOT to use I came up with the following - do you agree that these can't be used?

**Special Characters and XML Strings**

XML has a special set of characters that cannot be used in normal XML strings. These characters are:

1. & - &amp;
2. < - &lt;
3. > - &gt;
4. " - &quot;
5. ' - &#39;

FROM:hlee DATE:4/2/2008 3:01:06 PM  
The bridge name should be tagged as CDATA so the XML parser will not process the bridge name.  
The Advanced Rating Results Summary Report will display the special characters listed above.  
Resolved for 6.0 Release.

FROM:dteal DATE:Tuesday, June 17, 2008 11:47:10 AM  
Should this be tested in beta 4?

FROM:hlee DATE:6/17/2008 2:13:34 PM  
Yes, please.

FROM: Dean Teal DATE: 7/1/2008 3:27:14 PM Eastern Daylight Time  
Accepted in beta 4

Issue ID: 8539  
Subject: Cable members

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Ihnate, Joseph 4/3/2008 11:29:44 AM  
Modified By: administrator 6/19/2008 4:35:54 PM

4/19/2016 3:21:00 PM

**HRS AASHTO**

2574

## Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

## History

| Primary Contact | Status    | Priority | Category                     |
|-----------------|-----------|----------|------------------------------|
| Lee, Herman     | New       | High     | Unknown                      |
| Goodrich, Brian | Assigned  |          | Enhancement                  |
| Goodrich, Brian | Assigned  | High     | Enhancement<br>Enhance BRASS |
| Duray, Jim      | Suspended |          |                              |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FB_Vert_LEG.zip     |             |

## Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 8548.16521 | Assigned      | Possible Virtis 5.6 bug |

## Description

FROM:jihnat DATE:4/3/2008 7:33:39 AM  
Received via email (Bridgeware):

I have attached my VO file for Bridge 119.  
In attempting to rate the bridge, I find that the rating is extremely low, because of compressive failure of some of the minor members.

Can I use the following command to state that the minor members cannot take compression?

MemberOfInterest  
L3U4 L4U4 U4L5

4/19/2016 3:21:00 PM

HRS AASHTO

2575

**Complete Issue Information**

OverrideCapacity  
# 0 #

Also, where in the truss command language, should this be inserted?

Bernie Weinstein, P.E.  
NMDOT - Bridge Design  
505-827-0983  
bernard.weinstein@state.nm.us

FROM:jduray DATE:4/3/2008 8:37:37 AM  
No, the current release does not handle tension-only members. We are working on an enhancement that adds support for tension-only members.

|                                  |
|----------------------------------|
| Issue ID: 8548                   |
| Subject: Possible Virtis 5.6 bug |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Najjar, Walid    | 4/4/2008 2:50:04 PM  |
| Modified By: hlee              | 6/18/2010 4:27:52 PM |
| Priority: High                 |                      |
| Category: Enhance BRASS        |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:mordoobadi DATE:4/4/2008 10:52:59 AM  
e-mail sent by Frank DeOrtentiis  
>>> "Frank DeOrtentiis" <fdeortentiis@chashsells.com> 4/4/2008 10:09 AM >>>  
I am working in Virtis 5.6 doing load ratings for the NYSDOT and I think I may have found an error that

4/19/2016 3:21:00 PM

HRS AASHTO

2576

## Complete Issue Information

I was hoping you could investigate and confirm.

The issue occurs on a Girder/FB/stringer superstructure, although I cannot say if it is limited only to this configuration, and involved the built-up floorbeams.

The floorbeams have section losses to the bottom angles, both the horizontal and vertical legs; there are no cover plates on the bottom angles of this built-up member. The issue is when inputting the section losses that were measured in the field, I noticed that the Vertical Leg % Thickness loss does not affect the load rating at all. I even tried excessive numbers like 95% thickness loss to the vertical legs and the number did not change from As-Built.

I did some more testing and noticed that the "% Width/Depth" loss for vertical legs did appear to affect the load rating properly. The horizontal leg losses also worked correctly for both % Thickness and width. Therefore, so I believe this is isolated to only the Vertical Leg % Thickness loss.

I am unaware of any known issues for built-up floorbeams regarding the section losses, but let me know if you already know about this issue.

This potential incident would significantly affects a number of bridges that are currently posted, and may require a lowering of that posting, so I would appreciate it if you could get back to me as soon as you can.

If you would like me to send you the Virtis file I am using let me know. I can be reached at this e-mail address or by phone at 914-747-1120.

Thanks,

Frank DeOrtentiis

FROM:hlee DATE:4/4/2008 2:44:15 PM  
Attached Virtis file.

Bridgware e-mail from Frank DeOrtentiis:  
I believe the condition I described happens on every floorbeam.

FROM:bgoodrich DATE:Monday, April 07, 2008 2:12:23 PM  
BRASS only allow input of one thickness for angles, which is used for both the horizontal and vertical legs. Therefore, any loss to the vertical leg thickness cannot be exported to the BRASS engine.  
Options for addressing this issue include:  
1. Convert built-up beam to equivalent plate girder and export to BRASS.  
2. Request that BRASS be revised to allow different thicknesses for angle legs.

FROM: Herman Lee DATE: 7/29/2008 10:20:12 AM Eastern Daylight Time  
The TAG would like to request that BRASS be revised to allow different thicknesses for angle legs.

FROM: Brian Goodrich DATE: 8/18/2008 9:39:49 AM Mountain Daylight Time  
An e-mail from Jim 7/31/08 indicated that he will check with the Task Force again before having me draft the request letter.

4/19/2016 3:21:00 PM

HRS AASHTO

2577

**Complete Issue Information**

FROM: Brian Goodrich DATE: 3/12/2009 8:51:47 AM Mountain Daylight Time  
Has the TF made a decision. Should I draft the letter to WYDOT?

|                                             |
|---------------------------------------------|
| Issue ID: 8553                              |
| Subject: Bridge Exchange Help Clarification |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Lee, Herman                    |
| Submitted By: Ihnat, Joseph 4/7/2008 1:54:43 PM |
| Modified By: administrator 6/19/2008 4:35:52 PM |
| Priority: High                                  |
| Category: Bug                                   |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Kennelly, Krisha   |          |          |          |
| Lee, Herman        |          |          |          |
|                    | Resolved |          | Bug      |
| Lee, Herman        | Resolved | High     | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8553.16516 | Resolved      | Bridge Exchange Help Clarification |

**Description**

FROM:jihnat DATE:4/7/2008 9:57:53 AM  
Bridge Exchange/Export requires that the user have Check Out Authorization for the bridge, but this is not mentioned in the Help.

4/19/2016 3:21:01 PM

HRS AASHTO

2578

**Complete Issue Information**

FROM:mordoobadi DATE:4/8/2008 10:07:38 AM  
Krisha, please add a sentence to the help indicating that Bridge Exchange requires Check-out Authorization for the bridges that are being exchanged.

FROM:kkennelly DATE:4/8/2008 11:43:16 AM  
Herman please add this when you are working in the Help. Thanks.

FROM:hlee DATE:4/23/2008 2:38:09 PM  
Updated Virtis/Opis Help. Resolved for 6.0 Release.

Issue ID: 8554  
Subject: Program crashes in validation after copying girder line member

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Ihnat, Joseph 4/7/2008 3:03:34 PM  
Modified By: gcolgrove 4/7/2011 1:03:07 PM  
Priority: Low  
Category: Bug

**History**

| Primary Contact    | Status           | Priority | Category    |
|--------------------|------------------|----------|-------------|
| Duray, Jim         | New              | High     | Unknown     |
| Kennelly, Krisha   | Assigned         |          |             |
|                    | Not Reproducible |          |             |
|                    | Resubmit         |          |             |
| Kennelly, Krisha   | Resubmit         | High     | Bug - GUI 1 |
| Ordoobadi, Mehrdad | Assigned         |          | Bug - GUI 1 |
|                    | Suspended        |          |             |

### Complete Issue Information

|             |          |      |     |           |
|-------------|----------|------|-----|-----------|
|             | Assigned |      |     |           |
| Lee, Herman | New      | High | Bug | Unknown   |
|             | Resolved |      |     | Education |
| Lee, Herman | Resolved | High |     | Education |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 8556.16513 | Resolved      | Non-prestressed tension reinforcement |

### Description

FROM:jihnat DATE:4/7/2008 11:02:06 AM

In Beta 3:

Open TrainingBridge2 and TrainingBridge3.

Copy "Interior Member" from TB2 to TB3.

Try to validate "Copy of Interior Member" now in TB3, program crashes.

FROM:kkennelly DATE:4/8/2008 10:29:21 AM

I can't reproduce this in either the release or debug versions of beta 3.

FROM:jihnat DATE:4/14/2008 11:14:35 AM

Try it this way:

Open TrainingBridge2 and TrainingBridge3.

Copy "Interior Member" from TB2 to TB3.

In TB3 under "Copy of Interior Member" copy "Build-up Alt" to TB2.

\*\*Copy "Interior Member" from TB2 to TB3 again.

Try to validate the second "Copy of Interior Member" in TB3, program crashes.

Also crashes if you go vice versa (switch above instructions and start with TB3 member to TB2).

FROM:jihnat DATE:4/14/2008 12:15:29 PM

Changed project to Support Center. Also crashes in version 5.6, 5.5 and 5.4, but not in version 5.1

FROM: Krishna Kennelly DATE: 7/15/2008 2:37:02 PM Eastern Daylight Time

The problem isn't in the Validate, it is in the Copying.

4/19/2016 3:21:01 PM

HRS AASHTO

2580



## Complete Issue Information

When I do the preceding \*\*Copy "Interior Member" from TB2 to TB3 again, CBridgeWorkSpaceView::AddMemberAltItem() is going to assert because the lpMemberDefDisp is null because in line 1487 the ISpngMbrDefId is 0.

When the validate is called it crashes in line 12716 of DoGirderMbrAlt because the SpngMrbDefDisp is null. I've fixed this crash for 6.0 beta 6.

We have to figure out why the member alt in the second Copy of Interior Member does not have a spngmbrdefid assigned to it.

FROM: Mehrdad Ordoobadi DATE: 7/21/2008 9:30:08 AM Eastern Daylight Time  
This problem is reproducible. It will be very improbable that a user would go through this scenario. Krishna suggested that this issue be suspended and be fixed in a future release.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 10:55:25 AM Eastern Daylight Time  
In 6.1 release build I am not able to reproduce the crash. But the validation gives the following messages:

Total Number of Messages: 6  
Number of Information Messages: 5  
Number of Warning Messages: 0  
Number of Error Messages: 1

-----  
Member: Copy of Interior Member  
Existing member alternative: Built-up Alt  
Current member alternative: Built-up Alt  
Built-up Alt (Member Alternative)  
No errors or warnings.  
Copy of Built-up Alt (Member Alternative)  
ERROR: A beam definition has not been applied to the member alternative.

Also, the "Copy of Built-up Alt" does not show up in the tree.

FROM: Mehrdad Ordoobadi DATE: 10/9/2009 11:53:43 AM Eastern Daylight Time

FROM: Mehrdad Ordoobadi DATE: 12/16/2009 10:01:08 AM Eastern Standard Time  
The crash no longer happens in 6.1 and later builds.  
The "Severity" field changed from "Crash" to "Confusion"  
Since this scenario is unlikely to happen real usage of software the priority is changed from "High" to "Low"

FROM: Joseph Ihnat DATE: 3/30/2011 1:12:40 PM Eastern Daylight Time  
I found a more straightforward way to reproduce the problem in the current code:  
Open TrainingBridge2 and TrainingBridge3.  
Make a copy of "Built-up Alt" in TB2.  
Copy "Interior Member" from TB2 to TB3.  
Validating "Copy of Interior Member" in TB3 gives the same error message as above.

4/19/2016 3:21:01 PM

HRS AASHTO

2581

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 3/31/2011 8:53:08 AM Eastern Daylight Time  
 OK in 6.3.0 Alpha Build 6 with 3/31 update.

FROM: George Colgrove DATE: 4/7/2011 8:44:04 AM Eastern Daylight Time  
 This fix is verified in 6.3.0 Beta 1 with all updates up to the date and time of this posting.

|                                                |
|------------------------------------------------|
| Issue ID: 8556                                 |
| Subject: Non-prestressed tension reinforcement |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 4/7/2008 8:43:17 PM  |
| Modified By: administrator     | 6/19/2008 4:35:52 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rcurtis DATE:Monday, April 07, 2008 4:43:17 PM  
 Is there a way to add non-prestressed tension reinforcement to prestressed beams?

FROM:hlee DATE:4/8/2008 8:45:23 AM  
 Non-prestressed tension reinforcement is not supported for prestressed beams.  
 Please let us know if you want to change this to an enhancement request.

## Complete Issue Information

|                         |
|-------------------------|
| Issue ID: 8559          |
| Subject: PS Design Tool |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 4/9/2008 2:55:53 PM  |
| Modified By: administrator     | 6/19/2008 4:35:52 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:21:02 PM

HRS AASHTO

2583

### Complete Issue Information

|                                          |
|------------------------------------------|
| PSDesignToolTrainingBridge.xml           |
| AgencyTruckTrussWontRun-0160343.xml      |
| AgencyTruckTrussWontRun-Permit10Axle.xml |

### Tasks

| Name       | Current State | Summary                                                                                      |
|------------|---------------|----------------------------------------------------------------------------------------------|
| 8569.16500 | Resolved      | Virtis Crashes when Attempting to Analyze a Truss for an Agency Defined Standard Gauge Truck |

### Description

FROM:jihnat DATE:4/9/2008 10:56:32 AM

The example bridge in tutorial PS4 no longer works correctly.

It worked OK through version 5.4, but since version 5.5 we get the following message from the PS Design Tool:

Theoretical Pi and e could not be found!

Try a bigger beam size or decreasing the concrete strength!

FROM:jihnat DATE:4/9/2008 11:02:17 AM

Bridge is attached.

FROM:jihnat DATE:4/9/2008 1:38:38 PM

This may have been a compiler-related problem.

Fixed for version 6.0.0

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 8569                                                                                        |
| Subject: Virtis Crashes when Attempting to Analyze a Truss for an Agency Defined Standard Gauge Truck |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 4/16/2008 4:42:50 PM |
| Modified By: administrator     | 6/19/2008 4:35:51 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Assigned  |          |             |
| Lee, Herman     | Assigned  | High     | Enhancement |
|                 | Suspended |          | Enhancement |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 8570.16499 | Assigned      | Truss Will Not Rate from Bridge Explorer Unless it Has Been Checked Out |

### Description

FROM:tarmbrecht DATE:Wednesday, April 16, 2008 12:42:50 PM

When attempting to analyze the truss within the attached export file of the Virtis model, AgencyTruckTrussWontRun-0160343.xml, for the attached export file of an agency defined standard gauge truck, AgencyTruckTrussWontRun-Permit10Axle.xml, Virtis crashes. The same thing happens for all agency defined standard gauge trucks.

FROM:hlee DATE:4/23/2008 10:14:47 AM

Added codes to handle empty axle spacing and fixed a bug in cleaning up memory.  
Resolved for 6.0 Release.

A workaround in 5.6 is to copy the minimum axle spacing to the maximum axle spacing for each axle in the "Permit 10-Axle" Truck.

FROM:tarmbrecht DATE:Monday, May 12, 2008 5:09:54 PM  
Accepted for 6.0

## Complete Issue Information

Issue ID: 8570

Subject: Truss Will Not Rate from Bridge Explorer Unless it Has Been Checked Out

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

4/16/2008 4:46:49 PM

Modified By: hlee

3/1/2010 3:15:03 PM

Priority: High

Category: Enhancement

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |
| Goodrich, Brian | Assigned | High     | Bug      |
|                 | Resolved |          |          |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Adam Price     | Tennessee DOT    | Adam.Price@tn.gov                   | 615-741-5390 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SR840.xml           |             |

## Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 8572.16497 | Assigned      | Design Ratio Results |

## Description

FROM:tarmbrecht DATE:Wednesday, April 16, 2008 12:46:50 PM

When attempting to rate a truss bridge from Bridge Explorer, the bridge model (unlike all other structure

4/19/2016 3:21:03 PM

HRS AASHTO

2586

**Complete Issue Information**

types) must first be checked out. We feel that checking out a truss bridge should not necessary when rating a bridge directly from Bridge Explorer.

FROM:jduray DATE:4/17/2008 9:24:26 AM

This is by design and is necessary because floorbeam reactions are computed and saved to the database during the analysis.

We will investigate an alternative solution that does not save the the floorbeam reactions to the db.

|                               |
|-------------------------------|
| Issue ID: 8572                |
| Subject: Design Ratio Results |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Price, Adam        | 4/17/2008 12:34:18 PM |
| Modified By: bgoodrich           | 11/5/2008 8:24:48 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:aprice DATE:Thursday, April 17, 2008 8:34:18 AM

I am performing a design review for the attached file. I am getting design ratio and rating factor failures

4/19/2016 3:21:03 PM

HRS AASHTO

2587

**Complete Issue Information**

due to service III tension in the concrete. The failures are at points 104.00, 105.00, 305.00, and 306.00. At 104.00, the dead load stresses (which apparently includes the prestress) is given as -0.629 ksi. I designed the beams with Conspan, and Conspan reports this same stress as -1.109 ksi. Would you please look at this file and determine how -0.629 ksi is determined. I need an itemized list of all the individual stresses.

Thank you,  
 Adam Price  
 Tennessee Department of Transportation - Structures Division  
 615-741-5390  
 Adam.Price@state.tn.us

FROM: bgoodrich DATE: Monday, April 21, 2008 10:17:41 AM  
 The details of how BRASS calculates the -0.629 ksi stress can be found after running the LRFD analysis by opening the "Specification Checks" window, expanding the "Stage 3" folder, and clicking on the "Span 1 – 60.60 ft" folder. Scroll down to the first occurrence of "Determination of Stresses" and double-click this item. The following output will be shown:

**PERFORMING BASIC MECHANICS OF MATERIALS - Determination of Stresses for Concrete**

Point of Interest : 104.00  
 Construction Stage: 2  
 Flexure Sense : POSITIVE

**Stress Computations:**

**Axial Forces:**

| Stage | A, in <sup>2</sup> | DL + P/S  |               | Total Load |               |
|-------|--------------------|-----------|---------------|------------|---------------|
|       |                    | P, kips   | f(axial), ksi | P, kips    | f(axial), ksi |
| 1     | 767.000            | -1441.329 | -1.879        | -1441.329  | -1.879        |
| 2     | 1193.407           | 0.000     | 0.000         | 0.000      | 0.000         |

**Moments:**

| Stage | DL + P/S |          | Total Load |         |
|-------|----------|----------|------------|---------|
|       | M, ft-k  | M, ft-k  | M, ft-k    | M, ft-k |
| 1     | 1052.858 | 1052.858 |            |         |
| 2     | 686.419  | 3721.845 |            |         |

**Stage 1 Stresses:**

| Location   | S, in <sup>3</sup> | Dead + Prestress Loads |               | Total Loads |               |
|------------|--------------------|------------------------|---------------|-------------|---------------|
|            |                    | f(mom), ksi            | f(axial), ksi | f(mom), ksi | f(axial), ksi |
| Top Flange | -15421.284         | -0.819                 | -1.879        | -0.819      | -1.879        |
| Bot Flange | 14912.644          | 0.847                  | -1.879        | 0.847       | -1.879        |



## Complete Issue Information

Stage 2 Stresses:

| Location   | S, in <sup>3</sup> | Dead + Prestress Loads |               | Total Loads |               |
|------------|--------------------|------------------------|---------------|-------------|---------------|
|            |                    | f(mom), ksi            | f(axial), ksi | f(mom), ksi | f(axial), ksi |
| Slab       | -48219.875         | -0.171                 | 0.000         | -0.926      | 0.000         |
| Top Flange | -53781.809         | -0.153                 | 0.000         | -0.830      | 0.000         |
| Bot Flange | 20465.523          | 0.402                  | 0.000         | 2.182       | 0.000         |

Combined Stresses for ALL Stages:

| Location   | f(dead), ksi | f(total), ksi |
|------------|--------------|---------------|
| Slab       | -0.171       | -0.926        |
| Top Flange | -2.852       | -3.529        |
| Bot Flange | -0.629       | 1.150         |

Notes:

- => The negative sign (-) on stresses denotes compression.
- => Total loads include live load.

BRASS sums the stresses from the applied dead load moments as well as the axial force and moment from the prestress. The dead load moments are determined as follows:

$$\begin{aligned}M(1) &= 2200 + 2059 + 498 = 4757 \text{ ft-kips (self-weight, DC, haunches \& diaphragms)} \\M(P/S) &= -3704 = -3704 \text{ ft-kips} \\M(2) &= 449 + 237 = 686 \text{ ft-kips (DW, load group 2)}\end{aligned}$$

The difference between BRASS and Conspan may be in the dead load moments or the section properties.

FROM:aprice DATE:Monday, April 21, 2008 4:11:08 PM

Does Brass transform either the prestressing strands or the rebar when computing section properties?

FROM:bgoodrich DATE:Friday, April 25, 2008 10:35:55 AM

BRASS uses the gross section properties for stress calculations in prestressed concrete girders. Strands and rebar are not transformed.

FROM:bgoodrich DATE:Friday, May 02, 2008 7:42:25 AM

E-mails from Adam Price:

Brian,

I just wanted to let you know that it appears to me that in the analysis charts Opis is listing service III live load moments when the option for live load moments is selected. The live load factor for service III is 0.80. This does not seem to be labeled, so some users may assume they are looking at service I moments, which have a load factor of 1.0.

Sincerely,  
Adam Price

4/19/2016 3:21:03 PM

HRS AASHTO

2589

**Complete Issue Information**

615-741-5390

Brian,

The email I just sent you does not correctly explain my problem. I am looking at point 104.00, 60.5 feet into span 1. The live load stress for service III is given as 1.492 ksi. The live load moment at this location is given as 1942 k-ft. The composite section is modulus is 19537.85 in<sup>3</sup>.

If I assume that this moment is service I, then the service III live load stress would be  $1942 * 0.8 * 12 / 19537.85 = 0.9542$  ksi.

If I assume that this moment is service III, then the service III live load stress would be  $1942 * 12 / 19537.85 = 1.1928$  ksi.

If I assume that this moment is service I, but divide by the load factor instead of multiply, then the service III live load stress would be  $1942 * 12 / (19537.85 * 0.8) = 1.491$  ksi, which is the stress that is given by BRASS.

If the moment of 1942 k-ft is indeed service I, then BRASS would appear to be making a serious mistake. However, I designed this beam with Conspan, and Conspan reports the service III live load stress as 1.432 ksi, which is very close to 1.492 ksi. The service III live load moment given by Conspan is 2576.7 k-ft, which would give a stress of  $2576.7 * 12 / 21590 = 1.432$  ksi. (Conspan transforms the strands, so the section modulus is higher.) I believe BRASS is incorrectly reporting live load moments. Please let me know what you decide about this.

Thanks,  
Adam Price  
Tennessee Department of Transportation - Structures Division  
615-741-5390

FROM: bgoodrich DATE: Friday, May 02, 2008 8:03:21 AM  
The live load moment of 1942 ft-kips is only the truck portion of the HL-93. The lane portion is 1094 ft-kips. BRASS analyzes each live load case separately and then combines them as per the specification. Combining these two moments yields the stress reported by BRASS:

$$f = (1942 + 1094) * 12 * 0.8 / 19538 = 1.492 \text{ ksi}$$

Issue ID: 8577  
Subject: Mcr/Mmax Brass exports "no limit" as "ignore shear"

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Curtis, Beckie 4/18/2008 4:43:40 PM  
Modified By: kkennelly 8/11/2008 1:35:08 PM  
Priority: High

4/19/2016 3:21:04 PM

**HRS AASHTO**

2590

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          |           |
| Lee, Herman     | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LintonHall.xml      |             |

## Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 8578.16491 | Resolved      | Negative Composite Plate Girder Section Properties |

## Description

FROM:rcurtis DATE:Friday, April 18, 2008 12:43:40 PM

The following is from one of our consultants:

There appears to be an error with the Virtis software. As such we cannot analyze a prestressed concrete structure using the BRASS Engine with the Mcr/Mmax ratio set to "no limit". Many of the prestressed concrete structures that we analyzed using the BRASS Engine have poor rating factors with shear controlling apparently due to the Mcr/Mmax ratio being limited to 1.0. It is my understanding that AASHTO (9.20.2.2) does not require the ratio to be limited to 1.0. Note that the Virtis Std Engine does not limit the Mcr/Mmax ratio to 1.0. However, on many of the prestressed concrete structures we have to use the BRASS Engine because the beams have both draped and debonded strands. When using the BRASS Engine the Virtis software interface gives the user the option of limiting the Mcr/Mmax ratio in the Vci calculation to 1.0 or setting "no limit" to this ratio. So to stay consistent and to prevent overly conservative results when using the BRASS Engine we would recommend setting the Mcr/Mmax ratio to "no limit" if it worked.

The issue is that BRASS does not appear to be applying the user defined option correctly through the Virtis interface. When the Mcr/Mmax ratio is set to "no limit" BRASS ignores shear, no shear

4/19/2016 3:21:04 PM

HRS AASHTO

2591

## Complete Issue Information

calculations

are performed and consequently no shear ratings are given. Review of the BRASS-Girder Manual indicates that command line 310 controls the analysis settings. Command line 310 has 11 command parameters. The Mcr/Mmax ratio setting is controlled by the 7th command parameter. There are three possible codes for this parameter 0, 1 or 2. A "0" code means that the Mcr/Mmax ratio is set to "limit 1.0",

a "1" code means that shear rating is to be "ignored" and a "2" code means that the Mcr/Mmax ratio is set

to "no limit. As stated above through the Virtis interface under the BRASS LFD Engine properties when we set the Mcr/Mmax ratio to "no limit" the 7th command parameter should be a "2". After an analysis is ran a review of the BRASS LFD output file shows that 7th command parameter at Command Line 310 is

a "1" in which shear is ignored and no shear ratings are performed. In comparison if through the Virtis interface under the BRASS LFD Engine properties we set the Mcr/Mmax ratio to "limit 1.0" and run the analysis a code "0" is correctly placed at the 7th command parameter for command line 310. Shear calculation are performed and shear ratings are reported; however because the ratio was limited to 1.0 the results are overly conservative and often give poor ratings for shear. Virtis and BRASS appear to apply the code correctly when the user wishes to limit the Mcr/Mmax ratio to 1.0, but not if the user wishes

to set "no limit" to the ratio.

FROM:hlee DATE:4/21/2008 8:46:41 AM

Duplicate of Incidentn 8403 (Shear shouldn't be ignored when no limit is selected for Mcr/Mmax in engine properties).

FROM:gbarnhill DATE:Tuesday, April 22, 2008 7:25:08 PM

Related to this issue:

- 1 Create a PS member alt and check IGNORE SHEAR on the Member Alt Description tab.
- 2 Copy this member alt.
- 3 Open the Engine Tab/BRASS LFD - Configure engine properties....
- 4 Note that the last line is METHOD USED TO DETERMINE Vci: LIMIT Mcr/Mmax to 1.0
- 5 Click the PROPERTIES button
- 6 Note that in the MICELLANEOUS tab there are no options for Vci
- 7 Click OK and note that the last line is METHOD USED TO DETERMINE Vci: NO LIMIT ON Mcr/Mmax.

If you now Uncheck IGNORE SHEAR and re-open the Engine Tab/BRASS LFD - Configure..., the last line is still NO LIMIT. In the MISCELLANEOUS tab the Vci options are now available.

Is this what is supposed to happen ??

FROM:hlee DATE:4/23/2008 9:33:13 AM

Related to the fix for Incident 7593.

1. When ignore shear is checked, the options for Vci are hidden in the misc tab. The last line "Method used to determine Vci: ..." in the engine tab shouldn't be shown.
2. Clicking ok in step 7 shouldn't change the Vci option.

FROM: Brian Goodrich DATE: 6/27/2008 1:58:22 PM Eastern Daylight Time

I revised the BRASS component of the GUI (AbxBrass2 and AboBrass) so the Vci method is not

4/19/2016 3:21:04 PM

HRS AASHTO

2592

**Complete Issue Information**

changed when shear is to be ignored and the user simply opens the engine properties window and OKs out of it. The engine properties text listed in the Member Alternative Description window was also revised to not show the Vci method when shear is to be ignored. A string indicating that shear is ignored was put in its place. Fixed for version 6.0.0.

FROM: Joseph Ihnat DATE: 7/15/2008 1:06:00 PM Eastern Daylight Time  
OK in Beta Build 5.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 8578                                              |
| Subject: Negative Composite Plate Girder Section Properties |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ihnat, Joseph    | 4/18/2008 5:55:00 PM |
| Modified By: administrator     | 6/19/2008 4:35:50 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jihnat DATE:4/18/2008 1:59:10 PM  
Received via email (Bridgeware):

I am using the Virtis software to perform a load rating for a bridge in Virginia. In an attempt to verify the results, I noticed the negative section properties in the Virtis output are less than what we calculated during the design of the bridge using hand calculations and other software.

We expected the moment of inertia for "Section 2" and "Section 3" to be

4/19/2016 3:21:04 PM

HRS AASHTO

2593

**Complete Issue Information**

approximately 14600 in^4 and 20600 in^4 respectively. The Virtis output calculated 13100 in^4 and 19000 in^4 respectively. If you could provide any additional details regarding how these numbers were determined, I would greatly appreciate it.

I have attached the .xml file that I have created for your review.

Please feel free to contact me to discuss this issue.

Thanks,

Tony

Anthony Bower  
Staff Bridge Engineer, E.I.  
CH2M Hill - DMS  
6200 Aurora Avenue  
Suite 400W  
Des Moines, Iowa 50322  
Office - (515) 270-2700 x28

FROM:bgoodrich DATE:Monday, April 21, 2008 9:41:03 AM  
This issue pertains to the Virtis LFD engine, not BRASS LFD. Search for the header "GIRDER SECTION PROPERTIES (COMPOSITE, NEGATIVE MOMENT)" in the output file. Also, the attached XML file is from version 5.4.

FROM:hlee DATE:4/24/2008 8:26:21 AM  
Reply e-mail:

Section 3.2.3 in the Virtis Std User Manual describes how the section properties are calculated. For composite section under negative moment, the concrete area in tension is not included in the calculation. If you are not able to confirm the numbers in the output, please send us your calculations for investigation.

Issue ID: 8616  
Subject: Library Explorer should always be available in View Menu | Toolbars.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 4/28/2008 3:31:49 PM  
Modified By: jihnat 4/30/2010 4:45:35 PM  
Priority: High  
Category: Bug - GUI 2

**History**

4/19/2016 3:21:04 PM

HRS AASHTO

2594

### Complete Issue Information

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | 00050 - RCSH_54-7@72-54_LRFD_40'.xml |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 8617.16452 | Resolved      | Opis takes long time to analyze bridge |

### Description

FROM:hlee DATE:4/28/2008 11:13:29 AM  
Currently, it is available when Library Explorer is opened.

FROM: Joseph Ihnat DATE: 3/19/2009 8:37:04 AM Eastern Daylight Time  
Behavior is like BWS toolbar. It only has a context when its view is open.

FROM: Herman Lee DATE: 3/21/2009 1:38:31 PM Eastern Daylight Time  
I think the behavior for the Library Explorer toolbar should be like the Bridge Explorer toolbar. When Bridge Explorer is closed, the toolbar is still available but all buttons are disabled. Users control whether they want to see the toolbar or not. Currently checking or unchecking the BWS or Library Explorer toolbar doesn't have any effect. Virtis will always check and show the toolbar next time the user open the BWS or Library Explorer. I think this behavior is acceptable for BWS but not for Library Explorer since BWS is a level below the Bridge Explorer.

FROM: Joseph Ihnat DATE: 10/14/2009 2:20:17 PM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:45:41 PM Eastern Daylight Time  
Verified - 6.2 alpha 4

4/19/2016 3:21:04 PM

HRS AASHTO

2595

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 8617                                  |
| Subject: Opis takes long time to analyze bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Harth, Derek     | 4/28/2008 4:14:28 PM |
| Modified By: administrator     | 6/19/2008 4:35:47 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact | Status  | Priority | Category |
|-----------------|---------|----------|----------|
| Duray, Jim      | New     | High     | Unknown  |
| Ihnat, Joseph   | On Hold |          |          |
| Ihnat, Joseph   | On Hold | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VirtisuserLogin.png |             |

## Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 8620.16449 | On Hold       | Bridge Explorer shouldn't be disabled when log in as Virtisuser |

## Description

FROM:jihnat DATE:4/28/2008 12:17:48 PM

Received via email (Bridgeware):

We are trying to analyze a 9 span haunch slab bridge. And each time I run it, it takes about 30-40 minutes to run. Have you ran a bridge this large? Would you have any idea of why it take so long to run and a way to fix it? If you would like, I can send you the file to see if works any faster on your computer.

4/19/2016 3:21:05 PM

HRS AASHTO

2596



## Complete Issue Information

Scott Moeder  
George Butler Associates, Inc.  
Bridges  
One Renner Ridge  
9801 Renner Boulevard  
Lenexa, KS 66219-9745  
T. 913.577.8236

FROM:hlee DATE:5/21/2008 10:39:31 AM

There are 301 points of interest defined for this bridge. One recommendation is to reduce the number of points of interest in initial design and include all points for final design check.

After I removed all reinforcement development points of interest, it took 5 minutes to analyze the 9-span bridge.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 8620                                                           |
| Subject: Bridge Explorer shouldn't be disabled when log in as Virtisuser |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: lhnat, Joseph |                      |
| Submitted By: Lee, Herman      | 4/28/2008 7:08:47 PM |
| Modified By: administrator     | 6/19/2008 4:35:47 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:hlee DATE:4/28/2008 2:59:40 PM

See attached screen capture.

4/19/2016 3:21:05 PM

HRS AASHTO

2597

### Complete Issue Information

The database was created using the AllScripts-SampleDB-60-SQLServer.SQL file.

FROM:jihnat DATE:4/29/2008 8:17:21 AM

Changed project to Support Center.

The Rating Engineers group does not have Read access privileges for Bridge List, which is why the button is disabled.

Probably the Bridge Explorer shouldn't even appear when Virtis is started.

Apparently it's been this way for quite a while.

|                                   |
|-----------------------------------|
| Issue ID: 8622                    |
| Subject: Strange grid appearance. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 4/29/2008 6:59:25 PM |
| Modified By: hlee              | 6/24/2008 2:57:04 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:21:05 PM

HRS AASHTO

2598

### Complete Issue Information

|               |          |      |           |
|---------------|----------|------|-----------|
| Ihnat, Joseph | Assigned |      |           |
|               | Resolved |      | Education |
| Lee, Herman   | New      | High | Unknown   |
|               | Resolved |      |           |
| Lee, Herman   | Resolved | High | Unknown   |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 8623.16446 | Resolved      | Truss Questions |

### Description

FROM:hlee DATE:4/29/2008 2:54:53 PM

Some rows have color some don't. See attached screen capture.

Attached Bridgeware Integrated Sybase database.

FROM:jihnata DATE:5/7/2008 3:32:21 PM

From the Help:

Pontis bridges that do not contain a Roadway record with on\_under = '1' cannot be linked in Virtis/Opis. Such bridges are shown as greyed out in the list of Pontis bridges.

FROM:hlee DATE:5/8/2008 10:17:24 AM

What does that mean? I think we should modify the help statement to something that end user can understand.

Statement was added in the Help for Incident 5572.

FROM: Mehrdad Ordoobadi DATE: 6/24/2008 9:18:37 AM Eastern Daylight Time

We can change it to something like this:

Pontis bridges that do not carry a route on the structure cannot be linked in Virtis/Opis. Such bridges are shown as greyed out in the list of Pontis bridges.

FROM: Herman Lee DATE: 6/24/2008 10:55:18 AM Eastern Daylight Time

Resolved for 6.0 Release.

4/19/2016 3:21:06 PM

HRS AASHTO

2599

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 8623           |
| Subject: Truss Questions |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Ihnat, Joseph    | 4/30/2008 11:32:04 AM |
| Modified By: administrator     | 6/19/2008 4:35:47 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary |
|------------|---------------|---------|
| 8624.16445 | Suspended     | Reports |

## Description

FROM:jihnat DATE:4/30/2008 7:37:06 AM  
Received via email (Bridgeware):

1. Am I correct in assuming that for trusses Virtis only does LFD or LRFR and does not do ASD?
2. The training example is for a pony truss, does Virtis consider top chord lateral buckling, we typically do an analysis based upon Timoshenko to calculate an effective length for buckling.

Joseph P. Gill, P.E.  
Gill Engineering Associates, Inc.  
85 Franklin Street

4/19/2016 3:21:06 PM

HRS AASHTO

2600

**Complete Issue Information**

Needham, MA 02494

(Office) 781-726-6551  
(Cell) 508-509-3656

FROM:jduray DATE:4/30/2008 8:52:02 AM  
Email response:  
Joe

Virtis only does LFD rating of trusses.

Virtis does not consider lateral buckling.

Jim

|                  |
|------------------|
| Issue ID: 8624   |
| Subject: Reports |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Duray, Jim       | 4/30/2008 1:01:57 PM |
| Modified By: jduray            | 6/3/2009 6:56:38 PM  |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jduray DATE:4/30/2008 9:01:14 AM  
This incident is a collection of other incidents dealing with improvements to the reporting capabilities.

4/19/2016 3:21:06 PM

HRS AASHTO

2601

## Complete Issue Information

Issue ID: 8625

Subject: Reinforcement - add square bar equivalents to the help.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Duray, Jim

4/30/2008 1:08:33 PM

Modified By: administrator

6/19/2008 4:35:46 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

4/19/2016 3:21:06 PM

HRS AASHTO

2602

**Complete Issue Information**

|             |           |      |             |
|-------------|-----------|------|-------------|
| Lee, Herman | Suspended | High | Enhancement |
|-------------|-----------|------|-------------|

**Contacts**

| Name            | Company        | Email 1                      | Phone 1 |
|-----------------|----------------|------------------------------|---------|
| David Dominguez | New Mexico DOT | David.Dominguez1@state.nm.us |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 8633.16436 | Resolved      | Not being able to rate for the BRIDGE WORKPLACE |

**Description**

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 8633<br>Subject: Not being able to rate for the BRIDGE WORKPLACE |
|----------------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Dominguez, David | 5/1/2008 9:10:14 PM  |
| Modified By: administrator     | 6/19/2008 4:35:46 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 8637.16432 | Resolved      | API Question |

### Description

FROM:ddominguez DATE:Thursday, May 01, 2008 5:10:15 PM

I have a user that has not been able to rate a bridge after he opens one up from the bridge explore. Contrary to another issue you guys have pending; where the person cannot rate from Bridge Explore, my user can. But its when he opens up a bridge that the rate (icon) becomes deactivated.

FROM:jihnat DATE:5/6/2008 8:52:42 AM

Rating from inside the bridge workspace does not use the same Rate button that is used from the Bridge Explorer.

Use the Analysis Settings button and Analyze button on the BWS toolbar (or Bridge/Analysis Settings and Bridge/Analyze from the menu bar).

In the bridge workspace, the Analyze button will be disabled until vehicles are selected in the Analysis Settings window.

If it remains disabled, make sure the user has sufficient Access Privileges (i.e. Create) for Rating Events (and/or Design Events).

4/19/2016 3:21:06 PM

HRS AASHTO

2604



## Complete Issue Information

|                       |
|-----------------------|
| Issue ID: 8637        |
| Subject: API Question |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Love, Ron        | 5/6/2008 1:01:17 PM  |
| Modified By: administrator     | 6/19/2008 4:35:45 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:5/6/2008 9:00:49 AM  
Received via email (Bridgewater). View the original email in HTML:

Refer to code snippet below and then examine the results listed below, specifically the variables highlighted in red: The question is when the same vehicle is used in Example B we do not get an Inventory vehicle and an Operating vehicle only Design and Pedestrian? Please refer results example A and B immediately following code block and explain the questions listed.

4/19/2016 3:21:07 PM

HRS AASHTO

2605

## Complete Issue Information

```
if (m_AnalysisEventPtr->FirstEventVehicle())
{
    while (m_AnalysisEventPtr->MoveNextEventVehicle())
    {
        noVehicles++; // RED
        InitTrkParameters();

        lpVehicleDisp = m_AnalysisEventPtr->GetEventVehicleDisp().Detach();
        VehiclePtr = lpVehicleDisp;
        CString trkName = (LPCTSTR) VehiclePtr->GetName()->GetValue();

        // Skip the reserved pedestrian load
        if (VehiclePtr->GetLibraryType()->GetCurrentTypeId() ==
TYP_LIBENT_RESERVED)
        {
            if (trkName == "Pedestrian Load")
                continue;
        }

        long lCategory = m_AnalysisEventPtr->GetVehicleCategory();

        if(lCategory == 1)
        {
            m_vInvVehicles.push_back(trkName);
        }
        else
        {
            m_vOpVehicles.push_back(trkName);
        }

        m_noAxles = VehiclePtr->GetAxleCount();
        int axleNo = 0;

        VehiclePtr->MoveFirstAxle(); // test if true
        m_GVW = VehiclePtr->GetVehicleWeight()->GetValue(U_TONS)
        m_axleWeights[axleNo] = VehiclePtr->GetAxleWeight()->GetValue(U_TONS);
        while ( VehiclePtr->MoveNextAxle())
        {
            axleNo++;
            double minSp = VehiclePtr->GetAxleMinimumSpacing()->GetValue
(U_IN);
            double maxSp = VehiclePtr->GetAxleMaximumSpacing()->GetValue
(U_IN);
            double axleWt = VehiclePtr->GetAxleWeight()->GetValue(U_TONS);
            double gagedist = VehiclePtr->GetAxleMinimumSpacing()->GetValue
(U_IN);

            m_axleSpacings[axleNo-1] = VehiclePtr->GetAxleMinimumSpacing()-
>GetValue(U_IN);
            m_axleWeights[axleNo] = VehiclePtr->GetAxleWeight()->GetValue
```

**Complete Issue Information**

```
(U_TONS);
    }
    WriteTruckFile(trkName, m_noAxles);
}
}
```

-----  
Results Example A: (Loop was executed 3 times)  
HS 15-44 was selected as an Inventory vehicle and an HS 20-44 vehicle was selected as an Operating vehicle for analysis.  
The results are as expected, however why was the Pedestrian Load 'vehicle' returned?

1st Loop  
trkName = HS 15-44  
ICategory = 1 (Inventory)

2nd Loop  
trkName = HS 20-44  
ICategory = 2 (Operating)

3rd Loop  
trkName = Pedestrian Load  
ICategory = 7 (assuming pedestrian)

noVehicles = 3

-----  
Results Example B: (Loop was executed 2 times)

The same vehicle an HS 20 - 44 was selected for Inventory and Operating analysis. The results are not as expected receive a Design vehicle and a Pedestrian Load 'vehicle' ?

1st Loop  
trkName = HS 20-44  
ICategory = 3 (Design)

2nd Loop  
trkName = Pedestrian Load  
ICategory = 7 (assuming pedestrian)

noVehicles = 2

FROM:hlee DATE:5/7/2008 10:15:01 AM  
Reply e-mail:

=====  
=====  
Please see the following comments for the first issue in your forwarded e-mail.

4/19/2016 3:21:07 PM

**HRS AASHTO**

2607

**Complete Issue Information**

1. GetVehicleCategory returns a bitmask, see API Reference and DoEventVehicleCategories.h for more information. Most likely you need something like

```
BOOL bInv = (ICategoryMask & ABW_EVNTVEHCAT_INVENTORY) ? TRUE : FALSE;
```

2. Each unique vehicle will appear in the loop only once but may appear in more than one category. You may want to use IsVehicleInCategory to check whether a vehicle is in a particular category.

3. Pedestrian Load is a dummy vehicle which will always appear as a vehicle in the loop. Some states treat Pedestrian Load as a separate vehicle and some states just want to treat it as a uniform load. If you don't want to use it, just filter it out in the loop.

With Joe's e-mail for the response of the second issue, the status of Incident 8637 is marked as Resolved.

=====

FROM:hlee DATE:5/12/2008 8:11:18 AM  
Received e-mail:

=====

I forwarded your response to the person working on this. He is still not clear on what needs to be done. We are selecting an inventory and operating vehicle in the Virtis Analysis Settings window and are looking for these vehicles in our export module so we can pass them to our load rating engine. Here is his response (in quotes "").

" The answers provided do not explain the results in Example A and B.

Please ask the following.

The code snippet does show us 'testing' the vehicle category and dismissing pedestrian loads.

The question(s) that remain, specifically are:

1) In Example A we see three vehicles come through in the loop whereas in Example B we see two vehicles come through. Why? Expected 3 vehicles in Example B. (since pedestrian load always accompanies the vehicle collection).

2) In Example B we had specified an Inventory vehicle and an Operating vehicle. When we review the vehicles we see (other than the 'Pedestrian Load' which was dismissed) a Design vehicle. Where did the Design vehicle come from? What happened to the Inventory and Operating vehicles? The results of Example A is consistent with our expectations but am unable to understand the results from Example B."

=====

**Complete Issue Information**

Reply e-mail:

=====

In Example A, you have a HS 15-44 vehicle and a HS 20-44 vehicle. The HS 15-44 vehicle is in the Inventory category. The HS 20-44 vehicle is in the Operating category. With the dummy Pedestrian Load, there are 3 UNIQUE vehicles in the analysis event. That's why you see 3 vehicles in Example A.

In Example B, you have a HS 20-44 vehicle. The HS 20-44 vehicle is in the Inventory category and also the Operating category. With the dummy Pedestrian Load, there are 2 UNIQUE vehicles in the analysis event. That's why you see 2 vehicles in Example B. The first vehicle in the loop in Example B is HS 20-44. When you check the category, the vehicle is a decimal 3. The decimal 3 doesn't represent the Design category. The decimal 3 is a bitmask which represents a hexadecimal 3. The hexadecimal 3 represents the Inventory category and also the Operating category at the same time. Copied below is part of the DoEventVehicleCategories.h. You need to use bitwise AND (&) to operate on the hexadecimal 3 to tell which category or categories that vehicle belongs to.

For example,

BOOL bInv = (ICategoryMask & ABW\_EVNTVEHCAT\_INVENTORY) ? TRUE : FALSE;  
If bInv is TRUE, the vehicle is in the Inventory category.

BOOL bOpr = (ICategoryMask & ABW\_EVNTVEHCAT\_OPERATING) ? TRUE : FALSE;  
If bOpr is TRUE, the vehicle is in the Operating category.

```
#define ABW_EVNTVEHCAT_INVENTORY      0x0001 // 1
#define ABW_EVNTVEHCAT_OPERATING     0x0002 // 2
#define ABW_EVNTVEHCAT_DESIGN        0x0004 // 4
#define ABW_EVNTVEHCAT_PERMIT        0x0008 // 8
...
```

=====

Issue ID: 8642  
Subject: Stage 1 Reaction Error for Continuous PS I-beams.

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Armbrecht, Tim 5/8/2008 9:01:53 PM  
Modified By: mordoobadi 5/7/2010 12:38:05 PM  
Priority: High  
Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name          | Company      | Email 1               | Phone 1      |
|---------------|--------------|-----------------------|--------------|
| Beckie Curtis | Michigan DOT | CurtisR4@michigan.gov | 517-322-1186 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | EndTravelway.png    |             |
|      | LL Dist Issue.xml   |             |

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 8645.16424 | Resolved      | LL Dist Question |

### Description

FROM:tarmbrecht DATE:Thursday, May 08, 2008 5:01:54 PM

For Prestressed Concrete I-beam bridges continuous for the composite section but simple span for initial dead loads the non-composite (Stage 1) reactions should be the same at each end of each span but as shown in the attached Word Document they are doubled at the ends adjacent to the next span.

Accompanying xml file is also attached.

FROM:hlee DATE:5/12/2008 9:09:42 AM  
Looks like Virtis Std Engine has the same issue.  
Brian, please assign to Mehrdad after you are done.

FROM:bgoodrich DATE:Wednesday, May 14, 2008 9:14:58 AM  
I have reviewed this issue and requested input from Jay Puckett.

FROM: Brian Goodrich DATE: 3/23/2010 9:33:44 AM Mountain Daylight Time  
BRASS only stores the reaction for the final support condition, i.e., it does not store the reaction on both sides of a double-bearing pier. This issue was forwarded to WYDOT.

FROM: Brian Goodrich DATE: 4/15/2010 2:04:44 PM Mountain Daylight Time  
Within BRASS, the reaction represents the force applied to the abutment/pier and not the force to the

4/19/2016 3:21:07 PM

HRS AASHTO

2610

**Complete Issue Information**

bearing. An e-mail from Mike Watters stated "We will leave the program as is." I am assigning this issue to Mehrdad now.

FROM: Mehrdad Ordoobadi DATE: 5/7/2010 7:14:50 AM Eastern Daylight Time  
The values that we have always been showing at the middle support for steel or RC or PS beams have been the total support reaction at the support. The total reaction at the pier is not the sum of the reactions at the left and right of the support. I think this is not a bug.

Stage 1 bearing line reactions are available in the shear column. So in this example the reaction at the left of the support is 31.2 kips and at the right is 29.4 kip.

|                           |
|---------------------------|
| Issue ID: 8645            |
| Subject: LL Dist Question |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 5/9/2008 1:59:26 PM  |
| Modified By: administrator     | 6/19/2008 4:35:44 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:rcurtis DATE:Friday, May 09, 2008 9:59:26 AM  
In the attached file, Please see G3 of the first superstructure alternative.  
When automatically calculating the LL Dist, Virtis is finding the same LL Dist for the single and multi-lane loading for this interior beam.

FROM:hlee DATE:5/12/2008 11:35:31 AM  
At the end of the structure, the width of the travelway is 13.58 ft (See attached screen capture). Both

### Complete Issue Information

single and multi-lane LL distribution factors are S/7 since only one lane can fit inside the travelway at end of the structure.

|                                         |
|-----------------------------------------|
| Issue ID: 8646                          |
| Subject: XML files should open in Excel |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Kennelly, Krisha | 5/12/2008 3:05:23 PM |
| Modified By: administrator     | 6/19/2008 4:35:44 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 |          |          | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

4/19/2016 3:21:08 PM

HRS AASHTO

2612



## Complete Issue Information

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | PSILLDistGenProb(7761)-2.doc        |             |
|      | PSILLDistGenProb(0760008-600B3).xml |             |

### Tasks

| Name       | Current State | Summary                                                                                           |
|------------|---------------|---------------------------------------------------------------------------------------------------|
| 8663.16406 | Assigned      | PS I-beams Treated Like PS Box Beams for LL Dist. Factor Generation (duplicate of Incident #7761) |

### Description

FROM:kkennelly DATE:5/12/2008 11:10:00 AM

The new truss reports 'PanelPointConcurrentForces.xml' and 'PanelPointMaxForces.xml' open very nicely in Excel.

Some of our other xml files do not open in Excel. We should fix them so that they do.

FROM:jduray DATE:5/13/2008 9:01:45 AM

Note: This is not a bug.

FROM:hlee DATE:5/21/2008 10:35:18 AM

Resolved for 6.0 Release.

Issue ID: 8663

Subject: PS I-beams Treated Like PS Box Beams for LL Dist. Factor Generation (duplicate of Incident #7761)

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

5/14/2008 6:53:52 PM

Modified By: hlee

7/13/2010 2:40:09 PM

4/19/2016 3:21:08 PM

HRS AASHTO

2613

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PSDesignTool.png    |             |

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 8673.16396 | Resolved      | PS Design Tool shouldn't be enabled when Spec Check window is opened. |

### Description

FROM:tambrecht DATE:Wednesday, May 14, 2008 2:54:22 PM

Since there has been no further discussion for 7761, I am resubmitting. I do not believe this is an enhancement.

The attached message is generated for PS I-beams when attempting to generate live load distribution factors if only the "Current" box is checked for either of the neighboring I-beams. Since only box/deck beams are subject to being constructed as "adjacent" beams, why would PS I-beams, which have distribution factors more similar to steel beams than box beams, have this constraint placed upon them?

Also, why is it necessary to have both Existing and Current checked in order to generate the LLDF for adjacent box beams? If only Current is checked and the adjacent beam is adequately described shouldn't Virtis have all the information it needs to calculate the LLDF?

FROM:jduray DATE:5/15/2008 9:09:07 AM

Virtis should only use Current for drawing the schematic. It should be looking at Existing for computations. We will investigate.

4/19/2016 3:21:08 PM

HRS AASHTO

2614

## Complete Issue Information

FROM: Herman Lee DATE: 3/3/2010 10:12:37 AM Eastern Standard Time

I agree that Std Spec 3.23.4 doesn't apply for PS I beams. The constraint of having adjacent beams defined has been removed for PS I beams and the distribution factors computation will be based on simple beam or Std Spec Table 3.23.1. Resolved for 6.2 Release.

As described above, the Current member alternative is for drawing the schematic and the Existing member alternative is for computations. When there is no Existing, the distribution factors computation could ask the user whether to use the Current member alternative or just use the member alternative if there's only one. I will consider this as an enhancement to the distribution factors computation. Please let us know if you want to change this to an Enhancement request.

FROM: Herman Lee DATE: 5/9/2010 10:18:52 AM Eastern Daylight Time  
Verified in 6.2 Beta 1.

FROM: Tim Armbrecht DATE: 7/13/2010 10:34:17 AM Eastern Daylight Time  
Accepted.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 8673                                                                 |
| Subject: PS Design Tool shouldn't be enabled when Spec Check window is opened. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 5/21/2008 2:06:32 PM |
| Modified By: administrator     | 6/19/2008 4:35:42 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:21:08 PM

HRS AASHTO

2615

## Complete Issue Information

### Description

FROM:hlee DATE:5/21/2008 10:09:23 AM  
See attached.

FROM:jihnata DATE:5/21/2008 11:06:57 AM  
Changed project to Support Center.

FROM:jihnata DATE:5/21/2008 1:25:32 PM  
Fixed for Version 6.0

Issue ID: 8684

Subject: Incorrect Controlling Span Location in Rating Summary

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Onysko, Jim

5/28/2008 2:41:42 PM

Modified By: hlee

10/15/2011 9:57:58 PM

Priority: High

Category: Bug - BRASS

## History

4/19/2016 3:21:09 PM

HRS AASHTO

2616

### Complete Issue Information

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Lee, Herman     | New    | High     | Unknown     |
| Duray, Jim      | New    | High     | Unknown     |
|                 |        |          | Enhancement |
| Ihnat, Joseph   |        |          |             |
| Ihnat, Joseph   | New    | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 8697.16372 | New           | Bridge Layout Wizard, Validation Error - Add Route to the wizard |

### Description

FROM:jonysko DATE:Wednesday, May 28, 2008 10:41:42 AM

I am rating a nine-span prestressed concrete structure made continuous for live loads. The structure consists of 14 butted box beams and two fascia box beams that are separated by sidewalk utility bays. After entering the input and running the analysis, the controlling inventory and operating locations for several of the beams occur at analysis points that do not exist. They are neither one of the 10th points, nor are they one of the points of interest I entered. For example, for Beam B-2, which is the first butted box beam, the controlling location is Span 8 at 0.705L according to the Summary Report. However, 0.705L is not a tenth point, nor is it one of my points of interest. Furthermore, when I search through the BRASS output, I see that the controlling rating values displayed in the Summary Report actually correspond to a different location: Span 9, 0.00L. I do have points of interest that are near the location 0.705L in Span 8. However, the rating values at these locations are much larger than the controlling rating values. So basically, it appears the VIRTIS summary is telling me that the controlling location occurs at an analysis point that does not exist, and the controlling rating values actually correspond to a different analysis point. Is this a problem that someone has come across before, and if so, is there a way to get around or fix it? I have attached a copy of the VIRTIS file.

FROM:bgoodrich DATE:Thursday, June 05, 2008 12:57:05 PM

Incident 5879 discusses this same issue.

BRASS does not have the capability to analyze the span length of simple-span bearing for the

4/19/2016 3:21:09 PM

HRS AASHTO

2617

**Complete Issue Information**

non-composite stage and a different span length of the continuous span for the composite stage. The prestress modeling method option can be utilized, so the BRASS Export will generate commands associated with the shorter or longer span lengths. You have the "Centerline of Simple-span Bearing" method currently selected, so BRASS will use the span lengths adjusted to remove the bearing offset at each end of the span.

BRASS determines the critical ratings and sends the location back to Virtis in the form of a distance along the length of the BRASS structure. Virtis is taking this distance and comparing it to the Virtis model, i.e., the centerline-of-pier to centerline-of-pier span lengths. Due to the number of spans, the cumulative effect on the distance really adds up.

The remedy for this issue is to convert the BRASS locations to locations on the Virtis model.

FROM:bgoodrich DATE:Thursday, June 05, 2008 2:12:45 PM  
Comment to development team:

Is this a BRASS issue or does this happen with the Virtis engine too? It looks like we need to develop some function to convert the engine locations to the appropriate location in Virtis. Does this belong in the results object or by some utility after the engine analysis? Either way, we will need some mechanism to store the BRASS span lengths for use by either method.

FROM:bgoodrich DATE:Thursday, June 05, 2008 2:13:43 PM  
E-mail from Herman Lee:

For continuous span PS structure, Virtis Std Engine uses simple span bearing span lengths for DL1 analysis and centerline of support span lengths for DL2 and LL analyses. Analysis points considered for DL1 analysis correspond to tenth points of the continuous span lengths used for DL2 and LL analyses. Analysis points for which the results are reported correspond to tenth points of the continuous span lengths.

Since each engine may have it's own interpretation of span length, I think the conversion should be done either in the engine or in the post processing part of the export.

Herman

FROM: Jim Onysko DATE: 6/26/2008 1:49:32 PM Eastern Daylight Time  
Okay, thank you very much.

FROM: Herman Lee DATE: 7/17/2008 2:51:36 PM Eastern Daylight Time  
E-mail from Brian Goodrich (6/5/08):

=====  
Another alternative would be to pass an array of interior-support bearing offsets into the engine and add these to the span lengths when determining the location to save to the results object. However, WYDOT would need to authorize this change.

Would you like me to pursue an engine solution with WYDOT, a post-processing export solution, or hold off?

**Complete Issue Information**

Brian

=====

FROM: Brian Goodrich DATE: 8/18/2008 9:32:12 AM Mountain Daylight Time  
Hi Brian,

For Incident 8684, Jim would like to pursue the post-processing export solution.

Herman

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 8697                                                            |
| Subject: Bridge Layout Wizard, Validation Error - Add Route to the wizard |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 5/30/2008 8:13:07 PM |
| Modified By: dteal             | 8/7/2008 1:38:27 PM  |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, May 30, 2008 4:13:09 PM

One item that should be added next time this GUI is touched is Route Number. When you create a bridge with this wizard and then save your bridge, unless you add the route number to the Bridge Description, validate will always indicate an error. It would be best for users if they could complete the Layout Wizard and save their new bridge without validate indicating an error is present.

FROM:kkennelly DATE:6/3/2008 12:08:04 PM

4/19/2016 3:21:09 PM

HRS AASHTO

2619

**Complete Issue Information**

Should we make the lack of a Route Number a Warning in the validation instead of an Error?

FROM: Joseph Ihnat DATE: 6/20/2008 9:42:42 AM Eastern Daylight Time  
Changed folder to Support Center and version to 5.6 Release.

FROM: Dean Teal DATE: 8/7/2008 9:38:27 AM Eastern Daylight Time  
A warning would be better  
But why have it in the first place?  
We don't get a warning for not entering the county, ownership, location, ect?? So why is Route singled out in the first place?

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 8698                                            |
| Subject: Critical moments for LRFD and LRFR are different |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 5/30/2008 8:30:08 PM |
| Modified By: administrator     | 6/19/2008 4:35:39 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Lee, Herman     | Duplicate | High     | Unknown  |

**Contacts**

4/19/2016 3:21:09 PM

HRS AASHTO

2620



### Complete Issue Information

| Name            | Company      | Email 1                    | Phone 1      |
|-----------------|--------------|----------------------------|--------------|
| Tim Armbrecht   | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |
| George Colgrove |              | gcolgrove@mbakercorp.com   |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 8699.16370 | Assigned      | Tutorials on the Web Site |

### Description

FROM:tarmbrecht DATE:Friday, May 30, 2008 4:30:08 PM

While checking someone else's work, I ran the attached structure in Opis and, without changing anything, ran in Virtis (LRFR). The Design Ratio for Opis was not close to the Virtis rating factor, so I tracked it down to the moments. BRASS LRFD used a Live Load Scale Factor = 1 and Lanes Loaded = Critical, while Virtis used a Load Scale Factor = 0.833 and Lanes Loaded = One. See attached pdf for flexure results from output. Why would the applied moments for LRFR be different than those for LRFD?

FROM:hlee DATE:6/2/2008 9:10:13 AM

The described issue is a duplicate of Incident 8450. Incident 8450 has been resolved and will be included in the 6.0 Release. The fix is also in 6.0 Beta 3.

FROM:tarmbrecht DATE:Tuesday, June 03, 2008 2:58:34 PM

I checked it in Beta 3 - looks like it's fixed, thanks.

|                                    |
|------------------------------------|
| Issue ID: 8699                     |
| Subject: Tutorials on the Web Site |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Colgrove, George | 6/2/2008 1:07:01 PM  |
| Modified By: jihnat            | 9/16/2008 5:59:13 PM |

4/19/2016 3:21:10 PM

HRS AASHTO

2621

## Complete Issue Information

|                         |
|-------------------------|
| Priority: High          |
| Category: Documentation |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Assigned |          |          |
| Duray, Jim      | Assigned | High     | Unknown  |
| Ihnat, Joseph   | Resolved |          | Bug      |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |

## Contacts

| Name      | Company    | Email 1         | Phone 1 |
|-----------|------------|-----------------|---------|
| Jeff Ruby | Kansas DOT | JRuby@ksdot.org |         |

## Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | ScreenShotError.jpg          |             |
|      | FancyCreek_beta3_current.xml |             |
|      | FancyCreek_v5.6.xml          |             |
|      | Beta6_ScreenShot_001.jpg     |             |

## Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 8725.16344 | Assigned      | Deleting bridge from the database and importing the same bridge |

## Description

FROM:gcolgrove DATE:Monday, June 02, 2008 9:07:01 AM

The Virtis Opis Baker Site needs to be updated with all new and updated tutorials. Last set of updates was 2006. The site has not been updated with the new 2007 material from VOBug 2007.

4/19/2016 3:21:10 PM

HRS AASHTO

2622

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 9/16/2008 1:59:00 PM Eastern Daylight Time  
The web site is updated.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 8725<br>Subject: Deleting bridge from the database and importing the same bridge |
|--------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Ruby, Jeff 6/5/2008 8:34:01 PM<br>Modified By: hlee 12/11/2009 7:09:08 PM<br>Priority: High<br>Category: Bug |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:jruby DATE:Thursday, June 05, 2008 4:34:02 PM

1)  
If I export a bridge that I have previously imported and run, I get the error as shown in the first ScreenShotError.jpg when I choose the "Delete files and folders" checkbox. When I hit ok the bridge is removed, but not all of the files and folders are deleted.

2)  
I don't know if this is related or not. But If I try to import the very same bridge, I have to give it a unique BID and unique NBI Structure ID. Is this normal? I don't think it should be.

My bridge is attached, but I don't think it matters what bridge you try and import.

4/19/2016 3:21:10 PM

HRS AASHTO

2623

## Complete Issue Information

By the way. If you want me to continue checking things with this bridge, I would appreciate you fixing the offset problem in my file and attaching the fixed version like you did for Dave Warner.

FROM:jduray DATE:6/9/2008 8:06:56 AM

2) Each bridge must have a unique BID (system assigns this number, not the user). As stated in the Help the Bridge Id and the NBI Structure Id must be unique within the system.

FROM:jduray DATE:6/9/2008 8:16:26 AM

FROM: Jeff Ruby DATE: 6/23/2008 9:00:17 AM Eastern Daylight Time

So, the "system" always remembers that you used this number in the past, even if you deleted it? I think this is a garbage clean-up problem. I can see all of the bridges in the "system". They are all the "example" bridges only. But, I still can't import my bridge. So the system has a memory like an elephant. Or, maybe this isn't the desired behavior. If I remember right, I haven't had this problem in the past. So I think this is new bug.

FROM: Jeff Ruby DATE: 6/23/2008 9:26:22 AM Eastern Daylight Time

I just checked this in beta 4. It is still broke. Try it if you want. I attached the the version 5.6 xml file of the bridge I imported. Import it. Save it. Delete it. Restart Virtis/Opis if you want. See the list. It is all clean. Only 23 example bridges. Now, Import the same bridge again. Try to save it. Bingo. It shouldn't be this way.

Thanks.

By the way. Did you actually try this? Also, What about issue #1? I am running out of time I'm sure. So I will have to update and get back to you. Can't tell, don't have a timer anymore.

FROM: Jim Duray DATE: 6/24/2008 9:38:16 AM Eastern Daylight Time

Regarding the import issue described in (2) above - When you delete a bridge it is not actually deleted from the database, it is marked as deleted and is displayed in the Deleted Bridges folder. This is not an accident and it is not a "garbage" cleanup problem, it is by design and the request of the UI TAG ten years ago. This gives you an opportunity to recover the bridge if you mistakenly delete it. Viewing and removing bridges in the Deleted Bridges folder is a privileged operation so you may not be able to see the folder. If that is the case you will have to ask your administrator to delete it. After that you can import it with the same Bridge Id and the NBI Structure Id as the original.

FROM: Jim Duray DATE: 6/24/2008 10:40:18 AM Eastern Daylight Time

I copied RcTrainingBridge1, did a LRFD analysis, closed the BWS and deleted the bridge. The bridge is moved to the Deleted Bridge folder (as it should be) but the Opis\_LRFD folder cannot be deleted. Using File Explorer I started at the bottom of the folder structure and deleted files until I found one that I could not delete. It was the Opis\_LRFD folder, all files below that point could be deleted. I thought the current directory may still be set to Opis\_LRFD so I analyzed another bridge thinking that would force the current directory to change. I still could not delete Opis\_LRFD. I suspect this is a problem in previous releases.

FROM: Jeff Ruby DATE: 6/25/2008 9:49:55 AM Eastern Daylight Time

Oops! Sorry about issue (2). I apologize for my ignorance. I forgot about the deleted bridges folder.

FROM: Joseph Ihnat DATE: 7/14/2008 11:21:31 AM Eastern Daylight Time

Fixed issue with deleting Opis\_LRFD (see Jim's comments 6/24/2008).

4/19/2016 3:21:10 PM

HRS AASHTO

2624

**Complete Issue Information**

Fixed for 6.0 release.

FROM: Herman Lee DATE: 7/18/2008 3:11:59 PM Eastern Daylight Time  
Verified the fix in Beta 6.

FROM: Jeff Ruby DATE: 7/22/2008 10:45:47 AM Eastern Daylight Time  
I still get this error. I think it has to do with the fact that Virtis/Opis is not "releasing" the file descriptors to open files. I hypothesize that if I would exit Virtis/Opis and then delete it it will work. It seems silly, but maybe someone really wants to delete a bridge immediately after running an analysis. See the screenshot I attached for the error number.

FROM: Joseph Ihnat DATE: 9/23/2008 12:53:31 PM Eastern Daylight Time  
Latest screenshot was LRFD Substructure Example 4.  
Fixed for 6.1.0 and 6.0.1

FROM: Herman Lee DATE: 5/27/2009 4:33:17 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

|                                              |
|----------------------------------------------|
| Issue ID: 8730                               |
| Subject: Truss Builtup Member Error Question |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 6/6/2008 6:06:24 PM  |
| Modified By: administrator     | 6/19/2008 4:35:35 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Unknown   |
|                 | Assigned |          |           |
|                 | Resolved |          |           |
| Lee, Herman     | Resolved | High     | Education |

**Contacts**

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

**Documents**

4/19/2016 3:21:10 PM

HRS AASHTO

2625

## Complete Issue Information

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | TrussBultupMemError<br>(0020009).xml |             |
|      | Incorrect Continuity GUI.JPG         |             |
|      | 00030 - 063-098.xml                  |             |
|      | Correct Continuity GUI.JPG           |             |

## Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 8733.16336 | New           | Tab key Functionality with Continuity GUI |

## Description

FROM:tarmbrecht DATE:Friday, June 06, 2008 2:06:25 PM

Attached TrussBultupMemError(0020009).xml

The following error message is generated for each of the "Bultup" that are defined in the subject Virtis model...

ERROR\_INFO: Unsupported bultup cross section...

ERROR\_INFO: Please check if any bultup section components are missing...

ERROR\_INFO: Error parsing bultup cross section " SecL0L2 "...

### Error at line 32 ###:

?

User cannot find any deviation from entry requirements as documented in the Virtis "Truss Input Command Language". Although the message says the section is not supported, the documentation says that it is supported as far as we can tell. I've attached the xml file causing the problem. Any ideas? Thanks.

FROM:hlee DATE:6/9/2008 9:17:22 AM

The 6 supported bultup section are shown on section 6.9.2 (page 25) in the Truss Input Command Language Manual. One of the supported bultup section allows web lacing but also requires top and bottom flange plates. The bultup sections coded in the attached truss are not supported since there are no top and bottom flange plates. Please let us know if you want to change this to an enhancement request.

Issue ID: 8733

Subject: Tab key Functionality with Continuity GUI

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

6/13/2008 11:39:26 AM

4/19/2016 3:21:10 PM

HRS AASHTO

2626

**Complete Issue Information**

|                     |                     |
|---------------------|---------------------|
| Modified By: jihnat | 7/2/2008 7:47:40 PM |
| Priority: High      |                     |
| Category: Unknown   |                     |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | nsg_schematic_axles.doc |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM:dteal DATE:Friday, June 13, 2008 7:39:26 AM

3 Span prestressed bridge

In the Beam Details, Continuity Diaphragm GUI

See the correct and incorrect jpg's

Using the tab key to navigate, just finished entering the 2nd set of continuity data for span 2  
 Pressing the tab key several times to put the focus on the Duplicate Button I pressed enter.  
 Instead of getting another line for span 2 with both left and right support fields available I got a line for span #1 with only right support fields.

I think it should have duplicated the last line shown for span 2. Is it not supposed to work that way?

It works fine if the focus is on a field in the last line and you poke the Duplicate button.

4/19/2016 3:21:11 PM

HRS AASHTO

2627

### Complete Issue Information

FROM: Joseph Ihnat DATE: 7/2/2008 3:27:34 PM Eastern Daylight Time

Not a Beta incident. Changed to Support Center.

Probably nearly every grid works this way. The "current cell" gets set back to the first row when you tab off the grid.

We could probably leave the "current cell" at the last row and/or add a keyboard shortcut to the New, Duplicate and Delete buttons.

|                         |
|-------------------------|
| Issue ID: 8784          |
| Subject: NSG Schematics |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Thompson, Todd   | 7/8/2008 1:46:16 PM   |
| Modified By: jihnat            | 5/13/2010 11:43:42 AM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/8/2008 9:48:47 AM Eastern Daylight Time

Noticed that on the axle schematic - the axle weights often overlap.

Not sure if this can be easily fixed for 6.0.

FROM: Joseph Ihnat DATE: 7/14/2008 11:27:18 AM Eastern Daylight Time

Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 11/6/2009 12:42:45 PM Eastern Standard Time

Reduced font size used for wheel load to prevent overlap in many cases.

Fixed for version 6.2

4/19/2016 3:21:11 PM

HRS AASHTO

2628



**Complete Issue Information**

FROM: Joseph Ihnat DATE: 4/30/2010 11:48:28 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

FROM: Todd Thompson DATE: 5/11/2010 11:18:19 AM Eastern Daylight Time  
6.2 Beta 1

Does seem to work better - When I do Fit View or higher - seems to be ok. Anything smaller than Fit View it still often overlaps.

Issue ID: 8808  
Subject: Virstis Std. Engine Flared Beam won't run

Folder: /Virtis/Support Center  
Primary Contact: Lathia, Hasmukh  
Submitted By: Armbrecht, Tim 7/28/2008 2:19:09 PM  
Modified By: hlee 3/30/2010 4:57:48 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
|                  | Assigned |          |          |
| Kennelly, Krisha | Resolved |          |          |
|                  | Resubmit |          |          |
| Lee, Herman      | Assigned |          |          |
| Lathia, Hasmukh  |          |          |          |

4/19/2016 3:21:11 PM

HRS AASHTO

2629

## Complete Issue Information

Resolved

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 7/28/2008 10:22:57 AM Eastern Daylight Time

The attached Virtis model, VSEFlaredBmError-060019().xml, a girder line with variable width deck and LLDF will not run in Virtis Standard Engine. The following error message is produced in the output file...

FORMAT ERROR OCCURRED ON THE FOLLOWING LINE

1M 40250670058506700585

THE PROGRAM WAS EXPECTING GIRDER MEMBER PROPERTIES  
BUT THE ABOVE DATA LINE WAS ENCOUNTERED.

FROM: Herman Lee DATE: 8/27/2008 11:07:46 AM Eastern Daylight Time

The above error message is caused by a defect in the 5.6 Release and had been fixed in the 6.0 Release. To run the model in 6.0, the Girder spacing in the Member window and the Start and End Effective Flange Widths in the Deck Profile window need to be entered. Incident 8863 (Virtis Std Engine export for effective flange width.) was discovered during investigation and had been fixed for 6.0 Service Pack.

During the export process in 6.0, the error message "Unable to get slab width!" is displayed. Two issues are identified:

1. After ADD\_ERROR\_MSG in DoGirderMbrAlt line 26172, ComputeGirderSpacing should return FALSE.
2. GetSlabWidth should either handle steel girder or complain girder spacing is not entered.

FROM: Krisha Kennelly DATE: 9/2/2008 1:57:40 PM Eastern Daylight Time

Items 1 and 2 are fixed for 6.0.1 but it really isn't a fix that makes this beam run without the user revising the data.

To analyze this member you have to follow the instructions above - "To run the model in 6.0, the Girder spacing in the Member window and the Start and End Effective Flange Widths in the Deck Profile window need to be entered"

FROM: Xinmei Li DATE: 5/28/2009 12:02:35 PM Eastern Daylight Time

4/19/2016 3:21:11 PM

HRS AASHTO

2630

**Complete Issue Information**

I tested with 6.1 Beta1. I entered girder spacing in the Member window and the Start and End Effective Flange Widths in the Deck Profile window, got the following error while doing rating with Virtis std engine.

Internal Errors (1) - Invalid index  
01:21:18 PM - Line 2473 in source file .\DoMemberResults.cpp.

Structural Analysis Errors (2410) - Input or computational error encountered.  
01:21:18 PM - Line 2473 in source file .\DoMemberResults.cpp.

FROM: Krisha Kennelly DATE: 3/1/2010 9:51:03 AM Eastern Standard Time  
Herman - I don't know if you or Hasmukh should look into this.

FROM: Herman Lee DATE: 3/1/2010 11:06:56 AM Eastern Standard Time  
I imported the attached bridge in 6.1 Release. The following error is listed in the Virtis Std Engine output file.

```
=====
DUPLICATE RANGE ENTERED FOR STEEL MEMBER PROPERTIES
PREVIOUS RANGE 46.75 EQUALS CURRENT RANGE 46.75 FOR SPAN 3
=====
```

Hasmukh, please investigate why it's complaining about the previous range. The previous range is for span 2.

FROM: Hasmukh Lathia DATE: 3/1/2010 3:11:17 PM Eastern Standard Time  
It appears that the enhancement made for Incident 9027 (check for a duplicate range in the steel member properties input) introduced a deficiency in the code to cause this error. A correction has been made that will be included in the next release of Virtis. Meanwhile, the workaround is to introduce an additional range in each span. This error would occur if there is only one range in each span.

FROM: Herman Lee DATE: 3/30/2010 12:55:54 PM Eastern Daylight Time  
Resolved by Hasmukh Lathia on 3/30.

Issue ID: 8812  
Subject: Enhancement request - add option for AASHTO Eq 8-59

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 7/30/2008 8:46:42 PM  
Modified By: hlee 7/16/2014 2:44:05 PM  
Priority: High  
Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Bug         |
| Goodrich, Brian | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | PSBoxTopFIWdthLRFRProb<br>(0700037).xml |             |
|      | PSBoxTopFIWdthLRFRProb.<br>doc          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 7/30/2008 4:56:36 PM Eastern Daylight Time

After running several RC culverts lately, I suggest that the program have the option to calculate the shear capacity per AASHTO equation 8-59, which is the special provision for shear capacity of slabs of box culverts with more than 2' of fill. Equation 8-59 is very similar to the standard or default equation used 8-48. Since a great amount of the culverts input in VIRTIS are controlled by the shear capacity of VIRTIS, the batch runs for permit loads over culverts may show incorrect shear capacities which may affect the time required to evaluate permit applications.

FROM: Herman Lee DATE: 7/16/2014 10:35:45 AM Eastern Daylight Time

Resolved in the 6.4 release (AASHTO Culvert Engine).

**Complete Issue Information**

Issue ID: 8814

Subject: Lesser Top Flange in PS Box Beam Results in Erroneous LRFR Results

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

Submitted By: Armbrecht, Tim

7/31/2008 1:34:58 PM

Modified By: tarmbrecht

6/18/2010 2:07:03 PM

Priority: High

Category: Bug - BRASS

**History**

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Lee, Herman     | New                | High     | Bug       |
|                 | Resolved           |          | Education |
|                 | Information Needed |          | Bug       |
|                 | Closed             |          | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | PSBoxCircVoidStrLocProb-0400018.xml |             |
|      | PSBoxCircVoidStrLocProb.doc         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 7/31/2008 9:39:29 AM Eastern Daylight Time

When the top flange is entered as slightly less than the total width of a prestressed concrete box beam in an adjacent box-beam superstructure the rating factors are significantly less than when the top flange width is set as the total width. Please see attached word document for an example.

FROM: Brian Goodrich DATE: 8/15/2008 1:21:54 PM Mountain Daylight Time

The 1.25" difference in the flange width should cause differences in the results. However, the rating

4/19/2016 3:21:11 PM

**HRS AASHTO**

2633

## Complete Issue Information

differences shown in the document are quite large. The XML file was not attached, so I am not able to duplicate the issue exactly. We need to examine the detailed output for the controlling limit state to see why the difference in flange width is affecting the rating so much.

FROM: Tim Armbrecht DATE: 8/18/2008 11:44:51 AM Eastern Daylight Time  
Sorry about that. I have attached it.

FROM: Brian Goodrich DATE: 8/20/2008 4:00:51 PM Mountain Daylight Time  
I rated the interior member with the standard and modified box beams. The difference in the rating is due to a difference in the factored live load moment, which is due to differences in the live load distribution factors. BRASS is calculating the live load distribution factors per the LRFD formulas. BRASS uses the width of the top of the box beam for the formulas, which is subject to a range of applicability ( $35" \leq b \leq 60"$ ). The standard box beam has a top width of 34.75", which is outside the range of applicability. When this occurs, BRASS is programmed to use the lever rule override, which results in a higher live load distribution factor than the formulas. The modified box beam has a top width of 36" and is within the range of applicability, so the LRFD formula distribution factors are used. Note that the next version of the BRASS engine has already been changed to use the maximum of the top and bottom box widths.

FROM: Brian Goodrich DATE: 11/20/2008 9:24:45 AM Mountain Standard Time  
The BRASS engine was already changed to use the maximum of the top and bottom box widths, so this issue is marked as resolved. Fixed for version 6.1.

FROM: Tim Armbrecht DATE: 7/24/2009 3:31:49 PM Eastern Daylight Time  
It does not appear that this has been fixed -

There is no change in the BRASS LRFR rating factors between v. 6.0 and v. 6.1 Beta 2.

Using BRASS LRFR (v. 6.1 B2 & v. 6.0), w/the 34.75" top flange, the Inv/Op rating factors are 0.583/0.756.

Using BRASS LRFR (v. 6.1 B2 & v. 6.0), w/the 36" top flange, the Inv/Op rating factors are 1.471/1.907.

Using Virtis LRFR (v. 6.1 B2), w/the 34.75" top flange, the Inv/Op rating factors are 1.495/1.938.

Using Virtis LRFR (v. 6.1 B2), w/the 36" top flange, the Inv/Op rating factors are 1.506/1.953.

FROM: Brian Goodrich DATE: 7/27/2009 9:21:54 AM Mountain Daylight Time  
Back in 2008 when I made my comments, I assumed that the new version of BRASS would have been included in version 6.1. However, it will not be. BRASS-GIRDER(LRFD) 2.0.1 was release in August 2008 and version 2.0.2 is scheduled for release in August 2009. AASHTO may release a new BRASS version with Virtis/Opis 6.2.

FROM: Brian Goodrich DATE: 8/12/2009 11:53:29 AM Mountain Daylight Time  
E-mail from Tim:

From: Armbrecht, Tim A [mailto:Tim.Armbrrecht@illinois.gov]  
Sent: Monday, July 27, 2009 9:41 AM

Hi Brian,

I understand, thanks for the clarification. We'll go ahead and keep this incident open until the new BRASS version is incorporated with V/O, and we'll test it then.

4/19/2016 3:21:11 PM

HRS AASHTO

2634

**Complete Issue Information**

Thanks again,

Tim

FROM: Tim Armbrecht DATE: 6/18/2010 10:07:03 AM Eastern Daylight Time  
Accepted.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 8815                                                       |
| Subject: PS Strand Location Problem in Box-beams with Circular Voids |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 7/31/2008 1:40:54 PM |
| Modified By: hlee              | 8/19/2008 7:56:48 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 7/31/2008 9:56:28 AM Eastern Daylight Time  
When defining PS Box-beams with circular voids strand locations cannot be placed continuously across the bottom flange of the beam. When that is attempted the strands appear in groups separated by gaps. What is the purpose? See attached word document for illustration and attached xml.

FROM: Herman Lee DATE: 8/14/2008 1:46:55 PM Eastern Daylight Time  
In the Strand Layout window, the method that used to position the strands is listed in red font at top of the schematic. Virtis/Opis Help of the Strand Layout window describes the reasons and the uses of the Original, Revised and Generic Strand Positioning Methods. If you want to have more strand locations in a row, increase the "No of Strands" in the PS Beam Strand Grid. Please note that BRASS doesn't

4/19/2016 3:21:12 PM

HRS AASHTO

2635

**Complete Issue Information**

use the Horizontal Spacing you specified in the strand grid.

FROM: Tim Ambrecht DATE: 8/15/2008 11:45:28 AM Eastern Daylight Time  
Herman,

Your response does not answer my question. We typically have strands below the voids, so why does the schematic have gaps below the voids which prevent us from modelling strands at those locations? If there is no technical reason, then the schematic should be modified to allow placement of strands underneath the voids. Also note that this is not a BRASS issue ultimately when the AASHTO engine comes online for prestressed.

I realize this is a modest issue, and that it doesn't really affect the results. However, the logic for the gaps makes no sense to me. I'm trying to help identify a (in my opinion) nonsensical issue and see if it can be simply resolved.

FROM: Herman Lee DATE: 8/19/2008 12:14:51 PM Eastern Daylight Time  
E-mail sent to Tim:

=====  
Tim,

The Strand Grid tab of the PS Box Beam doesn't have enough information to describe the exact horizontal location of each possible strand location. Are you requesting to modify the logic to evenly distribute the locations in each row of the strand grid? Or, requesting to modify the Strand Grid tab to describe the exact horizontal locations of each possible strand location? Modify the logic to evenly distribute the locations will make the schematic looks better but still cannot represent IDOT 21" x 36" Deck Beam (IDOT Prestressed Concrete Manual Page 2-59). I guess the question is how exact you would like the strand locations modeled in Virtis.

Thanks,  
Herman

=====

FROM: Tim Ambrecht DATE: 8/19/2008 3:17:32 PM Eastern Daylight Time  
Herman,

I see, so the grid tab is a generic representation and is not intended to represent a specific box beam.

Seems like it would be a waste of service units to pursue. I appreciate the clarification.

Thanks,

Tim

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8816<br>Subject: No Spec Checking or Design Ratio's |
|---------------------------------------------------------------|

|                                                                |
|----------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Lee, Herman |
|----------------------------------------------------------------|

4/19/2016 3:21:12 PM

**HRS AASHTO**

2636



**Complete Issue Information**

|                          |                     |
|--------------------------|---------------------|
| Submitted By: Teal, Dean | 8/1/2008 6:37:39 PM |
| Modified By: dteal       | 8/4/2008 1:59:23 PM |
| Priority: High           |                     |
| Category: Education      |                     |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Summary.txt         |             |
|      | SQL Failed.jpg      |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 8/1/2008 2:39:16 PM Eastern Daylight Time  
 No Spec Checking or Design Ratio's with the provided substructure examples  
 Using LRFD Substructure Example 1, 2 Continuous Spans, Girder 1 or 2  
 Do an LRFD design review on the exterior girder  
 No Spec checking is done (the engine property has it turned on)  
 Design Ratio's are not calculated

Is there something I didn't turn on??

FROM: Herman Lee DATE: 8/1/2008 3:30:27 PM Eastern Daylight Time  
 In Member Alternative BRASS LRFD Engine properties, select "Generate at tenth points plus user-defined points (using schedule data)" in Points of Interest Control to allow spec checking.

4/19/2016 3:21:12 PM

HRS AASHTO

2637

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 8817                                   |
| Subject: Unable to Install SQLServer 2005 in 6.0 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/2/2008 12:59:24 PM |
| Modified By: jihnat            | 4/2/2009 1:01:38 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 8/2/2008 9:00:30 AM Eastern Daylight Time  
I wanted to get this added as an incident so it will be fixed.  
KDOT had this problem loading on 3 out of 4 laptops  
ILL had this problem on 1 out of 3 laptops  
VT had this problem on Georges laptop

So it's not an isolated problem – it needs fix'in

Below is the email volley from start to finish:

4/19/2016 3:21:12 PM

HRS AASHTO

2638

## Complete Issue Information

RE: Installing Stand Alone SQL 2005 Server  
Joseph Ihnat [JIHNAT@bakercorp.com]  
Friday, August 1, 2008 3:33 PM  
To: Jeff, Jim, Dean & Mehrdad

Nice work.

The ODBC connections have always been configured as User DSNs on a Virtis/Opis install.  
(The workstation versions configure as System DSNs for reasons I no longer remember.)

I don't disagree that this should be changed.

Thanks.

- Joe

>>> Jeff Ruby <JRuby@ksdot.org> 8/1/2008 4:16 PM >>>  
Jim,

I finally got it to work. The following is for documentation so that perhaps this problem will get resolved, or at least I can fix it again when it happens.

The problem appears to be mostly a Microsoft thing. Virtis/Opis installs a new instance of SQL 2005 server express. From what I can determine, it is version 9.00.2047.00 (sp1?). On some machines when SQL server express tries to install, the MSXML6 component fails to install. Virtis/Opis will not install correctly no matter what you do.

I traced the problem down to the msxml6.msi. From Microsoft's web site the file is called msxml6\_x86.msi. In order to successfully install Virtis/Opis I had to replace the msxml6.msi and add the msxml6\_x86.msi to the temporary setup subdirectory during the Virtis/Opis install on the fly.

Observations during my troubleshooting:

1) If you already have a working install as one user, when you log in as another user Virtis/Opis will not have a connection to the database. In version 5.6 there was, but not in version 6.0. And if you want to uninstall and reinstall you first need to login as the "original" user to be able to successfully uninstall SQL Server. Because if you don't uninstall SQL Server 2005 Express first, Virtis/Opis will not install.

2) I could install SQL 2005 Server Express SP2 without incident.

Recommendations:

- 1) Update the redistributable SQL Server 2005 Express to SP2 in the Virtis/Opis 6.0 install.
- 2) Configure the ODBC connection like in 5.6 so that all users on the computer can access it.

If you have any questions or comments, please let me know.

Jeff.

-----Original Message-----

From: Dean Teal  
Sent: Friday, August 01, 2008 8:18 AM

4/19/2016 3:21:12 PM

HRS AASHTO

2639

## Complete Issue Information

To: Jeff Ruby  
Cc: Jo Palmer  
Subject: FW: Installing Stand Alone SQL 2005 Server

No solutions yet from Michael Baker

-----Original Message-----

From: Jim Duray [mailto:JDURAY@mbakercorp.com]  
Sent: Friday, August 01, 2008 8:13 AM  
To: Dean Teal  
Subject: RE: Fwd: Installing Stand Alone SQL 2005 Server

We are working on it...

>>> Dean Teal <Teal@ksdot.org> 7/31/2008 5:01 PM >>>  
Have we found out anything useful yet?

-----Original Message-----

From: Jeff Ruby  
Sent: Thursday, July 31, 2008 11:42 AM  
To: Jim Duray  
Cc: jihnat@mbakercorp.com; Dean Teal  
Subject: RE: Fwd: Installing Stand Alone SQL 2005 Server

Jim,

Dean gave the computer to me to troubleshoot. There wasn't any file in the location you mentioned.

During the install of the SQL stuff, there were 2 red x's before the "Send your error to Microsoft" box popped up. I didn't get a chance to save that info. It just disappeared. I zipped up the SQL log files. These are attached. I didn't see anything in the event viewer except the successful installs.

I also installed by itself the "SQL Server 2005 Express SP2" runtime. It installed successfully. During this install I identified one of the "failed" parts of the install previously. It was the top one, the MSXML6 install. I couldn't determine exactly what the other problem was.

Thanks,

Jeff

-----Original Message-----

From: Dean Teal  
Sent: Thursday, July 31, 2008 10:27 AM  
To: Jeff Ruby  
Subject: FW: Fwd: Installing Stand Alone SQL 2005 Server

Jeff,

Can you respond to the information request -

-----Original Message-----

From: Jim Duray [mailto:JDURAY@mbakercorp.com]

4/19/2016 3:21:12 PM

HRS AASHTO

2640

## Complete Issue Information

Sent: Thursday, July 31, 2008 10:20 AM  
To: Dean Teal  
Subject: Re: Fwd: Installing Stand Alone SQL 2005 Server

We did build testing on a clean PC before the release and it was fine.

>>> Joseph Ihnat 7/31/2008 11:15 AM >>>  
He should send us the log files from C:\Documents and Settings\All Users\Application Data\AASHTOWARE\MSSQL.1\MSSQL\LOG Screenshots would also be helpful.  
May also want to check the Event viewer.

>>> Jim Duray 7/31/2008 10:14 AM >>>

>>> Dean Teal <Teal@ksdot.org> 7/31/2008 10:13 AM >>>  
Jim,

Version 6.0 install with standalone 2005 server May be related to VI #8636

Has anybody reported install problems with standalone SQL 2005 Server?

I have had 3 out three unable to install the SQLServer 2005 On laptops that have never had Virtis installed before (getting ready for UG meeting) They would not install the SQL Server (failed) During the install of the SQL Server, it gets down to the second to the last item (SQL Server Database Services) - then it fails

My laptop and desktop that had previous versions - they work fine.

Dean Teal  
Bridge Evaluation  
Kansas Department of Transportation  
785-291-3001

FROM: Todd Thompson DATE: 8/6/2008 12:17:19 AM Eastern Daylight Time  
I tried the SQL Server also - and it doesn't work.  
It's on my machine that I have Pontis 51 Beta 3 working with SQL Express ok.

FROM: Joseph Ihnat DATE: 8/27/2008 11:20:31 AM Eastern Daylight Time  
A new Release CD (containing SQL Server 2005 Express SP2) will be sent to users who've reported a problem installing SQL Server.  
The issue of User DSN vs. System DSN will be addressed in the next release.

FROM: Dean Teal DATE: 8/28/2008 3:02:52 PM Eastern Daylight Time  
Updated CD was received 8/28/08  
It was sent to KSDOT, ILDOT, VADOT and VTRANS  
From reading the incident above - it appears that SD should have also received the update.

FROM: Joseph Ihnat DATE: 8/29/2008 9:23:09 AM Eastern Daylight Time  
I read Todd's comment differently.  
He may have already had SQL Server installed. In which case the ODBC connections may fail to be created.

4/19/2016 3:21:12 PM

HRS AASHTO

2641

## Complete Issue Information

I split that problem off to a new incident (8868).  
In any event, he's going to try it again.

FROM: Dean Teal DATE: 3/26/2009 7:36:01 AM Eastern Daylight Time  
It would appear that we don't have this fixed yet

Using the updated CD's sent 8/28/08 I tried to install Virtis/Opis 6.0 with provided database and the SQLServer 2005 on 3 desktop pc's

At the end of the install I received a message that the server failed to start on all three pc's.

FROM: Dean Teal DATE: 3/30/2009 7:57:14 AM Eastern Daylight Time  
Below is an email and response with Jim Friday March 27th:

We will investigate...

>>> Dean Teal <Teal@ksdot.org> 3/27/2009 11:18 AM >>>  
Jim,

I held training class yesterday for HNTB's Kansas City KS and MO office. As I wrote yesterday, KDOT had another issue with the SQL Server install from the CD (the new one provided I think it was 8-28-08) and could not get the stand alone installed. We work around that by having the consultants use my network log in and we actually used our production database. Not desirable but when your in a bind you just have to make due.

I got an email from one of the HNTB engineers that was at the training yesterday. He has been unable to install the SQL database from the CD. See his email below:

We are trying to get the Virtis software up and running here but are having some problems. We get an error trying to install the SQL components but everything else seems to be working. Are there any downsides to going with any of the other database options (MS access perhaps)? If we absolutely need the SQL components we will start trying to contact the support group from Virtis to see if they can help resolve this issue. Thanks.

Mike Briggs, E.I.T.  
Bridge Engineer

I know his problem description is light on details, but I am assuming he is having the same issue I had last August and this week. I emailed him for more details - but if it is the same issue, I need a solution.

Do we have a fix for this???

Dean

FROM: Joseph Ihnat DATE: 4/1/2009 2:44:53 PM Eastern Daylight Time  
Please see <http://support.microsoft.com/kb/968749>  
If that's not your situation, please attach the file C:\Program Files\Microsoft SQL Server\90\Setup Bootstrap\LOG\summary.txt

4/19/2016 3:21:12 PM

HRS AASHTO

2642

**Complete Issue Information**

FROM: Dean Teal DATE: 4/1/2009 5:47:27 PM Eastern Daylight Time  
Joe,  
That Microsoft link applies to when SQL fails to install.  
I think it installed, but it fails to connect - does that make sense?  
I attached the file you requested plus a screen shot of the Fail message

FROM: Joseph Ihnat DATE: 4/2/2009 8:57:19 AM Eastern Daylight Time  
This is not related to the original problem for which new CDs were issued.  
This latest problem looks like a duplicate of 8868.  
The ODBC connection needs to be configured manually.  
Please contact me (or have your IT person contact me) for instructions.

|                                                |
|------------------------------------------------|
| Issue ID: 8820                                 |
| Subject: Wrong Structural Thickness Being Used |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 8/6/2008 6:24:11 PM  |
| Modified By: kkennelly            | 8/20/2008 7:51:29 PM |
| Priority: High                    |                      |
| Category: Enhance BRASS           |                      |

**History**

| Primary Contact  | Status           | Priority | Category      |
|------------------|------------------|----------|---------------|
| Lee, Herman      | New              | High     | Bug           |
| Kennelly, Krisha | Not Reproducible |          |               |
|                  | Suspended        |          | Enhance BRASS |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | TrainingBridge1.xml                 |             |
|      | TrainingBridge1 Typ<br>Section.JPG  |             |
|      | TrainingBridge1 Deck<br>Profile.JPG |             |

## Complete Issue Information

Plate\_Girder.DST

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 8/6/2008 2:26:00 PM Eastern Daylight Time

Using TrainingBridge

Opis review using BRASS LRFD

The total deck thickness is 10"

The structural thickness is 9.5"

When you review the Load Distribution file I see that the LRFD Distribution Factors are calculated on total thickness and not structural thickness.

Shouldn't it be using structural thickness and not the total thickness?

Checking or unchecking the box in the Structure Definition Analysis tab does not make any difference??

It is always using the total thickness for DF calculations.

FROM: Krisha Kennelly DATE: 8/11/2008 9:20:34 AM Eastern Daylight Time

The ts used in the distribution factor calcs is controlled by the checkbox on the Structure Definition: Analysis tab.

I'm not sure what TrainingBridge you are referring to that has a total thickness = 10" and structural thickness = 9.5" but I ran BID11, Structure Definition #1 and the RC6 training example from the user group meeting and the ts that shows up in the Dist Factor detailed calcs file varies based on the checkbox on the Structure Definition: Analysis tab.

Can you reproduce this and if so please attach the xml file.

FROM: Dean Teal DATE: 8/13/2008 4:45:50 PM Eastern Daylight Time

Used TrainingBridge1

Attached TrainingBridge1, screen shot of total thickness and structural thickness

Below is an excerpt from the Distribution file (attached) starting with line 309.

Notice that Ts=10" and not 9.5"

### PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS

Method: AASHTO LRFD Table 4.6.2.2b-1

Moment in Interior Beams: (a, e, k, i, j)

Input Parameters:

S = 13.000 ft    ts = 10.000 in

L = 161.000 ft    Kg = 0.268094E+07 in<sup>4</sup>

Nb = 4

FROM: Krisha Kennelly DATE: 8/20/2008 11:12:33 AM Eastern Daylight Time

4/19/2016 3:21:13 PM

HRS AASHTO

2644



### Complete Issue Information

I'm sorry I didn't read the original description correctly. I thought you were discussing the new Opis RC LRFD engine since the incident was submitted during the User Group meeting. That engine does use the slab thickness based on the checkbox on the Structure Definition: Analysis tab.

The BRASS LRFD engine does not consider the checkbox on the Structure Definition: Analysis tab when determining the slab thickness to use in the LRFD dist factor calcs. This is a duplicate of 4315 and related to 2759,7874

|                            |
|----------------------------|
| Issue ID: 8823             |
| Subject: Truss Import Tool |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 8/7/2008 1:28:20 PM   |
| Modified By: hlee              | 8/13/2008 12:17:02 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 8/7/2008 9:29:58 AM Eastern Daylight Time

Many trusses exist/have been modeled in STAAD.

A utility that could import this truss model from STADD to Virtis would be of great value.

## Complete Issue Information

Issue ID: 8824  
Subject: Virtis won't start

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 8/8/2008 12:18:57 PM  
Modified By: jihnat 8/8/2008 2:03:40 PM  
Priority: High  
Category: Third Party

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Bug         |
|                 | Resolved |          | Third Party |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:21:13 PM

HRS AASHTO

2646

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 8/8/2008 8:19:27 AM Eastern Daylight Time  
Received via email from Brent Long, Fisher Assoc.

I'm having some problems with Virtis 6.0. When launch the program it does nothing. It doesn't even show up as a process running. I had version Virtis 5.6 previously and I removed it before I installed the newest version. I need to run it to be able to send you the codes correct? Any Ideas to what might be wrong?

Brent is running Windows XP SP3 and Symantec Endpoint protection ver: 11.0.2010.25  
He traced the problem to a conflict with the Symantec Endpoint.  
Just disabling the protection still would not allow Virtis to run, he had to uninstall Symantec Endpoint.

I am able to reproduce this in a VM running XP SP2 and Symantec Endpoint.

FROM: Joseph Ihnat DATE: 8/8/2008 9:38:35 AM Eastern Daylight Time  
Seems to be a problem that Symantec Endpoint is having with other apps.  
I don't think there's a solution yet, but here are two workarounds. I've verified both of them.

1) Open up Registry Editor and find:  
[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\SysPlant]  
Change "Start" to DWORD:00000004  
Exit and restart your system.

2) Uninstall Symantec Endpoint. Then reinstall Symantec Endpoint.  
During the reinstall, perform Custom install and unselect Application and Device Control.

Issue ID: 8825

Subject: Virtis Std Engine about box has wrong version number

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Ordoobadi, Mehrdad 8/8/2008 6:10:27 PM

Modified By: jihnat 5/29/2009 11:49:39 AM

Priority: High

4/19/2016 3:21:13 PM

HRS AASHTO

2647

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | PS3-PSAdjBoxTrainingBridge.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Mehrdad Ordoobadi DATE: 8/8/2008 2:10:57 PM Eastern Daylight Time  
The version 6.0 Virtis Std Engine about box shows version 5.6.0

FROM: Mehrdad Ordoobadi DATE: 8/8/2008 2:11:54 PM Eastern Daylight Time  
This was discovered by Yang Wang from Mass Highways.

FROM: Xinmei Li DATE: 5/28/2009 1:24:27 PM Eastern Daylight Time  
Verified with 6.1 Beta1, about box shows version 6.0 now, should we change it to 6.1 for Version 6.1?

FROM: Joseph Ihnat DATE: 5/29/2009 7:48:55 AM Eastern Daylight Time  
Fixed in Beta 1 Update.

## Complete Issue Information

Issue ID: 8844  
Subject: Don't show the "Deck Thickness" label in the Structure Typical Section schematic when there is no deck.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 8/12/2008 1:16:39 PM  
Modified By: xli 5/28/2009 6:16:03 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/12/2008 9:17:46 AM Eastern Daylight Time  
Attached the PS3 Adjacent PS Box training bridge.

FROM: Joseph Ihnat DATE: 8/13/2008 12:22:24 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:14:38 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

## Complete Issue Information

Issue ID: 8846

Subject: Incorrect spacings in Structure Typical Section schematic for splayed girder bridge.

Folder: /Virtis/Support Center

Primary Contact: Li, Xinmei

Submitted By: Lee, Herman

8/12/2008 5:36:44 PM

Modified By: xli

11/4/2008 9:06:55 PM

Priority: High

Category: Education

### History

| Primary Contact   | Status   | Priority | Category  |
|-------------------|----------|----------|-----------|
| Ihnat, Joseph     | Assigned | High     | Bug       |
| Kennelly, Krishna |          |          |           |
| Li, Xinmei        |          |          | Education |
|                   | Resolved |          |           |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:21:14 PM

HRS AASHTO

2650

**Complete Issue Information**

FramingPlanCalc.pdf  
Sections.doc

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 8/12/2008 1:39:31 PM Eastern Daylight Time  
Bridge file and supporting documents are attached.

FROM: Joseph Ihnat DATE: 9/18/2008 8:52:48 AM Eastern Daylight Time  
The schematic gets the spacings by calling IDoGirderSystemStructDef::ComputeGirderSpacing.  
Krisha, can you check if that function is working correctly in this case?

FROM: Krisha Kennelly DATE: 9/22/2008 10:08:49 AM Eastern Daylight Time  
Function is working correctly. When we display the girder spacing in the Structure Typical Section schematic we always display the spacing as measured perpendicular to the structure def ref line. The attached hand calcs show that the correct numbers are being displayed for G1 spacing as measured along a line perpendicular to the structure def ref line at the start of the structure. Due to the skew of support 1 the spacing is measured way out in the middle of G1 and not really at the support.

May,  
Remove the following sentence in paragraph 5 of that help topic "This view is also not available for splayed beams." Add the following sentence to the end of paragraph 5. "Girder spacings and deck overhangs displayed in the schematic are measured perpendicular to the superstructure definition reference line as shown below." Then add the attached 'StructureTypSectionSchematicHelp.vsd' below this paragraph.

FROM: Herman Lee DATE: 9/22/2008 10:51:15 AM Eastern Daylight Time  
Attached girder spacings hand calculations (FramingPlanCalc.pdf).

FROM: Xinmei Li DATE: 11/4/2008 4:08:37 PM Eastern Standard Time  
Help is updated.

Issue ID: 8848  
Subject: Library Properties – PS with Radius Fillet

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Teal, Dean 8/13/2008 8:15:23 PM  
Modified By: hlee 7/12/2012 6:36:36 PM  
Priority: High

4/19/2016 3:21:14 PM

HRS AASHTO

2651

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact  | Status                | Priority | Category    |
|------------------|-----------------------|----------|-------------|
| Lee, Herman      | New                   | High     | Bug         |
| Kennelly, Krisha | Assigned<br>Suspended |          | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 8/13/2008 4:16:12 PM Eastern Daylight Time

On wide top flange PS beams that have radius fillets

If you enter the correct dimensions and use the calculate button on the properties tab – you will not get the correct properties. You will get a area that is closer to a taper flange without fillets.

On a Nebraska NU78 section, the area will be off by 27 square inches. This will throw off all you other calc's that are dependent on area.

Being BRASS does not use radius fillets, we have to fudge in our numbers without a radii and trick the properties calculations into being correct.

FROM: Herman Lee DATE: 8/14/2008 7:50:35 AM Eastern Daylight Time

PS Beam Properties tab Compute button Virtis/Opis Help states that

"For prestressed I beams with curved fillets, the properties are computed assuming the curved fillets do not exist."

Following requests are identified:

1. Request the Compute button to include radius fillets.
2. Enhance BRASS to accept radius fillet as input or enhance BRASS to accept properties as input.

FROM: Herman Lee DATE: 7/12/2012 2:33:49 PM Eastern Daylight Time

Changed Category from Enhance BRASS to Enhancement.

4/19/2016 3:21:14 PM

HRS AASHTO

2652



## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 8849                           |
| Subject: Unit Weight PS Sections Library |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 8/14/2008 12:18:35 PM |
| Modified By: sthogaru             | 7/13/2009 6:28:40 PM  |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 8/14/2008 8:19:49 AM Eastern Daylight Time

The Nominal Load (unit weight) calculated in the PS Properties tab in Library calculates the weight using 150 #/ft<sup>3</sup>

High performance deep beams like the Nebraska NU2000 (NU78) is 6.5" deep with wide top flanges. These beams are made with high strength concrete – 7 ksi to 10 ksi.

The unit weight of the concrete is more like 155 #/ft<sup>3</sup> (may have granite aggregate)

On these beams, spanning 145', this may make a difference of 2.3 kip reaction at each beam end.

We need to add an estimated concrete weight to the properties grid so we get a more accurate Nominal load value in 6.1

## Complete Issue Information

Issue ID: 8851

Subject: Update BRASS LRFD Engine P/S Properties and Shrinkage/Time Help

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

8/14/2008 4:04:24 PM

Modified By: jduray

5/6/2010 2:18:53 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resubmit |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:21:15 PM

HRS AASHTO

2654

## Complete Issue Information

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | LongStifLocDesignationProb.doc |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/14/2008 12:05:34 PM Eastern Daylight Time  
Under P/S Properties, General P/S Data:  
Percentage DL: Not used in BRASS since Opis 5.5.

Under Shrinkage/Time, Time:  
Time composite and Time of analysis: Not used in BRASS since Opis 5.5.

FROM: Xinmei Li DATE: 11/4/2008 3:54:42 PM Eastern Standard Time  
Updated.

FROM: Xinmei Li DATE: 5/28/2009 2:21:04 PM Eastern Daylight Time  
Can't see the update in version 6.1 Beta1.

FROM: Herman Lee DATE: 4/12/2010 1:05:34 PM Eastern Daylight Time  
Resolved by May for 6.2 Release.

FROM: Jim Duray DATE: 5/6/2010 8:33:30 AM Eastern Daylight Time  
I don't see these changes in 6.2 alpha 4 Help.

FROM: Herman Lee DATE: 5/6/2010 10:10:04 AM Eastern Daylight Time  
The changes are in the BRASS LRFD Engine Help.

FROM: Jim Duray DATE: 5/6/2010 10:18:13 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                                                  |
|--------------------------------------------------|
| Issue ID: 8852                                   |
| Subject: Longitudinal Stiffener Data Entry Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Armbrecht, Tim   | 8/15/2008 3:52:19 PM |
| Modified By: tarmbrecht        | 8/14/2009 8:18:48 PM |

4/19/2016 3:21:15 PM

HRS AASHTO

2655

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Angle Stiffener.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 8/15/2008 11:56:55 AM Eastern Daylight Time  
Under "Stiffener Ranges", tab "Longitudinal Stiffener Ranges" for Steel Girders, the "Y" dimension is indicated as "(in)" when in fact it can be entered as either inches or a percentage of the distance between flanges (see screen image in attached file). From the Help for item "Y": "Enter the distance or percentage from the location selected in the "Measured From" column to the centroid of the longitudinal stiffener plate, as shown in the sketch."

This should be corrected on any affected data entry screens. Perhaps have it say "(in. or %)".

FROM: Herman Lee DATE: 8/18/2008 12:53:29 PM Eastern Daylight Time  
Related to Incident 2816.

FROM: Xinmei Li DATE: 8/25/2008 10:22:25 AM Eastern Daylight Time  
This problem was resolved in Incident 2816. I can't reproduce it in 6.0.  
In 6.0 the column heading is "Y" without "inch" or "%", "inch" or "%" is displayed in "Measured From"

4/19/2016 3:21:15 PM

HRS AASHTO

2656

**Complete Issue Information**

pull down list.

FROM: Herman Lee DATE: 8/26/2008 9:55:29 AM Eastern Daylight Time  
Check the Stiffener Ranges window in Member Definition. Incident 2816 only fixed the Stiffener Ranges window in Member Alternative.

FROM: Xinmei Li DATE: 8/28/2008 9:22:49 AM Eastern Daylight Time  
Fixed for member definition.

FROM: Srujana Thogaru DATE: 5/28/2009 4:29:06 PM Eastern Daylight Time  
appears to be corrected for 6.1V - Beta 1

FROM: Tim Armbrecht DATE: 8/14/2009 4:18:48 PM Eastern Daylight Time  
Appears to be working correctly. Accepted.

|                                        |
|----------------------------------------|
| Issue ID: 8855                         |
| Subject: Angles for bearing Stiffeners |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/18/2008 7:16:33 PM |
| Modified By: jihnat            | 7/14/2009 2:56:38 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 8/18/2008 3:17:10 PM Eastern Daylight Time  
When you use angles to create bearing stiffeners, pier or abutment, they don't show up on the view

4/19/2016 3:21:15 PM

HRS AASHTO

2657

**Complete Issue Information**

schematics GUI? Are they not supposed to?

FROM: Joseph Ihnat DATE: 8/19/2008 9:24:30 AM Eastern Daylight Time  
Are you saying that plate bearing stiffeners will show but not angles?  
If so, please export your bridge and attach the xml file to this incident.  
If neither show, we can change this to an enhancement request.

FROM: Dean Teal DATE: 8/20/2008 9:09:52 AM Eastern Daylight Time  
I have included our TrainingBridge1 that I modified.  
I have an angle used as a bearing stiffener at Abut 1 and a plate stiffener at Abut 2

In the Schematics:Prifile View of a girder, a green stiffener IS NOT displayed at Abut 1 (Angle Stiffener) and a green stiffener (Plate Stiffener) is displayed at Abut 2.

Bridge file attached

FROM: Joseph Ihnat DATE: 8/20/2008 3:46:49 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:32:01 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1. Both green stiffeners are displayed.

FROM: Dean Teal DATE: 7/14/2009 8:18:21 AM Eastern Daylight Time  
Accepted in 6.1 beta 2

|                                    |
|------------------------------------|
| Issue ID: 8858                     |
| Subject: Girder-Floorbeam Problems |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 8/20/2008 7:37:51 PM |
| Modified By: plitchfield         | 7/30/2014 8:09:33 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:21:16 PM

HRS AASHTO

2658

### Complete Issue Information

|                 |                    |      |     |
|-----------------|--------------------|------|-----|
| Goodrich, Brian | Assigned           |      |     |
|                 | Information Needed |      |     |
| Ihnat, Joseph   | Assigned           | High | Bug |
|                 | Resolved           |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 8/20/2008 3:46:45 PM Eastern Daylight Time

We're having a couple of issues related to analysis of a Girder-Floorbeam system superstructure:

Virtis is generating a message that there are too many (46) distributed loads for BRASS to handle (max 38). We're wondering if anything in the attached model can be changed to get around that even though this girder does have a large number of section changes along its length. (Obviously it would be best if BRASS were enhanced to allow more loads, as this could be a problem for the analysis of a significant number of major bridges, which we're starting to enter into Virtis.)

In the attached model, the cantilevered floorbeam, when entered as part of a Floor System Superstructure seems to yield reasonable results (Inventory/Operating rating factors = 1.243/1.597) with the control point being at the support. However, when entered using the Floor Line Superstructure method the rating at that point drops to Inventory/Operating rating factors of 0.064/0.107. It was determined that the reason for this was that Mr, from Eqn. 10-103c, was greatly reduced. This in turn seems to have been caused by the value of Lb, which for the Floor System was 10.5', being 53.0' under the Floor Line model. Have we made some error in the input of the Floor Line model (which should be essentially the same as the Floor System), or is there a bug in Virtis that is causing this? (Attached the BRASS output files for both Floor System & Line floorbeam analyses.)

FROM: Brian Goodrich DATE: 8/26/2008 2:08:09 PM Mountain Daylight Time

There is a difference in the unbraced lengths between the system and line models. I will investigate why they are not consistent.

FROM: Brian Goodrich DATE: 3/23/2010 12:46:57 PM Mountain Daylight Time

This issue is related to Incident 5416. For a floor system, the bracing is assumed to be at those locations where stringers intersect the floorbeam. For a floor line, there is no input related to bracing. Should we assume that the main girder provides bracing?

FROM: Tim Armbrecht DATE: 3/25/2010 9:10:59 AM Eastern Daylight Time

From my consultant:

4/19/2016 3:21:16 PM

HRS AASHTO

2659

## Complete Issue Information

Virtis doesn't provide for manual input of lateral bracing points for floorbeams. However, I had thought that to get reasonable results entering top flange support for the full length of the floorbeam under "Lateral Support" would work. That was done for the line floorbeams in the bridge model we provided for this incident. (I was not previously aware that the stringers in a GFS system are being automatically used as bracing points.) However, we should definitely be able to enter lateral bracing points for line floorbeams. The main girder could be assumed to provide bracing but if we had a way to manually enter the bracing points we would naturally enter them there. The latter is what I recommend since that would be consistent with the way bracing is entered for longitudinal beam lines. I don't think we should have both a manual and an automatic entry of main girders as bracing points.

Somewhat related, Virtis should allow for entry of cantilevered floorbeams in Truss-Floorbeam systems, just like it already does in Girder-Floorbeam systems.

Also, what about the first issue brought up regarding "too many distributed loads"? Is there any workaround available?

FROM: Brian Goodrich DATE: 4/15/2010 2:21:00 PM Mountain Daylight Time  
The number of distributed loads request is already on the BRASS enhancement list. I did forward your request to add your name to the other users making this request.

FROM: Brian Goodrich DATE: 5/5/2010 1:36:04 PM Mountain Daylight Time  
E-mail from Mike Watters:

I will add this to my documentation for Enhancement Requests. The users will need to prioritize this request.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

FROM: Herman Lee DATE: 7/12/2012 3:12:03 PM Eastern Daylight Time  
Changed Category from Enhance BRASS to Enhancement.

Issue ID: 8862

Subject: End effective flange width should be enabled for system definition exterior girder with flared deck width.

Folder: /Virtis/Support Center

Primary Contact: Ilnat, Joseph

Submitted By: Lee, Herman

8/26/2008 3:12:17 PM

Modified By: xli

5/28/2009 6:39:32 PM

Priority: High

Category: Bug

4/19/2016 3:21:16 PM

HRS AASHTO

2660



## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | IssueNet-8866-Email.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/26/2008 11:18:32 AM Eastern Daylight Time  
Currently, only parallel system is checked.

FROM: Joseph Ihnat DATE: 9/23/2008 12:52:46 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:35:37 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

**Complete Issue Information**

|                                                  |
|--------------------------------------------------|
| Issue ID: 8866                                   |
| Subject: Unable to Open or Copy Schedule Base RC |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 8/27/2008 6:42:02 PM |
| Modified By: mordoobadi             | 9/22/2009 7:22:17 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |
|                 | Closed |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Off the Bridge.xml  |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Dean Teal DATE: 8/27/2008 2:45:00 PM Eastern Daylight Time  
 I wanted to get this issue logged into VI for tracking purposes:  
 I have copied the email trail below.

Dean,

We are fixing this issue and we will send you one or more DLLs in a couple of days so that you can verify that the fix resolves the problem. In the meanwhile, the only way to avoid this problem is to check-out the bridges that you want to open, export, rate, or copy.

Thanks,  
 Mehrdad

## Complete Issue Information

>>> Mehrdad Ordoobadi 8/25/2008 5:51 PM >>>  
Dean,

I got the database and imported it into our Oracle Server. I was able to reproduce the problem. I tracked down the problem and have corrected it for the next version of Virtis/Opis release (6.1.0). This fix can be included in the 6.0 Service Pack 1.

Thanks,  
Mehrdad

>>> Janette McGrath <janette@ksdot.org> 8/25/2008 4:00 PM >>>  
The .zip file is in the Incoming/KSDOT/ folder.

From: Mehrdad Ordoobadi [mailto:MORDOOBADI@mbakercorp.com]  
Sent: Monday, August 25, 2008 2:05 PM  
To: Duray, Jim; Dean Teal  
Cc: Ihnat, Joseph; Lee, Herman; Janette McGrath  
Subject: RE: Virtis Problem

Dean,

My suggesting the possibility of problems with Points of Interest was a wild guess that does not seem to be the case. Since we weren't able to reproduce the problem, we will need to get a copy of your Oracle database to be able to investigate this problem further.

Jan, could you please send us an export dump of your Virtis/Opis database? Please export the database and compress it using WinZip and copy it to our FTP site at ftp.mbakercorp.com (username/password is hrsdept/jetta). Please put the file in the Incoming/KSDOT/ folder.

Thanks,  
Mehrdad

>>> Dean Teal <Teal@ksdot.org> 8/25/2008 2:41 PM >>>  
I have never gotten the error message you are talking about.  
I ran the POI Integrity Scanner on our current production test server – it returned with “no POI issues were discovered”.  
Therefore nothing to fix?

Back in version 5.5 (I think, or testing 5.6) we had a problem with the POI wizard overlapping when it had POI's for both LFD and LRFD. Could this be related?

Dean  
From: Dean Teal  
Sent: Monday, August 25, 2008 1:28 PM  
To: 'Mehrdad Ordoobadi'; Duray, Jim  
Cc: Ihnat, Joseph; Lee, Herman; Janette McGrath  
Subject: RE: Virtis Problem

You are correct that this is only happening with our RC Schedule based bridges.

4/19/2016 3:21:16 PM

HRS AASHTO

2663

## Complete Issue Information

I have never gotten the message you are referring to?

Being I have never gotten the message you reference, should I run this utility in an attempt to fix this error?

Being I didn't have this issue until version 6.0, is this something that should have been taken care of in the migration from 5.6 to 6.0?

Dean

From: Mehrdad Ordoobadi [mailto:MORDOOBADI@mbakercorp.com]

Sent: Monday, August 25, 2008 1:11 PM

To: Duray, Jim; Dean Teal

Cc: Ihnat, Joseph; Lee, Herman; Janette McGrath

Subject: RE: Virtis Problem

Dean,

I was not able to reproduce the problem. But I noticed that the bridge is a RC schedule-based bridge. When you start Virtis/Opis do you get a message stating:

"There are XXXXX inconsistent rows in table abw\_anal\_pt\_conc\_reinf.

Please run the POI Integrity Scanner utility program to review and correct the issues.

Refer to the POI Integrity Scanner Help located inside the Windows Start Menu's Virtis-Opis program folder for more information."

If you get the message, I suspect that the inconsistent rows in table abw\_anal\_pt\_conc\_reinf may be the cause of the problem that you are experiencing. You should run the POI Integrity Scanner utility program.

Please let us know what you find out.

Thanks,  
Mehrdad

>>> Dean Teal <Teal@ksdot.org> 8/25/2008 1:16 PM >>>

Sorry –

Here is one

This error applies to all bridges that I have tried

Thanks,  
Dean

From: Mehrdad Ordoobadi [mailto:MORDOOBADI@mbakercorp.com]

Sent: Monday, August 25, 2008 12:12 PM

To: Duray, Jim; Dean Teal

Cc: Ihnat, Joseph; Lee, Herman; Janette McGrath

Subject: RE: Virtis Problem

Dean,

4/19/2016 3:21:16 PM

HRS AASHTO

2664

### Complete Issue Information

As I stated in my email I understand that you have trouble copying and opening the bridge. In order for us to reproduce the problem, I will need to get an XML export of the bridge. As part of exporting the bridge the bridge is retrieved from the database (uses the same functionality as when you open a bridge). So since the opening of the bridge fails when the bridge is not checked-out, the exporting of that bridge will also fail (that's what I expected, because opening of the bridge failed). So In order to successfully export your bridge I would like you to do the following:

- 1 - Check Out the bridge
- 2 - Export it with either batch export or single bridge export.
- 3 - Send the bridge export XML file to us.

Thanks,  
Mehrdad

>>> Dean Teal <Teal@ksdot.org> 8/25/2008 1:03 PM >>>

I think you misunderstood the problem.

I am not trying to export a bridge

I can't open or make a copy of the bridge unless it is checked out.

I did try to export this from the explorer window and got an error message stating "Cannot add to bridge description because all or part of description is read only."

Dean

From: Mehrdad Ordoobadi [mailto:MORDOOBADI@mbakercorp.com]

Sent: Monday, August 25, 2008 11:58 AM

To: Duray, Jim; Dean Teal

Cc: Ihnat, Joseph; Lee, Herman; Janette McGrath

Subject: Re: Virtis Problem

Dean,

Could you please send us an XML export of the bridge that you have trouble opening and copying? If the export fails as it does when you open the bridge, you may need to check the bridge out then export it.

Thanks,  
Mehrdad

>>> Dean Teal <Teal@ksdot.org> 8/25/2008 12:33 PM >>>

Jim,

I am not able to open or copy a bridge in our database unless it is checked out.

Example:

This bridge is not checked out, but I do have check out privileges

When I try to open it I get

4/19/2016 3:21:16 PM

HRS AASHTO

2665

## Complete Issue Information

I get the same message if I try to make a copy of it

My oracle database administrator (Jan McGrath) does not know what to look for. No error messages have been created by the database. It appears to be an application problem??

I am fairly sure that this worked last week being I did some one on one training with a user.

Comments/suggestions?

Dean Teal  
Bridge Evaluation  
Kansas Department of Transportation  
785-291-3001

FROM: Mehrdad Ordoobadi DATE: 8/27/2008 4:53:01 PM Eastern Daylight Time  
Attached PDF copy of the e-mail correspondence. It has more information it it.

Also, the errors are listed below:

Unable to retrieve bridge object!  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Cannot add to bridge description because all or part of description is read-only.  
Bridge or Structure Definition is not checked-out!

FROM: Mehrdad Ordoobadi DATE: 8/27/2008 4:57:10 PM Eastern Daylight Time  
This has been fixed in V/O 6.1.0.  
The V/O 6.0 executables for this fix will be sent to Dean for bug fix verification.

FROM: Mehrdad Ordoobadi DATE: 9/2/2008 3:07:07 PM Eastern Daylight Time

>>> Mehrdad Ordoobadi 9/2/2008 3:03 PM >>>

Dean,

We have fixed the problem that you reported (Virtis/Opis issue 8866). The fix affected four DLLs that we have placed on our FTP site in the <ftp://ftp.mbakercorp.com/Outgoing/KSDOT/> folder.

ABGPRST1.DLL  
ABGRC1.DLL  
ABOBRDG.DLL  
ABOCNCB.DLL

4/19/2016 3:21:16 PM

HRS AASHTO

2666

**Complete Issue Information**

Please make backup copies of the above DLLs in the folder where Virtis/Opis is installed and then copy the files from our FTP site to that folder. We are planning to include this fix in Virtis/Opis 6.0 Service Pack 1.

Please let us know what you find out.

Thanks,  
Mehrddad Ordoobadi

FROM: Mehrddad Ordoobadi DATE: 9/3/2008 4:05:58 PM Eastern Daylight Time  
Fixed in V/O 6.0 SP1.

FROM: Dean Teal DATE: 7/21/2009 12:16:16 PM Eastern Daylight Time  
Accepted in 6.1 beta 2

|                                          |
|------------------------------------------|
| Issue ID: 8867                           |
| Subject: Inv. Location is off the Bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 8/28/2008 9:43:40 PM |
| Modified By: jhnat             | 8/29/2008 1:28:20 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 8/28/2008 5:46:13 PM Eastern Daylight Time  
Rating member 2 with BRASS for this attached bridge (my BID #851)  
2 span – 133-133 = 226' long

4/19/2016 3:21:17 PM

HRS AASHTO

2667

**Complete Issue Information**

For an HS20 Truck, the controlling rating is in span 2- (70%)  
But the inventory location is shown as 226.10 feet  
That is off the bridge???

FROM: Dean Teal DATE: 8/29/2008 9:09:49 AM Eastern Daylight Time  
I had an input bust - :(  
PLEASE CLOSE

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 8868                                                         |
| Subject: SQL Server ODBC connections may not be created during install |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Ihnat, Joseph    | 8/29/2008 1:18:42 PM  |
| Modified By: jihnat            | 5/28/2009 11:37:43 AM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

4/19/2016 3:21:17 PM

HRS AASHTO

2668



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 8/29/2008 9:19:06 AM Eastern Daylight Time

When SQL Server is already installed, Virtis/Opis installation may fail to configure the ODBC connections.

This happens because the installation does not know the sa password.

Workaround is to manually configure the ODBC connections.

FROM: Dean Teal DATE: 8/29/2008 10:54:37 AM Eastern Daylight Time

Was this with the new disk that was just sent out to KSDOT, ILDOT, VADOT and VTRANS?

FROM: Joseph Ihnat DATE: 8/29/2008 12:30:59 PM Eastern Daylight Time

The new disk did not address this problem.

This has probably always been an issue, it's just that we are more likely to see it now because SQL Server 2005 requires "sa" to have a password.

Prior to this "sa" was permitted to have a null password.

FROM: Joseph Ihnat DATE: 5/28/2009 7:36:25 AM Eastern Daylight Time

Fixed for version 6.1.0

The installation now establishes a Trusted Connection, instead of using the sa login.

Issue ID: 8869

Subject: Print Range not Working

Folder: /Virtis/Support Center

4/19/2016 3:21:17 PM

HRS AASHTO

2669

**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/29/2008 2:51:57 PM |
| Modified By: jihnat            | 8/29/2008 3:14:51 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 8/29/2008 10:52:29 AM Eastern Daylight Time  
Printing something with multiple pages available from Analysis Results  
Select Print from the File pulldown  
then in the lower left box you select a print range  
I selected Pages from 1 to 2  
When I print this it will print all the pages  
What ever your selection is, it will print all the pages – no control

FROM: Joseph Ihnat DATE: 8/29/2008 11:13:35 AM Eastern Daylight Time  
Duplicate of 8446.

**Complete Issue Information**

Issue ID: 8871  
Subject: Need to update Reinforcement schematic when bar mark definition length is changed.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 9/2/2008 5:57:44 PM  
Modified By: xli 5/28/2009 6:49:29 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 9/2/2008 3:13:39 PM Eastern Daylight Time  
Fixed in 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:47:22 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 8882                           |
| Subject: problem with the Virtis website |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Metcalf, William | 9/19/2008 6:10:20 PM |
| Modified By: jihnat            | 9/26/2008 6:22:33 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Ihnat, Joseph   | Information Needed |          |          |
|                 | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:21:17 PM

HRS AASHTO

2672

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 03019.xml           |             |
|      | 186-14.pdf          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 9/19/2008 2:14:43 PM Eastern Daylight Time

I'm having an issue with the Virtis website. when I'm at the page <http://aashto.bakerprojects.com/virtis/> and I follow the links on the left hand side of the page to Home, FAQ, Support Center, End User Mailing list ~ eNotification, or the tentative release it works fine, but if I follow the link for Technical notes, Downloads, or Tutorials I get an error page that says you do not have permission to view this page.

FROM: Herman Lee DATE: 9/19/2008 3:14:27 PM Eastern Daylight Time

Do you see the login box (attached screen capture) after you hit the link for Technical Notes, Downloads or Tutorials?

FROM: William Metcalf DATE: 9/23/2008 5:09:28 PM Eastern Daylight Time

no I do not get that box.

FROM: Joseph Ihnat DATE: 9/25/2008 8:08:53 AM Eastern Daylight Time

Which browser (and version) are you using?

FROM: William Metcalf DATE: 9/26/2008 12:09:16 PM Eastern Daylight Time

le 7; however I tried it today and now it works.....not sure what changed.

FROM: Joseph Ihnat DATE: 9/26/2008 2:21:34 PM Eastern Daylight Time

No changes on this end.

If it happens again, perhaps try Refresh or Delete Files and then Refresh.

Issue ID: 8883

Subject: Unable to open Supports window.

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Lee, Herman

9/22/2008 3:59:40 PM

Modified By: kkennelly

9/23/2008 1:05:12 PM

Priority: High

4/19/2016 3:21:18 PM

HRS AASHTO

2673

**Complete Issue Information**

Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | AnalysisSettingsEngineTab.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/22/2008 12:01:49 PM Eastern Daylight Time  
Unable to open G2 Supports window in AS-BUILT (Span 3 - Span 4). A "workaround" is to change the span length from 71.9271' to 71.9270' in AS-BUILT (Span 3 - Span 4).

**Developer Notes:**

ISupportId in CSupportConstraintBeamGeneralDlg Line 684 returns 0.

**Line 684:**

ISupportId = m\_DoGirderMbrPtr->GetSpanRightSupportId(iSupport - 1);

FROM: Krisha Kennelly DATE: 9/23/2008 9:04:51 AM Eastern Daylight Time  
I think the best that we can do for this problem is to use the workaround. If you just open the Structure Def window and re-type in the 71.9271' or 71.927083' for the first span length you will then be able to open the Supports window for G2. Making that change causes the coordinate geometry to be re-computed.

Due to the support skew, varying deck overhang and varying girder spacing I think there is a teeny tiny little error introduced into the generated coordinate geometry for the reference line for G2 that causes it to be a tiny bit shorter than it should be so line 684 above can't find the intersection of G2 with the last support.

G2 ref line length when you can't open the Supports window: 43.8689723309977 m  
ref line length after you reset the span length: 43.8689748984 m

## Complete Issue Information

Issue ID: 8889  
Subject: The clear button should also clear the read-only engine properties.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 9/24/2008 2:19:46 PM  
Modified By: xli 5/28/2009 7:00:15 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 9/24/2008 10:22:46 AM Eastern Daylight Time  
See attached screen capture.

FROM: Joseph Ihnat DATE: 9/26/2008 2:23:47 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:59:29 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

## Complete Issue Information

Issue ID: 8894  
Subject: Report Tool Sorting

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 9/30/2008 6:24:24 PM  
Modified By: dteal 10/7/2008 7:10:51 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Ihnat, Joseph   | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:21:18 PM

HRS AASHTO

2676



**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 9/30/2008 2:25:27 PM Eastern Daylight Time  
I am creating a Bridge Explorer Report using 3 Bridge List Attributes (Bridge ID, Bridge Name and Year Built).  
Using Bridge Id as the first item

Our bridge Id is made of CCC-SSS  
Where CCC is a 3 digit county number  
Where SSS is a 3 digit serial number

No matter what order I have the Bridge Explorer sorted in, the report always generates the report by the ascending BID number.

Are there any controls for sort order?

FROM: Herman Lee DATE: 10/1/2008 1:32:14 PM Eastern Daylight Time  
There's no control of the sort order in the Bridge Explorer Report.

FROM: Dean Teal DATE: 10/7/2008 3:10:50 PM Eastern Daylight Time  
To bad!

|                                                   |
|---------------------------------------------------|
| Issue ID: 8896                                    |
| Subject: BWS Report Gives All Superstructure Defs |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 10/1/2008 5:54:48 PM |
| Modified By: hlee              | 10/1/2008 6:07:03 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:21:18 PM

HRS AASHTO

2677

**Complete Issue Information**

|             |           |      |             |
|-------------|-----------|------|-------------|
| Lee, Herman | New       | High | Bug         |
|             | Duplicate |      | Enhancement |
| Lee, Herman | New       | High | Bug         |
|             | Resolved  |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 00021 - 170015-1.xml |             |
|      | 170015-1.bbd         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 10/1/2008 1:55:21 PM Eastern Daylight Time  
 Bridge Workspace

When there are multiple superstructure definitions, using the report tool, you will get a report on all of them and not just the one you have focus on. Is there any way to work around that?

FROM: Herman Lee DATE: 10/1/2008 1:58:45 PM Eastern Daylight Time  
 There is no workaround to just report the one you selected.  
 Duplicate of Incident 4057 and 8885.

|                                               |
|-----------------------------------------------|
| Issue ID: 8897                                |
| Subject: Call to SetSuperStructDefId() failed |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Laughlin, Christopher | 10/3/2008 3:50:57 PM |
| Modified By: mordoobadi             | 10/3/2008 5:31:03 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |
|                    | Accepted           |          |          |
|                    | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0160759.xml         |             |
|      | POI-Error-02.png    |             |
|      | POI-Error-01.png    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mehrdad Ordoobadi DATE: 10/3/2008 11:51:00 AM Eastern Daylight Time  
This issue is reported on behalf of Christopher Laughlin from FDOT.

Steps to reproduce the problem:

- 1 - Import the attached BBD file. (5.3.1 format)
- 2 - Open the Superstructure Alternative window (Flat Slab)
- 3 - Switch the Superstructure Definition from Flat Slab to None.

4/19/2016 3:21:19 PM

HRS AASHTO

2679

### Complete Issue Information

- 4 - Click OK.
- 5 - Open the Superstructure Alternative window (Flat Slab) again
- 6 - Switch the Superstructure Definition from None to Flat Slab.
- 7 - Click OK and get the System Error:

Call to SetSuperStructDefId() failed!  
11:46:48 AM - Line 482 in source file .\UiStructAltVw.cpp.

FROM: Mehrdad Ordoobadi DATE: 10/3/2008 1:24:10 PM Eastern Daylight Time  
Note that this issue is not reproducible in the latest release of Virtis/Opis (version 6.0). So we recommend that you move to the version 6.0.

FROM: Mehrdad Ordoobadi DATE: 10/3/2008 1:25:15 PM Eastern Daylight Time  
Version 6.0 XML file for the bridge is attached.

|                              |
|------------------------------|
| Issue ID: 8898               |
| Subject: POI Integrity Error |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Best, Richard         | 10/6/2008 1:37:29 PM  |
| Modified By: mordoobadi             | 11/19/2009 4:18:27 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mehrdad Ordoobadi DATE: 10/6/2008 9:38:56 AM Eastern Daylight Time  
Entered on behalf of Mr. Richard Best from Illinois DOT.

4/19/2016 3:21:19 PM

HRS AASHTO

2680

### Complete Issue Information

We just started getting another POI Integrity error. This is on a bridge that was started some time ago and modified recently. It might have been started in version 5.6. Anyway, we are using version 6.0 now and didn't see the error until the bridge got modified under 6.0. The scan utility cleaned the database of errors when we migrated to 6.0. I am enclosing an export of the bridge in question. Screen prints of the error message and the POI integrity scanner are below. (ATTACHED)

FROM: Mehrdad Ordoobadi DATE: 10/6/2008 9:45:31 AM Eastern Daylight Time

-----  
From: Mehrdad Ordoobadi [mailto:MORDOOBADI@mbakercorp.com]  
Sent: Tuesday, September 30, 2008 12:50 PM  
To: Best, Richard M  
Cc: Jim Duray  
Subject: Re: POI Integrity error

Richard,

I imported the bridge XML file export that you sent me. But I was not able to reproduce the problem that you are having. I am wondering if you could send me a copy of your database?

Also, do you know what happened to the bridge? Do you know what changes were made to the bridge that caused the bad POI data?

Thanks,

Mehrdad

I have uploaded the database in question to [ftp://ftp.mbakercorp.com/Outgoing/Virtis/IL\\_DOT/](ftp://ftp.mbakercorp.com/Outgoing/Virtis/IL_DOT/). Bob Perkins is the one who last modified structure 0160759. Here is his comment:

From: Perkins, Robert J  
Sent: Tuesday, September 30, 2008 1:59 PM  
To: Best, Richard M  
Subject: RE: POI Integrity error

4/19/2016 3:21:19 PM

HRS AASHTO

2681





**Complete Issue Information**

Mehrdad, I spoke with Dick Best about this. We have not been able to reproduce this ourselves, and so far, it has not appeared as an issue in 6.1. I believe we can go ahead and close out this incident. Thanks, Tim

|                                     |
|-------------------------------------|
| Issue ID: 8902                      |
| Subject: PS haunch load calculation |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Lee, Herman        | 10/14/2008 11:46:23 AM |
| Modified By: hlee                | 10/16/2008 12:35:08 PM |
| Priority: High                   |                        |
| Category: Education              |                        |

**History**

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Goodrich, Brian | Assigned | High     | Bug       |
|                 | Resolved |          | Education |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Haunch.bmp           |             |
|      | BT5440100_ppt wt.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 10/14/2008 7:48:14 AM Eastern Daylight Time  
Submitted on behalf of Laura Volle, Michael Baker Jr., Inc.

The exported haunch load is 0.015104 k/in for the G1 girder in the attached bridge.

The hand calculated haunch load is 0.01224 k/in.



### Complete Issue Information

$$\begin{aligned} \text{Haunch Area} &= (Y1 + Y2) \times \text{Top Flange Width} / 2 + Y2 * Z4 / 2 \\ &= (3.5 + 2.5) \times 42 / 2 + 2.5 * 12 / 2 \\ &= 141 \text{ in}^2 \end{aligned}$$

$$\begin{aligned} \text{Haunch Load} &= 141 \text{ in}^2 * 0.150 \text{ k/ft}^3 \\ &= 0.01224 \text{ k/in} \end{aligned}$$

FROM: Brian Goodrich DATE: 10/15/2008 6:27:11 AM Mountain Daylight Time  
The export calculates the haunch area as:

$$\begin{aligned} A &= 3.5 * 42 + (3.5 + 1.0) * 12 / 2 \\ &= 174 \text{ in}^2 \end{aligned}$$

See the attached bitmap (Haunch.bmp).

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 8906                                                    |
| Subject: Additional Dead Loads (Studs, stiffeners, splice plates) |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 10/24/2008 3:04:39 PM |
| Modified By: hlee              | 10/24/2008 7:13:28 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 10/24/2008 11:05:20 AM Eastern Daylight Time

Currently we know the steel volume for studs and stiffeners.

The DL from these items are not calculated and used inside VO, they should be!

Splice Plates – We can enter splice plate locations but not sizes. We should either allow for entering the size for DL calculations OR provide a field to enter the DL in that GUI.

Issue ID: 8918

Subject: Diaphragm Placement Error

Folder: /Virtis/Support Center

Primary Contact: Li, Xinmei

Submitted By: Teal, Dean

11/5/2008 2:14:20 PM

Modified By: hlee

11/5/2008 6:55:30 PM

Priority: High

Category: Education

4/19/2016 3:21:20 PM

HRS AASHTO

2686

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 08776.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/5/2008 9:19:24 AM Eastern Standard Time

Attached pdf of framing plan

Attached xml export

Attached jpg of Framing Plan Screen shot

This skewed structure is supposed to have a diaphragm at the end of the last span. According to the input, one should be placed at 66' (end of span 3).

The Schematics does not show one at the end of span 3.

FROM: Xinmei Li DATE: 11/5/2008 9:54:04 AM Eastern Standard Time

In Virtis input, Structure Framing plan details, diaphragms, last row support number 3, Diaphragm spacing is 18.6667 ft, number of spaces is 3, the result location of the last diaphragm is  $18.6667 \times 3 = 56.0001$  ft + 10 ft (start distance) = 66.0001 ft > span length 66 ft.

So the location of the last diaphragm is beyond the end of span 3. If you change the Diaphragm spacing to 18.6666 ft for all girder bays, the end diaphragm will show up in the framing plan Schematics.

FROM: Dean Teal DATE: 11/5/2008 12:53:26 PM Eastern Standard Time

Shouldn't that have triggered an error message stating that it was off the end of the beam?

**Complete Issue Information**

Issue ID: 8923  
 Subject: Unable to locate the source of the error message in validation

Folder: /Virtis/Support Center  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Bouscher, Justin 11/12/2008 4:34:01 PM  
 Modified By: kkennelly 11/17/2008 5:06:13 PM  
 Priority: High  
 Category: Bug

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
|                  | Assigned |          |          |
| Thogaru, Srujana |          |          |          |
| Shih, Chung      |          |          |          |
| Thogaru, Srujana | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | S-24-3_Truss-Span4.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 11/12/2008 11:34:26 AM Eastern Standard Time  
 Submitted on behalf of Justin Bouscher, Michael Baker Jr., Inc.:

Validation error message:

ERROR: Deck panel ranges not defined for entire structure definition length.

**Complete Issue Information**

Attached the bridge xml file.

FROM: Krisha Kennelly DATE: 11/17/2008 12:03:16 PM Eastern Standard Time  
duplicate of 8243. Resolution of 8243 was to add code to the domain to reset the deck panel length whenever a span was added, deleted or changed length. That code change was made for 6.0. the attached xml file was entered in 5.6.

Deck panel length in the xml file was modified for the user.

|                            |
|----------------------------|
| Issue ID: 8929             |
| Subject: Report Tool Error |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Ihnat, Joseph       | 11/25/2008 7:02:55 PM |
| Modified By: sthogaru             | 5/5/2010 6:09:17 PM   |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 11/25/2008 2:03:14 PM Eastern Standard Time  
Reported by Julia Carroll, AECOM.  
For the attached bridge, use Report Tool and

4/19/2016 3:21:20 PM

HRS AASHTO

2689

**Complete Issue Information**

BWS Report for truss system truss-floorbeam-stringer.abr, click Generate, get error:

01:59:39 PM - Line 3124 in source file .UiReportToolBwsEngine.cpp.

Error processing attribute Num Bars Std for the DoMbrAltDeckReinfRangeSet class.

01:59:39 PM - Line 1060 in source file .UiReportToolEngine.cpp.

GetIDsOfNames returned an error while searching for GetNumBarsStd (DISP\_E\_UNKNOWNNAME).

01:59:39 PM - Line 3519 in source file .UiReportToolEngine.cpp.

FROM: Herman Lee DATE: 10/1/2009 12:17:47 PM Eastern Daylight Time  
Srujana, after the error is fixed, please assign to Chung for updating the abr files if needed.

FROM: Joseph Ihnat DATE: 3/18/2010 11:32:08 AM Eastern Daylight Time  
Now getting a different error:

Error processing attribute Nominal Depth for the DoSteelChannel class.

11:30:24 AM - Line 895 in source file d:\virtis\gui\abgreport\uireporttoolengine.cpp.

GetIDsOfNames returned an error while searching for GetNominalDepth (DISP\_E\_UNKNOWNNAME).

11:30:24 AM - Line 3519 in source file d:\virtis\gui\abgreport\uireporttoolengine.cpp.

FROM: Srujana Thogaru DATE: 4/30/2010 2:42:30 PM Eastern Daylight Time  
Updated the database with missing attributes. SQL Script sent to Mehrdad.

FROM: Mehrdad Ordoobadi DATE: 5/4/2010 8:30:51 AM Eastern Daylight Time  
SQL script attached to VI 8999 applied to the SS DB.

FROM: Srujana Thogaru DATE: 5/5/2010 2:08:56 PM Eastern Daylight Time  
Verified for 6.2 alpha build 4

Issue ID: 8933  
Subject: PS Tee Beam St. Venant torsional constant

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Lee, Herman 12/3/2008 9:25:09 PM  
Modified By: jduray 5/6/2010 1:22:07 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:21:21 PM

HRS AASHTO

2690

**Complete Issue Information**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Li, Xinmei         | Assigned | High     | Bug      |
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 7604MG.xml          |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 12/3/2008 4:25:40 PM Eastern Standard Time  
Submitted on behalf of Billy Chao, SC DOT.

Bridgeware e-mail:

=====  
Herman,

Please find attached MicroStation dgn file and PDF file. I don't know if you have MicroStation software to open the dgn file, however, I also enclosed a hand calculation for you to review. If any questions, please let us know.

Thanks  
T. Billy Chao, P.E.  
SCDOT Bridge Maintenance  
955 Park Street  
Columbia, SC 29201  
803-737-3101  
Email: chaotb@scdot.org

-----Original Message-----

4/19/2016 3:21:21 PM

HRS AASHTO

2691

## Complete Issue Information

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
Sent: Wednesday, December 03, 2008 12:01 PM  
To: Chao, Tsemin B.  
Subject: RE: Load Factor Rating Calculations for Concrete Tension Control

Hi Billy,

The  $I_y$  calculated by Virtis used in the  $I_p$  in LRFD Equation C4.6.2.2.1-2 is  $25196.7 \text{ in}^4$ . Please send us your calculation for the investigation.

The  $J$  is used only for the calculation of the LL distribution factors. There is no particular reason to use the LRFD equation. The LRFD has one more equation than the LFD. Please note that the user can enter/override the  $J$  value.

Herman

>>> "Chao, Tsemin B." <ChaoTB@dot.state.sc.us> 12/3/08 10:13 AM >>>  
Herman,

How was your Thanksgiving holiday? I am sorry that I am here bothering you again. The following was my calculation of the moment of inertia about the prestressed channel beam which we discussed before.

Area:  $341.451 \text{ in}^2$   
Perimeter:  $134.9782''$   
Centroid:  $(14.25, 12.397, 0)$

Moments of Inertia:  $(9821.46, 44300.8, 54122.3)$

Principal Moments:  $X = 9821.46$   
Principal Moments:  $Y = 44300.8$   
Principal Moments:  $Z = 54122.3$

Radii of Gyration:  $(5.3632, 11.3905, 12.5899)$

The calculation result is very close to the Virtis program's calculation (cross section area =  $341.75$  and  $I_{x-x} = 9841.18$ ). However, the St. Venant torsional constant calculation ( $341.45^4 / (40 * 54122.3) = 6278.7$ ) based on LRFD 4.6.2.2.1-2 was much different from Virtis' computation ( $J = 9732.77$ ). Would you please verify this for me?

Besides the question above, why is LRFD C4.6.2.2.1-2 equation used in Virtis for LFD analysis? Is there any particular reason that the Virtis program was written in this way? As far as I know that analysis performed by mixing design codes is not permitted.

Thanks again for your help and wish you a Merry Christmas!

T. Billy Chao, P.E.  
SCDOT Bridge Maintenance

4/19/2016 3:21:21 PM

HRS AASHTO

2692



**Complete Issue Information**

955 Park Street  
Columbia, SC 29201  
803-737-3101  
Email: chaotb@scdot.org

-----Original Message-----

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
Sent: Monday, November 24, 2008 2:49 PM  
To: Chao, Tsemin B.  
Subject: RE: Load Factor Rating Calculations for ConcreteTensionControl

Billy,

Virtis doesn't use 3.23.4.3 in Std Spec to calculate J for tee beams.  
Virtis uses AASHTO LRFD Equation C4.6.2.2.1-2 to calculate J for tee beams.

Herman

>>> "Chao, Tsemin B." <ChaoTB@dot.state.sc.us> 11/24/08 11:43 AM >>>  
Herman,

Would be please verify the program calculation on St. Venant torsion constant (J = 9372 in^4). Based on the equation  $J = 1/3 * \text{Sum of } (b*t^3)*(1-0.630*(t/b))$  in 3.23.4.3, it seems the program calculated J value is quite big than it supposed to be.

This year due to our budgetary cut, we did not get a chance to joint the conference. Hopfully, next year either Mark or I would joint the meeting in Denver. We are looking forward to it.

T. Billy Chao, P.E.  
SCDOT Bridge Maintenance  
955 Park Street  
Columbia, SC 29201  
803-737-3101  
Email: chaotb@scdot.org

=====

FROM: Xinmei Li DATE: 10/22/2009 11:18:33 AM Eastern Daylight Time  
When calculating MOI about y axis the self MOI about x axis was used. This error caused wrong results of Polar MOI calculation and St. Venant torsion constant calculation.  
This error occurs to Tee beam with one tee and 3 tee, too. All are fixed now.

The new St. Venant torsion constant calculated by Virtis is 6293.568 which is close to hand calculation.

FROM: Jim Duray DATE: 5/6/2010 9:00:58 AM Eastern Daylight Time  
I assume this is about the calculation being done int he PS Tee Beam window, not the BRASS or AASHTO engines. I found the changes in the window code.  
Verified - 6.2 alpha 4.

4/19/2016 3:21:21 PM

**HRS AASHTO**

2693

**Complete Issue Information**

|                                     |
|-------------------------------------|
| Issue ID: 8939                      |
| Subject: System Error saving bridge |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 12/15/2008 5:47:56 PM |
| Modified By: hlee                   | 5/9/2010 2:31:45 PM   |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
| Lee, Herman     | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 12/15/2008 12:48:16 PM Eastern Standard Time  
Received via email (Bridgeware):

Import the attached bridge, try to Save, get error:

Unable to save Bridge data!  
Saving New and Modified objects failed while processing CDmPsPrecastStrandLayout (SaveOrder object 562).  
Error updating database record set.

Kimberly Coleman  
Coleman@pbworld.com

4/19/2016 3:21:21 PM

HRS AASHTO

2694

## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 2/10/2009 3:16:10 PM Eastern Standard Time  
What kind of database are you using? Is it SQL Server, or Oracle? What version?

Could you please give us the debug description of the error.

FROM: Mehrdad Ordoobadi DATE: 2/11/2009 10:11:27 AM Eastern Standard Time  
Similar issues have been reported when using a SQL Server database

Debug Description of the Error:  
Unable to save Bridge data!  
11:39:57 AM - Line 884 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmPsPrecastStrandLayout (SaveOrder object 562).  
11:39:51 AM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.  
11:39:51 AM - Line 993 in source file .\DmPsPrecastStrandLayout.cpp.  
State:37000,Native:8023,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
The incoming tabular data stream (TDS) remote procedure call (RPC) protocol stream is incorrect.  
Parameter 13 (""): The supplied value is not a valid instance of data type float. Check the source data for invalid values. An example of an invalid value is data of numeric type with scale greater than precision.

This is due to too much accuracy in some double precision fields in the abw\_ps\_precast\_strand\_layout table. The value for left and right harp point distances have too much accuracy. The SQL server database cannot store them.

For example Virtis/Opis is trying to put a value of 6.748272000000001 into the left and right harp point distance, and the SQL Server database cannot handle it.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 12:51:45 PM Eastern Daylight Time  
The problem is tracked down to values in the Strand Layout object for radii of curvature that were too small "5.389869678000e-313#DEN".

In order to resolve this issue we need to revise the DeDouble and DeFloat little buckets to change the values to 0.0 if smaller than the smallest for double (1.7E-308) and float (3.4e-38) data types.

This will avoid similar situations in other places in the future.

FROM: Mehrdad Ordoobadi DATE: 11/11/2009 4:07:09 PM Eastern Standard Time  
DeDouble and DeFloat::SetValue and ::InitValue revised.

Verified that the fix resolves this issue.  
Fixed for 6.2

4/19/2016 3:21:21 PM

HRS AASHTO

2695

## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 12:11:03 PM Eastern Standard Time  
Code repinned for 6.1 SP1.

FROM: Herman Lee DATE: 5/9/2010 10:31:01 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

|                                       |
|---------------------------------------|
| Issue ID: 8943                        |
| Subject: f'c in STL1 Training Example |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Lee, Herman      | 12/16/2008 3:10:37 AM |
| Modified By: hlee              | 12/29/2008 3:52:29 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 12/15/2008 10:19:25 PM Eastern Standard Time  
The Deck Concrete f'c on page STL1-3 is 4.5 ksi but page STL1-9 has 4.0 ksi. Which one is correct and used in the ratings?

FROM: Herman Lee DATE: 12/29/2008 10:49:56 AM Eastern Standard Time  
4.5 ksi Deck Concrete is used in the original STL1 example.

Updated f'c to 4.5 ksi. Updated rating results and design review based on 4.5 ksi Deck Concrete.

4/19/2016 3:21:21 PM

HRS AASHTO

2696

## Complete Issue Information

Issue ID: 8947

Subject: New Truss Line Member not cleaned up if Canceled

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Ihnat, Joseph

12/22/2008 3:09:56 PM

Modified By: hlee

5/9/2010 2:33:42 PM

Priority: High

Category: Bug

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Ihnat, Joseph      |          |          |          |
| Bhanushali, Girish |          |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |

4/19/2016 3:21:22 PM

HRS AASHTO

2697

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 12/22/2008 10:10:50 AM Eastern Standard Time

Create a TFS Line or TF Line superstructure definition.

Double-click TRUSSES to create a new truss member, then Cancel.

Try to save, error indicates that not everything has been deleted:

Unable to save Bridge data!

10:08:46 AM - Line 884 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmSpngMbrDef (SaveOrder object 229).

10:08:44 AM - Line 448 in source file .\DmBridgeCache.cpp.

Assignment of data to recordset variables failed.

10:08:44 AM - Line 1119 in source file .\DmSpngMbrDef.cpp.

Trying to set NAME to NULL in table ABW\_SPNG\_MBR\_DEF, but the field is not allowed to be NULL.

10:08:44 AM - Line 1009 in source file .\DmObject.cpp.

FROM: Mehrdad Ordoobadi DATE: 9/21/2009 3:28:31 PM Eastern Daylight Time

Fixed for version 6.2

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 12:14:15 PM Eastern Standard Time

Code repinned for 6.1 SP1.

FROM: Herman Lee DATE: 5/9/2010 10:32:53 AM Eastern Daylight Time

Verified in 6.2 Beta 1.

Issue ID: 8951

Subject: Incorrect harp point distance validation warning message.

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Hart, Sean

1/7/2009 4:35:27 PM

Modified By: kkennelly

1/31/2010 2:59:52 AM

4/19/2016 3:21:22 PM

HRS AASHTO

2698

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
| Shih, Chung     |          |          |          |
| Ihnat, Joseph   | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 02958.xml                 |             |
|      | BWS Report for rc girders |             |
|      | Modified.abr              |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 1/7/2009 11:36:11 AM Eastern Standard Time  
Submitted on behalf of Sean Hart, Michael Baker Jr., Inc..

To reproduce:

1. Open Example7 in the sample database. Simple span bridge with 120 ft span.
2. Open Interior Member. Beam projections for both ends are 6 in.
3. Open Strand Layout window for Span 1 and change left harp point distance to 60.5 ft.
4. Validate the Interior Member will give the following warning messages.

Warning: SPAN 1: The left harp point distance is out of range.

Warning: SPAN 1: The right harp point distance is out of range.

FROM: Krishna Kennelly DATE: 1/30/2010 9:40:29 PM Eastern Standard Time  
Fixed for version 6.2

**Complete Issue Information**

Issue ID: 8954  
Subject: Unable to generate BWS report.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 1/21/2009 7:52:33 PM  
Modified By: jihnat 4/30/2010 3:07:42 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/21/2009 2:53:56 PM Eastern Standard Time  
Attached the bridge XML file.

The Report Tool has problem reporting the Reinforcement Set inside the Point of Interest. I'm able to generate the report after I removed that attribute from the report definition. Attached is the modified report definition.

FROM: Joseph Ihnat DATE: 3/22/2010 3:48:28 PM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:07:49 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

4/19/2016 3:21:22 PM

HRS AASHTO

2700



## Complete Issue Information

Issue ID: 8957

Subject: Problem Saving Files - "SaveOrder object 53" Error

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Campisi, Paul

1/23/2009 6:23:44 PM

Modified By: mordoobadi

3/19/2009 2:28:08 PM

Priority: High

Category: Bug

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name        | Resource Identifier | Description |
|-------------|---------------------|-------------|
| error53.doc |                     |             |

4/19/2016 3:21:22 PM

HRS AASHTO

2701

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Paul Campisi DATE: 1/23/2009 1:31:26 PM Eastern Standard Time  
When trying to save new bridge files in Virtis, numerous users are reporting the following error.

"Saving New and Modified objects failed while processing CDmBridge(SaveOrder object 53)"

See the attached file for a screenshot of the error message.

FROM: Mehrdad Ordoobadi DATE: 3/19/2009 10:17:26 AM Eastern Daylight Time  
This problem was reported by Mike Farron and was addressed by e-mail correspondence shown below:

>>> "Mike Farron" <mfarron@dot.state.ny.us> 01/23/09 2:17 PM >>>  
Hi Mehrdad,  
Our virtis users have been reporting that they are getting an error in virtis for the last day or so.  
I was wondering if the attached might look familiar or you might have some advice off the top of your head as to what may need attention, or if we've hit some limitation of some sort.

Thank you very much.

-----  
Michael Farron  
Oracle Database Administration  
NYS Dept of Transportation  
50 Wolf Road  
Albany, NY 12232  
(518) 485-0171

>>> "Mehrdad Ordoobadi" <mordoobadi@mbakercorp.com> 1/23/2009 5:23 PM >>>  
Mike,

I haven't seen this error before. Could you please run the following select statements and send me the results.

SELECT COUNT(\*) FROM abw\_overflow;

4/19/2016 3:21:22 PM

HRS AASHTO

2702

**Complete Issue Information**

```
SELECT MAX(overflow_id) FROM abw_overflow;
```

Regards,  
Mehrddad Ordoobadi

>>> "Mike Farron" <mfarron@dot.state.ny.us> 1/26/2009 8:50 AM >>>

Here's the results of the queries:

```
MFARRON on ORP2> SELECT COUNT(*) FROM abw_overflow;
```

```
COUNT(*)
-----
  19080
```

```
MFARRON on ORP2> SELECT MAX(overflow_id) FROM abw_overflow;
```

```
MAX(OVERFLOW_ID)
-----
          32767
```

Thanks Mehrddad

-----  
Michael Farron  
Oracle Database Administration  
NYS Dept of Transportation  
50 Wolf Road  
Albany, NY 12232  
(518) 485-0171

>>> "Mehrddad Ordoobadi" <MORDOOBADI@mbakercorp.com> 1/26/2009 8:57 AM >>>

Mike,

Could you please send me the description for the abw\_overflow table.

```
desc abw_overflow;
```

Thanks,  
Mehrddad

>>> "Mike Farron" <mfarron@dot.state.ny.us> 1/26/2009 9:16 AM >>>

4/19/2016 3:21:22 PM

**HRS AASHTO**

2703

## Complete Issue Information

attached

-----  
Michael Farron  
Oracle Database Administration  
NYS Dept of Transportation  
50 Wolf Road  
Albany, NY 12232  
(518) 485-0171

>>> "Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> 1/26/2009 10:21 AM >>>

Mike,

We found the source of the problem that you reported, and we have already fixed it. This required source code changes. We are going to send you a DLL (ABMBRDG.DLL) that contains the fix. This bug does not affect anything other than creating new bridges. Without this revised DLL, Virtis/Opis users will not be able to create new bridges (as they have already experienced).

We are going to do some testing and send you the revised DLL tomorrow.

Thanks,  
Mehrdad

>>> "Mike Farron" <mfarron@dot.state.ny.us> 1/26/2009 11:53 AM >>>

Mehrdad,

As you might recall we have 2 databases for virtis/opis.  
Do you have any idea why we haven't encountered this same problem in our other database (orp4) ?

Regarding the .dll you mentioned. Will that need to be applied to all client machines where Virtis/Opis is installed ?

-----  
Michael Farron  
Oracle Database Administration  
NYS Dept of Transportation  
50 Wolf Road  
Albany, NY 12232  
(518) 485-0171

>>> "Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> 1/26/2009 12:02 PM >>>

4/19/2016 3:21:22 PM

HRS AASHTO

2704

## Complete Issue Information

Mike,

The problem was due to the way we computed the next ID for the overflow\_id in the abw\_overflow table. The code mistakenly assumed that the field is a short integer (-32768 to +32767). Since your last overflow\_id was 32767 the next ID will go beyond the limits of a short integer and it returns a -32768 which is an unacceptable ID in the Virtis/Opis code. The reason that creating new bridges fails in one database but not the other one (ORP4) is that the overflow\_id has reached its limit in the one that you have problem with, but not in ORP4.

Thanks,  
Mehrdad

>>> "Mike Farron" <mfarron@dot.state.ny.us> 1/26/2009 12:10 PM >>>

That makes sense.

Thanks.

Regarding the .dll will it need to be applied to all client machines ?

-----  
Michael Farron  
Oracle Database Administration  
NYS Dept of Transportation  
50 Wolf Road  
Albany, NY 12232  
(518) 485-0171

>>> Mehrdad Ordoobadi 1/27/2009 8:34 AM >>>

Mike,

Yes, the DLL needs to be applied to all client machines. But before doing that I would like someone in NYDOT to try it to make sure it fixes the problem with creating new bridges.

Which version of Virtis/Opis are you using? Are you using 6.0?

Thanks,  
Mehrdad

>>> "Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com> 1/27/2009 9:32 AM >>>

Mike,

The revised ABMBRDG.DLL file is now placed on our FTP site at  
<ftp://ftp.mbakercorp.com/Outgoing/NYDOT/> username/password is hrsdept/jetta.

Please do this on one machine first.

4/19/2016 3:21:22 PM

HRS AASHTO

2705

**Complete Issue Information**

- 1 - Shutdown Virtis/Opis application if it is running.
- 2 - Rename the original ABMBRDG.DLL to ABMBRDG.DLL-ORIG in the folder where Virtis/Opis is installed.
- 3 - Copy the ABMBRDG.DLL file from the FTP site to the folder where Virtis/Opis is installed.
- 4 - Launch Virtis/Opis and connect to the database that you had problem adding new bridges to.
- 5 - Create a new bridge.
- 6 - Save

Please let me know how it goes.

Thanks,  
Mehrdad

>>> "Mike Farron" <mfarron@dot.state.ny.us> 1/27/2009 9:44 AM >>>

Will do .  
Thanks Mehrdad

-----  
 Michael Farron  
 Oracle Database Administration  
 NYS Dept of Transportation  
 50 Wolf Road  
 Albany, NY 12232  
 (518) 485-0171

FROM: Mehrdad Ordoobadi DATE: 3/19/2009 10:27:10 AM Eastern Daylight Time  
There was a bug in ABMBRDG project that caused this. The bug is fixed in Version 6.1.

|                                     |
|-------------------------------------|
| Issue ID: 8974                      |
| Subject: Unable to save Bridge Data |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Horton, Doug          | 2/10/2009 7:13:07 PM |
| Modified By: mordoobadi             | 2/11/2009 3:06:21 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |

4/19/2016 3:21:23 PM

HRS AASHTO

2706

**Complete Issue Information**

|          |
|----------|
| Resolved |
|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Doug Horton DATE: 2/10/2009 2:18:58 PM Eastern Standard Time

Just received same error reported in Incident 8939 when using version 5.6. Occured for two structures, then stopped. Was able to successfully upload several other structures.

FROM: Mehrdad Ordoobadi DATE: 2/10/2009 3:02:59 PM Eastern Standard Time

Doug,

What kind of database are you using? Is it SQL Server, or Oracle? What version?

Could you please give us the debug description of the error.

Could you please attach an XML export of the bridge, if it is different from the Incident 8939.

Thanks,

Mehrdad

FROM: Doug Horton DATE: 2/11/2009 7:56:28 AM Eastern Standard Time

Database is Oracle 10 - not sure of version

Debug description and two files that provided error are attached for review.

Note: Only these two out of over 40 files resulted in this error.

FROM: Mehrdad Ordoobadi DATE: 2/11/2009 10:07:51 AM Eastern Standard Time

The error was due to a large value for the Year Built field in the Bridge/Description window. The value was 14899. The field allows for up to 4 digit year values. I changed the value to 1899 and was able to save successfully.

Note that this problem is different from the problem reported in issue 8939 in IssueNet.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 8975                                        |
| Subject: Database Migration Wizard Error (5.4 to 6.0) |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:21:23 PM

HRS AASHTO

2707

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 2/12/2009 1:45:41 PM |
| Modified By: hlee                   | 5/9/2010 2:36:20 PM  |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Lee, Herman        | New      | High     | Bug       |
| Ordoobadi, Mehrdad | Assigned |          |           |
| Ihnat, Joseph      | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI8979 Perms.JPG    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 2/12/2009 8:46:35 AM Eastern Standard Time

1) I installed Virtis 5.4 with MSDE databases, then installed Virtis 6.0 (SQL Server 2005) and attempted to migrate our sample database from 5.4 to 6.0. Got error:

Unexpected error while executing "...\RemoveOrphanedBeamDefs.exe" "BRIDGEWARE" "bridgeware" "VIRTIS54\_SQLSERVER".

2) I clicked "Ignore" but migration then ended.

3) The View Log button at the end of the migration did nothing. I had to open the log file from Windows Explorer.

If you do the migration in two steps (5.4 to 5.5, 5.5 to 6.0) it works OK.

FROM: Mehrdad Ordoobadi DATE: 3/19/2009 10:30:34 AM Eastern Daylight Time

3) The file in the list box should be selected before clicking the view log button. We probably should make the button disabled when a file is not selected.

4/19/2016 3:21:23 PM

HRS AASHTO

2708



**Complete Issue Information**

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 2:40:14 PM Eastern Daylight Time  
Duplicate of 7709

- 1) This has not been reproducible.
- 2) The RemoveOrphanedBeamDefs step is the last step and continue after error just ends the migration which is OK.
- 3) Is fixed for 6.2. The First item in the list box is now selected when the summary page is displayed, and the clicking view log button will open the log file without selecting the item in the list box.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 3:26:45 PM Eastern Daylight Time  
New Migration Wizard executable should be included with the next build.

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 12:34:37 PM Eastern Standard Time  
New Migration Wizard should also be included in the 6.1 SP1.

FROM: Herman Lee DATE: 5/9/2010 10:34:31 AM Eastern Daylight Time  
Verified 3) in 6.2 Beta 1.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 8979                                                      |
| Subject: Can't login to Virtis under a (Windows XP) Limited account |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 2/13/2009 9:00:28 PM |
| Modified By: jihnat            | 11/6/2009 8:28:56 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Joseph Ihnat DATE: 2/13/2009 4:00:55 PM Eastern Standard Time  
Either Sybase or SQL Server.  
Shouldn't require Administrator privileges.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 3:12:32 PM Eastern Daylight Time  
We possibly can move the databases to user's documents and settings folder to resolve this issue.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 3:14:42 PM Eastern Daylight Time

FROM: Joseph Ihnat DATE: 11/6/2009 3:22:36 PM Eastern Standard Time  
With version 6.1 I'm able to get both Sybase and SQL Server to run as a limited user.  
See attached screen shot for permissions to set.

Issue ID: 8981

Subject: RC Bars Not Allowed past End of Member

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Teal, Dean

2/26/2009 2:42:01 PM

Modified By: kkennelly

6/30/2010 3:21:50 PM

Priority: High

Category: Support

### History

4/19/2016 3:21:23 PM

HRS AASHTO

2710

### Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Lee, Herman        | New      | High     | Bug      |
|                    | Assigned |          |          |
| Shih, Chung        |          |          |          |
| Ordoobadi, Mehrdad |          |          |          |
| Thogaru, Srujana   |          |          |          |
| Ordoobadi, Mehrdad |          |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | VI8999VI8929.SQL               |             |
|      | trace.txt                      |             |
|      | S-24-003 (0UJ) Springfield.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/26/2009 9:47:24 AM Eastern Standard Time

All of our RC slab structures have rebar that starts 1' left of the member and ends 1' right of the member.

See export of RCSH 48-64-48 structure and see jpg of GUI named "Bar off Member prior to 6.0"  
Notice that for Set 1, 2 3 25, 26 & 27 – the bars start left of the member and end right of the member.  
This structure was created prior to version 6.0

Now in 6.0

I created the same situation with the bar starting left of (before) member.

See export Validation Error.xml

This is not allowed now in 6.0, I get a Validation Error that will not let me continue until I move the bars onto the member. See jpg "Bar off Member Validation Error"

I can model it this way "IF" I copy over a pre-existing RC Slab and modify it. But I cannot start a new

4/19/2016 3:21:23 PM

HRS AASHTO

2711

**Complete Issue Information**

bridge and continue.

Re-Steel is modeled this way to obtain anchorage. I have to hook the bars on the ends that extend into the abutments. The hook is a work around being we cannot indicate fully developed on one end only.

FROM: Krisha Kennelly DATE: 2/1/2010 3:48:05 PM Eastern Standard Time  
In the Validation Error.xml file, the end bearing locations are entered as 1.25 inches on the Member alt Window. This is the distance the beam extends past the cl bearing. The rebars are entered as extending 1 foot past the cl bearing. The inches vs. feet discrepancy is causing the error. Enter the end bearing locations as 15" and the rebars can be extended past the cl bearing.

FROM: Dean Teal DATE: 6/24/2010 12:49:26 PM Eastern Daylight Time  
Accepted

|                                          |
|------------------------------------------|
| Issue ID: 8999                           |
| Subject: Report Tool - Duplicate End Tag |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 3/26/2009 12:01:57 PM |
| Modified By: mordoobadi             | 5/18/2010 1:15:28 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 3/26/2009 8:02:25 AM Eastern Daylight Time  
For the attached bridge, use Report Tool and BWS Report for truss system truss-floorbeam-stringer.abr  
You may need to remove some attributes to get the report to Generate (see 8929).

4/19/2016 3:21:23 PM

HRS AASHTO

2712

## Complete Issue Information

The Generated xml file has two </Bridge> end tags, resulting in an error when the report is opened in IE.

FROM: Joseph Ihnat DATE: 3/19/2010 10:01:04 AM Eastern Daylight Time  
Appears to be a database problem. See attached trace.txt

FROM: Mehrdad Ordoobadi DATE: 3/24/2010 2:01:24 PM Eastern Daylight Time  
Srujana, please review Joe's fix for this and if this is the right thing to do give me SQL scripts to fix the database.

FROM: Srujana Thogaru DATE: 4/30/2010 2:58:06 PM Eastern Daylight Time  
Modified the database with corrected functions. SQL Script sent to Mehrdad

FROM: Mehrdad Ordoobadi DATE: 5/1/2010 7:09:53 PM Eastern Daylight Time  
Added SQL Script file from email.

FROM: Mehrdad Ordoobadi DATE: 5/4/2010 8:28:51 AM Eastern Daylight Time  
SQL Script applied to SS DB.

FROM: Srujana Thogaru DATE: 5/5/2010 2:09:44 PM Eastern Daylight Time  
Verified for 6.2 alpha build 4

FROM: Mehrdad Ordoobadi DATE: 5/18/2010 9:15:27 AM Eastern Daylight Time  
Accepted.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 9003                                                    |
| Subject: Pressing Alt+Letter shortcuts does not operate correctly |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Schoedel, Rich   | 4/2/2009 12:25:59 PM |
| Modified By: xli               | 5/28/2009 7:16:42 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |

4/19/2016 3:21:24 PM

HRS AASHTO

2713

### Complete Issue Information

|               |          |      |     |
|---------------|----------|------|-----|
|               | Closed   |      |     |
| Duray, Jim    | New      | High | Bug |
| Ihnat, Joseph | Resolved |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | Cross Sections Shortcuts not working.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rich Schoedel DATE: 4/2/2009 8:37:59 AM Eastern Daylight Time  
Pressing Alt+Letter shortcuts does not operate correctly in the Floorbeam Definition Window, Description Tab. For example pressing Alt+A should take the cursor to the ASD drop down menu and it does not. The same thing occurs for all underlined text on this window tab.

FROM: Joseph Ihnat DATE: 4/6/2009 10:40:11 AM Eastern Daylight Time  
Changed Folder to Support Center.  
Probably been like this for a while. Factors tab was similar.  
Fixed for version 6.1 (Alpha Build 2).

FROM: Xinmei Li DATE: 5/28/2009 3:15:13 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 9011                                                             |
| Subject: Cross Sections: Dimensions - Alt + shortcuts not working properly |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Ihnat, Joseph |

4/19/2016 3:21:24 PM

HRS AASHTO

2714

**Complete Issue Information**

|                              |                     |
|------------------------------|---------------------|
| Submitted By: Schoedel, Rich | 4/2/2009 8:05:00 PM |
| Modified By: rschoedel       | 5/5/2009 7:48:40 PM |
| Priority: High               |                     |
| Category: Bug                |                     |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Closed   |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Pressing the.pdf    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Rich Schoedel DATE: 4/2/2009 4:05:57 PM Eastern Daylight Time  
 Cross Sections: Dimensions - The Alt + shortcuts not working properly, see the attached file.

FROM: Joseph Ihnat DATE: 4/7/2009 2:03:00 PM Eastern Daylight Time  
 Probably been like this for a while.  
 Changed Folder to Support Center.  
 Fixed for version 6.1 (Alpha Build 2).

FROM: Rich Schoedel DATE: 5/5/2009 3:48:40 PM Eastern Daylight Time  
 Alt+ shortcuts work with the exception of when "Enter angle descriptions in Table" is checked and pressing "Alt+o" or "Alt+m", which are disabled causes the window to close without warning.

**Complete Issue Information**

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 9014                                                                  |
| Subject: Cross Sections: Top Cover Plates - "Relative Position" text disappears |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Schoedel, Rich   | 4/2/2009 8:35:09 PM  |
| Modified By: jhnat             | 5/6/2009 12:03:49 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Rich Schoedel DATE: 4/2/2009 4:36:21 PM Eastern Daylight Time  
Cross Sections: Top Cover Plates - "Relative Position" text disappears when Duplicate is pressed. See attached.

FROM: Joseph Ihnat DATE: 4/6/2009 1:05:41 PM Eastern Daylight Time  
Probably been like this for a while.  
Changed Folder to Support Center.  
Fixed for version 6.1 (Alpha Build 2).



## Complete Issue Information

Issue ID: 9028  
Subject: Copy member alternative.

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Dombrowski, Chris 4/5/2009 3:06:49 PM  
Modified By: jihnat 4/30/2010 4:27:06 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:21:24 PM

HRS AASHTO

2717

**Complete Issue Information**

00112 - 82182112000S348.xml

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 4/5/2009 11:07:41 AM Eastern Daylight Time  
Submitted on behalf of Chris Dombrowski, Williams & Works.

This incident is for the member alternative copy issue. Incident 9027 is for the G3 array size error.

Received Bridgeware e-mail:

=====

Please see the attached .xml file. I previously sent a version of this file which had an array size error (See Virtis Incident 8992). As a workaround to this error, I have separated the file into 3 separate superstructures to reduce the array size and get the girders to run.

For the superstructure definition "WB Spans 9-15 (Continuous Pin and Hanger)", I was able to enter girder G2 and get it to run. However, when I copied the information to girder G3 and adjusted the properties for the different span lengths, I received an array size error when I tried to run G3. The only differences between G2 and G3 are the span lengths and plate girder flange thicknesses for Spans 1 and 5. Spans 2, 3, 4, 6, and 7 are exactly the same. Can you tell me why I am getting an array size error on one girder and not the other?

Also, when I copied the data from G2 to G3 Virtis recalculates all of the start distances. For example, the transverse stiffener spacings for Spans 2, 3, 4, 6, and 7 are exactly the same for Girders G2 and G3. However, when I copy the member alternative Virtis changes all of the start distances for the transverse stiffeners in these spans. Therefore, I had to retype all of the stiffener spacings for G3. Virtis also changes the distances for the hinge locations and deck reinforcement. Can you tell me how to copy the member alternative without having Virtis change the start distances for these spans?

Thank you,

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer

E-mail: dombrowski@williams-works.com

Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

4/19/2016 3:21:24 PM

HRS AASHTO

2718

## Complete Issue Information

=====

FROM: Joseph Ihnat DATE: 4/10/2009 10:32:41 AM Eastern Daylight Time  
When ranges are entered, the start distance is from a particular support.  
However, the start distance is actually stored as the distance from the first support.  
Because the length of span 1 is different for G2 and G3,  
the start distances are being displayed differently.

FROM: Joseph Ihnat DATE: 11/12/2009 2:24:14 PM Eastern Standard Time  
When copying a member alt to a member that has different span lengths,  
a message will now pop up to alert the user that the ranges will need to be adjusted.  
Done for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:27:12 PM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9035                                             |
| Subject: Missing STD LL Distribution Factors in BWS Report |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Shih, Chung   |                     |
| Submitted By: Hart, Sean       | 4/8/2009 9:17:24 PM |
| Modified By: sthogaru          | 5/5/2010 6:11:49 PM |
| Priority: High                 |                     |
| Category: Bug                  |                     |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | Assigned | High     | Bug      |
| Thogaru, Srujana |          |          |          |
| Shih, Chung      |          |          |          |
| Thogaru, Srujana |          |          |          |
| Shih, Chung      |          |          |          |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:21:24 PM

HRS AASHTO

2719

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 4/8/2009 5:17:46 PM Eastern Daylight Time  
Submitted on behalf of Sean Hart, Michael Baker Jr., Inc.

For Stringer Member Alternative in GFS and TFS system definitions.

FROM: Herman Lee DATE: 10/1/2009 12:29:12 PM Eastern Daylight Time  
Srujana, please assign to Chung for updating the abr files after you added the missing attributes to the database.

FROM: Srujana Thogaru DATE: 2/16/2010 11:08:15 AM Eastern Standard Time  
Updated the database with missing attributes

FROM: Joseph Ihnat DATE: 3/31/2010 1:21:53 PM Eastern Daylight Time  
Srujana, please look at this again.

FROM: Srujana Thogaru DATE: 4/30/2010 2:49:13 PM Eastern Daylight Time  
Updated the database with missing attributes. SQL Script sent to Mehrdad

FROM: Mehrdad Ordoobadi DATE: 5/1/2010 7:11:32 PM Eastern Daylight Time  
Added SQL Script file from email.

FROM: Chung Shih DATE: 5/4/2010 1:58:50 PM Eastern Daylight Time

Two files are updated to include the STD LL Distribution Factors  
BWS Report for floor system floorbeam-stringer.abr  
BWS Report for floor system girder-floorbeam-stringer.abr

Superstructure definitions > Floor System Geometry > Stringer Unit Layout > Stringer Member Alternatives (Live Load Distribution).

Issue ID: 9048

Subject: Legal Pair option is not saved with the template

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:21:25 PM

HRS AASHTO

2720

### Complete Issue Information

|                          |                      |
|--------------------------|----------------------|
| Submitted By: Duray, Jim | 4/23/2009 3:20:00 PM |
| Modified By: xli         | 5/28/2009 7:20:31 PM |
| Priority: High           |                      |
| Category: Bug            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
| Ihnat, Joseph   | Accepted |          |           |
|                 | Assigned |          |           |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jim Duray DATE: 4/23/2009 11:20:55 AM Eastern Daylight Time  
Analysis Settings - Saved setting as a template, a legal vehicle was assigned to the legal category and the legal pair was checked. Made it my default template. Closed Virtis and started again. Opened the template and the legal pair was not checked.

FROM: Joseph Ihnat DATE: 4/27/2009 9:07:11 AM Eastern Daylight Time  
I'm not able to reproduce this. Is your abgbrdg2 code up to date?

FROM: Joseph Ihnat DATE: 5/6/2009 12:17:50 PM Eastern Daylight Time  
Didn't work when Rating Method was set to Member Alternative (8893 fixed the case for Rating Method set to LRFR).  
Fixed for version 6.1.0

FROM: Xinmei Li DATE: 5/28/2009 3:19:40 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

4/19/2016 3:21:25 PM

HRS AASHTO

2721

## Complete Issue Information

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 9091                                                                               |
| Subject: Alt+ shortcuts not consistently applied in Floorbeam Definition Window, Factors Tab |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Schoedel, Rich   | 5/5/2009 7:50:38 PM  |
| Modified By: jihnat            | 5/13/2009 6:14:22 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rich Schoedel DATE: 5/5/2009 3:52:30 PM Eastern Daylight Time  
Alt+ shortcuts not consistently applied in Floorbeam Definition Window, Factors Tab

There is an Alt+ shortcut for the LRFD factors and LFD factors but not for the LRFR factors. Assign R or F to LRFR.

FROM: Joseph Ihnat DATE: 5/12/2009 2:08:06 PM Eastern Daylight Time  
Shortcuts L,R,F are already being used.

FROM: Rich Schoedel DATE: 5/13/2009 1:18:21 PM Eastern Daylight Time

4/19/2016 3:21:25 PM

HRS AASHTO

2722

### Complete Issue Information

Then perhaps some reassignment is needed. LFD could use "D". LFD factors could use "a". Then LRFR could use "F". and LRFR factors could use "t" or something like that.

FROM: Joseph Ihnat DATE: 5/13/2009 2:12:28 PM Eastern Daylight Time

I don't think we should change shortcuts that have been in use for years.

It's a fact of life that not every field in the UI has a shortcut. Just shortcut to the nearest field and then tab.

Issue ID: 9105

Subject: Pressing Ok in Prestress Beam Properties Window causes program to crash

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Schoedel, Rich

5/6/2009 4:51:21 PM

Modified By: jihnat

5/18/2009 1:34:32 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

### Contacts

4/19/2016 3:21:25 PM

HRS AASHTO

2723

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Rich Schoedel DATE: 5/6/2009 12:53:01 PM Eastern Daylight Time  
See attached

FROM: Joseph Ihnat DATE: 5/7/2009 3:26:44 PM Eastern Daylight Time  
Changed Folder to Support Center.  
Spec Check view was (incorrectly) responding to arbitrary updates broadcast by other windows.  
Fixed in version 6.1.0 (Alpha Build 4).

FROM: Rich Schoedel DATE: 5/18/2009 8:31:01 AM Eastern Daylight Time  
This appears to have been corrected for alpha build 4

|                                 |
|---------------------------------|
| Issue ID: 9120                  |
| Subject: Stiffener Ranges Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Turner, Keith    | 5/11/2009 3:34:35 PM |
| Modified By: xli               | 5/28/2009 7:33:09 PM |
| Priority: High                 |                      |

4/19/2016 3:21:26 PM

HRS AASHTO

2724



## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Keith Turner DATE: 5/11/2009 11:39:10 AM Eastern Daylight Time  
Open "FSys GFS TrainingBridge1"; under MEMBER DEFINITIONS, FLOORBEAM DEFINITIONS, Floorbeam Def 1, Click on Stiffener Ranges. It will open but then immediatiely close, not allowing the user to see anything within the window.

FROM: Joseph Ihnat DATE: 5/12/2009 10:16:19 AM Eastern Daylight Time  
To reproduce, add a steel angle shape to the bridge.  
Then open Stiffener Ranges as above. On the Logitudinal tab add a row to the Angle grid, click OK, try to reopen window.  
It looks like it's been like this for a while. Changed Folder to Support Center.  
Fixed for version 6.1.0 (Alpha Build 4).

FROM: Xinmei Li DATE: 5/28/2009 3:25:57 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

**Complete Issue Information**

Issue ID: 9122  
Subject: UI Error, Builtup Cross Section

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Turner, Keith 5/11/2009 3:50:49 PM  
Modified By: xli 5/28/2009 7:30:52 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Keith Turner DATE: 5/11/2009 11:59:43 AM Eastern Daylight Time  
Create a Detailed Steel Truss for a New Floorbeam Definition. Select the Truss Member Cross Sections folder. Select Built-Up Section. When changing the width of the columns within the angle description table (the one in the bottom left corner), the bug occurs right when the width changes so that the word "Leg" or "Thick" wraps down to the second line, within the cell. As you can see the The respective words mash with the defined units "(in)" to make that part of the cell illegible.

FROM: Joseph Ihnat DATE: 5/12/2009 8:06:04 AM Eastern Daylight Time  
It looks like it's been like this for a while. Changed Folder to Support Center.  
This window is shared with steel builtup cross section. Changed Subject of this incident from "Truss Member" to "Builtup".  
Fixed for version 6.1.0 (Alpha Build 4).

FROM: Xinmei Li DATE: 5/28/2009 3:25:22 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

## Complete Issue Information

Issue ID: 9146

Subject: error when switching between si and english on strand layout screen

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Jensen, Paul

5/14/2009 3:37:20 PM

Modified By: hlee

1/5/2010 2:43:24 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:21:26 PM

HRS AASHTO

2727

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 5/14/2009 11:56:17 AM Eastern Daylight Time

we have found when a user changes from english to si, the screen dose not behave correctly. when the user make the switch to si from english, the hover on the strand reports the location correctly. the screen that reports the harp locations dose not change to the si value. when the user switchs back, the harp locations (and all of the values on the leftside of the screen) convert to the english values.

summary- the witch from english to si dose not convert the area in the gray areas, but dose when you change back to english. durning our training, had half of the systems work correctly with others not working correctly. the only differences, is having 2007 office program(s) open [power point, word].

the systems was using the installed sqlserver express, sample database and program from the production cd.

FROM: Joseph Ihnat DATE: 5/21/2009 3:56:28 PM Eastern Daylight Time

I'm not able to reproduce this. Please attach your bridge and/or screenshot(s).

FROM: Herman Lee DATE: 10/30/2009 2:37:47 PM Eastern Daylight Time

Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:06:42 AM Eastern Standard Time

Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:46:56 AM Eastern Standard Time

No response to Information Needed E-mail for two months. Status changed to Closed.

Please let us know if you want to reopen this incident.

|                                                 |
|-------------------------------------------------|
| Issue ID: 9172                                  |
| Subject: Unable to save LRFR rating to database |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Withers, Richard      | 5/20/2009 2:26:08 PM |
| Modified By: mordoobadi             | 9/10/2009 7:58:43 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:21:28 PM

HRS AASHTO

2728

**Complete Issue Information**

|                    |          |      |     |
|--------------------|----------|------|-----|
| Lee, Herman        | New      | High | Bug |
| Ordoobadi, Mehrdad | Assigned |      |     |
| Lee, Herman        | New      | High | Bug |
| Ordoobadi, Mehrdad | Assigned |      |     |
|                    | Resolved |      |     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0108347.xml         |             |
|      | 0108345.xml         |             |
|      | 0108303.xml         |             |
|      | 0108340.xml         |             |
|      | 0108341.xml         |             |
|      | 0108302.xml         |             |
|      | VI-9182.png         |             |
|      | 0108346.xml         |             |
|      | 0108339.xml         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Richard Withers DATE: 5/20/2009 10:33:51 AM Eastern Daylight Time

We have recently upgraded our database from 5.4 to 6.0. After running an LRF rating, I can't save the results to the database. I get the following error message:

"Error updating database record set.

03:20:15 PM - Line 432 in source file .\DmLrfdSpecCheck.cpp.

State:23000,Native:2291,Origin:[Oracle][ODBC][Ora]

ORA-02291: integrity constraint (PONTIS.R\_2214) violated - parent key not found "

It appears that the table "PONTIS.R\_2214" does not exist in our database. The migration log shows that everything was updated successfully.

All other functions, including saving LFD ratings to the database, are working.

Richard Withers  
Mississippi DOT

4/19/2016 3:21:28 PM

HRS AASHTO

2729

## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 5/29/2009 9:40:03 AM Eastern Daylight Time  
R\_2214 is a foreign key it is not a table.

It appears that there may be some records missing in the abw\_lib\_spec\_article table.  
Could you please ask your Oracle Database Administrator (DBA) to send us the result of the following queries:

```
set linesize 255;  
set pagesize 800;
```

```
SELECT major_version_num, minor_version_num, patch_num, build_num FROM abw_sys_database;
```

```
SELECT maintenance_keyword, name, development_timestamp FROM abw_sys_db_maintenance  
order by development_timestamp, maintenance_keyword
```

```
SELECT maintenance_keyword, stage_keyword , name, maintenance_stage_timestamp FROM  
abw_sys_db_maintenance_stage ORDER BY maintenance_stage_timestamp;
```

```
SELECT count(*) from abw_lib_spec_article;
```

```
SELECT spec_id, spec_article_id, spec_article_reference FROM abw_lib_spec_article ORDER BY  
spec_id, spec_article_id;
```

FROM: Mehrdad Ordoobadi DATE: 6/10/2009 1:53:11 PM Eastern Daylight Time

-----Original Message-----

From: Withers, Richard [mailto:RWithers@mdot.state.ms.us]

Sent: Tuesday, June 02, 2009 2:52 PM

To: Pontis, Pontis

Subject: FW: Virtis/Opis issue 9172 - Unable to save LRFR rating to database

Mehrdad,

This is what I received from our DBA. I hope this will help solve our problem. Please tell me if you need anything else or this is not the right information.

Thank you,

Richard Withers  
Mississippi Department of Transportation  
601 359 7200

-----Original Message-----

From: Mood, Chris

Sent: Tuesday, June 02, 2009 11:55 AM

To: Withers, Richard

Subject: FW: Virtis/Opis issue 9172 - Unable to save LRFR rating to database

4/19/2016 3:21:30 PM

HRS AASHTO

2730

**Complete Issue Information**

-----Original Message-----

From: Simon, Wesley

Sent: Tue 6/2/2009 9:45 AM

To: Mood, Chris

Subject: RE: Virtis/Opis issue 9172 - Unable to save LRFR rating to database

This should be what you guys are requesting!

```
SELECT major_version_num, minor_version_num, patch_num, build_num FROM abw_sys_database;
```

```
MAJOR_VERSION_NUM MINOR_VERSION_NUM PATCH_NUM BUILD_NUM
```

```
-----
```

```
6          0      0    3001
```

```
SELECT maintenance_keyword, name, development_timestamp FROM abw_sys_db_maintenance
order by development_timestamp, maintenance_keyword;
```

```
MAINTENANCE_KEYWORD      NAME
```

```
DEVELOPME
```

```
-----
-----
-----
```

```
ORIGINAL_VERSION_420_OR_OLDER  Original Version 4.2.0 Or Older
```

```
01-AUG-02
```

```
DB_MIG_420_TO_500           Migration from 4.2.0 to 5.0.0
```

4/19/2016 3:21:31 PM

**HRS AASHTO**

2731

**Complete Issue Information**

31-MAR-03  
UPDATE\_TIMESTAMPS\_MIG\_DB      Convert Timestamps to GMT  
31-MAR-03  
DB\_MIG\_501\_TO\_510              Migration from 5.0.1 to 5.1.0  
12-SEP-03  
DB\_MIG\_510\_TO\_511              Migration from 5.1.0 to 5.1.1  
08-JAN-04  
ADJUST\_ANGLE\_CONVERSION      Adjust Angle Conversion  
18-FEB-04  
SCAN\_ANGLE\_CONVERSION        Scan Angle Conversion  
18-FEB-04  
DB\_MIG\_511\_TO\_520\_INC\_5072    Incident 5072  
27-JUL-04  
DB\_MIG\_511\_TO\_520              Migration from 5.1.1 to 5.2.0  
23-NOV-04  
DB\_MIG\_520\_TO\_530              Migration from 5.2.0 to 5.3.0  
08-APR-05  
UPDATE\_REFLINES\_MIG\_DB        Update Reference Lines  
08-APR-05  
DB\_MIG\_520\_TO\_530\_INC\_5531    Incident 5531  
08-APR-05  
DB\_MIG\_530\_TO\_531              Migration from 5.3.0 to 5.3.1  
14-JUN-05  
DB\_MIG\_531\_TO\_540              Migration from 5.3.1 to 5.4.0  
20-APR-06  
REMOVE\_ORPHANBEAMDEFS\_MIG\_DB    Remove Orphaned Beam Defs

4/19/2016 3:21:33 PM

**HRS AASHTO**

2732



**Complete Issue Information**

|                   |                               |
|-------------------|-------------------------------|
| 03-OCT-06         |                               |
| DB_MIG_540_TO_550 | Migration from 5.4.0 to 5.5.0 |
| 06-NOV-06         |                               |
| DB_MIG_550_TO_560 | Migration from 5.5.0 to 5.6.0 |
| 04-OCT-07         |                               |
| DB_MIG_560_TO_600 | Migration from 5.6.0 to 6.0.0 |
| 23-JUL-08         |                               |

18 rows selected.

```
SELECT maintenance_keyword, stage_keyword , name, maintenance_stage_timestamp FROM  
abw_sys_db_maintenance_stage ORDER BY maintenance_stage_timestamp;
```

| MAINTENANCE_KEYWORD | STAGE_KEYWORD | NAME |
|---------------------|---------------|------|
|---------------------|---------------|------|

MAINTENAN

-----  
-----

-----

ORIGINAL\_VERSION\_420\_OR\_OLDER EXISTS  
Database Exist

s 01-AUG-02

DB\_MIG\_420\_TO\_500 COMPLETE\_STRUCTURE  
Complete Struc

tural Migration 05-MAY-03

DB\_MIG\_420\_TO\_500 CREATE\_VIEWS Create  
Databas

e Views 05-MAY-03

DB\_MIG\_420\_TO\_500 GRANTS Grant

4/19/2016 3:21:35 PM

HRS AASHTO

2733

### Complete Issue Information

Access P

|                                            |             |  |      |
|--------------------------------------------|-------------|--|------|
| rivilleges                                 | 05-MAY-03   |  |      |
| DB_MIG_420_TO_500<br>Migrating Othe        | OTHER_DATA  |  |      |
| r Data                                     | 05-MAY-03   |  |      |
| DB_MIG_420_TO_500<br>Migration Fini        | FINISHED    |  |      |
| shed                                       | 05-MAY-03   |  |      |
| DB_MIG_420_TO_500<br>Migration Star        | START       |  |      |
| ted                                        | 05-MAY-03   |  |      |
| UPDATE_TIMESTAMPS_MIG_DB<br>Timestamp Conv | FINISH      |  |      |
| ersion Finished                            | 05-MAY-03   |  |      |
| UPDATE_TIMESTAMPS_MIG_DB<br>Timestamp Conv | START       |  |      |
| ersion Started                             | 05-MAY-03   |  |      |
| DB_MIG_420_TO_500<br>Migrating Syst        | SYSTEM_DATA |  |      |
| em Data                                    | 05-MAY-03   |  |      |
| DB_MIG_420_TO_500<br>Migrating Data        | STRUCTURAL  |  |      |
| base Structure                             | 05-MAY-03   |  |      |
| DB_MIG_501_TO_510<br>Migration Star        | START       |  |      |
| ted                                        | 15-DEC-03   |  |      |
| DB_MIG_501_TO_510<br>Migration Fini        | FINISHED    |  |      |
| shed                                       | 15-DEC-03   |  |      |
| SCAN_ANGLE_CONVERSION<br>Angle Con         | SUCCESS     |  | Scan |

4/19/2016 3:21:36 PM

HRS AASHTO

2734

### Complete Issue Information

|                                        |            |        |
|----------------------------------------|------------|--------|
| version Succeeded                      | 24-AUG-04  |        |
| DB_MIG_510_TO_511<br>Migration Star    | START      |        |
| ted                                    | 25-AUG-04  |        |
| ADJUST_ANGLE_CONVERSION<br>Angle C     | FINISH     | Adjust |
| onversion Finished                     | 25-AUG-04  |        |
| ADJUST_ANGLE_CONVERSION<br>Angle C     | START      | Adjust |
| onversion Started                      | 25-AUG-04  |        |
| DB_MIG_510_TO_511<br>Migration Fini    | FINISHED   |        |
| shed                                   | 25-AUG-04  |        |
| DB_MIG_511_TO_520<br>Migration Star    | START      |        |
| ted                                    | 07-JAN-05  |        |
| DB_MIG_511_TO_520<br>Migration Fini    | FINISHED   |        |
| shed                                   | 10-JAN-05  |        |
| DB_MIG_511_TO_520_INC_5072<br>Started  | START      |        |
|                                        | 10-JAN-05  |        |
| DB_MIG_511_TO_520_INC_5072<br>Finished | FINISHED   |        |
|                                        | 10-JAN-05  |        |
| DB_MIG_520_TO_530<br>Migration Star    | START      |        |
| ted                                    | 06-JUL-06  |        |
| DB_MIG_520_TO_530<br>Migrating Data    | STRUCTURAL |        |

4/19/2016 3:21:38 PM

HRS AASHTO

2735

**Complete Issue Information**

|                                        |              |        |
|----------------------------------------|--------------|--------|
| base Structure                         | 06-JUL-06    |        |
| DB_MIG_520_TO_530<br>Databas           | CREATE_VIEWS | Create |
| e Views                                | 06-JUL-06    |        |
| DB_MIG_520_TO_530<br>Migrating Syst    | SYSTEM_DATA  |        |
| em Data                                | 06-JUL-06    |        |
| DB_MIG_520_TO_530<br>Migrating Libr    | LIBRARY_DATA |        |
| ary Data                               | 06-JUL-06    |        |
| DB_MIG_520_TO_530<br>Migrating Othe    | OTHER_DATA   |        |
| r Data                                 | 06-JUL-06    |        |
| DB_MIG_520_TO_530<br>Migration Fini    | FINISHED     |        |
| shed                                   | 06-JUL-06    |        |
| DB_MIG_520_TO_530_INC_5531<br>Started  | START        |        |
|                                        | 06-JUL-06    |        |
| DB_MIG_530_TO_531<br>Migration Star    | START        |        |
| ted                                    | 06-JUL-06    |        |
| DB_MIG_531_TO_540<br>Migration Star    | START        |        |
| ted                                    | 06-JUL-06    |        |
| DB_MIG_530_TO_531<br>Migration Fini    | FINISHED     |        |
| shed                                   | 06-JUL-06    |        |
| DB_MIG_520_TO_530_INC_5531<br>Finished | FINISHED     |        |
|                                        | 06-JUL-06    |        |

### Complete Issue Information

|                                         |           |
|-----------------------------------------|-----------|
| DB_MIG_531_TO_540<br>Migration Fini     | FINISHED  |
| shed                                    | 06-JUL-06 |
| UPDATE_REFLINES_MIG_DB<br>Started       | START     |
|                                         | 06-JUL-06 |
| UPDATE_REFLINES_MIG_DB<br>Finished      | FINISH    |
|                                         | 06-JUL-06 |
| DB_MIG_540_TO_550<br>Migration Star     | START     |
| ted                                     | 09-MAY-09 |
| DB_MIG_540_TO_550<br>Migration Fini     | FINISHED  |
| shed                                    | 09-MAY-09 |
| DB_MIG_550_TO_560<br>Migration Star     | START     |
| ted                                     | 09-MAY-09 |
| DB_MIG_550_TO_560<br>Migration Fini     | FINISHED  |
| shed                                    | 09-MAY-09 |
| DB_MIG_560_TO_600<br>Migration Star     | START     |
| ted                                     | 09-MAY-09 |
| DB_MIG_560_TO_600<br>Migration Fini     | FINISHED  |
| shed                                    | 09-MAY-09 |
| REMOVE_ORPHANBEAMDEFS_MIG_DB<br>Started | START     |
|                                         | 09-MAY-09 |

4/19/2016 3:21:41 PM

HRS AASHTO

2737

**Complete Issue Information**

REMOVE\_ORPHANBEAMDEFS\_MIG\_DB FINISH  
Finished

09-MAY-09

45 rows selected.

SELECT count(\*) from abw\_lib\_spec\_article;

COUNT(\*)

-----

779

SELECT spec\_id, spec\_article\_id, spec\_article\_reference FROM abw\_lib\_spec\_article ORDER BY  
spec\_id, spec\_article\_id;

| SPEC_ID | SPEC_ARTICLE_ID | SPEC_ARTICLE_REFERENCE |
|---------|-----------------|------------------------|
| 2       | 1               | 6.10.5.2.2a-1          |
| 2       | 2               | 6.10.5.2.2a-3          |
| 2       | 3               | 6.10.5.2.3a-1          |
| 2       | 4               | 6.10.5.3.2a-1          |
| 2       | 5               | 6.10.5.5.2-1           |
| 2       | 6               | 6.10.5.5.2-2           |
| 2       | 7               | 6.10.5.5.3-1           |
| 2       | 8               | 6.10.6.4.1-1           |
| 2       | 9               | 6.10.6.4.1-2           |
| 2       | 10              | 6.10.6.4.1-3           |
| 2       | 11              | 6.10.6.4.2-1           |
| 2       | 12              | 6.10.5.6.2-1           |
| 2       | 13              | 6.10.5.6.2-2           |

4/19/2016 3:21:43 PM

HRS AASHTO

2738

### Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 2 | 14  | 6.10.5.2.2a-2 |
| 2 | 15  | 6.10.5.2.2b-* |
| 2 | 101 | 6.10.7.3.3a-5 |
| 2 | 102 | 6.10.7.3.3a-6 |
| 2 | 103 | 6.10.7.3.3a-7 |
| 2 | 104 | 6.10.5.5.2-4  |
| 2 | 105 | C6.10.5.5.2-1 |
| 2 | 106 | 6.10.5.2.3e-1 |
| 2 | 107 | 6.10.5.3.2d   |
| 2 | 108 | 6.10.5.3.3d-1 |
| 2 | 109 | 6.10.5.2.3c-1 |
| 2 | 110 | 6.10.5.3.3c-1 |
| 2 | 111 | 6.10.5.3.3c-2 |
| 2 | 112 | 6.10.5.1.4a   |
| 2 | 113 | 6.10.7.4.1a   |
| 2 | 114 | 6.10.7.4.1b   |
| 2 | 115 | 6.10.7.4.1c   |
| 2 | 116 | 6.10.7.4.1d   |
| 2 | 117 | 6.10.7.4.1b-1 |
| 2 | 118 | 6.10.5.2.2b   |
| 2 | 119 | 6.6.1.2.5-1   |
| 2 | 120 | 6.10.5.2.2b-1 |
| 2 | 121 | 6.10.2.1-1    |
| 2 | 122 | 6.10.2.1-3    |
| 2 | 123 | None          |

### Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 2 | 124 | 6.10.5.6.3-1  |
| 2 | 125 | 6.10.5.4.1a   |
| 2 | 126 | 6.10.5.4.1c-1 |
| 2 | 127 | 6.10.5.4.1c-2 |
| 2 | 128 | 6.10.5.4.1b-1 |
| 2 | 129 | 6.10.5.4.2a   |
| 2 | 130 | 6.10.5.4.2b   |
| 2 | 131 | 6.10.1.1-1    |
| 2 | 132 | None          |
| 2 | 133 | None          |
| 2 | 134 | None          |
| 2 | 135 | None          |
| 2 | 136 | None          |
| 2 | 137 | 6.10.7.3.4-1  |
| 2 | 138 | 6.10.7.3.3c-1 |
| 2 | 139 | 6.10.7.1      |
| 2 | 140 | 6.10.7.3.3a-1 |
| 2 | 141 | 6.10.7.3.3a-2 |
| 2 | 142 | 6.10.7.3.3b-1 |
| 2 | 143 | 6.10.7.3.3b-2 |
| 2 | 144 | 6.10.7.3.2    |
| 2 | 145 | 6.10.7.2-1    |
| 2 | 146 | 6.10.7.2-2    |
| 2 | 147 | 6.10.7.2-3    |
| 2 | 148 | 6.10.5.2.3d-1 |
| 2 | 149 | 6.6.1.2.2-1   |



## Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 2 | 150 | 6.10.8.2.2-1  |
| 2 | 151 | 6.10.8.2.3-1  |
| 2 | 152 | 6.10.8.2.4    |
| 2 | 153 | 6.10.8.3.1    |
| 2 | 154 | 6.10.8.3.2-1  |
| 2 | 155 | 6.10.8.3.3    |
| 2 | 156 | 6.10.8.1.2    |
| 2 | 157 | 6.10.8.1.3    |
| 2 | 158 | 6.10.8.1.4-1  |
| 2 | 159 | 6.10.4.3-1    |
| 2 | 160 | 6.10.4.3-2    |
| 2 | 161 | N/A           |
| 2 | 162 | 6.10.4.4-1    |
| 2 | 163 | 6.10.3.2-1    |
| 2 | 164 | 6.10.3.2-2    |
| 2 | 165 | 6.10.5.2.2c-1 |
| 2 | 166 | 6.10.5.2.3b-1 |
| 2 | 167 | 6.10.5.3.2b-1 |
| 2 | 168 | 6.10.5.3.2b-2 |
| 2 | 169 | 6.10.5.1.2    |
| 2 | 170 | 6.10.5.2.2b   |
| 2 | 201 | 5.5.3.2       |
| 2 | 207 | 5.7.3.4       |
| 2 | 301 | N/A           |
| 2 | 461 | 6.10.3.2      |

### Complete Issue Information

|   |    |               |
|---|----|---------------|
| 4 | 1  | 6.10.4.2.1-1  |
| 4 | 2  | 6.10.4.2.2a-1 |
| 4 | 3  | 6.10.4.2.2a-2 |
| 4 | 4  | 6.10.4.2.2a-3 |
| 4 | 5  | 6.10.4.2.2a-4 |
| 4 | 6  | 6.10.4.2.3-1  |
| 4 | 7  | 6.10.4.2.3-2  |
| 4 | 8  | 6.10.4.2.4-1  |
| 4 | 9  | 6.10.4.2.5a-1 |
| 4 | 10 | 6.10.4.2.5a-2 |
| 4 | 11 | 6.10.4.2.5b-1 |
| 4 | 12 | 6.10.4.2.6a-1 |
| 4 | 13 | 6.10.4.2.6a-2 |
| 4 | 14 | 6.10.4.2.6a-3 |
| 4 | 15 | 6.10.4.2.6b-1 |
| 4 | 16 | 6.10.4.1.4    |
| 4 | 17 | 6.10.4.2.2b   |
| 4 | 21 | 6.10.4        |
| 4 | 22 | 6.10.4-1      |
| 4 | 23 | 6.10.4-2      |
| 4 | 50 | 6.10.4.2      |
| 4 | 51 | 6.10.4.2.1-1  |
| 4 | 52 | 6.10.4.2.2a-1 |
| 4 | 53 | 6.10.4.2.2a-2 |
| 4 | 54 | 6.10.4.2.2a-3 |
| 4 | 55 | 6.10.4.2.2a-4 |

## Complete Issue Information

|   |     |                |
|---|-----|----------------|
| 4 | 56  | 6.10.4.2.3-1   |
| 4 | 57  | 6.10.4.2.3-2   |
| 4 | 58  | 6.10.4.2.4a-1  |
| 4 | 59  | 6.10.4.2.4a-2  |
| 4 | 60  | 6.10.4.2.4b-1  |
| 4 | 61  | 6.10.4.2.5a-1  |
| 4 | 62  | 6.10.4.2.5a-2  |
| 4 | 63  | 6.10.4.2.4b-1  |
| 4 | 64  | 6.10.4.2.6a-1  |
| 4 | 65  | 6.10.4.2.6a-2  |
| 4 | 66  | 6.10.4.2.6a-3  |
| 4 | 67  | 6.10.4.2.6b-1  |
| 4 | 68  | 6.6.9.6 (LRFR) |
| 4 | 123 | 6.10.2.1-1     |
| 4 | 132 | 6.10.2.2-1     |
| 4 | 133 | 6.10.2.2-2     |
| 4 | 138 | 6.10.2.3-1     |
| 4 | 139 | 6.10.2.3-2     |
| 4 | 162 | 6.10.4.1.2-1   |
| 4 | 172 | 6.10.4.1.3-1   |
| 4 | 182 | 6.10.4.1.4-1   |
| 4 | 183 | 6.10.4.1.4-2   |
| 4 | 202 | 6.10.4.1.6a    |
| 4 | 206 | 6.10.4.1.6b-1  |
| 4 | 212 | 6.10.4.1.7-1   |

### Complete Issue Information

|   |     |                |
|---|-----|----------------|
| 4 | 222 | 6.10.4.1.8-1   |
| 4 | 223 | 6.10.4.1.8-2   |
| 4 | 232 | 6.10.4.1.9-1   |
| 4 | 242 | 6.10.4.2.2b-1  |
| 4 | 243 | 6.10.4.2.2b-2  |
| 4 | 312 | 6.10.4.3.1a    |
| 4 | 314 | 6.10.4.3.1b-1  |
| 4 | 316 | 6.10.4.3.1c-1  |
| 4 | 317 | 6.10.4.3.1c-2  |
| 4 | 322 | 6.10.4.3.2a    |
| 4 | 323 | 6.10.4.3.2b    |
| 4 | 332 | 6.10.4.2.5a-4  |
| 4 | 333 | C6.10.4.2.5a-1 |
| 4 | 341 | 6.10.7.3.3a-5  |
| 4 | 342 | 6.10.7.3.3a-6  |
| 4 | 343 | 6.10.7.3.3a-7  |
| 4 | 401 | None           |
| 4 | 402 | None           |
| 4 | 411 | 6.10.3.1.2     |
| 4 | 421 | 6.10.3.3.1     |
| 4 | 431 | 6.10.3.1.3     |
| 4 | 441 | 6.10.3.3.1     |
| 4 | 452 | 6.10.3.1.4a    |
| 4 | 461 | 6.10.3.2       |
| 4 | 463 | 6.10.3.2.2-1   |
| 4 | 465 | 6.10.3.2.3-1   |

## Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 4 | 471 | None          |
| 4 | 481 | None          |
| 4 | 491 | 6.10.3.7      |
| 4 | 511 | 6.10.7.1      |
| 4 | 512 | 6.10.7.1-1    |
| 4 | 522 | 6.10.7.2-1    |
| 4 | 523 | 6.10.7.2-2    |
| 4 | 524 | 6.10.7.2-3    |
| 4 | 551 | 6.10.7.3.2    |
| 4 | 562 | 6.10.7.3.3a-1 |
| 4 | 563 | 6.10.7.3.3a-2 |
| 4 | 572 | 6.10.7.3.3b-1 |
| 4 | 573 | 6.10.7.3.3b-2 |
| 4 | 582 | 6.10.7.3.3c-1 |
| 4 | 592 | 6.10.7.3.4-1  |
| 4 | 601 | 6.10.7.3.3    |
| 4 | 602 | 6.10.7.3.3    |
| 4 | 631 | 6.10.7.4.1a   |
| 4 | 641 | 6.10.7.4.1b   |
| 4 | 642 | 6.10.7.4.1b-1 |
| 4 | 651 | 6.10.7.4.1c   |
| 4 | 661 | 6.10.7.4.1d   |
| 4 | 672 | 6.10.7.4.3-1  |
| 4 | 681 | 6.10.7.4.4    |
| 4 | 731 | 6.10.8.1.2    |

### Complete Issue Information

|   |      |              |
|---|------|--------------|
| 4 | 741  | 6.10.8.1.3   |
| 4 | 752  | 6.10.8.1.4-1 |
| 4 | 782  | 6.10.8.2.2-1 |
| 4 | 792  | 6.10.8.2.3-1 |
| 4 | 801  | 6.10.8.2.4   |
| 4 | 821  | 6.10.8.3.1   |
| 4 | 832  | 6.10.8.3.2-1 |
| 4 | 842  | 6.10.8.3.3-1 |
| 4 | 902  | 6.10.5.2-1   |
| 4 | 903  | 6.10.5.2-2   |
| 4 | 941  | 6.10.6.3     |
| 4 | 942  | 6.10.6.3-1   |
| 4 | 943  | 6.10.6.3-2   |
| 4 | 951  | 6.10.6.4     |
| 4 | 952  | 6.10.4.4-1   |
| 4 | 961  | 6.6.1.2.2-1  |
| 4 | 962  | 6.6.1.2.5-1  |
| 4 | 2000 | 5.5.3        |
| 4 | 2001 | 5.5.3.1      |
| 4 | 2002 | 5.5.3.2      |
| 4 | 2003 | 5.5.3.3      |
| 4 | 2120 | 5.7.3.2      |
| 4 | 2131 | 5.7.3.3.1    |
| 4 | 2132 | 5.7.3.3.2    |
| 4 | 2140 | 5.7.3.4      |
| 4 | 2261 | 5.8.2.4-1    |

## Complete Issue Information

|   |      |             |
|---|------|-------------|
| 4 | 2271 | 5.8.2.5-1   |
| 4 | 2280 | 5.8.2.6     |
| 4 | 2290 | 5.8.2.7     |
| 4 | 2291 | 5.8.2.7     |
| 4 | 2293 | 5.8.2.9     |
| 4 | 2330 | 5.8.3.3     |
| 4 | 2340 | 5.8.3.4     |
| 4 | 2350 | 5.8.3.5     |
| 4 | 2400 | 5.8.4       |
| 4 | 2500 | 5.9.4       |
| 4 | 2600 | None        |
| 4 | 2601 | None        |
| 4 | 2602 | None        |
| 4 | 2603 | None        |
| 4 | 3000 | None        |
| 4 | 3001 | None        |
| 4 | 3100 | 3.6.1.3.2   |
| 5 | 1    | 6.10        |
| 5 | 10   | 6.10.1      |
| 5 | 50   | 6.10.1.7    |
| 5 | 60   | 6.10.1.9    |
| 5 | 61   | 6.10.1.9.1  |
| 5 | 62   | 6.10.1.9.2  |
| 5 | 70   | 6.10.1.10   |
| 5 | 71   | 6.10.1.10.1 |

### Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 5 | 72  | 6.10.1.10.1-1 |
| 5 | 73  | 6.10.1.10.2   |
| 5 | 80  | 6.10.2        |
| 5 | 90  | 6.10.2.1      |
| 5 | 91  | 6.10.2.1.1    |
| 5 | 92  | 6.10.2.1.1-1  |
| 5 | 93  | 6.10.2.1.2    |
| 5 | 94  | 6.10.2.1.2-1  |
| 5 | 100 | 6.10.2.2      |
| 5 | 101 | A6.1-2        |
| 5 | 110 | 6.10.6.2.2    |
| 5 | 111 | 6.10.6.2.2-1  |
| 5 | 120 | 6.10.6.2.3    |
| 5 | 121 | 6.10.6.2.3-1  |
| 5 | 130 | A6.2.1        |
| 5 | 131 | A6.2.1-1      |
| 5 | 132 | A6.2.1-4      |
| 5 | 133 | A6.2.1-5      |
| 5 | 140 | A6.2.2        |
| 5 | 141 | A6.2.2-1      |
| 5 | 142 | A6.2.2-4      |
| 5 | 143 | A6.2.2-5      |
| 5 | 200 | 6.10.7.3      |
| 5 | 201 | 6.10.7.3-1    |
| 5 | 300 | 6.10.8.2.3    |
| 5 | 301 | A6.3.3        |



## Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 5 | 350 | 6.10.9.3.2-4  |
| 5 | 351 | 6.10.9.3.2-5  |
| 5 | 352 | 6.10.9.3.2-6  |
| 5 | 400 | 6.10.11       |
| 5 | 410 | 6.10.11.1     |
| 5 | 420 | 6.10.11.1.1   |
| 5 | 430 | 6.10.11.1.2   |
| 5 | 431 | 6.10.11.1.2-1 |
| 5 | 440 | 6.10.11.1.3   |
| 5 | 441 | 6.10.11.1.3-1 |
| 5 | 442 | 6.10.11.1.3-2 |
| 5 | 443 | 6.10.11.1.3-3 |
| 5 | 450 | 6.10.11.1.4   |
| 5 | 451 | 6.10.11.1.4-1 |
| 5 | 460 | 6.10.11.2     |
| 5 | 470 | 6.10.11.2.1   |
| 5 | 480 | 6.10.11.2.2   |
| 5 | 481 | 6.10.11.2.2-1 |
| 5 | 490 | 6.10.11.2.3   |
| 5 | 491 | 6.10.11.2.3-1 |
| 5 | 500 | 6.10.11.2.4   |
| 5 | 510 | 6.10.11.3     |
| 5 | 520 | 6.10.11.3.1   |
| 5 | 530 | 6.10.11.3.2   |
| 5 | 531 | 6.10.11.3.2-1 |

### Complete Issue Information

|   |      |               |
|---|------|---------------|
| 5 | 540  | 6.10.11.3.3   |
| 5 | 541  | 6.10.11.3.3-1 |
| 5 | 701  | None          |
| 5 | 702  | None          |
| 5 | 710  | None          |
| 5 | 800  | D6.1          |
| 5 | 810  | D6.2          |
| 5 | 811  | D6.2.1        |
| 5 | 812  | D6.2.2        |
| 5 | 813  | D6.2.3        |
| 5 | 820  | D6.3          |
| 5 | 821  | D6.3.1        |
| 5 | 999  | None          |
| 5 | 1000 | None          |
| 5 | 1001 | 6.10.3.2.1-2  |
| 5 | 1002 | 6.10.3.2.2-1  |
| 5 | 1003 | 6.10.3.2.3-1  |
| 5 | 1004 | 6.10.7.1.2-1  |
| 5 | 1005 | 6.10.7.1.2-2  |
| 5 | 1006 | 6.10.7.1.2-3  |
| 5 | 1007 | 6.10.7.2.2-1  |
| 5 | 1008 | 6.10.7.2.2-2  |
| 5 | 1009 | 6.10.8.2.2-1  |
| 5 | 1010 | 6.10.8.2.2-2  |
| 5 | 1011 | 6.10.8.2.3-1  |
| 5 | 1012 | 6.10.8.2.3-2  |

## Complete Issue Information

|   |      |              |
|---|------|--------------|
| 5 | 1013 | 6.10.8.2.3-3 |
| 5 | 1014 | 6.10.8.1.3-1 |
| 5 | 1015 | 6.10.8.3-1   |
| 5 | 1016 | A6.1.3-1     |
| 5 | 1017 | A6.1.4-1     |
| 5 | 1018 | A6.3.2-1     |
| 5 | 1019 | A6.3.2-2     |
| 5 | 1020 | A6.3.3-1     |
| 5 | 1021 | A6.3.3-2     |
| 5 | 1022 | A6.3.3-3     |
| 5 | 1023 | A6.4-1       |
| 5 | 1024 | 6.10.7.3     |
| 5 | 1025 | R-6.9.6      |
| 5 | 1050 | 6.10.3.2.1   |
| 5 | 1051 | 6.10.3.2.1-1 |
| 5 | 1052 | 6.10.3.2.1-3 |
| 5 | 1060 | 6.10.7.1.1   |
| 5 | 1061 | 6.10.7.1.1-1 |
| 5 | 1070 | 6.10.7.2.1   |
| 5 | 1071 | 6.10.7.2.1-1 |
| 5 | 1072 | 6.10.7.2.1-2 |
| 5 | 1080 | 6.10.8.1.1   |
| 5 | 1081 | 6.10.8.1.1-1 |
| 5 | 1090 | 6.10.8.1.2   |
| 5 | 1091 | 6.10.8.1.2-1 |

### Complete Issue Information

|   |      |              |
|---|------|--------------|
| 5 | 1100 | 6.10.8.1.3   |
| 5 | 1101 | 6.10.8.1.3-1 |
| 5 | 1110 | A6.1.1       |
| 5 | 1111 | A6.1.1-1     |
| 5 | 1120 | A6.1.2       |
| 5 | 1121 | A6.1.2-1     |
| 5 | 1150 | 6.10.3.3     |
| 5 | 1151 | 6.10.3.3-1   |
| 5 | 1200 | 6.10.4.2.2   |
| 5 | 1201 | 6.10.4.2.2-1 |
| 5 | 1202 | 6.10.4.2.2-2 |
| 5 | 1203 | 6.10.4.2.2-3 |
| 5 | 1204 | 6.10.4.2.2-4 |
| 5 | 1250 | 6.10.5.3     |
| 5 | 1251 | 6.10.5.3-1   |
| 5 | 1300 | 6.10.9       |
| 5 | 1310 | 6.10.9.1     |
| 5 | 1311 | 6.10.9.1-1   |
| 5 | 1320 | 6.10.9.2     |
| 5 | 1321 | 6.10.9.2-1   |
| 5 | 1330 | 6.10.9.3     |
| 5 | 1340 | 6.10.9.3.1   |
| 5 | 1350 | 6.10.9.3.2   |
| 5 | 1351 | 6.10.9.3.2-1 |
| 5 | 1352 | 6.10.9.3.2-2 |
| 5 | 1353 | 6.10.9.3.2-8 |

## Complete Issue Information

|   |      |               |
|---|------|---------------|
| 5 | 1360 | 6.10.9.3.3    |
| 5 | 1361 | 6.10.9.3.3-1  |
| 5 | 1400 | 6.6.1.2       |
| 5 | 1401 | 6.6.1.2.2-1   |
| 5 | 1402 | 6.6.1.2.5-1   |
| 5 | 1500 | 6.10.10       |
| 5 | 1510 | 6.10.10.1     |
| 5 | 1511 | 6.10.10.1.1   |
| 5 | 1512 | 6.10.10.1.2   |
| 5 | 1513 | 6.10.10.1.2-1 |
| 5 | 1514 | 6.10.10.1.3   |
| 5 | 1515 | 6.10.10.1.4   |
| 5 | 1540 | 6.10.10.3     |
| 5 | 1541 | 6.10.10.3-1   |
| 5 | 1550 | 6.10.10.4     |
| 5 | 2000 | 5.5.3         |
| 5 | 2001 | 5.5.3.1       |
| 5 | 2002 | 5.5.3.2       |
| 5 | 2003 | 5.5.3.3       |
| 5 | 2120 | 5.7.3.2       |
| 5 | 2131 | 5.7.3.3.1     |
| 5 | 2132 | 5.7.3.3.2     |
| 5 | 2140 | 5.7.3.4       |
| 5 | 2261 | 5.8.2.4-1     |
| 5 | 2271 | 5.8.2.5-1     |

### Complete Issue Information

|   |      |               |
|---|------|---------------|
| 5 | 2280 | 5.8.2.6       |
| 5 | 2290 | 5.8.2.7       |
| 5 | 2291 | 5.8.2.7       |
| 5 | 2293 | 5.8.2.9       |
| 5 | 2330 | 5.8.3.3       |
| 5 | 2340 | 5.8.3.4       |
| 5 | 2350 | 5.8.3.5       |
| 5 | 2400 | 5.8.4         |
| 5 | 2500 | 5.9.4         |
| 5 | 2600 | None          |
| 5 | 2601 | None          |
| 5 | 2602 | None          |
| 5 | 2603 | None          |
| 5 | 3000 | None          |
| 5 | 3001 | None          |
| 5 | 3100 | 3.6.1.3.2     |
| 6 | 1    | 6.10          |
| 6 | 10   | 6.10.1        |
| 6 | 50   | 6.10.1.7      |
| 6 | 60   | 6.10.1.9      |
| 6 | 61   | 6.10.1.9.1    |
| 6 | 62   | 6.10.1.9.2    |
| 6 | 70   | 6.10.1.10     |
| 6 | 71   | 6.10.1.10.1   |
| 6 | 72   | 6.10.1.10.1-1 |
| 6 | 73   | 6.10.1.10.2   |

## Complete Issue Information

|   |     |              |
|---|-----|--------------|
| 6 | 80  | 6.10.2       |
| 6 | 90  | 6.10.2.1     |
| 6 | 91  | 6.10.2.1.1   |
| 6 | 92  | 6.10.2.1.1-1 |
| 6 | 93  | 6.10.2.1.2   |
| 6 | 94  | 6.10.2.1.2-1 |
| 6 | 100 | 6.10.2.2     |
| 6 | 101 | A6.1-2       |
| 6 | 110 | 6.10.6.2.2   |
| 6 | 111 | 6.10.6.2.2-1 |
| 6 | 120 | 6.10.6.2.3   |
| 6 | 121 | 6.10.6.2.3-1 |
| 6 | 130 | A6.2.1       |
| 6 | 131 | A6.2.1-1     |
| 6 | 132 | A6.2.1-4     |
| 6 | 133 | A6.2.1-5     |
| 6 | 140 | A6.2.2       |
| 6 | 141 | A6.2.2-1     |
| 6 | 142 | A6.2.2-4     |
| 6 | 143 | A6.2.2-5     |
| 6 | 200 | 6.10.7.3     |
| 6 | 201 | 6.10.7.3-1   |
| 6 | 300 | 6.10.8.2.3   |
| 6 | 301 | A6.3.3       |
| 6 | 350 | 6.10.9.3.2-4 |

### Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 6 | 351 | 6.10.9.3.2-5  |
| 6 | 352 | 6.10.9.3.2-6  |
| 6 | 400 | 6.10.11       |
| 6 | 410 | 6.10.11.1     |
| 6 | 420 | 6.10.11.1.1   |
| 6 | 430 | 6.10.11.1.2   |
| 6 | 431 | 6.10.11.1.2-1 |
| 6 | 440 | 6.10.11.1.3   |
| 6 | 441 | 6.10.11.1.3-1 |
| 6 | 442 | 6.10.11.1.3-2 |
| 6 | 443 | 6.10.11.1.3-3 |
| 6 | 450 | 6.10.11.1.4   |
| 6 | 451 | 6.10.11.1.4-1 |
| 6 | 460 | 6.10.11.2     |
| 6 | 470 | 6.10.11.2.1   |
| 6 | 480 | 6.10.11.2.2   |
| 6 | 481 | 6.10.11.2.2-1 |
| 6 | 490 | 6.10.11.2.3   |
| 6 | 491 | 6.10.11.2.3-1 |
| 6 | 500 | 6.10.11.2.4   |
| 6 | 510 | 6.10.11.3     |
| 6 | 520 | 6.10.11.3.1   |
| 6 | 530 | 6.10.11.3.2   |
| 6 | 531 | 6.10.11.3.2-1 |
| 6 | 540 | 6.10.11.3.3   |
| 6 | 541 | 6.10.11.3.3-1 |



## Complete Issue Information

|   |      |              |
|---|------|--------------|
| 6 | 701  | None         |
| 6 | 702  | None         |
| 6 | 710  | None         |
| 6 | 800  | D6.1         |
| 6 | 810  | D6.2         |
| 6 | 811  | D6.2.1       |
| 6 | 812  | D6.2.2       |
| 6 | 813  | D6.2.3       |
| 6 | 820  | D6.3         |
| 6 | 821  | D6.3.1       |
| 6 | 999  | None         |
| 6 | 1000 | None         |
| 6 | 1001 | 6.10.3.2.1-2 |
| 6 | 1002 | 6.10.3.2.2-1 |
| 6 | 1003 | 6.10.3.2.3-1 |
| 6 | 1004 | 6.10.7.1.2-1 |
| 6 | 1005 | 6.10.7.1.2-2 |
| 6 | 1006 | 6.10.7.1.2-3 |
| 6 | 1007 | 6.10.7.2.2-1 |
| 6 | 1008 | 6.10.7.2.2-2 |
| 6 | 1009 | 6.10.8.2.2-1 |
| 6 | 1010 | 6.10.8.2.2-2 |
| 6 | 1011 | 6.10.8.2.3-1 |
| 6 | 1012 | 6.10.8.2.3-2 |
| 6 | 1013 | 6.10.8.2.3-3 |

### Complete Issue Information

|   |      |              |
|---|------|--------------|
| 6 | 1014 | 6.10.8.1.3-1 |
| 6 | 1015 | 6.10.8.3-1   |
| 6 | 1016 | A6.1.3-1     |
| 6 | 1017 | A6.1.4-1     |
| 6 | 1018 | A6.3.2-1     |
| 6 | 1019 | A6.3.2-2     |
| 6 | 1020 | A6.3.3-1     |
| 6 | 1021 | A6.3.3-2     |
| 6 | 1022 | A6.3.3-3     |
| 6 | 1023 | A6.4-1       |
| 6 | 1024 | 6.10.7.3     |
| 6 | 1025 | R-6.9.6      |
| 6 | 1050 | 6.10.3.2.1   |
| 6 | 1051 | 6.10.3.2.1-1 |
| 6 | 1052 | 6.10.3.2.1-3 |
| 6 | 1060 | 6.10.7.1.1   |
| 6 | 1061 | 6.10.7.1.1-1 |
| 6 | 1070 | 6.10.7.2.1   |
| 6 | 1071 | 6.10.7.2.1-1 |
| 6 | 1072 | 6.10.7.2.1-2 |
| 6 | 1080 | 6.10.8.1.1   |
| 6 | 1081 | 6.10.8.1.1-1 |
| 6 | 1090 | 6.10.8.1.2   |
| 6 | 1091 | 6.10.8.1.2-1 |
| 6 | 1100 | 6.10.8.1.3   |
| 6 | 1101 | 6.10.8.1.3-1 |

## Complete Issue Information

|   |      |              |
|---|------|--------------|
| 6 | 1110 | A6.1.1       |
| 6 | 1111 | A6.1.1-1     |
| 6 | 1120 | A6.1.2       |
| 6 | 1121 | A6.1.2-1     |
| 6 | 1150 | 6.10.3.3     |
| 6 | 1151 | 6.10.3.3-1   |
| 6 | 1200 | 6.10.4.2.2   |
| 6 | 1201 | 6.10.4.2.2-1 |
| 6 | 1202 | 6.10.4.2.2-2 |
| 6 | 1203 | 6.10.4.2.2-3 |
| 6 | 1204 | 6.10.4.2.2-4 |
| 6 | 1250 | 6.10.5.3.2   |
| 6 | 1251 | 6.10.5.3.2-1 |
| 6 | 1300 | 6.10.9       |
| 6 | 1310 | 6.10.9.1     |
| 6 | 1311 | 6.10.9.1-1   |
| 6 | 1320 | 6.10.9.2     |
| 6 | 1321 | 6.10.9.2-1   |
| 6 | 1330 | 6.10.9.3     |
| 6 | 1340 | 6.10.9.3.1   |
| 6 | 1350 | 6.10.9.3.2   |
| 6 | 1351 | 6.10.9.3.2-1 |
| 6 | 1352 | 6.10.9.3.2-2 |
| 6 | 1353 | 6.10.9.3.2-8 |
| 6 | 1360 | 6.10.9.3.3   |

### Complete Issue Information

|   |      |               |
|---|------|---------------|
| 6 | 1361 | 6.10.9.3.3-1  |
| 6 | 1400 | 6.6.1.2       |
| 6 | 1401 | 6.6.1.2.2-1   |
| 6 | 1402 | 6.6.1.2.5-1   |
| 6 | 1500 | 6.10.10       |
| 6 | 1510 | 6.10.10.1     |
| 6 | 1511 | 6.10.10.1.1   |
| 6 | 1512 | 6.10.10.1.2   |
| 6 | 1513 | 6.10.10.1.2-1 |
| 6 | 1514 | 6.10.10.1.3   |
| 6 | 1515 | 6.10.10.1.4   |
| 6 | 1540 | 6.10.10.3     |
| 6 | 1541 | 6.10.10.3-1   |
| 6 | 1550 | 6.10.10.4     |
| 6 | 2000 | 5.5.3         |
| 6 | 2001 | 5.5.3.1       |
| 6 | 2002 | 5.5.3.2       |
| 6 | 2003 | 5.5.3.3       |
| 6 | 2120 | 5.7.3.2       |
| 6 | 2131 | 5.7.3.3.1     |
| 6 | 2132 | 5.7.3.3.2     |
| 6 | 2140 | 5.7.3.4       |
| 6 | 2141 | None          |
| 6 | 2261 | 5.8.2.4-1     |
| 6 | 2271 | 5.8.2.5-1     |
| 6 | 2280 | 5.8.2.6       |

## Complete Issue Information

|   |      |               |
|---|------|---------------|
| 6 | 2290 | 5.8.2.7       |
| 6 | 2291 | 5.8.2.7       |
| 6 | 2293 | 5.8.2.9       |
| 6 | 2330 | 5.8.3.3       |
| 6 | 2340 | 5.8.3.4       |
| 6 | 2350 | 5.8.3.5       |
| 6 | 2400 | 5.8.4         |
| 6 | 2500 | 5.9.4         |
| 6 | 2600 | None          |
| 6 | 2601 | None          |
| 6 | 2602 | None          |
| 6 | 2603 | None          |
| 6 | 3000 | None          |
| 6 | 3001 | None          |
| 6 | 3100 | 3.6.1.3.2     |
| 6 | 3200 | 4.6.2.6       |
| 7 | 1    | 6.10          |
| 7 | 10   | 6.10.1        |
| 7 | 50   | 6.10.1.7      |
| 7 | 60   | 6.10.1.9      |
| 7 | 61   | 6.10.1.9.1    |
| 7 | 62   | 6.10.1.9.2    |
| 7 | 70   | 6.10.1.10     |
| 7 | 71   | 6.10.1.10.1   |
| 7 | 72   | 6.10.1.10.1-1 |

### Complete Issue Information

|   |     |              |
|---|-----|--------------|
| 7 | 73  | 6.10.1.10.2  |
| 7 | 80  | 6.10.2       |
| 7 | 90  | 6.10.2.1     |
| 7 | 91  | 6.10.2.1.1   |
| 7 | 92  | 6.10.2.1.1-1 |
| 7 | 93  | 6.10.2.1.2   |
| 7 | 94  | 6.10.2.1.2-1 |
| 7 | 100 | 6.10.2.2     |
| 7 | 101 | A6.1-2       |
| 7 | 110 | 6.10.6.2.2   |
| 7 | 111 | 6.10.6.2.2-1 |
| 7 | 120 | 6.10.6.2.3   |
| 7 | 121 | 6.10.6.2.3-1 |
| 7 | 130 | A6.2.1       |
| 7 | 131 | A6.2.1-1     |
| 7 | 132 | A6.2.1-4     |
| 7 | 133 | A6.2.1-5     |
| 7 | 140 | A6.2.2       |
| 7 | 141 | A6.2.2-1     |
| 7 | 142 | A6.2.2-4     |
| 7 | 143 | A6.2.2-5     |
| 7 | 200 | 6.10.7.3     |
| 7 | 201 | 6.10.7.3-1   |
| 7 | 300 | 6.10.8.2.3   |
| 7 | 301 | A6.3.3       |
| 7 | 350 | 6.10.9.3.2-4 |

## Complete Issue Information

|   |     |               |
|---|-----|---------------|
| 7 | 351 | 6.10.9.3.2-5  |
| 7 | 352 | 6.10.9.3.2-6  |
| 7 | 400 | 6.10.11       |
| 7 | 410 | 6.10.11.1     |
| 7 | 420 | 6.10.11.1.1   |
| 7 | 430 | 6.10.11.1.2   |
| 7 | 431 | 6.10.11.1.2-1 |
| 7 | 440 | 6.10.11.1.3   |
| 7 | 441 | 6.10.11.1.3-1 |
| 7 | 442 | 6.10.11.1.3-2 |
| 7 | 443 | 6.10.11.1.3-3 |
| 7 | 450 | 6.10.11.1.4   |
| 7 | 451 | 6.10.11.1.4-1 |
| 7 | 460 | 6.10.11.2     |
| 7 | 470 | 6.10.11.2.1   |
| 7 | 480 | 6.10.11.2.2   |
| 7 | 481 | 6.10.11.2.2-1 |
| 7 | 490 | 6.10.11.2.3   |
| 7 | 491 | 6.10.11.2.3-1 |
| 7 | 500 | 6.10.11.2.4   |
| 7 | 510 | 6.10.11.3     |
| 7 | 520 | 6.10.11.3.1   |
| 7 | 530 | 6.10.11.3.2   |
| 7 | 531 | 6.10.11.3.2-1 |
| 7 | 540 | 6.10.11.3.3   |

### Complete Issue Information

|   |      |               |
|---|------|---------------|
| 7 | 541  | 6.10.11.3.3-1 |
| 7 | 701  | None          |
| 7 | 702  | None          |
| 7 | 710  | None          |
| 7 | 800  | D6.1          |
| 7 | 810  | D6.2          |
| 7 | 811  | D6.2.1        |
| 7 | 812  | D6.2.2        |
| 7 | 813  | D6.2.3        |
| 7 | 820  | D6.3          |
| 7 | 821  | D6.3.1        |
| 7 | 999  | None          |
| 7 | 1000 | None          |
| 7 | 1001 | 6.10.3.2.1-2  |
| 7 | 1002 | 6.10.3.2.2-1  |
| 7 | 1003 | 6.10.3.2.3-1  |
| 7 | 1004 | 6.10.7.1.2-1  |
| 7 | 1005 | 6.10.7.1.2-2  |
| 7 | 1006 | 6.10.7.1.2-3  |
| 7 | 1007 | 6.10.7.2.2-1  |
| 7 | 1008 | 6.10.7.2.2-2  |
| 7 | 1009 | 6.10.8.2.2-1  |
| 7 | 1010 | 6.10.8.2.2-2  |
| 7 | 1011 | 6.10.8.2.3-1  |
| 7 | 1012 | 6.10.8.2.3-2  |
| 7 | 1013 | 6.10.8.2.3-3  |



## Complete Issue Information

|   |      |              |
|---|------|--------------|
| 7 | 1014 | 6.10.8.1.3-1 |
| 7 | 1015 | 6.10.8.3-1   |
| 7 | 1016 | A6.1.3-1     |
| 7 | 1017 | A6.1.4-1     |
| 7 | 1018 | A6.3.2-1     |
| 7 | 1019 | A6.3.2-2     |
| 7 | 1020 | A6.3.3-1     |
| 7 | 1021 | A6.3.3-2     |
| 7 | 1022 | A6.3.3-3     |
| 7 | 1023 | A6.4-1       |
| 7 | 1024 | 6.10.7.3     |
| 7 | 1025 | R-6.9.6      |
| 7 | 1050 | 6.10.3.2.1   |
| 7 | 1051 | 6.10.3.2.1-1 |
| 7 | 1052 | 6.10.3.2.1-3 |
| 7 | 1060 | 6.10.7.1.1   |
| 7 | 1061 | 6.10.7.1.1-1 |
| 7 | 1070 | 6.10.7.2.1   |
| 7 | 1071 | 6.10.7.2.1-1 |
| 7 | 1072 | 6.10.7.2.1-2 |
| 7 | 1080 | 6.10.8.1.1   |
| 7 | 1081 | 6.10.8.1.1-1 |
| 7 | 1090 | 6.10.8.1.2   |
| 7 | 1091 | 6.10.8.1.2-1 |
| 7 | 1100 | 6.10.8.1.3   |

### Complete Issue Information

|   |      |              |
|---|------|--------------|
| 7 | 1101 | 6.10.8.1.3-1 |
| 7 | 1110 | A6.1.1       |
| 7 | 1111 | A6.1.1-1     |
| 7 | 1120 | A6.1.2       |
| 7 | 1121 | A6.1.2-1     |
| 7 | 1150 | 6.10.3.3     |
| 7 | 1151 | 6.10.3.3-1   |
| 7 | 1200 | 6.10.4.2.2   |
| 7 | 1201 | 6.10.4.2.2-1 |
| 7 | 1202 | 6.10.4.2.2-2 |
| 7 | 1203 | 6.10.4.2.2-3 |
| 7 | 1204 | 6.10.4.2.2-4 |
| 7 | 1250 | 6.10.5.3.2   |
| 7 | 1251 | 6.10.5.3.2-1 |
| 7 | 1300 | 6.10.9       |
| 7 | 1310 | 6.10.9.1     |
| 7 | 1311 | 6.10.9.1-1   |
| 7 | 1320 | 6.10.9.2     |
| 7 | 1321 | 6.10.9.2-1   |
| 7 | 1330 | 6.10.9.3     |
| 7 | 1340 | 6.10.9.3.1   |
| 7 | 1350 | 6.10.9.3.2   |
| 7 | 1351 | 6.10.9.3.2-1 |
| 7 | 1352 | 6.10.9.3.2-2 |
| 7 | 1353 | 6.10.9.3.2-8 |
| 7 | 1360 | 6.10.9.3.3   |

## Complete Issue Information

|   |      |               |
|---|------|---------------|
| 7 | 1361 | 6.10.9.3.3-1  |
| 7 | 1400 | 6.6.1.2       |
| 7 | 1401 | 6.6.1.2.2-1   |
| 7 | 1402 | 6.6.1.2.5-1   |
| 7 | 1403 | 6.6.1.2.1     |
| 7 | 1500 | 6.10.10       |
| 7 | 1510 | 6.10.10.1     |
| 7 | 1511 | 6.10.10.1.1   |
| 7 | 1512 | 6.10.10.1.2   |
| 7 | 1513 | 6.10.10.1.2-1 |
| 7 | 1514 | 6.10.10.1.3   |
| 7 | 1515 | 6.10.10.1.4   |
| 7 | 1540 | 6.10.10.3     |
| 7 | 1541 | 6.10.10.3-1   |
| 7 | 1550 | 6.10.10.4     |
| 7 | 2000 | 5.5.3         |
| 7 | 2001 | 5.5.3.1       |
| 7 | 2002 | 5.5.3.2       |
| 7 | 2003 | 5.5.3.3       |
| 7 | 2020 | 5.5.4.2       |
| 7 | 2021 | 5.5.4.2.1     |
| 7 | 2022 | 5.5.4.2.1     |
| 7 | 2023 | 5.5.4.2.1-1   |
| 7 | 2024 | 5.5.4.2.1-2   |
| 7 | 2120 | 5.7.3.2       |

### Complete Issue Information

|   |      |             |
|---|------|-------------|
| 7 | 2121 | 5.7.3.2.1   |
| 7 | 2122 | 5.7.3.2.1-1 |
| 7 | 2131 | 5.7.3.3.1   |
| 7 | 2132 | 5.7.3.3.2   |
| 7 | 2140 | 5.7.3.4     |
| 7 | 2141 | None        |
| 7 | 2261 | 5.8.2.4-1   |
| 7 | 2271 | 5.8.2.5-1   |
| 7 | 2280 | 5.8.2.6     |
| 7 | 2290 | 5.8.2.7     |
| 7 | 2291 | 5.8.2.7     |
| 7 | 2293 | 5.8.2.9     |
| 7 | 2330 | 5.8.3.3     |
| 7 | 2340 | 5.8.3.4     |
| 7 | 2346 | 5.8.3.4.2-4 |
| 7 | 2350 | 5.8.3.5     |
| 7 | 2400 | 5.8.4       |
| 7 | 2500 | 5.9.4       |
| 7 | 2600 | None        |
| 7 | 2601 | None        |
| 7 | 2602 | None        |
| 7 | 2603 | None        |
| 7 | 3000 | None        |
| 7 | 3001 | None        |
| 7 | 3100 | 3.6.1.3.2   |
| 7 | 3200 | 4.6.2.6     |

**Complete Issue Information**

7            4001      6.5.7 (LRFR)

Wesley Simon

Mississippi Department of Transportation

Database Administrator

Office (601) 359-7404

E-mail - [wsimon@mdot.state.ms.us](mailto:wsimon@mdot.state.ms.us)

FROM: Mehrdad Ordoobadi DATE: 6/10/2009 1:55:15 PM Eastern Daylight Time  
Thanks for the information. Could you also please send us XML export of one or more bridges that you have problem saving LRFR results for.

FROM: Mehrdad Ordoobadi DATE: 6/10/2009 1:57:01 PM Eastern Daylight Time

-----Original Message-----

From: Withers, Richard [mailto:[RWithers@mdot.state.ms.us](mailto:RWithers@mdot.state.ms.us)]

Sent: Tuesday, June 02, 2009 3:42 PM

To: Bridgeware,

Subject: RE: Virtis/Opis issue 9172 - Unable to save LRFR rating to database

Attached is the bridge that I can't save the rating for. It is the only bridge that I have run the LRFR spec on.

Richard

((Attached file: MDOT\_LRFR\_29\_01290.xml))

FROM: Mehrdad Ordoobadi DATE: 6/10/2009 1:58:28 PM Eastern Daylight Time  
Verified the contents of the `abw_lib_spec_article` table and it is correct.  
Imported the attached XML file and ran an LRFR analysis. I was not able to reproduce the error.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 9182<br>Subject: Can't analyze slabs without check out error message |
|--------------------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:22:37 PM

**HRS AASHTO**

2769

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 5/21/2009 6:19:40 PM |
| Modified By: mordoobadi             | 9/18/2009 4:41:26 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/21/2009 2:24:37 PM Eastern Daylight Time

The attached files are giving us an error message as described below when trying to run from Bridge Explorer. Note that we attempted to analyze them on a different machine. 0108302 & 0108303 originally produced the error message, but after running on a separate machine, we were able to run the structures, and then run them on the original machine. However for 0108340 & 0108341, we got the error message on both machines.

Unable to retrieve bridge object!

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Cannot add to bridge description because all or part of description is read only.

Bridge or Structure Definition is not checked-out!

FROM: Tim Armbrecht DATE: 5/29/2009 10:47:35 AM Eastern Daylight Time

Tacking on to this incident. I tried to run a batch export, and three structures wouldn't export because they weren't checked out. the others that successfully exported were also not checked out. the log is as follows. If you need the xmls of any of the files, let me know.

4/19/2016 3:22:37 PM

HRS AASHTO

2770

**Complete Issue Information**

Batch Virtis/Opis Export Log

Export Timestamp: Friday, May 29, 2009 09:43:59

Please Select Destination Folder

Destination Folder: O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite

```

+-----+
| Processing Bridge:
|   BID = 1878
|   Bridge ID = 0270095
|   Bridge Export Timestamp: Friday, May 29, 2009 09:44:21
+-----+

```

```

Retrieving Bridge: Failed
===== E R R O R S =====

```

Unable to export bridge

Unable to retrieve bridge

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Cannot add to bridge description because all or part of description is read only.

Bridge or Structure Definition is not checked-out!

```

=====
////////////////////////////////////

```

```

+-----+
| Processing Bridge:
|   BID = 2730
|   Bridge ID = 0160164

```

4/19/2016 3:22:37 PM

**HRS AASHTO**

2771

**Complete Issue Information**

| Bridge Export Timestamp: Friday, May 29, 2009 09:44:24

+-----

Retrieving Bridge: Successful  
Export File Name:  
O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02730 - 0160164.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:27

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----

| Processing Bridge:  
| BID = 2000  
| Bridge ID = 0490088  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:27

+-----

Retrieving Bridge: Failed  
===== E R R O R S =====

Unable to export bridge

Unable to retrieve bridge

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Cannot add to bridge description because all or part of description is read only.

Bridge or Structure Definition is not checked-out!

=====

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////



**Complete Issue Information**

+-----  
| Processing Bridge:  
| BID = 3277  
| Bridge ID = 0720008  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:29  
+-----

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\03277 - 0720008.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:33

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----  
| Processing Bridge:  
| BID = 2101  
| Bridge ID = 0900065  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:33  
+-----

Retrieving Bridge: Failed  
===== E R R O R S =====

Unable to export bridge

Unable to retrieve bridge

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Incomplete retrieval of data.

Cannot add to bridge description because all or part of description is read only.

Bridge or Structure Definition is not checked-out!

=====

**Complete Issue Information**

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----  
| Processing Bridge:  
| BID = 2448  
| Bridge ID = 0450045  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:35  
+-----

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02448 - 0450045.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:39

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----  
| Processing Bridge:  
| BID = 2265  
| Bridge ID = 0010050  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:39  
+-----

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02265 - 0010050.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:43

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----  
| Processing Bridge:  
| BID = 3109  
| Bridge ID = 0100272  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:43  
+-----

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\03109 - 0100272.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:49

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

**Complete Issue Information**

+-----+  
| Processing Bridge:  
| BID = 2261  
| Bridge ID = 0010055  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:49  
+-----+

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02261 - 0010055.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:52

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----+  
| Processing Bridge:  
| BID = 2767  
| Bridge ID = 0150017  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:52  
+-----+

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02767 - 0150017.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:44:58

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

+-----+  
| Processing Bridge:  
| BID = 2718  
| Bridge ID = 0160343  
| Bridge Export Timestamp: Friday, May 29, 2009 09:44:58  
+-----+

Retrieving Bridge: Successful  
Export File Name:  
 O:\Ratings\Unprotected\Armbrecht\Ver 6.1 Beta Test Suite\02718 - 0160343.xml  
Exporting Bridge Data: Successful  
Export Completed at: Friday, May 29, 2009 09:45:06

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

8 of 11 Bridges Exported Successfully

**Complete Issue Information**

\*\*\*\*\* List of Unsuccessful Bridge Exports \*\*\*\*\*

- \* BID = 1878 [ Bridge ID = 0270095]
- \* BID = 2000 [ Bridge ID = 0490088]
- \* BID = 2101 [ Bridge ID = 0900065]

FROM: Mehrdad Ordoobadi DATE: 9/18/2009 10:25:50 AM Eastern Daylight Time  
We were not able to reproduce this issue with any of the XML files in Versions 6.0 or 6.1.

FROM: Mehrdad Ordoobadi DATE: 9/18/2009 10:39:10 AM Eastern Daylight Time  
Using an old database from IDOT I noticed similar issues when opening bridge BID = 1878. The bridge does not open and gives these errors:

Unable to retrieve bridge object!  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Incomplete retrieval of data.  
Cannot add to bridge description because all or part of description is read only.  
Bridge or Structure Definition is not checked-out!

When I check-out the bridge I am able to open it.

FROM: Mehrdad Ordoobadi DATE: 9/18/2009 11:26:04 AM Eastern Daylight Time  
This is reproducible in 6.0 but not in 6.1. (Opening the bridge 1878)  
In the migrated IDOT database bridge 1878 opens successfully without being checked-out. LFD analysis of the bridge from the bridge explorer is successful.  
See attached screenshot.

FROM: Mehrdad Ordoobadi DATE: 9/18/2009 12:39:13 PM Eastern Daylight Time  
Not reproducible in 6.1.0 Acceptance build.  
This issue appears to be resolved in 6.1 Acceptance build.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 9222<br>Subject: RC Member Alt Schematic not updated for shear reinforcement ranges |
|-----------------------------------------------------------------------------------------------|

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Ihnat, Joseph |                     |
| Submitted By: Kennelly, Krisha | 6/1/2009 6:26:54 PM |
| Modified By: jihnat            | 6/4/2009 7:23:37 PM |
| Priority: High                 |                     |

4/19/2016 3:22:37 PM

**HRS AASHTO**

2776

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 531 library.zip     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Krisha Kennelly DATE: 6/1/2009 2:27:14 PM Eastern Daylight Time  
 This may be also be a problem in release, I'm not sure.

Beta 1. Open Member Alt Profile Schematic. Open Shear Reinf Ranges window, change some reinf, hit Apply. Schematic does not update.

FROM: Joseph Ihnat DATE: 6/4/2009 3:21:05 PM Eastern Daylight Time  
 Probably always been like this. Changed folder to Support Center.  
 Fixed for version 6.1.0 (Beta Build 2).

**Complete Issue Information**

Issue ID: 9300  
Subject: Unable to import 5.3.1 library XML file into 6.0.0.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 6/10/2009 12:40:17 PM  
Modified By: hlee 5/9/2010 3:41:42 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 6/10/2009 8:40:31 AM Eastern Daylight Time  
Submitted on behalf of George Khury (gkhury@bheng.com).

Received bridgewater e-mail:

=====

Joe

As per our conversation, attached is a zip file for the agency library (NYSDOT) that I was unable to import.

Thanks for your help.

George

=====

**Complete Issue Information**

I'm able to import the library XML file after I removed all the vehicles in the file.

FROM: Herman Lee DATE: 3/15/2010 2:29:30 PM Eastern Daylight Time  
The attribute VEHICLE\_GAGE\_TYPE was added to the database in 5.4. This attribute is for identifying standard gage and non-standard gage vehicles and is required during library import. The attached library file is exported from a 5.3 database. This attribute is missing from the library file.

Fixed for 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 11:38:24 AM Eastern Daylight Time  
Tested the library XML file (inside the ZIP file) in this incident.  
Verified in 6.2 Beta 1.

|                                                   |
|---------------------------------------------------|
| Issue ID: 9301                                    |
| Subject: "Elements too small" Error for RC T Beam |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Armbrecht, Tim      | 6/10/2009 6:43:46 PM |
| Modified By: tarmbrecht           | 6/17/2010 4:41:32 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 033-0029.xml        |             |

4/19/2016 3:22:38 PM

HRS AASHTO

2779

**Complete Issue Information**

|                      |
|----------------------|
| BrassDataFile.png    |
| 0900114 Stringer run |
| crashes.docx         |
| 0900114x.xml         |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 6/10/2009 2:57:57 PM Eastern Daylight Time  
 One of my staff reports: "While trying to analyze G2 I've encountered this error. I've narrowed it down to the bend in the G1 rebar and the CL of bearing being too close to each other. Below is the error summary."

----- Contents of BRASS Error File -----  
 File: C:\Program Files\AASHTOWARE\VirtisOpis60\0330029  
 \Staging\_Tee\_Beams\_widened\_w\_\_PPCDB\G2\Ext\_\_T-Beam\BRASS\_LFD\Ext\_\_T-Beam.ERR  
 Fatal Error Encountered - Unexpected Termination  
 Data File: PCDB\G2\Ext\_\_T-Beam\BRASS\_LFD\Ext\_\_T-Beam.DAT

-----  
 Error No.: 2103  
 Type : Structural Analysis Error  
 Location : Data File

The change point located 0.0000 ft from the left end of span 1 is within 0.099 ft of another node point (located at 0.0733 ft).

-----  
 Error No.: 2103  
 Type : Structural Analysis Error  
 Location : Data File

One or more elements are too small. A change point(s) is within 0.099 ft of another node point. Numerical instability will result.  
 Adjust the location of the change point slightly away from the conflicting point. See page 10.1 of Vol 1.

----- End of Contents of BRASS Error File -----

He also reports that when he tried to run VSE, the program crashes. Please review the attached file. Is there something in BRASS or VSE that needs to be changed to accomodate the attached configuration?

FROM: Herman Lee DATE: 6/11/2009 8:16:49 AM Eastern Daylight Time

4/19/2016 3:22:38 PM

HRS AASHTO

2780



**Complete Issue Information**

The vertical distances to rebar in some generated cross sections are negative. These negative vertical distances are in both the BRASS and Virtis Std Engine data files.

FROM: Tim Armbrecht DATE: 6/12/2009 2:39:06 PM Eastern Daylight Time  
Herman, could you please clarify? Where is the measuring being done? Maybe provide some screen shots? Thanks.

FROM: Herman Lee DATE: 6/15/2009 7:15:02 AM Eastern Daylight Time  
The measuring is done inside the export process during generating cross sections for the rating engine. Attached is a screen shot of those negative distances in the BRASS data file.

FROM: Tim Armbrecht DATE: 6/22/2009 3:44:25 PM Eastern Daylight Time  
So it's an export bug in Virtis? Not an input error on our part?

FROM: Herman Lee DATE: 3/16/2010 10:18:29 AM Eastern Daylight Time  
Summary of issues:

1. The vertical distances to rebar in some generated cross sections are negative. This is input error. We updated the export to issue useful message when a bar is above or below the beam. This is a duplicate of Incident 8984.
2. Virtis Std Engine crashes. In addition to the export message in 1, we added a check in the Virtis Std Engine export for negative distance to rebar c.g..
3. Elements too small error message when using the BRASS Engine. This is a duplicate of Incident 7751 and 7643.

Resolved for 6.2 Release.

FROM: Jim Duray DATE: 5/6/2010 6:26:55 PM Eastern Daylight Time  
Verified for 6.2 a4.

FROM: Tim Armbrecht DATE: 6/17/2010 12:41:31 PM Eastern Daylight Time  
Accepted.

|                                            |
|--------------------------------------------|
| Issue ID: 9312                             |
| Subject: Virtis crashes for unknown reason |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 6/22/2009 7:00:39 PM |
| Modified By: mordoobadi             | 6/18/2010 2:50:43 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:22:38 PM

HRS AASHTO

2781

**Complete Issue Information**

|                    |          |      |           |
|--------------------|----------|------|-----------|
| Lee, Herman        | New      | High | Bug       |
| Ordoobadi, Mehrdad | Assigned |      |           |
| Lee, Herman        | New      | High | Bug       |
| Ihnat, Joseph      | Assigned |      |           |
|                    | Resolved |      | Education |
|                    | Closed   |      |           |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 6/22/2009 3:04:39 PM Eastern Daylight Time

My consultant reports that Virtis crashes when attempting to run the stringer, "1st N Int-x" (xml attached). This happens in both v. 6.0 and 6.1.0 Beta 1. I have also attached a Word document displaying the error messages.

FROM: Herman Lee DATE: 6/22/2009 3:07:57 PM Eastern Daylight Time

Related to Incident 9185.

FROM: Tim Armbrecht DATE: 9/9/2009 2:56:31 PM Eastern Daylight Time

Checked in the Acceptance Build. Virtis still crashes. Has this attached structure been checked?

FROM: Mehrdad Ordoobadi DATE: 9/10/2009 12:31:45 PM Eastern Daylight Time

This was fixed for acceptance build but was not included in the build. We will send you a new DLL to verify.

FROM: Tim Armbrecht DATE: 9/11/2009 2:08:03 PM Eastern Daylight Time

Tested the new dlls. It appears to be working correctly. Note that Jim says the dlls will be included in the release. Accepted.

Issue ID: 9314

Subject: Beam Shapes/Materials/With same names

4/19/2016 3:22:39 PM

HRS AASHTO

2782

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 6/25/2009 1:00:00 PM  |
| Modified By: jihnat            | 9/16/2009 11:30:47 AM |
| Priority: High                 |                       |
| Category: Education            |                       |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Lee, Herman      | New      | High     | Bug       |
| Goodrich, Brian  | Assigned |          |           |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 6/25/2009 9:05:40 AM Eastern Daylight Time

I would classify this a bug

When a superstructure definition is copied and then pasted into another bridge, all materials and beam shapes will be copied along with it.

When a material or beam shape is present in each superstructure definition, they are different but have the SAME name - when you copy it in you will not get two materials/shapes, only one. One of them gets overwritten.

One gets lost.

FROM: Joseph Ihnat DATE: 7/15/2009 8:26:02 AM Eastern Daylight Time

When we find a material with the same name at the destination, we use that material. This is by design.

4/19/2016 3:22:39 PM

HRS AASHTO

2783

**Complete Issue Information**

The assumption was that if two materials had the same name they were the same material, and this is probably the most common case by far. Otherwise, if you always copy the materials you'd end up with lots of duplication.

|                                   |
|-----------------------------------|
| Issue ID: 9315                    |
| Subject: Blank Stress Limit Field |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Teal, Dean          | 6/25/2009 4:33:11 PM |
| Modified By: kkennelly            | 7/20/2009 5:49:53 PM |
| Priority: High                    |                      |
| Category: Education               |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 6/25/2009 12:47:41 PM Eastern Daylight Time  
When the "final allowable slab compression" fields are not filled in - what does the engine do?  
Brass LDF -  
Brass LRFD -  
Opis LRFD -

**Complete Issue Information**

Being the program doesn't stop or produce an error i am assuming that the engines find the slab concrete material and calculate it? Or is that a bad assumption?

FROM: Herman Lee DATE: 6/29/2009 8:23:47 AM Eastern Daylight Time  
Brian, please assign to Krisha after you are done.

FROM: Brian Goodrich DATE: 7/2/2009 2:30:23 PM Mountain Daylight Time  
BRASS LFD - This field is not used by LFD engine.  
BRASS LRFD - 0.60 f'c (calculated in engine)

FROM: Krisha Kennelly DATE: 7/14/2009 2:21:08 PM Eastern Daylight Time  
Opis LRFD will compute this value for you in article 5.9.4.2.1 if it is left blank in the UI.

FROM: Dean Teal DATE: 7/20/2009 1:47:23 PM Eastern Daylight Time  
Accepted in 6.1 beta 2

|                                      |
|--------------------------------------|
| Issue ID: 9316                       |
| Subject: Unable to Copy/Paste bridge |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Lee, Herman           | 6/29/2009 1:40:08 PM |
| Modified By: mordoobadi             | 8/21/2009 6:03:33 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |

**Contacts**

4/19/2016 3:22:39 PM

HRS AASHTO

2785

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

|      |               |         |
|------|---------------|---------|
| Name | Current State | Summary |
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 6/29/2009 9:40:26 AM Eastern Daylight Time  
Submitted on behalf of Richard Pickings, BridgeSight Inc. (rdp@bridgesight.com).

Received e-mail:

=====

Another head scratcher. I'm trying to use the DoBridge.Copy function so I can allow users to select a "template" bridge to be used as a seed for bridges exported into O/V. However, the function fails on some bridges and I don't know why.

This is easy to replicate. Attached is a bridge sent to me from Jeff Ruby at KDOT. Import it into OPIS, save it, and then use the UI to copy/paste it. I end up with an error that says:

Error occurred while copying the bridge data!  
04:53:36 PM - Line 4676 in source file .\UiDescDtopGridView.cpp.

This appears to be the same thing that happens from my program. Any insight?

Thanks,  
Richard

=====

Copy and paste work ok after I delete and recreate "Try #1" superstructure. I suspect the internal relationship between the superstructure and superstructure alt/def is incorrect.

FROM: Jeff Ruby DATE: 7/7/2009 1:05:05 PM Eastern Daylight Time  
This also occurs in version 6.1 beta 2

FROM: Mehrdad Ordoobadi DATE: 8/21/2009 9:40:05 AM Eastern Daylight Time  
Fixed for 6.1 acceptance build.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9337                                             |
| Subject: Truss (grouped by TAG June 2009) - Superstructure |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Duray, Jim    |

4/19/2016 3:22:39 PM

**HRS AASHTO**

2786

**Complete Issue Information**

|                                |                     |
|--------------------------------|---------------------|
| Submitted By: Thogaru, Srujana | 7/8/2009 2:55:09 PM |
| Modified By: hlee              | 6/9/2011 9:24:43 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

## Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 9338                                           |
| Subject: GFS (grouped by TAG June 2009) - Superstructure |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Duray, Jim    |                     |
| Submitted By: Thogaru, Srujana | 7/8/2009 3:35:50 PM |
| Modified By: hlee              | 6/9/2011 8:49:52 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 4/8/2010 10:16:09 AM Eastern Daylight Time  
Removed Incident 7005, has been resolved in 6.1 Release.



## Complete Issue Information

Issue ID: 9339

Subject: Reports (grouped by TAG June 2009) - Superstructure

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thogaru, Srujana

7/8/2009 3:43:14 PM

Modified By: hlee

6/9/2011 9:26:18 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:22:40 PM

HRS AASHTO

2789

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

|                                                                   |                     |
|-------------------------------------------------------------------|---------------------|
| Issue ID: 9340                                                    |                     |
| Subject: TF Direction (grouped by TAG June 2009) - Superstructure |                     |
| Folder: /Virtis/Support Center                                    |                     |
| Primary Contact: Duray, Jim                                       |                     |
| Submitted By: Thogaru, Srujana                                    | 7/8/2009 5:02:48 PM |
| Modified By: jduray                                               | 9/1/2009 8:14:43 PM |
| Priority: High                                                    |                     |
| Category: Enhancement                                             |                     |

4/19/2016 3:22:40 PM

HRS AASHTO

2790

**Complete Issue Information****History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

**Complete Issue Information**

Issue ID: 9341  
 Subject: GC3 UI (grouped by TAG June 2009) - Superstructure

Folder: /Virtis/Support Center  
 Primary Contact: Duray, Jim  
 Submitted By: Thogaru, Srujana 7/8/2009 5:08:31 PM  
 Modified By: hlee 6/9/2011 9:03:18 PM  
 Priority: High  
 Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Closed    |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

## Complete Issue Information

Issue ID: 9342

Subject: Short Listed 6/09 (grouped by TAG June 2009) - Superstructure (NOT USED)

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thogaru, Srujana

7/8/2009 5:13:50 PM

Modified By: hlee

6/10/2011 9:39:31 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 5/30/2010 6:57:51 PM Eastern Daylight Time  
Added short listed 5/10.

4/19/2016 3:22:41 PM

HRS AASHTO

2793

## Complete Issue Information

FROM: Herman Lee DATE: 6/10/2011 5:38:47 PM Eastern Daylight Time  
Not used.

Issue ID: 9343

Subject: Original Functionality Missing (grouped by TAG June 2009) - Substructure

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thogaru, Srujana

7/8/2009 5:36:41 PM

Modified By: hlee

6/10/2011 8:42:01 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

4/19/2016 3:22:41 PM

HRS AASHTO

2794

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

Issue ID: 9344

Subject: Graphics (grouped by TAG June 2009) - Substructure

Folder: /Virtis/Support Center

4/19/2016 3:22:41 PM

HRS AASHTO

2795

**Complete Issue Information**

|                                |                     |
|--------------------------------|---------------------|
| Primary Contact: Duray, Jim    |                     |
| Submitted By: Thogaru, Srujana | 7/8/2009 5:47:42 PM |
| Modified By: hlee              | 6/9/2011 9:23:18 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**



## Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9345                                             |
| Subject: Reports (grouped by TAG June 2009) - Substructure |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Thogaru, Srujana | 7/8/2009 5:51:03 PM   |
| Modified By: hlee              | 5/30/2010 10:52:13 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

## Complete Issue Information

Issue ID: 9346

Subject: Short Listed 6/09 (grouped by TAG June 2009) - Substructure (NOT USED)

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thogaru, Srujana 7/8/2009 5:53:58 PM

Modified By: hlee 6/10/2011 9:40:36 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Closed    |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:22:42 PM

HRS AASHTO

2798

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 6/10/2011 5:40:00 PM Eastern Daylight Time  
Not used.

Issue ID: 9347

Subject: Bug (grouped by TAG June 2009) - Substructure

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thogaru, Srujana

7/8/2009 6:00:53 PM

Modified By: jduray

9/1/2009 8:20:03 PM

Priority: High

4/19/2016 3:22:42 PM

HRS AASHTO

2799

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

## Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 9349                                           |
| Subject: VSE (grouped by TAG June 2009) - Superstructure |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Duray, Jim    |                     |
| Submitted By: Thogaru, Srujana | 7/8/2009 6:22:13 PM |
| Modified By: hlee              | 6/9/2011 9:19:02 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

## Complete Issue Information

|                           |
|---------------------------|
| Issue ID: 9368            |
| Subject: licence time out |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jensen, Paul     | 7/14/2009 4:49:15 PM |
| Modified By: jhnat             | 7/14/2009 5:16:17 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
| Ihnat, Joseph   | Assigned |          |           |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | vo_6.0_lic_exp.png  |             |

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Paul Jensen DATE: 7/14/2009 12:52:53 PM Eastern Daylight Time  
attached is a png file with the error we are now receiving- this (I think) is for Opis Sub. We are using all three product and now substructure is part of the products, this licence should be the same and superstructure. V/O 6.1 will not be available until October, we need a patch for the time-out

FROM: Joseph Ihnat DATE: 7/14/2009 1:11:55 PM Eastern Daylight Time  
The substructure exes were to expire after one year for the non-participants. You should have a VirtisOpis.exe to run that is superstructure only and does not expire.

|                                         |
|-----------------------------------------|
| Issue ID: 9392                          |
| Subject: Effective Width Compute Button |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 7/22/2009 8:55:34 PM  |
| Modified By: jihnat            | 5/13/2010 11:44:53 AM |
| Priority: High                 |                       |
| Category: Bug - GUI 2          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:22:43 PM

HRS AASHTO

2803

### Complete Issue Information

|                  |          |      |     |
|------------------|----------|------|-----|
| Duray, Jim       | New      | High | Bug |
| Kennelly, Krisha | Assigned |      |     |
| Lee, Herman      | New      | High | Bug |
| Goodrich, Brian  | Assigned |      |     |
|                  | Resolved |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 082A001.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 7/22/2009 4:58:16 PM Eastern Daylight Time

When we use the Compute from Typical Section to find the effective width for the Deck Profile – we have to enter the structural thickness. The structural thickness populated by the program by default is the total thickness. Usually by the time the user gets to this point they already have the field populated for structural thickness.

Why can't the program populate with the structural thickness?

The way it is, the user has to change that number every time – and if we set the program up correctly the user would most likely never have to change the value and just except the default.

See attached screen shot

FROM: Jim Duray DATE: 7/27/2009 8:41:11 AM Eastern Daylight Time

FROM: Krisha Kennelly DATE: 7/27/2009 10:04:05 AM Eastern Daylight Time

The user should hit the 'Compute' button before they enter any data in the grid and the Structural Thickness on the Deck Profile grid would be populated with what you entered on the Compute dialog.

I don't think we want to encourage the user to enter partial data in the grid and then hit the Compute button.

The Compute button generates rows in the grid and it will delete any rows the user has entered before the Compute button is hit.

FROM: Dean Teal DATE: 7/28/2009 1:57:42 PM Eastern Daylight Time

4/19/2016 3:22:43 PM

HRS AASHTO

2804



## Complete Issue Information

The point I was making is that when using the compute button - the field is already filled in "with the wrong value"

FROM: Krisha Kennelly DATE: 7/29/2009 9:11:39 AM Eastern Daylight Time

The grid on the Deck Concrete window is the only place where the user can enter the structural thickness. So if you want the compute button populated with the structural thickness we would require the user to create 1 row in the grid solely to enter the structural thickness so the Compute button could retrieve it. Then the Compute button will delete the row in the grid that the user entered anyway. Why not just enter the structural thickness in the Compute dialog instead of creating a row that gets deleted anyway?

FROM: Dean Teal DATE: 8/19/2009 3:11:36 PM Eastern Daylight Time

Look at the screen shot I attached – it's the Deck Profile GUI.

When you select the "Compute from Typical Section" button in the lower left the wizard pops up.

Now if you look at the Wizard GUI, you see that it has two fields, both populated with in this case with 9".

Why can't the wizard take the 8.5 inch value that is already in the Deck Profile GUI that the wizard was launched from?

The structural thickness value came from the superstructure wizard, right?

I just don't understand why the value used can't be populated from the value that is on the Deck Concrete tab –

It's so frustrating to have to type it in when the value is right there on the same GUI. I would rather have a blank value than a pre-populated value that is wrong 99% of the time.

It's one of those user things that is frustrating – and all you ask yourself is why – it's right there – use it

FROM: Krisha Kennelly DATE: 8/25/2009 2:42:03 PM Eastern Daylight Time

Joe,

If the user has entered a row in the grid on the Deck Concrete tab, retrieve the structural thickness from that grid and populate it on the Compute dialog.

thanks.

FROM: Joseph Ihnat DATE: 8/26/2009 11:00:53 AM Eastern Daylight Time  
Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 10/27/2009 12:45:37 PM Eastern Daylight Time  
Done for Version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 9:56:31 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

FROM: Dean Teal DATE: 5/11/2010 4:11:50 PM Eastern Daylight Time  
Accepted in 6.2 beta 1

4/19/2016 3:22:43 PM

HRS AASHTO

2805

## Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 9406                                          |
| Subject: Interpolation error when positioning live load |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 7/29/2009 3:40:19 PM |
| Modified By: tarmbrecht          | 6/18/2010 2:03:03 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | LRFR analysis problem.pdf |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 7/29/2009 11:47:14 AM Eastern Daylight Time  
Note that this happened in 6.0 and 6.1 beta 2. From my consultant (file attached):

The following error messages were generated when attempting to do a LRFR analysis of 082-A001 (attached 082A001.xml), Supstr. Def. "Unit 2 WB (6-Span Cont.) WPG", Member "2 - 1st N Int", Mem Alt. "112" WPG-Comp."

4/19/2016 3:22:43 PM

HRS AASHTO

2806

**Complete Issue Information**

----- Contents of BRASS Error File -----

File: C:\Program  
Files\AASHTOWARE\VirtisOpis60\082A001\Unit\_2\_WB\_(6-Span\_Cont\_)\_WPG\2\_-\_1st\_N\_Int\112\_\_WPG-Comp\_BRASS\_LRFR\112\_\_WPG-Comp\_.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program  
Files\AASHTOWARE\VirtisOpis60\082A001\Unit\_2\_WB\_(6-Span\_Cont\_)\_WPG\2\_-\_1st\_N\_Int\112\_\_WPG-Comp\_BRASS\_LRFR\112\_\_WPG-Comp\_.DAT

-----  
Error No.: 2200  
Type : Structural Analysis Error  
Location : posgen.for (posgen)

An interpolation error occurred when positioning live load for critical actions.

----- End of Contents of BRASS Error File -----

Structural Analysis Errors (2200) - Interpolation error in live load positioning  
09:00:00 AM - Line 2473 in source file .\DoMemberResults.cpp.

FROM: Brian Goodrich DATE: 7/29/2009 12:42:44 PM Mountain Daylight Time  
This issue was already addressed in BRASS-GIRDER(LRFD) 2.0.1, which was released in August 2008. This version has not been released with Virtis.

FROM: Tim Armbrecht DATE: 6/18/2010 10:03:03 AM Eastern Daylight Time  
Appears to be fixed. Accepted.

|                                                 |
|-------------------------------------------------|
| Issue ID: 9407                                  |
| Subject: LRFR analysis issues between 6.0 & 6.1 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 7/29/2009 3:49:34 PM |
| Modified By: bgoodrich           | 9/11/2009 5:03:19 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:22:43 PM

**HRS AASHTO**

2807

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LRFR Factors.png    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 7/29/2009 11:53:13 AM Eastern Daylight Time  
This applies to 6.0 and 6.1 beta 2. From my consultant:

There are two issues with the LRFR analysis results for Unit 1 of 082-A001:

- This HL-93 designed structure is getting rating factors far below 1.0 in both v. 6.0 & v. 6.1 Beta 2.
- The first two Live Load Types are different between them (Design Truck & Design Tandem in v. 6.0 vs. Axle Load & Tandem in v. 6.1 Beta 2).

See incident 9406 for related xml file. Attached are screen shots showing discrepancies.

FROM: Brian Goodrich DATE: 7/29/2009 12:39:46 PM Mountain Daylight Time  
I ran 6.1 Beta 2 and received the same results as the user. I took the BRASS data file and ran it with the BRASS DLL from 6.0 and got the same results as 6.1 Beta 2. There must have been an export change between 6.0 and 6.1 that is causing the difference. I'll investigate this next.

FROM: Brian Goodrich DATE: 8/12/2009 1:51:20 PM Mountain Daylight Time  
I found there is a difference in the generated data files between 6.0 and 6.1. In version 6.0, there is a gap in the transverse stiffener range at the end of span 1. BRASS interpreted this as there being no transverse stiffeners present and hence the lower rating. The 6.1 export was revised to adjust the schedule distances near the span ends to make up this small difference in length. The 6.1 export is functioning correctly and now gives a higher rating for this structure.

FROM: Tim Armbrecht DATE: 9/9/2009 3:00:50 PM Eastern Daylight Time  
This does not appear to have been fixed. The Unit 1 Inventory/Operating LRFR ratings for BRASS in the Acceptance Build:

Axle 0.555/0.721  
Tandem 0.608/0.790  
Truck Pair 0.478/0.621

LFD - 1.192/1.991

FROM: Brian Goodrich DATE: 9/10/2009 9:46:48 AM Mountain Daylight Time  
The source of the 0.555 inventory rating factor is due to web bend-buckling for the Service II limit state. BRASS is determining the web bend-buckling resistance ( $F_{crw}$ ) as 42.1 ksi at the right end of span 2 (POI = 210). This stress resistance is less than the combined dead and live load stress. Can you tell me if this resistance or the stresses due to applied loads are different from the design calculations?

4/19/2016 3:22:43 PM

HRS AASHTO

2808

**Complete Issue Information**

FROM: Tim Armbrecht DATE: 9/10/2009 3:39:36 PM Eastern Daylight Time  
Brian, we are satisfied with your explanation and agree with the results. Thanks for investigating.  
Accepted.

FROM: Tim Armbrecht DATE: 9/10/2009 3:40:55 PM Eastern Daylight Time  
Adding - turns out the designer of this major river bridge was in error for ignoring WBB.

FROM: Brian Goodrich DATE: 9/11/2009 10:56:51 AM Mountain Daylight Time  
Closed.

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| Issue ID: 9417                                                                                           |
| Subject: Apply button shouldn't change the entered values and duplicate the rows in the Permit Loads tab |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 8/6/2009 2:55:57 PM  |
| Modified By: jihnat            | 4/30/2010 2:27:45 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 8/6/2009 10:56:11 AM Eastern Daylight Time

**Complete Issue Information**

Reported by Mary Walker (marywalker@byu.net), Idaho Transportation Department during the 2009 User Group Meeting.

To reproduce:

1. Open TrainingBridge1 BWS
2. Create a new LRFR Factors
3. Copy the 2003 factors in the library
4. Select the Permit Loads tab
5. Hit Apply will change the load factor values.
6. Click OK and reopen the Permit Loads tab will see duplicate rows in both grids (see attached)

FROM: Joseph Ihnat DATE: 8/13/2009 8:12:02 AM Eastern Daylight Time  
Changed Folder to Support Center.

FROM: Joseph Ihnat DATE: 10/14/2009 3:40:53 PM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 10:27:51 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 9423                                                 |
| Subject: Apparently can drag objects into bridge explorer grid |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 8/11/2009 9:38:16 PM |
| Modified By: tarmbrecht        | 6/18/2010 2:03:40 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | Resolved |          |             |

**Complete Issue Information**

|             |           |      |             |
|-------------|-----------|------|-------------|
|             | Closed    |      |             |
| Lee, Herman | New       | High | Bug         |
|             | Suspended |      | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 8/11/2009 5:41:16 PM Eastern Daylight Time

One of my engineers inadvertently dragged a heading of the grid and was able to place it into the grid. Seems like this shouldn't be allowed. See attached for illustration.

FROM: Joseph Ihnat DATE: 8/13/2009 8:10:56 AM Eastern Daylight Time

Probably always been like this. Changed Folder to Support Center.

FROM: Joseph Ihnat DATE: 10/15/2009 3:29:24 PM Eastern Daylight Time

Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:15:39 AM Eastern Daylight Time

Verified - 6.2 alpha 4

FROM: Tim Armbrecht DATE: 6/17/2010 12:42:35 PM Eastern Daylight Time

Accepted.

|                                          |
|------------------------------------------|
| Issue ID: 9427                           |
| Subject: Virtis Opis Remote Installation |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Waheed, Amjad    | 8/13/2009 8:14:04 PM  |
| Modified By: hlee              | 8/14/2009 12:55:37 PM |

4/19/2016 3:22:44 PM

HRS AASHTO

2811

**Complete Issue Information**

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Amjad Waheed DATE: 8/13/2009 4:14:24 PM Eastern Daylight Time

At the organizational level Virtis/Opis are installed on several workstations at different premises. New releases of the software require uninstalling and re-installing the client portion on several workstations. To save time and resources IT departments of several DOTs have started pushing the updates remotely during the after-work hours. This process not only saves time and manual efforts but also keeps the upgrades consistent across all machines.

I understand that it is the functionality/discretion of individual IT department whether they want to push the updates remotely or not. However the software should be tested/verified & marked ready for remote update of clients. This is request to test and mark the software Virtis/Opis ready for remote updates of the client machines within an organization holding a site license.



## Complete Issue Information

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 9428                                                |
| Subject: Video courses for fundamental training of Viris/Opis |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Waheed, Amjad    | 8/13/2009 8:14:41 PM  |
| Modified By: hlee              | 8/14/2009 12:59:27 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/13/2009 4:29:04 PM Eastern Daylight Time  
Virtis/Opis are quite stable products now and the basic features of the GUI and library items do not change quite often. I think it will be in the better interests of the users as well as the consultants that videos of trainings on the basic/fundamentals of Virtis/Opis be produced. Those videos can then be posted on the VOBUG website. They would help the new users to get started quickly on the program without waiting for any training session. They will also save time on repeating the same fundamental training sessions at the conferences. The trainers' time would be better spent on giving trainings on new and complex features of the program.

## Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 9452                |
| Subject: timber gluelam beams |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Jensen, Paul     | 8/21/2009 2:43:34 PM |
| Modified By: pjensen           | 8/25/2009 3:07:51 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:22:44 PM

HRS AASHTO

2814

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Paul Jensen DATE: 8/21/2009 10:45:05 AM Eastern Daylight Time  
looking to modify the timber program to include glulam beams. the use of the the proprites from sawn is not the same.

FROM: Paul Jensen DATE: 8/25/2009 11:07:51 AM Eastern Daylight Time  
until when- will this be on the next TF agenda?????????

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 9455                                                                           |
| Subject: Compute button should use the entered No. of tees for computation of properties |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Lee, Herman      | 8/21/2009 5:36:01 PM |
| Modified By: jduray            | 5/6/2010 2:22:57 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

4/19/2016 3:22:45 PM

HRS AASHTO

2815

### Complete Issue Information

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Li, Xinmei      | Assigned           | High     | Bug       |
| Lee, Herman     | New                | High     | Bug       |
|                 | Information Needed |          |           |
|                 | Resolved           |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/21/2009 1:36:26 PM Eastern Daylight Time  
Submitted on behalf of Tyler Haney, WH Pacific (THaney@whpacific.com).

Attached is the received bridgeware e-mail.

FROM: Xinmei Li DATE: 10/6/2009 8:54:52 AM Eastern Daylight Time  
When user changes information on "Dimensions" tab without saving to domain, the "Compute" button on "Properties" tab will compute section properties base on the information in domain instead of that on UI.  
Added a message when user click compute button, so that user will have a chance to save changes to domain before doing computation.  
Same message is added to all Ps beam shapes.  
Resolved for next release.

FROM: Jim Duray DATE: 5/6/2010 10:02:26 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

## Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 9462                                           |
| Subject: report opens in IE on some machines, not others |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 8/25/2009 4:40:42 PM |
| Modified By: hlee              | 8/25/2009 7:10:53 PM |
| Priority: High                 |                      |
| Category: Education            |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ihnat, Joseph      | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Resubmit |          |          |
| Ihnat, Joseph      | Assigned |          |          |
|                    | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 8/25/2009 12:46:01 PM Eastern Daylight Time  
What would be the reason that one of my engineers can double click on the "Member Section Property Report" in "View Analysis Output" and the report will automatically open in Internet Explorer, but when another engineer (on a different machine) double clicks on it, nothing happens, i.e. no windows pop open with the report? They both have V/O 6.0 on their machines and IE 6.0. I also checked "About Internet Explorer" and they have identical versions and updates (SP3).

4/19/2016 3:22:45 PM

HRS AASHTO

2817

**Complete Issue Information**

FROM: Herman Lee DATE: 8/25/2009 12:48:19 PM Eastern Daylight Time  
Most likely the xml file extension is not associated with IE in the machine that doesn't work. Below is copied from the Frequently Asked Questions in the Help menu.

=====  
Why won't my report open from the Analysis Output window?

Internet Explorer needs to be the associated application for opening xml files on your computer.

- 1) Right-click on any xml file in Windows Explorer.
- 2) Select Open With - Choose Program
- 3) Select IE in the list, also check "Always use the selected program...", click OK.

=====  
Please let us know whether this fixes the problem.

FROM: Tim Armbrecht DATE: 8/25/2009 2:16:23 PM Eastern Daylight Time  
It fixed it, thanks. I had assumed that IE would automatically open with any double click of an XML file (because that's what happens in Windows Explorer), but when I went through the procedure above, it worked.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 9469                                                           |
| Subject: Year input in Steel Shapes (Build Test Librray Explorer Step 3) |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: lhnat, Joseph |                      |
| Submitted By: Lee, Herman      | 9/1/2009 2:27:04 PM  |
| Modified By: gcolgrove         | 9/27/2010 5:23:12 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:22:45 PM

HRS AASHTO

2818

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/1/2009 10:27:25 AM Eastern Daylight Time  
To reproduce:

1. Navigate to Library Explorer | Steel Shapes | Tee | Agency.
2. Select File | New.
3. Enter Name "New Tee" and Year "200999". Click Save and close the window.
4. Open "New Tee" will show Year as "4391".

FROM: Jim Duray DATE: 9/1/2009 11:44:12 AM Eastern Daylight Time  
This issue applies to previous versions as well.

FROM: Joseph Ihnat DATE: 10/14/2009 10:35:45 AM Eastern Daylight Time  
Mehrad, please set min/max values in the data dictionary.  
For "year" in tables abw\_lib\_stl\_shape and abw\_lib\_ps\_shape, set min\_int\_value=0 and max\_int\_value=9999 (or other appropriate values).

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 2:33:16 PM Eastern Standard Time  
Fixed for 6.2 in the Sample database.

FROM: Herman Lee DATE: 5/9/2010 11:48:17 AM Eastern Daylight Time  
Still show Year as "4391".

FROM: Mehrdad Ordoobadi DATE: 5/17/2010 9:37:26 AM Eastern Daylight Time  
The min/max values are set in the data dictionary, but if you use a value like what Herman is trying "200999" it saves as a different number.

The Year edit control is probably not handling this right. I think if the value is beyond 32768 it automatically gets cast to a short integer and if the conversion is within the range (0 - 9999) it gets saved.

FROM: Joseph Ihnat DATE: 5/20/2010 1:37:39 PM Eastern Daylight Time  
Fixed for 6.2 Beta 2. Input is limited to 4 digits when max is 9999.

FROM: George Colgrove DATE: 9/27/2010 1:20:10 PM Eastern Daylight Time  
Verified in VO62B7

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 9475<br>Subject: Report Tool error message - BID 24 |
|---------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Ihnat, Joseph       | 9/2/2009 12:42:25 PM |
| Modified By: sthogaru             | 5/5/2010 6:11:14 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Lee, Herman      | Assigned |          |          |
| Thogaru, Srujana |          |          |          |
| Shih, Chung      |          |          |          |
| Ihnat, Joseph    | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 9/2/2009 8:42:46 AM Eastern Daylight Time  
I don't know if this is new or not, but

- 1) Open BID 24 - Visual Reference 1
- 2) Open Report Tool
- 3) Open BWS Report for steel girders
- 4) Click Generate, get error message:

Cannot retrieve DoWeldDefListPtr for unsupported Structure Definition type  
08:46:35 AM - Line 3713 in source file .\DoGetObjectFunctions.cpp.

FROM: Jim Duray DATE: 9/2/2009 8:51:21 AM Eastern Daylight Time  
I get the same behavior in 6.0.

FROM: Herman Lee DATE: 10/1/2009 12:44:51 PM Eastern Daylight Time

4/19/2016 3:22:45 PM

HRS AASHTO

2820



**Complete Issue Information**

Srujana, after the error is fixed, please assign to Chung for updating the abr files if needed.

FROM: Srujana Thogaru DATE: 3/10/2010 2:11:05 PM Eastern Standard Time  
Fixed

FROM: Srujana Thogaru DATE: 5/5/2010 2:11:14 PM Eastern Daylight Time  
Verified for 6.2 alpha build 4

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 9476                                                                         |
| Subject: Report tool - "Member loads" doesn't have any group and attribute to be added |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Shih, Chung      | 9/2/2009 2:16:34 PM  |
| Modified By: jihnat            | 4/30/2010 3:02:25 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Chung Shih DATE: 9/2/2009 10:23:52 AM Eastern Daylight Time

Truss line truss-floorbeam

Within BWS Report for truss line truss-floorbeam.abr (under virtis\gui\abgreport), Superstructure Definitions > Truss Line – Truss-Floorbeam –Structure Def > Floorbeam Member > Member Loads doesn't have any attribute or group to be added.

FROM: Herman Lee DATE: 10/1/2009 12:44:53 PM Eastern Daylight Time

Srujana, please assign to Chung for updating the abr files after you added the missing attributes to the database.

4/19/2016 3:22:46 PM

HRS AASHTO

2821

**Complete Issue Information**

FROM: Srujana Thogaru DATE: 2/16/2010 11:25:09 AM Eastern Standard Time  
Updated the database with missing attributes

FROM: Joseph Ihnat DATE: 3/18/2010 11:01:02 AM Eastern Daylight Time  
abr file updated for 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:02:30 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

Issue ID: 9477  
Subject: Report tool - "Member loads" doesn't have any group and attribute to be added

Folder: /Virtis/Support Center  
Primary Contact: Duray, Jim  
Submitted By: Shih, Chung 9/2/2009 5:32:40 PM  
Modified By: jduray 9/2/2009 6:19:58 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status      | Priority | Category |
|-----------------|-------------|----------|----------|
| Duray, Jim      | New         | High     | Bug      |
|                 | Development |          |          |
|                 | Duplicate   |          |          |

**Contacts**

4/19/2016 3:22:46 PM

HRS AASHTO

2822

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Chung Shih DATE: 9/2/2009 1:37:12 PM Eastern Daylight Time

Found that the Member Loads doesn't have any groups or attributes to be added under Superstructure Definitions > Truss Line – Truss-Floorbeam –Structure Def > Floorbeam Member in the Truss Line – Truss-Floorbeam –Structure.

(found this within the report tool: virtis\gui\labgreport\BWS Report for truss line truss-floorbeam.abr)

FROM: Chung Shih DATE: 9/2/2009 1:49:44 PM Eastern Daylight Time

Duplicated issue. Original issue ID: 9476

Issue ID: 9478

Subject: Crash in the Pier Alternative 3D Schematic

Folder: /Virtis/Support Center

Primary Contact: Bhanushali, Girish

Submitted By: Ordoobadi, Mehrdad

9/3/2009 6:28:22 PM

Modified By: gbhanushali

9/14/2009 2:50:25 PM

Priority: High

4/19/2016 3:22:46 PM

HRS AASHTO

2823

## Complete Issue Information

Category: Bug

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | CrackedMOI.png      |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Mehrdad Ordoobadi DATE: 9/3/2009 2:30:09 PM Eastern Daylight Time  
Program crashed in the Pier Alternative 3D Schematic while viewing deflections and turned on "Hover" and then hovered over a node. The program crashed at the following line in Ogl3DObject.h (line 54).

```
inline GLuint GetID(){return m_iObjectID;}
```

FROM: Jim Duray DATE: 9/3/2009 2:40:37 PM Eastern Daylight Time  
I think this is a duplicate. Does it do this in 6.0?

FROM: Mehrdad Ordoobadi DATE: 9/3/2009 2:43:50 PM Eastern Daylight Time  
Similar issue is reported in issue 6399 In 0.9 and 6.0.

FROM: Mehrdad Ordoobadi DATE: 9/3/2009 2:52:40 PM Eastern Daylight Time  
This is reproducible as Krisha describes in 6399:

"I have Auto Apply checked, scroll thru some load combinations and then turn on the Hover in the 3D schematic."

FROM: Girish Bhanushali DATE: 9/14/2009 10:47:43 AM Eastern Daylight Time  
VI# 6399

4/19/2016 3:22:46 PM

HRS AASHTO

2824

**Complete Issue Information**

Issue ID: 9492  
Subject: Missing messages in one of the two cracked MOI computations

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Lee, Herman 9/17/2009 11:38:29 AM  
Modified By: sthogaru 5/5/2010 8:02:28 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/17/2009 7:38:40 AM Eastern Daylight Time  
Please see attached.

To reproduce, use the LRFR Design Load Rating analysis template.

FROM: Jim Duray DATE: 9/17/2009 8:07:07 AM Eastern Daylight Time  
This is not new to 6.1. Defer for resolution for 6.2.

FROM: Krisha Kennelly DATE: 4/11/2010 2:25:06 PM Eastern Daylight Time  
fixed for 6.2

FROM: Srujana Thogaru DATE: 5/5/2010 3:58:08 PM Eastern Daylight Time  
Verified for 6.2 Beta build 1.

4/19/2016 3:22:46 PM

HRS AASHTO

2825

**Complete Issue Information**

Issue ID: 9493  
Subject: Empty folder in Analysis Output window

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 9/17/2009 11:50:47 AM  
Modified By: jihnat 4/30/2010 3:19:35 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | Assigned |          | Bug - GUI 2 |
| Ihnat, Joseph   | Resolved |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | EmptyFolder.png     |             |

4/19/2016 3:22:47 PM

HRS AASHTO

2826

## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 9/17/2009 7:51:00 AM Eastern Daylight Time

If Capacity Summary is not selected in the Analysis Settings window Output tab, the folder shouldn't be created for Beam Capacity Summary files. Please see attached.

FROM: Joseph Ihnat DATE: 3/19/2010 3:29:15 PM Eastern Daylight Time

Empty .LST files are being created.

I added a check in the analysis output window to check for empty .LST file before adding folder to tree. Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:19:40 AM Eastern Daylight Time

Verified - 6.2 alpha 4

Issue ID: 9495

Subject: G1 for BID 22 has wrong data

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Duray, Jim

9/17/2009 2:31:08 PM

Modified By: jduray

9/17/2009 2:37:39 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Obeidat, Khalid | Assigned | High     | Bug      |

4/19/2016 3:22:47 PM

HRS AASHTO

2827

**Complete Issue Information**

|                    |           |      |           |
|--------------------|-----------|------|-----------|
| Ordoobadi, Mehrdad | Duplicate |      |           |
| Lee, Herman        | New       | High | Bug       |
| Ordoobadi, Mehrdad | Assigned  |      | Education |
|                    | Accepted  |      |           |
|                    | Closed    |      |           |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jim Duray DATE: 9/17/2009 10:32:11 AM Eastern Daylight Time  
This originated from 9470.

The following changes need to be made to the sample and production databases for Bridge BID 22 G1.

Beam Details/Span Details:

| SPAN | Left End Beam Projection | Right End Beam Projection |
|------|--------------------------|---------------------------|
| 1    | 9.5000                   | 7.500                     |
| 2    | 7.5000                   | 7.000                     |
| 3    | 7.0000                   | 12.000                    |

Beam Details/Stress Limit Ranges:

| SPAN | Length |
|------|--------|
| 1    | 115.75 |
| 2    | 115.54 |
| 3    | 115.92 |

Look at G2 for the full decimal values.

FROM: Jim Duray DATE: 9/17/2009 10:41:38 AM Eastern Daylight Time  
Same as 9490.

|                                           |
|-------------------------------------------|
| Issue ID: 9511                            |
| Subject: File Exchange Function In Virtis |

4/19/2016 3:22:47 PM

HRS AASHTO

2828



## Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Huang, George         | 9/30/2009 3:00:53 PM |
| Modified By: mordoobadi             | 4/8/2011 7:43:22 PM  |
| Priority: High                      |                      |
| Category: Education                 |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          |             |
|                 | Resolved |          | Bug - GUI 1 |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: George Huang DATE: 9/30/2009 11:12:19 AM Eastern Daylight Time

I use the file exchange to export a bridge file from my main database. But this bridge file can't be imported (under exchange) by my stand alone database, and even can't be imported with the same main database. In both cases, I got the same system error "Unable to exchange bridge. Invalid bridge exchange file."

We have a need for this exchange function in one or two weeks. I may need to call someone the resolve this issue quickly. Please provide the contact phone number if it's possible. Thanks.

FROM: George Huang DATE: 10/5/2009 4:17:48 PM Eastern Daylight Time

The exchange function is working for the 6.1 testing version. The "respository" box was not checked before.

My new question is how to define a 6.0 version database as a Respository Database? Thanks.

4/19/2016 3:22:47 PM

HRS AASHTO

2829

**Complete Issue Information**

FROM: George Huang DATE: 10/8/2009 10:05:23 AM Eastern Daylight Time  
The problem is solved. Thanks.

|                                     |
|-------------------------------------|
| Issue ID: 9519                      |
| Subject: LRFD Impact Factors issues |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Duray, Jim       | 10/6/2009 6:28:22 PM |
| Modified By: jihnat            | 4/30/2010 2:59:16 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 1          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jim Duray DATE: 10/6/2009 2:28:28 PM Eastern Daylight Time  
From 9287...

I found the following behavior regarding DLA in the UI:

4/19/2016 3:22:47 PM

HRS AASHTO

2830

## Complete Issue Information

For the BRASS LRFR analysis, if mbr alt DLA is NULL we get the struct def DLA. If the struct def DLA is NULL we get the bridge DLA. This is the desired behavior and it was also implemented for the AASHTO LRFD/LRFR engine.

If the mbr alt and structure def DLA are NULL, the analysis checks the bridge DLA and if it is NULL the analysis is aborted with the following message.

```
"Error generating LRFD load commands!  
Error generating LOAD-LIVE-DYNAMIC command!  
Unable to determine LRFD impact factors!"
```

This is the desired behavior.

The DLA windows have some problems with default values for DLA:

For the struct def DLA window, if DLA is NULL it populates the window with the DLA from the bridge DLA – even if the user closes the window by clicking Cancel.

If the bridge DLA is NULL and the struct def window is opened, the struct def DLA gets set to 0 and the analysis will be performed without warning. Not desirable.

If the bridge DLA window is opened and the DLA is NULL the window sets it to 15% and 33% even if the cancel button is clicked. Probably acceptable behavior.

The mbr alt window never gets populated from the struct def or bridge DLA (except when a new mbr alt is created).

I think we should change this behavior to use in the analysis the default AASHTO impact/DLA values if mbr alt, struct def and bridge DLA are NULL. The struct def window DLA should get set to NULL if the bridge DLA is NULL instead of zero. If the mbr alt DLA is NULL it should get set to the struct def DLA. Or we should change the behavior so mbr alt and structure def windows do not get DLA from the parent DLA window.

-----  
From Todd 10/6/09

I can import and run the steel bridge and never open any window and I get the behaviour.

Let me go right to the DB where I don't have to "open" or not open any GUI windows.

Upon digging into it further, and going directly into the DB to review the data of the 6.1 DB the ABW\_SUPER\_STRUCTURE\_SPNG\_MBR\_ALT.LRFD\_CONSTANT\_IMPACT\_FACTOR is actually stored as Zero after being imported from an XML.

And upon digging into my 6.0 DB, appears most if not all of my steel girder bridges have Zero for ABW\_SUPER\_STRUCTURE\_SPNG\_MBR\_ALT.LRFD\_CONSTANT\_IMPACT\_FACTOR (whereas my RC had blanks/NULLS) - Not sure what the difference is between the two structure types.

The vast majority of all of my bridges were originally from BARS imports, although all of my steel girder bridges are now defined as a Girder System, but evidently when creating a new superstructure definition from scratch does not populate the LRFD DLA values, or if they do - populates them with

4/19/2016 3:22:47 PM

HRS AASHTO

2831

**Complete Issue Information**

Zeroes. Or at least that is what appears to be happening.

Appears my best bet is to populate manually (via script) all of my LRFD DLA values with 15 and 33 and not rely upon the application to populate them when one creates a new superstructure definition.

FROM: Joseph Ihnat DATE: 12/4/2009 8:39:55 AM Eastern Standard Time  
The Impact window should not be modifying the Domain when the window is opened.  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 12/4/2009 2:32:28 PM Eastern Standard Time  
When a new member alternative (or struct def) is created, and the impact values in the struct def (or bridge) are null, the impact values in the new member alternative (or struct def) should also be null, not zero.  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 10:59:10 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                   |
|---------------------------------------------------|
| Issue ID: 9526                                    |
| Subject: LRFD Substructure Design Settings window |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ihnat, Joseph         | 10/12/2009 7:11:45 PM |
| Modified By: kkennelly              | 5/8/2010 2:54:44 AM   |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ihnat, Joseph      | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

4/19/2016 3:22:47 PM

HRS AASHTO

2832

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 10/12/2009 3:12:18 PM Eastern Daylight Time

1) In the Library, create a vehicle with no axles then try to open the Library LRFD Substructure Design Settings window. Virtis will crash.

The Bridge LRFD Substructure Design Settings window cannot be opened but Virtis does not crash.

2) Mehrdad, please review the code in CDoLibVehicle::GetAxleWeight()

FROM: Joseph Ihnat DATE: 11/3/2009 3:19:38 PM Eastern Standard Time

#1 is fixed for version 6.2

FROM: Mehrdad Ordoobadi DATE: 12/1/2009 9:28:52 AM Eastern Standard Time

Fixed item 2 for Version 6.1 SP 1 and 6.2. (DoLibVehicle.CPP)

Also required changes to the UiLibLrfdSubDgnSetSubstructLoadDlg.CPP to avoid a crash.

FROM: Krisha Kennelly DATE: 5/7/2010 10:51:44 PM Eastern Daylight Time

verified fix in 6.2 beta 1. Added a vehicle with no axles to the library. Was able to open Library and Bridge substructure Design Settings windows without crashes.

Issue ID: 9542

Subject: Incorrect description in Analysis Settings: Engine tab Help

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Lee, Herman

11/5/2009 3:34:45 PM

Modified By: jihnat

4/30/2010 4:30:55 PM

Priority: High

Category: Bug

4/19/2016 3:22:48 PM

HRS AASHTO

2833

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
| Duray, Jim      | Resolved |          |          |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/5/2009 10:48:55 AM Eastern Standard Time  
Submitted on behalf of Jim Randall, County of Santa Clara.

Incorrect description:

"The engine to be used for analysis is selected using the Girder Line Superstructure Definition or Girder System Superstructure Definition: Analysis tab by selecting an analysis module for an analysis method."

Superstructure Definition: Analysis tab:

"and analysis methods" in first sentence should be "and analysis options".

FROM: Joseph Ihnat DATE: 3/22/2010 11:08:28 AM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:30:57 PM Eastern Daylight Time  
Verified - 6.2 alpha 4

4/19/2016 3:22:48 PM

HRS AASHTO

2834

**Complete Issue Information**

Issue ID: 9543

Subject: Version 6.1 - Analysis Settings - Traffic Direction

Folder: /Virtis/Support Center

Primary Contact: Duray, Jim

Submitted By: Thompson, Todd

11/5/2009 7:20:45 PM

Modified By: hlee

5/13/2010 3:23:01 PM

Priority: High

Category: Bug

**History**

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Ihnat, Joseph   | Assigned | High     | Bug            |
|                 | Resolved |          | Bug - Warranty |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 11/5/2009 2:24:05 PM Eastern Standard Time

We've been reviewing a bridge and using the Analysis Settings - Traffic Direction (options of both directions up and down mileposts).

With 6.1 and BRASS LRFD - appears to work ok. For example, one gets slightly different Reactions because of the different direction and placement of a truck.

With 6.1 and OPIS LRFD - question on whether this is working, as we get identical results whether one does both directions, up or down. Appears that this control setting only works on BRASS and not OPIS (and possibly not on VIRTIS, but didn't check).

We are looking for clarification if this analysis setting is valid for the OPIS and VIRTIS engines.

RC Slab bridge was the type of bridge in question that our designer was working on.

4/19/2016 3:22:48 PM

HRS AASHTO

2835

**Complete Issue Information**

FROM: Jim Duray DATE: 4/24/2010 4:27:51 PM Eastern Daylight Time  
Fixed for Alpha 4.

FROM: Jim Duray DATE: 4/30/2010 3:17:09 PM Eastern Daylight Time  
Verified - 6.2 alpha 4.

FROM: Todd Thompson DATE: 5/11/2010 1:20:36 PM Eastern Daylight Time  
6.2 Beta 1  
Appears to be fixed

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 9548                                                              |
| Subject: Clicking Apply with bolted cross section cover plates causes crash |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 11/9/2009 6:20:11 PM |
| Modified By: jihnat            | 4/30/2010 4:46:06 PM |
| Priority: High                 |                      |
| Category: Bug - Warranty       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 11/9/2009 1:20:21 PM Eastern Standard Time  
Received via email (Bridgeware):

4/19/2016 3:22:48 PM

HRS AASHTO

2836



**Complete Issue Information**

We're having a problem with Virtis 6.1 for built up steel sections. After inputting the data in the member cross sections and clicking apply, we are getting a runtime error and the whole program crashes. This happens if we are entering a new cross section and if we open one that was previously inputted and click apply without making any changes. I have attached the file we are having problems with.

Thank you for your assistance. Feel free to call if you have any questions or need further information.  
David A. Packard  
BAYSIDE ENGINEERING, INC.

FROM: Joseph Ihnat DATE: 11/9/2009 1:24:15 PM Eastern Standard Time  
For example, open TB2, add a bolted cvr plate, click Apply, Virtis crashes.  
If you click OK instead of Apply, Virtis doesn't crash.  
Also, the effective area edit box should be hidden.

FROM: Joseph Ihnat DATE: 11/11/2009 7:57:11 AM Eastern Standard Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:46:13 PM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 9550                                                                    |
| Subject: Problems with specifying "shear ignored" for PS beams in control options |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Armbrecht, Tim     | 11/10/2009 1:04:40 PM  |
| Modified By: hlee                | 10/15/2011 11:27:19 PM |
| Priority: High                   |                        |
| Category: Bug - BRASS            |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:22:48 PM

HRS AASHTO

2837

### Complete Issue Information

|                  |           |      |                |               |
|------------------|-----------|------|----------------|---------------|
| Goodrich, Brian  | Assigned  |      |                |               |
| Lee, Herman      | New       | High | Bug - Warranty | Bug           |
| Kennelly, Krisha | Assigned  |      |                |               |
| Goodrich, Brian  |           |      | Support        |               |
|                  | Suspended |      | Enhancement    | Enhance BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 11/10/2009 8:08:21 AM Eastern Standard Time

This concerns PS concrete beam bridges brought into v. 6.1 with shear ignored (see Engine tab under Member Alternative Description). If the LFD Shear Computation Method, under the Control Options tab, is changed from "Ignore" to "Use current AASHTO" or to "Use AASHTO 1979 Interim code" the statement "Shear ignored (see member alternative)", under the Engine tab (for BRASS LFD), remains. It is then impossible to control the Vci switch so that it may be changed from the default Wyoming DOT value (1.0 max) to the AASHTO specified value (unlimited). Captured images of the applicable windows/tab views are attached.

Also, because the Ignore shear switch is no longer present under the Description tab of Member Alternative Description the aforementioned instruction, "see member alternative" is misleading.

I have attached an example file, PSI-Vci\_SwitchProb-v61(0600319).xml. The Member used is 9 - 2nd N Int-x.

FROM: Brian Goodrich DATE: 11/12/2009 8:15:14 AM Mountain Standard Time

I found the problem in the AbxBrass2 project. The beam definitions' GetLfdIgnoreShearInd() function is being called to determine if shear is to be ignored. For P/S structures, the GetLfdShearComputationMethodType() function should be used instead. For the BRASS ASD, we may need to use the GetAsdShearComputationMethodType() function.

FROM: Brian Goodrich DATE: 11/19/2009 4:02:26 PM Mountain Standard Time

I revised AbxBrass2 project to use GetLfdShearComputationMethodType() function. There are no ASD

4/19/2016 3:22:48 PM

HRS AASHTO

2838

**Complete Issue Information**

control options for P/S. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/9/2010 9:09:36 AM Eastern Daylight Time

Two more issues still have to be investigated.

- 1. Access to BRASS Engine Vci switch for bridges brought into 6.1 with shear ignored and changed to consider shear in 6.1.
- 2. The "Shear ignored (see member alternative)." description for BRASS Engine Properties.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 9551                                                     |
| Subject: Non-Composite LRFD/LRFR Design and Rating LL distribution |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Colgrove, George   | 11/10/2009 7:30:02 PM  |
| Modified By: hlee                | 10/16/2011 10:56:16 PM |
| Priority: High                   |                        |
| Category: Enhance BRASS          |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 11/10/2009 2:47:33 PM Eastern Standard Time

Trying to enter a fully non-composite bridge (specifically example A5 from the 2008 MBE). Live load distribution factors are being calculated considering a composite section. According to AASHTO LRFD (2009):

4.6.2.2 Beam-Slab Bridges

4.6.2.2.1 Application

Unless otherwise stated, the stiffness parameters for area, moments of inertia and torsional stiffness used herein and in Articles 4.6.2.2.2 and 4.6.2.2.3 shall be

4/19/2016 3:22:49 PM

HRS AASHTO

2839

**Complete Issue Information**

taken as those of the cross-section to which traffic will be applied, i.e., usually the composite section.

There is a suggestion (albeit very weak) that there is a different process for composite vs. non-composite. The example shows that  $eg = 0$  for non-composite construction. I have yet to find justification for this elsewhere but assuming this is true, BRASS LRFD/LRFR calculates the distribution factor with a calculated value for  $eg$ . This results in a 1.11 times increase for the distribution factor for the particular example.

I think this needs to be looked into. More specifically, there is no place in the GUI that I could find that defines a bridge as non-composite throughout. The steel girder wizard provides partially composite or composite options. We need to add that option which needs to be communicated to the engine so live load distribution factors can be calculated properly.

FROM: Krisha Kennelly DATE: 11/17/2009 8:26:31 AM Eastern Standard Time  
A non-composite throughout bridge in Virtis is one in which no shear connector ranges are defined. You don't define it as non-composite, you just don't enter any shear connector ranges.

FROM: Brian Goodrich DATE: 11/17/2009 4:22:55 PM Mountain Standard Time  
With respect to BRASS, WYDOT chose (in 1998) to have BRASS compute the non-composite steel  $K_g$  the same as for composite. BRASS does not consider a zero eccentricity for non-composite beams.

FROM: Brian Goodrich DATE: 11/19/2009 10:58:20 AM Mountain Standard Time  
The philosophy regarding these kinds of decisions is that if a user doesn't agree with a the BRASS calculation for live load distribution factors, he can input his own factors using the schedules.

FROM: Brian Goodrich DATE: 1/26/2010 10:22:20 AM Mountain Standard Time  
WYDOT assigned this issue to BRASS Problem Log 929.

FROM: Brian Goodrich DATE: 1/26/2010 11:09:43 AM Mountain Standard Time  
BRASS was modified to allow the user to choose if the "eg" term should be set to zero for non-composite sections. A control option must be implemented in engine properties and the export must be updated accordingly to take advantage of this feature.

FROM: Herman Lee DATE: 6/18/2010 1:12:28 PM Eastern Daylight Time  
Same request in Incident 10040.

Issue ID: 9552  
Subject: Analysis template saving problem for BRASS LRFR Intermediate Output Options

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Hart, Sean 11/11/2009 9:43:12 PM  
Modified By: jihnat 4/12/2010 7:42:23 PM  
Priority: High  
Category: Bug - GUI 2

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Kennelly, Krisha | Assigned | High     | Bug       |
|                  | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Visio-vi9567.pdf    |             |
|      | W-44-082(1T7).bbd   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/11/2009 4:43:55 PM Eastern Standard Time  
Submitted on behalf of Sean Hart, Michael Baker Jr., Inc.

Unable to save Intermediate Output Options or saved to different options.  
I'm not able to consistently reproduce this problem. I suspect it's related to missing member variable initialization.

FROM: Joseph Ihnat DATE: 4/12/2010 3:42:50 PM Eastern Daylight Time  
I haven't been able to reproduce this.

**Complete Issue Information**

|                                                     |
|-----------------------------------------------------|
| Issue ID: 9567                                      |
| Subject: Problem with Virtis Built up steel girders |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Lee, Herman         | 11/19/2009 7:31:56 PM |
| Modified By: kkennelly            | 11/23/2009 4:45:33 PM |
| Priority: High                    |                       |
| Category: Education               |                       |

**History**

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | New              | High     | Bug      |
| Ihnat, Joseph   | Assigned         |          |          |
|                 | Not Reproducible |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L04024.xml          |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 11/19/2009 2:33:00 PM Eastern Standard Time  
Submitted on behalf of David A. Packard [dpackard@baysideengineering.com], BAYSIDE ENGINEERING, INC.

Bridgware support e-mail:

=====  
We're having a problem with Virtis 6.1 for built up steel sections. In the file open to "Span 5-11 (EB) 2009", "Members", "G66, G69, G72, G83", "Member Alternatives", "G66, G69, G72, G83", "Cross Section Ranges". After clicking apply we get an error that says: "Discontinuous adjacent circular varying webs have been detected". The cross sections have been checked and re-checked and the web depth at each section change does not vary. I have attached the file we are having problems with.

4/19/2016 3:22:49 PM

HRS AASHTO

2842

**Complete Issue Information**

=====

FROM: Krisha Kennelly DATE: 11/23/2009 8:30:10 AM Eastern Standard Time  
Adjacent circular web sections have to have the same radius in Virtis. See the attached pdf to see how Virtis computes the radii of adjacent sections in this member.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9573                                             |
| Subject: Virtis Crashes after changing POI Control Options |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Ihnat, Joseph    | 11/23/2009 7:33:19 PM |
| Modified By: jihnat            | 4/12/2010 7:41:53 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 11/23/2009 2:33:34 PM Eastern Standard Time  
Received via email (Bridgeware):

4/19/2016 3:22:49 PM

HRS AASHTO

2843

**Complete Issue Information**

When working with a Virtis bridge file, any time I change the point of interest control options the program stops running. I get the following message "Virtis Workstation Application has encountered a problem and needs to close. We are sorry for the inconvenience."

Michael A. Cruz, P.E.  
Green International Affiliates, Inc.  
239 Littleton Road, Suite 3  
Westford, MA 01886  
TEL (978)923-0400  
email: mcruz@greenintl.com

FROM: Joseph Ihnat DATE: 2/5/2010 12:30:46 PM Eastern Standard Time  
I haven't been able to reproduce this.

|                                          |
|------------------------------------------|
| Issue ID: 9579                           |
| Subject: Bridge Alternative Wizard Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Teal, Dean       | 12/1/2009 7:06:31 PM |
| Modified By: hlee              | 5/13/2010 3:19:45 PM |
| Priority: High                 |                      |
| Category: Bug - Warranty       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:22:50 PM

HRS AASHTO

2844



**Complete Issue Information**

|             |                    |      |             |
|-------------|--------------------|------|-------------|
| Li, Xinmei  | Information Needed |      |             |
|             | Assigned           |      |             |
| Lee, Herman | New                | High | Bug         |
| Duray, Jim  | Suspended          |      | Enhancement |
|             | Resolved           |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 12/1/2009 2:14:14 PM Eastern Standard Time

I have attached a structure that will not allow me to save if I use the Brg Alt Superstructure Wizard. this has happend on 2 bridges todote.

I have to delete the superstructure alternative and enter it manually in order to save the structure.

I was using the last 2 superstructure definitions.

FROM: Herman Lee DATE: 12/1/2009 3:31:36 PM Eastern Standard Time

We don't see the structure attached in this incident. Please attach the XML file again. Thanks.

FROM: Herman Lee DATE: 12/1/2009 3:55:24 PM Eastern Standard Time

Attached the bridge XML file.

FROM: Mehrdad Ordoobadi DATE: 1/13/2010 2:00:57 PM Eastern Standard Time

The name of the generated Superstructures and Superstructure Alternatives are blank if the user does not specify their names. However the save is successful in Sybase and SQL Server databases. Saving the changes to an Oracle database produces errors shown below:

-----  
Unable to save Bridge data!

03:34:24 PM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmSuperStruct (SaveOrder object 110).

03:34:17 PM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.

4/19/2016 3:22:50 PM

HRS AASHTO

2845

**Complete Issue Information**

03:34:17 PM - Line 792 in source file .\DmSuperStruct.cpp.  
State:S1000,Native:1400,Origin:[Oracle][ODBC][Ora]  
ORA-01400: cannot insert NULL into ("VIRTIS"."ABW\_SUPER\_STRUCT"."NAME")

-----  
which is due to blank values for the Superstructure names.

Dean are you getting the same errors?

If so the work around is to open the generated superstructures with empty names and enter a name, then click OK.

Then open the generated superstructure alternatives with empty names and enter a name and click OK.

Then you should be able to save.

The GUI code should be modified so that it does not accept empty names for superstructures and superstructure alternatives.

FROM: Mehrdad Ordoobadi DATE: 1/14/2010 12:09:19 PM Eastern Standard Time  
GUI code was updated so that it does not accept empty names for superstructures and superstructure alternatives.

Fixed for 6.2.0.  
Code repinned in 6.1 SP1.

FROM: Jim Duray DATE: 5/6/2010 10:43:49 AM Eastern Daylight Time  
Message was added - blank names cannot be saved.  
Verified - 6.2 alpha 4.

FROM: Dean Teal DATE: 5/12/2010 4:15:54 PM Eastern Daylight Time  
Accepted in 6.2 beta 1

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9588<br>Subject: Enhancement to Structure Export |
|------------------------------------------------------------|

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Horton, Doug     | 12/8/2009 2:44:26 PM  |
| Modified By: hlee              | 7/17/2014 12:25:24 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

4/19/2016 3:22:50 PM

**HRS AASHTO**

2846

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 12/8/2009 9:50:04 AM Eastern Standard Time

The current export does not include the multimedia links for the structure. Thus, if structures are manually exported and transferred, the multimedia links are not maintained.

The current export also does not include links to Pontis if the user has a combined database (as does Virginia).

It would be very beneficial and time saving if the above could be implemented as options (or default settings) for the export process.

Virginia would be interested in assisting with the cost of adding the above features, assuming it is not extremely high.

FROM: Doug Horton DATE: 10/13/2010 12:16:06 PM Eastern Daylight Time

This request is indeed an enhancement, however it was my understanding that an estimate was going to be prepared and provided to VDOT and the Task Force. As previously noted, we have over a thousand files that have links to Pontis and multimedia attached. When we upgrade to a new version, say 6.2, we will not have any method of transferring the links.

Please reopen this and provide the estimate requested.

FROM: Herman Lee DATE: 10/15/2010 12:04:26 PM Eastern Daylight Time

We are preparing an estimate for this enhancement. The estimate will be presented to VDOT and the Task Force in the TF Meeting at the end of October.

When migrating a combined database to a new version using the Migration Wizard, the Pontis and multimedia links will not be affected during the database migration.

4/19/2016 3:22:50 PM

HRS AASHTO

2847

**Complete Issue Information**

FROM: Herman Lee DATE: 7/17/2014 8:20:46 AM Eastern Daylight Time  
 Implemented in version 6.3.1.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9589                                             |
| Subject: Modification to Multimedia file selection default |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Lee, Herman                    |
| Submitted By: Horton, Doug 12/8/2009 2:50:22 PM |
| Modified By: hlee 5/17/2010 1:28:07 PM          |
| Priority: High                                  |
| Category: Enhancement                           |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Doug Horton DATE: 12/8/2009 10:02:27 AM Eastern Standard Time  
 The multimedia dialog for linking a file currently defaults to jpg files. This is reasonable since pictures are usually what are added. There are many times however that documentation files are added for easy reference. In Virginia they are generally pdf files. If the default was set to all files, then the selection would not have to be resset each time an attachment is made to a structure.

We would suggest that all files become the default, and, if possible, the chosen document type set for the first link would stay active for the whole session. In other words, if we picked pdf files on a structure and then followed with several other structures, pdf would be the default for every structure until the user logs out.

FROM: Herman Lee DATE: 5/17/2010 9:10:39 AM Eastern Daylight Time  
 Requested by TF and TAG during 6.2 Beta Testing to set default filter to "All Files". Done for 6.2 Release.

4/19/2016 3:22:50 PM

HRS AASHTO

2848

### Complete Issue Information

The enhancement request is to use the chosen document type set for the first link as the subsequent default.

|                                              |
|----------------------------------------------|
| Issue ID: 9612                               |
| Subject: Moment redistribution in LRFD Specs |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Armbrecht, Tim     | 1/6/2010 5:16:46 PM  |
| Modified By: hlee                | 7/14/2010 2:47:02 PM |
| Priority: High                   |                      |
| Category: Enhance BRASS          |                      |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Lee, Herman     | New       | High     | Bug           |
| Goodrich, Brian | Assigned  |          | Support       |
|                 | Suspended |          | Enhance BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:22:51 PM

HRS AASHTO

2849

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 1/6/2010 12:31:48 PM Eastern Standard Time  
Related to 3426 & 5313.

It's my understanding from these two incidents that BRASS does not support the 10.48.1.3 provision of the standard specs which allows a 10% redistribution of moment from the negative moment areas to the positive moment areas.

This provision is also in the LRFD specs in Appendix B. My questions:

- Is it correct to assume that BRASS-GIRDER still does not support redistribution of moments?
- Does Virtis Std. Engine support it?
- Does BRASS-LRFD support it?
- Is it in the plan to be supported by the new AASHTO Engine in this current workplan?

Thanks, Tim

FROM: Herman Lee DATE: 1/6/2010 3:13:37 PM Eastern Standard Time  
Virtis Std Engine supports 10.48.1.3 through the "LFD Allow moment redistribution" checkbox in Control Options.  
AASHTO LRFD/LRFR Engine in the coming 6.2 Release will support moment redistribution based on LRFD specs Appendix B.

Brian, please comment on the BRASS Engines.

FROM: Brian Goodrich DATE: 1/8/2010 1:32:55 PM Mountain Standard Time  
None of the BRASS-GIRDER engines support moment redistribution. I have forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 1/22/2010 10:55:15 AM Mountain Standard Time  
WYDOT put this issue on the BRASS enhancement list. It will be ranked at a later date.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 9620                                                 |
| Subject: Virtis/Opis install gives "SQLConnect Failed" message |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Ihnat, Joseph    | 1/19/2010 12:49:09 PM |
| Modified By: jihnat            | 1/19/2010 2:04:33 PM  |
| Priority: High                 |                       |

4/19/2016 3:22:51 PM

**HRS AASHTO**

2850

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status   | Priority | Category              |
|-----------------|----------|----------|-----------------------|
| Ihnat, Joseph   | Assigned | High     | Bug<br>Bug - Warranty |
|                 | Resolved |          | Bug                   |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Control Options message.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Joseph Ihnat DATE: 1/19/2010 7:50:04 AM Eastern Standard Time

If SQL Server is already installed when the Virtis/Opis installation is run, the user may receive a "SQLConnect Failed" message.

This may result when the installation attempts to configure the SQL Server ODBC connection. For instance, run the Pontis installation to install SQL Server, then run the Virtis/Opis installation.

FROM: Joseph Ihnat DATE: 1/19/2010 9:04:18 AM Eastern Standard Time

Fixed for version 6.2

**Complete Issue Information**

Issue ID: 9631  
Subject: LRFD/LRFR points of interest warning message

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 2/2/2010 6:21:31 PM  
Modified By: jihnat 4/30/2010 4:09:27 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/2/2010 1:22:58 PM Eastern Standard Time  
Points of interest warning should only show up when LRFD/LRFR is available in Control Options (see attached).

FROM: Joseph Ihnat DATE: 2/5/2010 10:45:28 AM Eastern Standard Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:09:34 PM Eastern Daylight Time  
Verified - 6.2 alpha 4



## Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Issue ID: 9641                                     |
| Subject: Add a Stop Button to Stop an analysis Run |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Colgrove, George | 2/12/2010 2:10:08 PM  |
| Modified By: hlee              | 4/25/2013 12:58:00 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:22:51 PM

HRS AASHTO

2853

### Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

#### Description

FROM: George Colgrove DATE: 2/12/2010 9:13:54 AM Eastern Standard Time  
Would it be possible to add a "Stop Run" button to the error message box to stop a run? For large structures that have many stringers and floorbeams, it takes a long time to keep pressing Close between each successive error. Could be numerous and takes up time to get through. I'm thinking this feature would benefit us in the development realm - but would also be appreciated by the customer as well. See example in Documents.

FROM: Herman Lee DATE: 6/9/2011 9:48:23 AM Eastern Daylight Time  
As discussed with the TAG (April 2011), more checks for aborting the analysis (Cancel button) can be added during the run for a single member alternative.

I think what George is looking for is a Cancel button for an analysis event (eg. batch rating or analysis the whole superstructure definition).

FROM: Herman Lee DATE: 4/25/2013 8:57:18 AM Eastern Daylight Time  
Resolved for 6.5 release.

|                                  |
|----------------------------------|
| Issue ID: 9645                   |
| Subject: Varying LL Dist Factors |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Colgrove, George |                      |
| Submitted By: Curtis, Beckie      | 2/17/2010 8:58:26 PM |
| Modified By: rcurtis              | 7/14/2010 8:01:11 PM |
| Priority: High                    |                      |
| Category: Support                 |                      |

#### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:22:51 PM

HRS AASHTO

2854

**Complete Issue Information**

|                    |             |      |         |
|--------------------|-------------|------|---------|
| Lee, Herman        | New         | High | Bug     |
| Colgrove, George   | Assigned    |      | Support |
| Duray, Jim         | New         | High | Bug     |
| Shi, Weidong       | Assigned    |      |         |
| Ordoobadi, Mehrdad | Development |      |         |
|                    | Resolved    |      |         |
| Lee, Herman        |             |      |         |
| Ihnat, Joseph      | Assigned    |      |         |
| Thogaru, Srujana   |             |      |         |
|                    | Resolved    |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | LongStiffVerticalLocation.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 2/17/2010 4:07:39 PM Eastern Standard Time

Looking for some clarification on how the engines apply live loads that vary in distribution factor along the length of a structure. I want to make sure I'm not making any incorrect assumptions.

For the engines that allow LL dist factors to vary:

lets say for every 10th of the span there is a new distribution factor. The vehicle in question has 10 axles, each in a different range. When calculating the load effect in range 5, do the engines calculate the effect of all 10 axles times the load distribution in range 5, or is it the effect of the axle in range 1 \* dist from range 1 plus the effect of the axle in range 2 \* dist from range 2 and so on.

FROM: Brian Goodrich DATE: 2/22/2010 9:00:41 AM Mountain Standard Time

For the BRASS LFD engine, there is only one distribution factor that is applied to all live load actions.

For the BRASS LRFD/LRFR engine, the distribution factors are applied based on the range in which the particular analysis point is located. If calculating the load effect in range 5, the effect of the axles times the load distribution in range 5. BRASS also has the capability to apply the distribution factor

4/19/2016 3:22:52 PM

HRS AASHTO

2855

**Complete Issue Information**

based on the axle position, but this method was never exposed to the Virtis user through the engine data.

FROM: Jim Duray DATE: 2/22/2010 11:48:12 AM Eastern Standard Time

The AASHTO LRFD/LRFR engine applies the distribution factor that corresponds to the location of the axle, not the location of the point of interest.

|                                                   |
|---------------------------------------------------|
| Issue ID: 9647                                    |
| Subject: Longitudinal Stiffener Vertical Location |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Ordoobadi, Mehrdad  | 2/18/2010 4:12:45 PM |
| Modified By: sthogaru             | 4/1/2011 9:05:03 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Mehrdad Ordoobadi DATE: 2/18/2010 11:14:12 AM Eastern Standard Time

The vertical location of the longitudinal stiffeners are specified by the following two fields:

- 1) Y Vertical Distance or Percentage
- 2) An indicator that indicates the location is measured from top or bottom flange, and if it is a percentage instead of distance.

The data dictionary for the vertical location indicates that the values are stored in mm. This is not working correctly because there is no conversion from percentage and distance.

FROM: Mehrdad Ordoobadi DATE: 2/18/2010 11:20:29 AM Eastern Standard Time

4/19/2016 3:22:52 PM

HRS AASHTO

2856

## Complete Issue Information

This should be fixed in 6.2.0:

- 1) DB Work - Add a new column to store the percentages
- 2) Db, De, Dm and domain changes
- 3) GUI - the longitudinal stiffeners tab should be revised to display the value in the Vertical Distance field when the Vertical Distance Reference type is from the top and bottom flange, and it should display the Vertical Location as percentage field when the Vertical Distance Reference type is as percentage of the web from top or bottom flange. Also schematics should be updated to use the new column.
- 4) Database Migration - An executable should be added to the migration wizard that looks at the Vertical Location Reference Type values and if they are set to percentage, it should calculate the percentage that the user intended to put in the Vertical Distance field (Y) and place it in the new column that was added in #1 above and set the Vertical Distance to null.
- 5) Version Conversion - (Similar to #5) a new method should be added to perform this in the abvconvert project.
- 6) Export - BRASS Export should be modified to use the new field when percentages are chosen.

Weidong, please do 1,2, 4, 5, 6. Once finished with 1 and 2 please assign to Joe for the GUI changes (3)

FROM: Mehrdad Ordoobadi DATE: 2/18/2010 3:25:45 PM Eastern Standard Time

The new column that I suggested previously has been in the database/domain for a long time but we are not using it. We need to display the column "vert\_dist\_by\_web\_fraction" when the distance reference type is percentage of web and the old column "vert\_dist" when distance reference type is in inches or mm.

FROM: Mehrdad Ordoobadi DATE: 2/18/2010 3:28:31 PM Eastern Standard Time

FROM: Joseph Ihnat DATE: 2/19/2010 2:18:22 PM Eastern Standard Time

3) UI changes are done.

FROM: Weidong Shi DATE: 3/11/2010 4:01:25 PM Eastern Standard Time

As previous email mentioned, I was done with my part earlier. Mehrdad, I would like to assign it back to you for reviewing the entire work and updating the status of this issue. Thanks!

FROM: Mehrdad Ordoobadi DATE: 9/3/2010 11:18:12 AM Eastern Daylight Time

Herman, please see if anything needs to be done in our export code.

FROM: Herman Lee DATE: 9/3/2010 11:31:32 AM Eastern Daylight Time

Brian updated BRASS Engine export. I updated AASHTO Engine export to use the GetVertDistanceByWebFraction function.

Joe, please implement GetVertDistanceByWebFraction in UI beam def (CUIBmDefStiffenerRangesLongDlg).

FROM: Herman Lee DATE: 9/3/2010 3:07:27 PM Eastern Daylight Time

4/19/2016 3:22:52 PM

HRS AASHTO

2857

**Complete Issue Information**

Joe, please assign to Srujana to add it to the Report Tool and abr files.

FROM: Joseph Ihnat DATE: 9/7/2010 1:00:44 PM Eastern Daylight Time  
BmDef window is updated.  
Report Tool should be completed for 6.3

FROM: Herman Lee DATE: 9/13/2010 12:42:48 PM Eastern Daylight Time  
Tested and confirmed the fix in 6.2 Beta 7 database migration, XML file import version conversion,  
BRASS Engine export, AASHTO Engine Export and Girder Profile schematic.

FROM: Srujana Thogaru DATE: 4/1/2011 5:04:33 PM Eastern Daylight Time  
Report Tool fixed for 6.3 Beta Build 1

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 9650                                                |
| Subject: Unable to find certain results in NCHRP 12-50 output |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Mlynarski, Mark    | 2/22/2010 5:36:57 PM |
| Modified By: bgoodrich           | 5/18/2011 2:28:17 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | New      | High     | Bug - BRASS |
|                 | Assigned |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description              |
|------|---------------------|--------------------------|
|      | G8.dat              | BRASS data file          |
|      | G6.OUT              | BRASS output file        |
|      | G8.OUT              | BRASS output file        |
|      | G8_DBR.CSV          | NCHRP 12-50 results file |
|      | G6.dat              | BRASS data file          |

**Complete Issue Information**

|            |                          |
|------------|--------------------------|
| G6_DBR.CSV | NCHRP 12-50 results file |
|------------|--------------------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brian Goodrich DATE: 2/22/2010 10:37:10 AM Mountain Standard Time  
Submitted e-mail from Mark Mlynarski:

Hey Brian,

I was running the attached file in BRASS through Virtis. Virtis returns critical rating factors (which happen to be shear for this problem) of 5.10 and 8.51 (see table below from the BRASS output files). I can't find these values in the 12-50 output. This is the only case I have thus far that I can't retrieve the critical rating values from the 12-50 output. Not sure what is peculiar about this particular problem. It seems like other LRFR and LFR files, I'm able to get the critical rating from the 12-50 file. I've attached the input, output and CSV file for your reference.

Thanks,

Mark

**RATING FACTOR REPORT**

ANALYSIS POINT NO. 1: 100.00

| LOAD LEVELS                    | TRUCK DESCRIPTION                           |
|--------------------------------|---------------------------------------------|
| 1: 1.30( 1.00 * D + 1.67 * L ) | 1. Truck: AASHTO H 20-S 16 Loading, 1944 Ed |
| 2: 1.00( 1.00 * D + 1.67 * L ) | 2. Lane: AASHTO H 20-S 16 Loading, 1944 Edi |
| 3: 1.30( 1.00 * D + 1.00 * L ) | 3. SPECIAL-LOAD                             |
| 4: 1.00( 1.00 * D + 1.00 * L ) | 4. SPECIAL-LOAD                             |

----- STRENGTH -----

LOAD LEVEL 1 ----- LOAD LEVEL 2 ----- LOAD LEVEL 3 ----- LOAD LEVEL 4

-----

**FLEXURE**

|         |     |     |     |     |
|---------|-----|-----|-----|-----|
| TRUCK 1 | N/A | N/A | N/A | N/A |
|---------|-----|-----|-----|-----|

4/19/2016 3:22:52 PM

**HRS AASHTO**

2859

**Complete Issue Information**

|               |          |      |          |       |
|---------------|----------|------|----------|-------|
| TRUCK 2       | N/A      | N/A  | N/A      | N/A   |
| CRITICAL      | N/A      | N/A  | N/A      | N/A   |
| REINFORCEMENT |          |      |          |       |
| TRUCK 1       | N/A      | N/A  | N/A      | N/A   |
| TRUCK 2       | N/A      | N/A  | N/A      | N/A   |
| CRITICAL      | N/A      | N/A  | N/A      | N/A   |
| SHEAR         |          |      |          |       |
| TRUCK 1       | [ 5.10 ] | 6.71 | [ 8.51 ] | 11.21 |
| TRUCK 2       | 6.89     | 9.07 | 11.51    | 15.15 |
| CRITICAL      | 5.10     | 6.71 | 8.51     | 11.21 |
| BEARING       |          |      |          |       |
| TRUCK 1       | N/A      | N/A  | N/A      | N/A   |
| TRUCK 2       | N/A      | N/A  | N/A      | N/A   |
| CRITICAL      | N/A      | N/A  | N/A      | N/A   |

-----  
FROM: Brian Goodrich DATE: 2/22/2010 10:49:35 AM Mountain Standard Time  
Submitted e-mail from Vanessa Storlie:

Brian,

I was running the attached file in BRASS through Virtis. Using the 12-50 output, I am verifying that the unfactored dead load moments and shears from LFR are the same as for LRFR. I encountered several cases where Stage 2 dead loads are present in the BRASS output (see table below from the BRASS output files) but I can't find these values in the 12-50 output. I've attached the input, output and CSV file for your reference. For the particular case shown there are 8 girders in the cross-section and the dead load moments and shears for Girder 1 through Girder 5 are the same for both methods, but for Girder 6 through Girder 8 the DC2 moments and shears are different.



**Complete Issue Information**

\*\* GIRDER ACTIONS DUE TO APPLIED STATIC LOAD \*\*

\*\* CONSTRUCTION STAGE 2 \*\*

ACTIONS AND DISPLACEMENTS FOR SUPERIMPOSED DEAD LOAD GROUP #2

LENGTH OF SPAN NO. 1 = 35.36 FEET

LOAD DESCRIPTION IS \*\* DC2 \*\*

| POINT<br>Deflection | MOMENT   | AXIAL | SHEAR   | REACTION | X Deflection | Y       |
|---------------------|----------|-------|---------|----------|--------------|---------|
| NO.                 | K-FT     | KIPS  | KIPS    | KIPS     | FEET         | FEET    |
| 1.000R<br>0.00000   | 0.0      | 0.0   | [ 3.0 ] | 3.0      | 0.00000      |         |
| 1.100               | 9.5      | 0.0   | 2.4     |          | 0.00000      | 0.00054 |
| 1.200               | 16.9     | 0.0   | 1.8     |          | 0.00000      | 0.00101 |
| 1.300               | 22.2     | 0.0   | 1.2     |          | 0.00000      | 0.00139 |
| 1.400               | [ 25.4 ] | 0.0   | 0.6     |          | 0.00000      | 0.00163 |
| 1.500               | 26.4     | 0.0   | 0.0     |          | 0.00000      | 0.00171 |
| 1.600               | 25.4     | 0.0   | -0.6    |          | 0.00000      | 0.00163 |
| 1.700               | 22.2     | 0.0   | -1.2    |          | 0.00000      | 0.00139 |
| 1.800               | 16.9     | 0.0   | -1.8    |          | 0.00000      | 0.00101 |
| 1.900               | 9.5      | 0.0   | -2.4    |          | 0.00000      | 0.00054 |
| 1.100L              | 0.0      | 0.0   | -3.0    | 3.0      | 0.00000      | 0.00000 |

Thanks.

Vanessa

FROM: Brian Goodrich DATE: 2/22/2010 10:53:21 AM Mountain Standard Time

4/19/2016 3:22:52 PM

HRS AASHTO

2861

## Complete Issue Information

Submitted e-mail from Chad Clancy:

Brian,

Please see the following request from Vanessa for the NCHRP 12-78 research project. Please note that these items are for the LFR output from BRASS. Please let me know if you think this will be possible.

Thanks,  
Chad

From: Storlie, Vanessa L.  
Sent: Wednesday, February 10, 2010 11:07 AM  
To: Clancy, Chad M.  
Subject: Additional BRASS Output IDs

Chad,

If you talk to Brian Goodrich could you see if he would be able to include the following 12-50 Report IDs in the LFR output from BRASS:

For Steel Cross-Sections:

40049 – Mr – Factored Moment Capacity at Strength I limit state

40053 – Fr – Allowable Flexural Stress at Strength I limit state for non-compact sections

40093 – Vr – Factored Shear Capacity at Strength I limit state

For Concrete Cross-Sections:

50029 – Mr – Factored Moment capacity at Strength I limit state

50042 – Vr – Factored Shear Capacity at Strength I limit state.

Thanks.

Vanessa

FROM: Brian Goodrich DATE: 2/22/2010 10:54:48 AM Mountain Standard Time  
I forwarded these issues to WYDOT for assignment to a BRASS problem log.

FROM: Brian Goodrich DATE: 5/18/2011 8:30:28 AM Mountain Daylight Time

4/19/2016 3:22:52 PM

HRS AASHTO

2862

**Complete Issue Information**

This issue was assigned to BRASS Incident 42.

|                                                    |
|----------------------------------------------------|
| Issue ID: 9654                                     |
| Subject: XML Export - XML Import ---- missing data |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Thompson, Todd        | 2/23/2010 9:55:31 PM |
| Modified By: tthompson              | 3/1/2010 7:07:33 PM  |
| Priority: High                      |                      |
| Category: Support                   |                      |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 01398 - 51151041.xml |             |
|      | BatchImpGUI.png      |             |
|      | 01395 - 06320198.xml |             |
|      | BatchImportDB.png    |             |
|      | 00097 - 51150051.xml |             |
|      | 01397 - 51150082.xml |             |
|      | 01396 - 51150099.xml |             |
|      | 00098 - 51150049.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Todd Thompson DATE: 2/23/2010 4:56:56 PM Eastern Standard Time  
I happened to notice today after I exported 6 bridges from a 6.0 DB and Imported them into a 6.1 DB - that the county number came across for only 2 of those bridges. The other 4 bridges were blank.

I'll attach the 6 files.

FROM: Todd Thompson DATE: 2/23/2010 4:59:52 PM Eastern Standard Time  
This does make we wonder and question if there are other data items that did not get across.

FROM: Todd Thompson DATE: 2/25/2010 9:08:35 AM Eastern Standard Time  
Appears this lies in that there was not a value for that specific county in the paramatrs table. So it didn't import anything for the county.

Guess I'm not sure if this is the right behaviour one would expect. I thought the county value would still import, just it wouldn't display a name - just the value. Instead, if appears if there is not a match, then there is no value for county.

FROM: Mehrdad Ordoobadi DATE: 2/25/2010 10:07:56 AM Eastern Standard Time  
I imported the 6 XML files using batch import. All of the county information were transfered correctly. (See attached screenshots)

The only way that this problem could happnen is if you use File/Import to import each XML file, then Click Apply or OK in the Bridge Description window. Clicking OK or Apply will replace the county with NULL value because it cannot find the matching row in the paramters table.

FROM: Todd Thompson DATE: 3/1/2010 2:07:33 PM Eastern Standard Time  
I used the Batch Import

|                        |
|------------------------|
| Issue ID: 9655         |
| Subject: POI generator |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 2/24/2010 1:44:13 PM |
| Modified By: jduray            | 5/12/2010 6:25:30 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |

**Complete Issue Information**

|           |             |
|-----------|-------------|
| Suspended | Enhancement |
|-----------|-------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 2/24/2010 8:50:12 AM Eastern Standard Time  
 For parabolic reinforced concrete beams, there are a large number of cross-sections generated using the wizard. Often when we run the structure the number of cross-sections exported exceed the capabilities of the engine. In my opinion, the wizard should not create more cross-sections than can be analyzed with the program.

FROM: Herman Lee DATE: 2/24/2010 9:08:17 AM Eastern Standard Time  
 Separating bridge model dependency from analysis engines is one of the strengths in Virtis. This allows switching to another engine without changing the bridge data. I think the engine should check the limit and adjust the number of cross sections during the export process. Please let us know your comment.

FROM: Herman Lee DATE: 2/24/2010 9:47:28 AM Eastern Standard Time  
 Beckie's e-mail received on 2/24/2010:

=====  
 Sounds reasonable.

Beckie Curtis  
 Load Rating Engineer  
 MDOT - Construction and Technology Division Bridge Operations Unit  
 =====

FROM: Jim Duray DATE: 5/12/2010 2:22:42 PM Eastern Daylight Time  
 Consider skipping in the export POI if change in rebar area less than certain amount and if location interval is less than a certain amount.

FROM: Jim Duray DATE: 5/12/2010 2:25:30 PM Eastern Daylight Time  
 Make sure this is included in the AASHTO LFR.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 9662                                                       |
| Subject: Problems with copying girderlines in a girder system bridge |

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Colgrove, George | 3/3/2010 1:16:19 PM  |
| Modified By: gcolgrove         | 5/14/2010 5:44:26 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 3/3/2010 8:17:44 AM Eastern Standard Time  
There is a problem with copying a girder line when entering a girder system. I cannot find a reason why. Somehow the copied girder line gets corrupted and wont analyze. I have tried to export and re-import to no avail. The only thing that works is to re-enter the girder line from scratch. I have come across this in my employment at VT, and have seen it here in some of the support questions.

George

FROM: Joseph Ihnat DATE: 3/3/2010 1:28:22 PM Eastern Standard Time  
Can you provide some specific information on how to reproduce this?

FROM: Joseph Ihnat DATE: 3/5/2010 11:08:29 AM Eastern Standard Time  
The specific issue that George provided in this case turned out to be a data entry error. He will monitor this issue and may resubmit at a later time.

FROM: George Colgrove DATE: 5/14/2010 8:21:26 AM Eastern Daylight Time

4/19/2016 3:22:53 PM

HRS AASHTO

2866

**Complete Issue Information**

I am not sure why, but there is a data

|                                        |
|----------------------------------------|
| Issue ID: 9676                         |
| Subject: Sidewalk Load Effects in OPIS |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Colgrove, George | 3/18/2010 2:46:47 PM |
| Modified By: hlee              | 5/3/2010 12:11:57 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 3/18/2010 10:46:55 AM Eastern Daylight Time  
 From: Colgrove, George  
 Sent: Thursday, March 18, 2010 10:01 AM  
 To: Kennelly, Krishna  
 Cc: Duray, Jim  
 Subject: Side walk Dead Load Effect for the four Stage 2 conditions

4/19/2016 3:22:56 PM

HRS AASHTO

2867

**Complete Issue Information**

Krishna,

Enclosed is the bridge file used for this test. The model used is the one with a sidewalk. I checked this with code available today. We have good results for both Evenly distributed over girders, and Tributary Area. For Transverse Simple-Beam Analysis we do get good correlation for Girder 1, but nothing comes up for girder 2. For Transverse Continuous-Beam Analysis we get errors on the analysis. Below you can find my results.

Side walk data

|                |     |        |          |          |      |
|----------------|-----|--------|----------|----------|------|
| Sidewalk width | 60  | inches | Area     | 2.083333 | ft^2 |
| Thickness      | 5   | inches | Concrete | 0.15     | kcf  |
| Length         | 161 | ft^2   | unit wt  | 0.3125   | k/ft |
| Live Load      | 1   | ksf    | Weight   | 50.3125  | kips |

STAGE 2 Dead Load distribution

Evenly distributed over girders PASSED - GWC 03/17/10

Hand calcs

|          |          |        |                                        |
|----------|----------|--------|----------------------------------------|
| No Gird. | 4        |        |                                        |
| Reaction | 6.289063 | kips   | Total weight / no. beams / 2 reactions |
| Max M    | 253.1348 | ft-kip |                                        |

G1(BRASS)

G2(BRASS)

|                      |        |       |            |          |        |      |
|----------------------|--------|-------|------------|----------|--------|------|
| Distance             | Moment | Shear | Reaction   | Distance | Moment | Shea |
| 4/19/2016 3:22:56 PM |        |       | HRS AASHTO |          |        | 2868 |



**Complete Issue Information**

|       |        |       |      |       |        |       |      |     |     |     |
|-------|--------|-------|------|-------|--------|-------|------|-----|-----|-----|
| 96.6  | 243.01 | -1.26 |      | 96.6  | 243.01 | -1.26 |      | YES | YES |     |
| 112.7 | 212.63 | -2.52 |      | 112.7 | 212.63 | -2.52 |      | YES | YES |     |
| 128.8 | 162.01 | -3.77 |      | 128.8 | 162.01 | -3.77 |      | YES | YES |     |
| 144.9 | 91.13  | -5.03 |      | 144.9 | 91.13  | -5.03 |      | YES | YES |     |
| 161   | 0      | -6.29 | 6.29 | 161   | 0      | -6.29 | 6.29 | YES | YES | YES |

**G1(OPIS)**

**G2(OPIS)**

| Distance | Moment   | Shear  | Reaction | Distance | Moment | Shea  |
|----------|----------|--------|----------|----------|--------|-------|
| r        | Reaction | Equal? |          |          |        |       |
| 0        | 0        | 6.29   | 6.29     | 0        | 0      | 6.29  |
| 16.1     | 91.13    | 5.03   |          | 16.1     | 91.13  | 5.03  |
| 32.2     | 162.01   | 3.77   |          | 32.2     | 162.01 | 3.77  |
| 48.3     | 212.63   | 2.52   |          | 48.3     | 212.63 | 2.52  |
| 64.4     | 243.01   | 1.26   |          | 64.4     | 243.01 | 1.26  |
| 80.5     | 253.13   | 0      |          | 80.5     | 253.13 | 0     |
| 96.6     | 243.01   | -1.26  |          | 96.6     | 243.01 | -1.26 |
| 112.7    | 212.63   | -2.52  |          | 112.7    | 212.63 | -2.52 |
| 128.8    | 162.01   | -3.77  |          | 128.8    | 162.01 | -3.77 |
| 144.9    | 91.13    | -5.03  |          | 144.9    | 91.13  | -5.03 |

4/19/2016 3:22:57 PM

**HRS AASHTO**

2869

**Complete Issue Information**

| Distance | Moment         | Shear | Reaction  | Distance | Moment | Shea |
|----------|----------------|-------|-----------|----------|--------|------|
| r        | Reaction       |       |           |          |        |      |
| 0        | 0 25.16 25.16  |       | 0 0 0     | 0        |        |      |
| 16.1     | 364.51 20.13   |       | 16.1 0 0  |          |        |      |
| 32.2     | 648.02 15.09   |       | 32.2 0 0  |          |        |      |
| 48.3     | 850.52 10.06   |       | 48.3 0 0  |          |        |      |
| 64.4     | 972.03 5.03    |       | 64.4 0 0  |          |        |      |
| 80.5     | 1012.53 0      |       | 80.5 0 0  | 0        |        |      |
| 96.6     | 972.03 -5.03   |       | 96.6 0 0  |          |        |      |
| 112.7    | 850.53 -10.06  |       | 112.7 0 0 |          |        |      |
| 128.8    | 648.03 -15.09  |       | 128.8 0 0 |          |        |      |
| 144.9    | 364.52 -20.12  |       | 144.9 0 0 |          |        |      |
| 161      | 0 -25.16 25.16 |       | 161 0 0   | 0        |        |      |

G1(OPIS)

G2(OPIS)

(EXPECTED)

| Distance | Moment        | Shear | Reaction | Distance | Moment | Shea |
|----------|---------------|-------|----------|----------|--------|------|
| r        | Reaction      |       |          |          |        |      |
| 0        | 0 25.16 25.16 |       | 0 0 0    | 0        |        |      |
| 16.1     | 364.51 20.12  |       | 16.1 0 0 |          |        |      |
| 32.2     | 648.02 15.09  |       | 32.2 0 0 |          |        |      |

4/19/2016 3:22:58 PM

HRS AASHTO

2870

**Complete Issue Information**

161 0 -25.16 25.16 161 0 0 0

Transverse Simple-Beam Analysis FAILED - GWC 03/18/10

Stage 2 Sidewalk Load not being calculated for G2 as it was for BRASS

Hand Calcs

|                    |      |    |             |          |        |
|--------------------|------|----|-------------|----------|--------|
| Fascia To Girder 1 | 4.25 | ft | G1 Reaction | 28.54267 | kip    |
| Girder Spacing     | 13   | ft | G2 Reaction | -3.38642 | kip    |
|                    |      |    | Max M G1    | 1148.842 | ft-kip |
|                    |      |    | Max M G2    | -136.303 | ft-kip |

G1(BRASS)

G2(BRASS)

| Distance | Reaction | Moment | Shear | Reaction | Distance | Moment | Shea  |
|----------|----------|--------|-------|----------|----------|--------|-------|
| 0        | 0        | 28.54  | 28.54 | 0        | 0        | -3.39  | -3.39 |
| 16.1     | 413.58   | 22.83  |       | 16.1     | -49.07   | -2.71  |       |
| 32.2     | 735.26   | 17.13  |       | 32.2     | -87.24   | -2.03  |       |
| 48.3     | 965.02   | 11.42  |       | 48.3     | -114.49  | -1.35  |       |
| 64.4     | 1102.88  | 5.71   |       | 64.4     | -130.85  | -0.68  |       |
| 80.5     | 1148.83  | 0      |       | 80.5     | -136.3   | 0      |       |

4/19/2016 3:23:00 PM

HRS AASHTO

2871

**Complete Issue Information**

| r     | Reaction |        |       |       |   |   |   |
|-------|----------|--------|-------|-------|---|---|---|
| 0     | 0        | 28.54  | 28.54 | 0     | 0 | 0 | 0 |
| 16.1  | 413.58   | 22.83  |       | 16.1  | 0 | 0 |   |
| 32.2  | 735.26   | 17.13  |       | 32.2  | 0 | 0 |   |
| 48.3  | 965.03   | 11.42  |       | 48.3  | 0 | 0 |   |
| 64.4  | 1102.89  | 5.71   |       | 64.4  | 0 | 0 |   |
| 80.5  | 1148.84  | 0      |       | 80.5  | 0 | 0 |   |
| 96.6  | 1102.89  | -5.71  |       | 96.6  | 0 | 0 |   |
| 112.7 | 965.03   | -11.42 |       | 112.7 | 0 | 0 |   |
| 128.8 | 735.26   | -17.13 |       | 128.8 | 0 | 0 |   |
| 144.9 | 413.58   | -22.83 |       | 144.9 | 0 | 0 |   |
| 161   | 0        | -28.54 | 28.54 | 161   | 0 | 0 | 0 |

Transverse Continuous-Beam Analysis FAILED - GWC 03/18/10

Stage 2 Sidewalk Load not being calculated at all - Analysis Failed!

Error - Unable to determine sidewalk loads entered on the Structure Typical Section window Sidewalk tab!

Error - Unable to determine sidewalk loads entered on the Structure Typical Section window!

Reactions from RISA

G1 29.422 kip G3 1.309 kip

4/19/2016 3:23:01 PM

HRS AASHTO

2872

**Complete Issue Information**

|       |         |        |       |       |         |       |       |
|-------|---------|--------|-------|-------|---------|-------|-------|
| 0     | 0       | 29.45  | 29.45 | 0     | 0       | -5.42 | -5.42 |
| 16.1  | 426.67  | 23.56  |       | 16.1  | -78.51  | -4.33 |       |
| 32.2  | 758.52  | 17.67  |       | 32.2  | -139.58 | -3.25 |       |
| 48.3  | 995.55  | 11.78  |       | 48.3  | -183.2  | -2.17 |       |
| 64.4  | 1137.77 |        | 5.89  | 64.4  | -209.36 | -1.08 |       |
| 80.5  | 1185.18 |        | 0     | 80.5  | -218.09 | 0     |       |
| 96.6  | 1137.78 |        | -5.89 | 96.6  | -209.36 | 1.08  |       |
| 112.7 | 995.56  | -11.78 |       | 112.7 | -183.19 | 2.17  |       |
| 128.8 | 758.53  | -17.67 |       | 128.8 | -139.58 | 3.25  |       |
| 144.9 | 426.67  | -23.56 |       | 144.9 | -78.51  | 4.33  |       |
| 161   | 0       | -29.45 | 29.45 | 161   | 0       | 5.42  | -5.42 |

G1(OPIS) (UNEXPECTED)

G2(OPIS) (UNEXPECTED)

| Distance | Moment   | Shear | Reaction | Distance | Moment | Shea |
|----------|----------|-------|----------|----------|--------|------|
| r        | Reaction |       |          |          |        |      |
| 0        | 0        | 0     | 0        | 0        | 0      |      |

|      |   |   |  |      |   |   |
|------|---|---|--|------|---|---|
| 16.1 | 0 | 0 |  | 16.1 | 0 | 0 |
|------|---|---|--|------|---|---|

|      |   |   |  |      |   |   |
|------|---|---|--|------|---|---|
| 32.2 | 0 | 0 |  | 32.2 | 0 | 0 |
|------|---|---|--|------|---|---|

|      |   |   |  |      |   |   |
|------|---|---|--|------|---|---|
| 48.3 | 0 | 0 |  | 48.3 | 0 | 0 |
|------|---|---|--|------|---|---|

4/19/2016 3:23:02 PM

HRS AASHTO

2873

## Complete Issue Information

FROM: Herman Lee DATE: 4/13/2010 11:50:54 AM Eastern Daylight Time  
The bridge file used for the test is in G:\PROJ\VIRTIS\TESTING\Version 6.2.0\Alpha\FP5 - AASHTO  
Engines - Adding Steel\EXAMPLE 01 - Training Bridge 1 MOD\EXAMPLE 01A - Sidewalk

FROM: Herman Lee DATE: 4/26/2010 12:05:45 PM Eastern Daylight Time

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 9684                                                   |
| Subject: Cross Sections window Apply button locks up the program |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 3/24/2010 6:57:10 PM |
| Modified By: tarmbrecht        | 6/14/2010 6:55:44 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Ihnat, Joseph   | Assigned  | High     | Bug      |
|                 | Duplicate |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RPG Bridge.pdf      |             |
|      | 001-0012.xml        |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 3/24/2010 2:57:55 PM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT:

4/19/2016 3:23:05 PM

HRS AASHTO

2874

**Complete Issue Information**

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====
I'm in the process of reviewing a RPG bridge. When I'm within the "Cross Sections" window (shown below) and click "Apply" the program locks up and I get the error message (shown below at the bottom), the program then automatically shuts down. Attached is the xml file for the bridge that this is occurring on. If I make the changes necessary and then click "OK" the program does not lock up, only when clicking "Apply".

<<001-0012.xml>>
Bob Perkins
(217)557-5701
Robert.Perkins@illinois.gov
=====

FROM: Joseph Ihnat DATE: 3/24/2010 3:30:56 PM Eastern Daylight Time
Duplicate of 9548. This is fixed for version 6.2

FROM: Tim Armbrecht DATE: 6/14/2010 2:55:40 PM Eastern Daylight Time
Bob tested this in 6.2 beta. It appears to be working correctly. Accepted.

Issue ID: 9686
Subject: Error message - Girder Spacing Display Type is set to "Perpendicular" but the girders are not parallel

Folder: /Virtis/Support Center
Primary Contact: Lee, Herman
Submitted By: Armbrecht, Tim 3/25/2010 1:24:33 PM
Modified By: hlee 8/20/2010 5:42:23 PM
Priority: High
Category: Support

**History**

Table with 4 columns: Primary Contact, Status, Priority, Category. Rows include Lee, Herman (New, High, Bug), Ihnat, Joseph (Assigned), and Lee, Herman (Resolved, Support).

**Contacts**

4/19/2016 3:23:05 PM

HRS AASHTO

2875

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | CantDeleteWSLoadCase<br>(0100287).xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 3/25/2010 9:29:11 AM Eastern Daylight Time  
From my consultant (Souther):

In the model, GirderNotParallelError-v61(0161009).xml, I am getting an error message when attempting to open the Framing Plan Detail or Structure Typical Section stating "...Girder Spacing Display Type is set to "Perpendicular" but the girders are not parallel...". When I examine the input data I can't find logic for this message.

It's possible that it could be related to the fact that the dimensions were converted from metric and are therefore mostly have six or more non-zero decimal places. In a different copy, after rounding them to 4 & 3 decimals (for feet & inches respectively), the error no longer occurred and the analysis ran successfully.

FROM: Herman Lee DATE: 8/20/2010 11:46:05 AM Eastern Daylight Time

I'm able to fix the geometry by the following steps:

1. Open the Structure Typical Section window and select Yes for the warning message to change "Girder Spacing Display" to "Along Support".
2. Click OK to close the Structure Typical Section window.
3. Open the Framing Plan Details window and change the selection back to "Perpendicular to girder".
4. Click OK to close the Framing Plan Details window.

I'm not able to locate or duplicate the cause of this issue.

|                                      |
|--------------------------------------|
| Issue ID: 9688                       |
| Subject: Can't Delete Load Case "WS" |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 3/29/2010 7:22:31 PM |
| Modified By: tarmbrecht        | 4/13/2010 1:27:52 PM |
| Priority: High                 |                      |

4/19/2016 3:23:05 PM

HRS AASHTO

2876



## Complete Issue Information

Category: Support

## History

| Primary Contact                     | Status   | Priority | Category |
|-------------------------------------|----------|----------|----------|
| Ihnat, Joseph<br>Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                                     | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Girder Load Type.png |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrrecht DATE: 3/29/2010 3:25:24 PM Eastern Daylight Time  
From my consultant (Souther):

In the attached Virtis Model, the load case "WS" cannot be deleted. All usages of the load case have been removed, which was verified by a search of the "Review" text. Nevertheless, when I attempt to do the delete, I get an error message stating, "Cannot delete load case since it is being used elsewhere!" I'm guessing that the data has been corrupted in some way.

FROM: Joseph Ihnat DATE: 3/29/2010 3:49:26 PM Eastern Daylight Time  
For girder members 1,2 and 3, Member Loads - Settlement was set to "WS" but no data was entered in the grid.  
After changing these to "None" I was able to delete Load Case "WS".  
I used Report Tool to find this.

FROM: Tim Armbrrecht DATE: 4/13/2010 9:27:52 AM Eastern Daylight Time  
Joe, from my consultant:

Regarding VI 9688 (Can't Delete Load Case "WS"), I verified Baker's solution. However, while the Load Case is shown in the BWS Report under Report Tools, the Load Case Name does not display under Member Loads - Settlement portion of the report generated by clicking <View BWS Reports> icon. I tested this by assigning values to Settlement and by changing from WS to another load case.

4/19/2016 3:23:05 PM

HRS AASHTO

2877

## Complete Issue Information

The latter method of generating a report for review is much preferred since it will usually provide all the data needed for reviews with far less effort than required using the "Report Tools" method.

|                                            |
|--------------------------------------------|
| Issue ID: 9693                             |
| Subject: Incorrect load type is showing up |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kennelly, Krisha      | 3/30/2010 6:08:33 PM |
| Modified By: mordoobadi             | 5/1/2010 10:28:31 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Krisha Kennelly DATE: 3/30/2010 2:08:43 PM Eastern Daylight Time  
See attached screenshot. GirderDeadLoad shouldn't show up in this list.

Joe, please investigate and assign as accordingly.

FROM: Joseph Ihnat DATE: 4/27/2010 1:12:59 PM Eastern Daylight Time  
Modified the UI.

Since this was available in version 6.1, the migration wizard needs to check if it is in use (plug in D,DC instead).

Likewise, the import needs to check for this.

FROM: Mehrdad Ordoobadi DATE: 5/1/2010 6:25:26 PM Eastern Daylight Time

We should not do different things on different customer databases during migration. I think we should keep the Girder Dead Load in the type table.

4/19/2016 3:23:06 PM

HRS AASHTO

2878

## Complete Issue Information

Issue ID: 9699

Subject: PS Concr Beam Stirrup Wizard Errors & Problems

Folder: /Virtis/Support Center

Primary Contact: Li, Xinmei

Submitted By: Best, Richard

3/31/2010 3:37:59 PM

Modified By: xli

5/13/2011 2:55:46 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:06 PM

HRS AASHTO

2879

## Complete Issue Information

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | FlaredBmX-SecDisplayWrong<br>(0160420).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Best DATE: 3/31/2010 11:49:20 AM Eastern Daylight Time

There are multiple problems with the shear stirrup wizard for prestressed beams, which render it virtually unworkable for multi-span continuous PS I-beams. Refer to the Virtis model export, PSShearStirrupWizardProbs.xml.

First, when attempting to apply symmetry, the application doesn't appear to recognize the full length of the beam in the applicable span. For Span 1, which has an end-to-end beam length of 81.8334', the following message was produced...Attached

The 40.92 ft is actually the correct value but for some reason Virtis is erroneously reporting 41.42 ft. (However, in this case, when <OK> is selected the stirrups are laid out correctly in the model, except for the second issue.)

Second, when applying "Finish by symmetry" after entering multiple spans the above warning message only appears for one of them, even when it should apply to more than one of them. It would seem that the best solution would be to apply the Stirrup Wizard to each span separately, which might solve more than one of these issues.

Third, second, after entering the data for one span, then selecting another span and subsequently returning to the previously entered span, stirrup data is not visible. However, when applying the Wizard the data entered for the previous span is present. Even though the data is not lost, this problem prevents review and correction of the previously entered data, which is essential.

Fourth, when "Extends to deck" is selected it applies to all stirrups, even though all stirrups may not extend into the deck. This should be like in the manual stirrup entry where it's only selected for the applicable bars.

Fifth, with regard to "Start Distance", the operation of the Wizard is inconsistent with the way that stirrups are and have always been entered. When entering stirrups manually, there is and has never been a stirrup added at the Start location but only at the spacing specified to the right of it. Conversely, when the Wizard is applied, a stirrup is placed at the beginning (and at the end if symmetry is used). I think it would be best to make the Wizard work consistent with manual entry in order to avoid confusion, reducing the chance of data entry error.

Sixth, when stirrups already exist clicking the Stirrup Wizard button brings up the following warning dialogue box...Attached

Aside from the typos ("Stirrup" & "reinforcements" should be "Stirrups" & "reinforcement" or "reinforcement entries") it states, "...may delete...", when in actuality all stirrup information is always deleted. At a minimum, the information in the warning should be corrected so that it's accurate. Ideally, the programming should be modified so that only the information in the spans that the wizard is applied to is deleted. Stirrup information for all other spans should not be deleted.

Submitted by Richard Best for Tim Armbrecht

Problem reported by Tim Souther 3/31/2010

Screen prints and xml as attachments

4/19/2016 3:23:06 PM

HRS AASHTO

2880

## Complete Issue Information

FROM: Xinmei Li DATE: 10/6/2010 10:11:21 AM Eastern Daylight Time

#1 is not a bug. The span length of the beam is 40.92, but shear reinforcement is defined from end to end of the beam instead of support to support of the beam, so the 6" projections is added to 40.92'.

#2 is not a bug. In the attached bridge, you have 3 spans, if you decide to finish by symmetry, you need to define stirrups in the first span and half of the second span. So validation only checks the first span.

#3 is a bug. It is fixed for the next release.

#4 could be an enhancement. Now if you decide to define stirrups with wizard you have to set them all "extends to deck" or set them all "not extends to deck" and then make changes in the stirrup window.

#5 is not a bug. This is done on purpose. Wizard is a convenient way to create stirrups.

#6 Typo is fixed for next release. The suggestion about deleting partial stirrup information could be an enhancement.

FROM: Srujana Thogaru DATE: 4/8/2011 11:01:20 AM Eastern Daylight Time

Tested and found that #3 and #6 has been fixed for 6.3

FROM: Tim Ambrecht DATE: 5/13/2011 9:55:30 AM Eastern Daylight Time

Accepted.

|                                                |
|------------------------------------------------|
| Issue ID: 9705                                 |
| Subject: Flared Beams Cross-Section View Wrong |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Best, Richard    | 4/1/2010 8:26:36 PM  |
| Modified By: jihnat            | 5/13/2011 3:02:05 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |
|                 | Closed   |          |          |

## Contacts

4/19/2016 3:23:06 PM

HRS AASHTO

2881

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S-33-22.xml         |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Richard Best DATE: 4/1/2010 4:28:14 PM Eastern Daylight Time

In the attached example, "FlaredBmX-SecDisplayWrong(0160420).xml" a 4-span continuous with flared (splayed) wide-flange beams on 36.4667 degree skewed supports the schematic view of the superstructure cross-section seems to be wrong.

The spacings along the supports were input as 6.9761' at the first support and 11.2597' at the fifth support. This would correspond, respectively to spacings at a right angle to the superstructure definition line of 5'-7 5/16" & 9'-0 11/16". However, what is displayed ranges from 5'-11 9/16" to 6'-5 1/2" for the first support and from 9'-5 5/16" to 10'-2 11/16" at the fifth support. Not only do the values not match the appropriate values but each one is different from the others.

In addition, the farthest right beam appears in the diagram outside of the right edge of the deck. It does appear that the overhang value on the right is correct at 2'-10 1/4" even though it is displayed upside down. Also, the computed analysis results appear to be reasonable.

Submitted by Richard Best for Tim Armbrecht  
Problem reported by Tim Souther 4/1/2010

FROM: Joseph Ihnat DATE: 12/7/2010 1:41:47 PM Eastern Standard Time  
Fixed for version 6.3

FROM: Xinmei Li DATE: 3/28/2011 3:22:47 PM Eastern Daylight Time  
Verified fixed for 6.3 Alpha6

FROM: Tim Armbrecht DATE: 5/13/2011 9:55:08 AM Eastern Daylight Time  
Accepted.

|                                     |
|-------------------------------------|
| Issue ID: 9719                      |
| Subject: Blocking ASD for Prestress |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Colgrove, George | 4/12/2010 11:18:32 AM |

4/19/2016 3:23:07 PM

HRS AASHTO

2882

**Complete Issue Information**

|                       |                       |
|-----------------------|-----------------------|
| Modified By: hlee     | 5/30/2010 11:20:03 PM |
| Priority: High        |                       |
| Category: Enhancement |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: George Colgrove DATE: 4/12/2010 7:23:00 AM Eastern Daylight Time  
 From: Colgrove, George  
 Sent: Monday, April 12, 2010 7:17 AM  
 To: Kennelly, Krisha  
 Subject: RE: Virtis questions

Krisha,

That's good to know. However when you select ASD in any place you do get different rating results when compared with the LFD settings. I think that if the beam type is prestress, the ASD selections should automatically switch to LFD (or rather not allow ASD in the default rating method dropdown) and the ASD analysis module selection dropdown should be hidden in the Member Alternative Description dialog.

- George

From: Kennelly, Krisha  
 Sent: Friday, April 09, 2010 7:31 PM  
 To: Colgrove, George  
 Subject: RE: Virtis questions

That is correct that prestress ratings are not done in ASD. In the LFD/ASD bridge rating manual, the

4/19/2016 3:23:07 PM

HRS AASHTO

2883

## Complete Issue Information

section for ASD for prestress beams says to use the LFD method for ps beams. So if you pick ASD in Virtis, you will get the LFD ratings only.

I think the error about the hinge you get in Alpha 3 was fixed by Herman on Wednesday. The file was in the gui/abxvirtisstdlfrd directory.

From: Bridgeware,  
Sent: Friday, April 09, 2010 3:02 PM  
To: Kennelly, Krisha  
Subject: FW: Virtis questions

Krisha,

Got an interesting issue revealed in this support call. When you set the Rating Method to ASD in the Analysis Settings and the Default Rating method set to ASD, then run the analysis. The resulting rating table shows LFD as the rating method. This is in VO 6.1. I ran it in 6.2 Alpha 1 and 2 and it did the same thing, but got different rating values. I ran it in Alpha 3 and it gave me this error:

Error generating BRASS span commands!  
Error generating HINGE command!  
No hinge location sets are defined!  
Error getting hinge locations!

Am I right in that prestress ratings are not done in ASD?

- George

From: Nguyen, Hanh (DOT) [mailto:Hanh.Nguyen@state.ma.us]  
Sent: Friday, April 09, 2010 1:02 PM  
To: Bridgeware,  
Subject: RE: Virtis questions

Hi George,

Thank you for your responded attached is the rating results of member B1 at POI 0.4 and 0.5 of the span. Please note that I don't have this problem with other bridge.

Hanh,

Thanks,

---

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, April 09, 2010 12:33 PM  
To: Nguyen, Hanh (DOT)  
Cc: Bridgeware,  
Subject: RE: Virtis questions  
Hi Hanhn

4/19/2016 3:23:07 PM

HRS AASHTO

2884



**Complete Issue Information**

I just gave you a call and left a message. I ran the model in ASD, LFD and LRFR and everything rated fine for each method. I could not get a low rating as you related in your message. Will you please send me more information. What methodology are you rating with (I am assuming ASD)? I ran the model exactly as you sent it. Are there specifics about how you are analyzing the model? Will you please send me either the output file or a screenshot of the output in the view analysis report, wherever the rating factor you mentioned is published.

Thanks,

- George Colgrove

From: Nguyen, Hanh (DOT)  
Sent: Friday, April 09, 2010 10:41 AM  
To: Bridgeware,  
Subject: Virtis questions

<<S-33-22.xml>>

To Whom It May Concern:

My name is Hanh Nguyen I work for MassDOT. The rating results of the attached file shown very low rating at POI of 0.4 of the span and control by Ultimate Strength Shear, which is does not make cense. The rating results at midspan are ok. See attached file for details. If there are any questions please call me at 617-973-8086. Your response to this matter is appreciated.

Thanks,

---

Hanh Nguyen  
Consultant Bridge Design  
Massachusetts Department of Transportation, Highway Division  
10 Park Plaza  
Boston, MA 02116  
Phone: 617-973-8086. Fax: 617-973-7990  
Hanh.nguyen@state.ma.us

FROM: Herman Lee DATE: 4/12/2010 1:11:12 PM Eastern Daylight Time  
Related to Incident 7974.

FROM: Herman Lee DATE: 5/30/2010 7:16:33 PM Eastern Daylight Time  
Duplicate of Incident 7974.

|                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 9734<br>Subject: Enhancement Request: Alternate distribution factors for "Concrete Beams used in Multibeam Decks" |
|-----------------------------------------------------------------------------------------------------------------------------|

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center                    |
| Primary Contact: Lee, Herman                      |
| Submitted By: Armbrecht, Tim 4/15/2010 2:26:53 PM |
| Modified By: hlee 5/13/2014 5:58:21 PM            |

4/19/2016 3:23:07 PM

**HRS AASHTO**

2885

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Bug      |
|                   | Assigned |          |          |
| Kennelly, Krishna |          |          |          |
| Thogaru, Srujana  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0222027.xml         |             |
|      | VI 9735.pdf         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 4/15/2010 10:33:59 AM Eastern Daylight Time

We would like Virtis and Opis to include an option to use the alternate distribution factors for Concrete Beams used in Multibeam Decks, Cross section (g)-"if connected only enough to prevent relative vertical displacement at the interface" in Table 4.6.2.2.2b-1 on page 4-36 of the LRFD specs. It turns out that our Design Section has determined that Illinois should be using these formulas instead of the ones on the previous page, which is what Virtis/Opis is currently using. I am proposing to use service units and would like to see this in the 6.3 release, assuming that it is an easy fix. Thanks, Tim

FROM: Herman Lee DATE: 5/13/2014 1:56:54 PM Eastern Daylight Time

Implemented the option to specify sufficiently connected PS box beam for live load distribution factor calculations in the upcoming 6.6 release.

4/19/2016 3:23:07 PM

HRS AASHTO

2886

**Complete Issue Information**

Issue ID: 9735  
Subject: AASHTO Engine for LRFR much lower than BRASS

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Armbrecht, Tim 4/15/2010 2:56:30 PM  
Modified By: sthogaru 6/29/2011 2:08:13 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 4/15/2010 11:01:24 AM Eastern Daylight Time  
For this PPC I-beam structure my consultant (Chamberlain) noted that there is a big disparity between the AASHTO Engine and BRASS results. With no wearing surface applied, BRASS determines the RF to be 1.014 Inventory for truck pair, and AASHTO Engine determines it to be 0.136. I also note that the only live load listed in the results is the 90%(truck Pair + Lane) Load, apparently the other live load cases (axle load, tandem) were not analyzed. File attached, please advise.

FROM: Herman Lee DATE: 4/16/2010 9:18:42 PM Eastern Daylight Time  
I'm able to reproduce the BRASS 1.014 RF with the "2 - 1st N Int" member. When switched to the AASHTO Engine, the analysis failed while computing the LL distribution factors.

Developer Note:  
The development build asserts inside CAbaLrfdDistFactorCalc::ComputeMultiLaneLeverRule.

4/19/2016 3:23:07 PM

HRS AASHTO

2887

## Complete Issue Information

FROM: Krisha Kennelly DATE: 4/20/2010 2:26:45 PM Eastern Daylight Time

1. "2 - 1st N Int" member does not analyze with Virtis LRFR due to problem computing distribution factor for member that is not under a travelway.

2. Member "3-2nd N Int - x" is the member that produces RF = 0.136

Comparison of Virtis LRFR distribution factors and BRASS distribution factors shows the factors are essentially the same between the 2 programs. So have to investigate what is causing the difference.

FROM: Krisha Kennelly DATE: 5/2/2010 2:44:01 PM Eastern Daylight Time

1. DF is fixed for version 6.2. but final rating result is still too small (0.136). only 90% (truck pair + lane) shows up.

2. still haven't found source of this problem.

FROM: Krisha Kennelly DATE: 6/20/2011 10:43:14 AM Eastern Daylight Time  
Srujana - please investigate

FROM: Srujana Thogaru DATE: 6/22/2011 1:13:21 PM Eastern Daylight Time

Tested with 6.3 Beta 3 and was found to be fixed due to other updates, Please see the attached PDF for reference.

Issue ID: 9832

Subject: Delete Data Sources from Virtis Opis - Enhancement Request

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Thompson, Todd 4/29/2010 3:43:39 PM

Modified By: hlee 4/29/2010 5:06:19 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:07 PM

HRS AASHTO

2888

**Complete Issue Information**

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Shear at interior support.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 4/29/2010 11:45:25 AM Eastern Daylight Time  
I would like to see the ability to delete obsolete or otherwise unused data sources from showing up within the virtis opis application. One can do this by editing the registry, but this should be availalbe from the application. See VI-9822 for more information

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 9835                                                                      |
| Subject: Incorrect live load shear at interior support in Virtis LRFR and Opis LRFD |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 4/29/2010 5:08:15 PM |
| Modified By: hlee              | 4/29/2010 5:18:08 PM |

**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: Bug  |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L1230.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 4/29/2010 1:08:33 PM Eastern Daylight Time  
Please see attached results graph.

Fixed for 6.2 Release.

**Complete Issue Information**

|                                                   |
|---------------------------------------------------|
| Issue ID: 9850                                    |
| Subject: Analysis Module Not Selected - in Madero |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Dokken, Ronald   | 4/30/2010 7:36:37 PM |
| Modified By: hlee              | 5/3/2010 12:08:07 AM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Ronald Dokken DATE: 4/30/2010 3:41:53 PM Eastern Daylight Time  
I receive the following messages when rating timber deck:

Please open superstructure definition's deck window and select an analysis module for the type of analysis you are trying to do.  
Analysis Module is not selected  
Unable to configure event for selected analysis method!  
No rows returned from database when expecting one row.

Madero module HAS BEEN selected when going back to deck window, yet message persists.

FROM: Herman Lee DATE: 4/30/2010 3:44:15 PM Eastern Daylight Time  
Please export your bridge to a XML file and attach to this incident for our investigation.

4/19/2016 3:23:08 PM

HRS AASHTO

2891

**Complete Issue Information**

FROM: Herman Lee DATE: 5/2/2010 7:42:43 PM Eastern Daylight Time  
When I tried to rate the "13 beam span" superstructure definition with the "HS 20 Rating" template, I got the following error message.

=====  
Error converting Virtis/Opis steel cross sections or schedules to 'general' cross sections!  
07:56:31 PM - Line 8847 in source file .\EngineExport.cpp.

Unable to DoSteelWebPlateRangeSetPtr->MoveFirst in ResetChangePointGeneration!  
07:56:31 PM - Line 2063 in source file .\DoGirderMbrAlt.cpp.  
=====

Please review the following in the model:

1. Girder Profile for the G1 girder.
2. Lane positions. The two travelways are entered on top of each other.
3. Deck width and girder spacings. The left edge and right edge of the deck are located at the center of the exterior girders.

|                                      |
|--------------------------------------|
| Issue ID: 9923                       |
| Subject: Vi Issue - Concurrent shear |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Schiller, Brent    | 5/10/2010 5:29:34 PM |
| Modified By: bgoodrich           | 5/12/2010 2:50:28 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | New      | High     | Bug - BRASS |
|                 | Assigned |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description            |
|------|---------------------|------------------------|
|      | 11025_LFD.xml       | User's original bridge |
|      | SCAN1632_000.pdf    |                        |



## Complete Issue Information

|                   |                                |
|-------------------|--------------------------------|
| Issue ID 6549.doc |                                |
| 11025_LFD_BG.xml  | Edited bridge. Symmetrical POI |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Brian Goodrich DATE: 5/10/2010 11:31:01 AM Mountain Daylight Time  
Submitted on behalf of Brent H. Schiller [BSchiller@Forsgren.com].

I have a question regarding the BRASS LFD engine in Virtis 6.1. We are rating a prestressed beam bridge which has a low rating for shear. As we looked at the BRASS output, it appears that the Vi term may be too low. We've reviewed Issue ID #'s 6511 & 6549 and have used a larger denominator for the live load increment to try and obtain more accurate results, but the Vi selected still remains the same. A HS-20 Lane Load is controlling and we calculated the concurrent LL shear for the maximum LL moment that occurs at the point of interest. The point load that occurs with the uniform lane load was positioned right at the point of interest in our calculations which causes maximum moment at that point. This causes a large drop or discontinuity in the shear diagram right at that point load. Since we have very small increments for live load advancement, it is my understanding that BRASS would pick the larger shear value when the point load is moved to the next increment (Issue ID 6549 @ end of the text). This would effectively pick the larger shear at the "high" end of the discontinuity vs the "low" end of the discontinuity which appears to be being picked by BRASS. I've attached the Virtis XML file. The point we are investigating is at 9.92 ft (27.5%) for Inventory rating, in span 1, girder G2. Rating is 0.62. Any thoughts on this?

FROM: Brian Goodrich DATE: 5/10/2010 11:32:01 AM Mountain Daylight Time  
E-mail from Bridgeware:

I ran the model through RISA and was able to verify the values reported by BRASS.

| Node | X    | Y | Z |
|------|------|---|---|
| N1   | 0    | 0 | 0 |
| N2   | 9.92 | 0 | 0 |
| N3   | 36   | 0 | 0 |

Moving load = 18kip on 0.640 k/lf. The shear reported was that for the largest imposed moment. See below (highlighted)

|        |   |     |   |   |        |   |   |   |   |   |   |   |
|--------|---|-----|---|---|--------|---|---|---|---|---|---|---|
| M1     | 1 | max | 0 | 1 | 31.35  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0      | 1 | min | 0 | 1 | 12.257 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0      | 1 | max | 0 | 1 | 30.728 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -6.307 | 1 |     |   |   |        |   |   |   |   |   |   |   |

4/19/2016 3:23:09 PM

HRS AASHTO

2893

**Complete Issue Information**

|          |   |     |   |   |        |   |   |   |   |   |   |   |
|----------|---|-----|---|---|--------|---|---|---|---|---|---|---|
| -12.428  | 1 | min | 0 | 1 | 11.014 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -31.809  | 1 | max | 0 | 1 | 29.485 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -18.363  | 1 | min | 0 | 1 | 10.393 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -47.018  | 1 | max | 0 | 1 | 28.864 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -24.113  | 1 | min | 0 | 1 | 9.772  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -61.765  | 1 | max | 0 | 1 | 28.189 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -29.678  | 1 | min | 0 | 1 | 9.097  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -75.909  | 1 | max | 0 | 1 | 27.568 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -35.056  | 1 | min | 0 | 1 | 8.475  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -89.701  | 1 | max | 0 | 1 | 26.946 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -40.249  | 1 | min | 0 | 1 | 7.854  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -103.029 | 1 | max | 0 | 1 | 26.325 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -45.257  | 1 | min | 0 | 1 | 7.233  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -115.895 | 1 | max | 0 | 1 | 25.703 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -50.078  | 1 | min | 0 | 1 | 6.611  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -128.297 | 1 | max | 0 | 1 | 25.029 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -54.715  | 1 | min | 0 | 1 | 5.936  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |

**Complete Issue Information**

|          |     |     |   |        |        |   |   |   |   |   |   |   |
|----------|-----|-----|---|--------|--------|---|---|---|---|---|---|---|
| 16       | max | 0   | 1 | 21.868 | 1      | 0 | 1 | 0 | 1 | 0 | 1 |   |
| -75.111  | 1   | min | 0 | 1      | 2.776  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -192.147 | 1   | max | 0 | 1      | 21.247 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 17       |     |     |   |        |        |   |   |   |   |   |   |   |
| -78.633  | 1   | min | 0 | 1      | 2.155  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -201.25  | 1   | max | 0 | 1      | 20.625 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 18       |     |     |   |        |        |   |   |   |   |   |   |   |
| -81.97   | 1   | min | 0 | 1      | 1.533  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -209.89  | 1   | max | 0 | 1      | 20.004 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 19       |     |     |   |        |        |   |   |   |   |   |   |   |
| -85.121  | 1   | min | 0 | 1      | 0.912  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -218.067 | 1   | max | 0 | 1      | 19.329 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 20       |     |     |   |        |        |   |   |   |   |   |   |   |
| -88.087  | 1   | min | 0 | 1      | 0.237  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -225.398 | 1   | max | 0 | 1      | 19.329 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| M2       | 1   |     |   |        |        |   |   |   |   |   |   |   |
| -88.087  | 1   | min | 0 | 1      | 0.237  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -225.398 | 1   | max | 0 | 1      | 17.703 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 2        |     |     |   |        |        |   |   |   |   |   |   |   |
| -94.998  | 1   | min | 0 | 1      | -1.389 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -243.337 | 1   | max | 0 | 1      | 16.024 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 3        |     |     |   |        |        |   |   |   |   |   |   |   |
| -100.626 | 1   | min | 0 | 1      | -3.068 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| -257.566 | 1   | max | 0 | 1      | 14.345 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 4        |     |     |   |        |        |   |   |   |   |   |   |   |
| -104.971 | 1   |     |   |        |        |   |   |   |   |   |   |   |

**Complete Issue Information**

|          |     |   |   |         |   |   |   |   |   |   |   |  |
|----------|-----|---|---|---------|---|---|---|---|---|---|---|--|
| -280.338 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 9        | max | 0 | 1 | 6.002   | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -107.45  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -13.091 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -275.275 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 10       | max | 0 | 1 | 4.376   | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -104.097 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -14.717 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -266.381 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 11       | max | 0 | 1 | 2.696   | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -99.461  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -16.396 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -254.511 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 12       | max | 0 | 1 | 1.017   | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -93.542  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -18.075 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -239.54  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 13       | max | 0 | 1 | -0.609  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -86.339  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -19.701 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -221.08  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 14       | max | 0 | 1 | -2.288  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -77.854  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -21.38  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -199.179 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 15       | max | 0 | 1 | -3.967  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -68.086  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -23.06  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -174.3   | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 16       | max | 0 | 1 | -5.647  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -57.035  | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 1        | min | 0 | 1 | -24.739 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |
| -146.094 | 1   |   |   |         |   |   |   |   |   |   |   |  |
| 17       | max | 0 | 1 | -7.273  | 1 | 0 | 1 | 0 | 1 | 0 | 1 |  |

## Complete Issue Information

FROM: Brian Goodrich DATE: 5/10/2010 11:36:38 AM Mountain Daylight Time  
E-mail from Brent Schiller:

I do not dispute what you get from RISA as we get something similar from our shear diagram (see attached pdf). However, what we are questioning is why BRASS is grabbing the lower shear value at the discontinuity (Point B = 0.21k vs Point A = 18.21k in our pdf). I know there are differing opinions about what to use for  $V_i$  in the the profession. Some engineers use the shear envelope to determine  $V_i$  while others look at the factored shear that occurs due to the same loading that creates the maximum moment at the section. I understand that BRASS uses the latter method. However, it seems to be overly conservative to use the the lower value (point B) instead of the higher value from the discontinuity. It is my understanding that BRASS has already been modified (at least for truck loads) to account for this issue and to take the HIGHER shear at the discontinuity based on the discussion in Issue ID 6549 (the text at the end of this issue seems to clarify how BRASS was modified to avoid taking the low value). I've attached the text of Issue ID 6549 in a Word file and highlighted the text at the end that I'm referring to. Am I reading/interpreting Issue ID 6549 incorrectly and is BRASS actually supposed to take the lower value at the discontinuity (point B)?

FROM: Brian Goodrich DATE: 5/10/2010 11:34:01 AM Mountain Daylight Time  
E-mail from George Colgrove:

Hi Brent,

There is a lot more to this equation than just this. First at the point you are at,  $M_{cr} > M_{max}$ . This equation was not intended for use in this case. As the maximum moment increases, the ratio ( $M_{cr}/M_{max}$ ) reduces the overall resistance as what would make sense, because the section is under increasing cracking. However the resistance cannot be any greater than what it is uncracked. However the equation as published does not limit the ratio to 1, therefore the equation (and how BRASS is using it) is inherently unconservative.

The first term of the equation represents the applied shear that precipitates the inclined crack. The second term is the applied shear due to self weight. The final term is the coincidental shear acting at the same time the maximum moment occurs which should be reduced depending on how much the section is cracked. From the BRASS output, the ratio  $M_{cr}/M_{max}$  is 1.21. So using the larger of the two values (1.21) not only is less conservative, but the way the equation is being used (albeit, correctly as prescribed by AASHTO) perpetuates that to probably something unconservative. Using the lower value is more conservative, but that is somewhat lessened by the use of a ratio that exceed 1 (in this case by increasing the minimum value by 21%!).

Please see enclosed article from PCI. The article also warns against overestimating  $V_i$ .

[http://www.pci.org/view\\_file.cfm?file=JL-01-MAY-JUNE-11.pdf](http://www.pci.org/view_file.cfm?file=JL-01-MAY-JUNE-11.pdf)

George Colgrove

FROM: Brian Goodrich DATE: 5/10/2010 11:37:15 AM Mountain Daylight Time  
The procedure outlined in Incident 6549 is only applicable to the axle-based live loads. For the lane load plus the concentrated load case, the actions are known at the element ends. The source code

4/19/2016 3:23:14 PM

HRS AASHTO

2897

### Complete Issue Information

looks like it is checking both element ends adjacent to a node point, but the smaller concurrent shear is getting saved. I'll forward this issue to WYDOT for further investigation.

|                                         |
|-----------------------------------------|
| Issue ID: 9932                          |
| Subject: Number of decimal points shown |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Curtis, Beckie   | 5/11/2010 2:26:46 PM  |
| Modified By: hlee              | 4/25/2013 12:57:55 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 5/11/2010 10:27:47 AM Eastern Daylight Time  
The number of decimal points shown for an input should either be increased by default, or at least reflect the accuracy assigned for the analysis run.

FROM: Herman Lee DATE: 5/11/2010 11:03:38 AM Eastern Daylight Time  
An edit mask (e.g. #####.##) is associated with each input data to determine how many decimal points to display. Edit masks are stored in the database. It would be nice to provide the capability for agency to modify the edit masks through the user interface.

4/19/2016 3:23:16 PM

HRS AASHTO

2898

**Complete Issue Information**

FROM: Herman Lee DATE: 6/9/2011 10:00:56 AM Eastern Daylight Time  
As discussed with the TAG (April 2011), more solution options are needed.

FROM: Herman Lee DATE: 4/25/2013 8:57:09 AM Eastern Daylight Time  
Resolved for 6.5 release.

|                                              |
|----------------------------------------------|
| Issue ID: 9948                               |
| Subject: Haunch Profile Panel To Be Improved |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Huang, George    | 5/11/2010 4:03:53 PM |
| Modified By: jduray            | 4/14/2011 1:53:22 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lee, Herman      | New       | High     | Bug         |
| Kennelly, Krisha |           |          |             |
| Lee, Herman      | Assigned  |          |             |
|                  | Suspended |          | Enhancement |
|                  |           |          | Maintenance |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:23:16 PM

HRS AASHTO

2899

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 5/11/2010 12:09:17 PM Eastern Daylight Time  
After haunch data were entered under one haunch type, the data won't change (and should change) when chose different haunch types. This may cause data entry mistakes.

FROM: Krisha Kennelly DATE: 5/11/2010 12:50:45 PM Eastern Daylight Time  
Issue was entered during beta testing but this is the behavior the window has always had.

FROM: Herman Lee DATE: 5/11/2010 1:11:29 PM Eastern Daylight Time  
The Haunch Profile window behaves like this for a long time. For users that select the wrong type but enter the correct data, they would probably prefer the data still there when they change to the correct type. I changed the Category to Enhancement for now. If there are more requests, the data should be cleared when the type is changed.

|                                  |
|----------------------------------|
| Issue ID: 9964                   |
| Subject: NSG distribution factor |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 5/12/2010 6:33:32 PM |
| Modified By: hlee              | 5/19/2010 5:34:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

4/19/2016 3:23:16 PM

HRS AASHTO

2900



**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          | Maintenance |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 5/12/2010 2:34:46 PM Eastern Daylight Time  
 Enhancement to add multiple distribution factor ranges based on NSG analysis. Number of DF's exported would be a user input.

**Complete Issue Information**

|                                                    |
|----------------------------------------------------|
| Issue ID: 9965                                     |
| Subject: loading configuration for lfr over 200-ft |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Curtis, Beckie   | 5/12/2010 6:34:49 PM  |
| Modified By: hlee              | 6/10/2011 10:53:20 PM |
| Priority: High                 |                       |
| Category: Maintenance          |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Bug      |
| Lee, Herman     |          |          |          |
| Ihnat, Joseph   | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 5/12/2010 2:36:49 PM Eastern Daylight Time  
For spans over 200-ft, the MBE requires a train of legal vehicles in one lane and then a different vehicle in the other lanes. Currently, different loads cannot be used at the same time. This is an enhancement request to add this functionality.

FROM: Herman Lee DATE: 7/16/2010 7:22:06 AM Eastern Daylight Time  
MCEB 7.4.2

FROM: Herman Lee DATE: 6/10/2011 6:46:44 PM Eastern Daylight Time  
Duplicate of Incident 8994.

## Complete Issue Information

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 9979                                                                   |
| Subject: Incorrect location when reporting spec check article in the report tool |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 5/13/2010 4:51:43 PM |
| Modified By: gcolgrove         | 5/24/2010 3:01:30 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 5/13/2010 12:52:02 PM Eastern Daylight Time  
Training BRidge 1, make G1 metric units on the Mbr Alt window. Run Opis LRFD.

4/19/2016 3:23:17 PM

HRS AASHTO

2903

## Complete Issue Information

Open Spec Check Viewer. Pick an article and then select the report tool. Pick either verbose or bullet and generate the report. the location in the generated reported has the number in meters but the units displayed are mm.

I don't know who to assign this to.

FROM: George Colgrove DATE: 5/13/2010 1:55:40 PM Eastern Daylight Time  
Confirmed issue

FROM: Joseph Ihnat DATE: 5/19/2010 9:31:05 AM Eastern Daylight Time  
Changed folder to Support Center. Get same result in 6.1 with Opis Lrfd (PCITraingBridge1).  
Fixed for 6.2 Beta 2.

FROM: George Colgrove DATE: 5/24/2010 10:57:05 AM Eastern Daylight Time  
Confirmed fixed.

|                                        |
|----------------------------------------|
| Issue ID: 9992                         |
| Subject: Web Terminology - Up and Down |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 5/18/2010 2:50:40 PM |
| Modified By: jihnat            | 7/13/2010 2:13:38 PM |
| Priority: High                 |                      |
| Category: Change Request       |                      |

## History

| Primary Contact | Status | Priority | Category       |
|-----------------|--------|----------|----------------|
| Lee, Herman     | New    | High     | Change Request |

4/19/2016 3:23:17 PM

HRS AASHTO

2904

### Complete Issue Information

|                    |           |      |         |
|--------------------|-----------|------|---------|
| Ordoobadi, Mehrdad | Assigned  |      |         |
| Ihnat, Joseph      |           |      |         |
| Lee, Herman        | New       | High | Unknown |
| Ordoobadi, Mehrdad | Assigned  |      |         |
|                    | Duplicate |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | pontis_status.out   |             |
|      | pontis_error.docx   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 5/18/2010 10:51:01 AM Eastern Daylight Time  
Submitted from the agenda presented at the Version 6.2 beta testing meeting.

This is from an Illinois consultant, he brings up a good point. However, instead of entering it in as an enhancement request, I thought maybe this should go through the Beta TAG for discussion and concurrence. I think if the TAG agrees, we should classify it as a bug and request Baker fix it. What do you all think?

The terminology for parabolic and circular haunches in steel plate girder webs is confused. The "pot-belly" haunch enhancement for v. 6.1 necessitated that we specify the orientation of the curvature. The system calls convexly curved (pot-belly) haunches as "Up" and concavely curved as "Down". This seems to me to be opposite of what it should be, but whether or not I am right there could be no argument either way if the curvature orientation descriptions were changed to "Convex" and "Concave". A potential analogy could be the confusion of using right, left, up or down when we mean east, west, north or south. Up / down (or left / right) changes according to the perspective of the observer.

Therefore, I propose that what is now under the Depth Vary column as "Circular / Parabolic Down" be changed to "Circular / Parabolic Concave" and as "Circular / Parabolic Up" be changed to "Circular / Parabolic Convex".

FROM: Krisha Kennelly DATE: 5/18/2010 10:55:55 AM Eastern Daylight Time  
1. Mehrdad - Change the following display strings:

4/19/2016 3:23:17 PM

HRS AASHTO

2905

**Complete Issue Information**

Parabolic Down should be Parabolic Concave  
Parabolic Up should be Parabolic Convex  
Circular Down should be Circular Concave  
Circular Up should be Circular Convex

2. Joe - revise the help

FROM: Mehrdad Ordoobadi DATE: 5/19/2010 1:49:20 PM Eastern Daylight Time  
Fixed database, SysTypeDefines.h, and other affected SourceCode.

FROM: Joseph Ihnat DATE: 5/20/2010 10:30:59 AM Eastern Daylight Time  
Help is updated for Beta 2.

FROM: Tim Armbrecht DATE: 7/13/2010 9:25:21 AM Eastern Daylight Time  
Accepted.

|                                                 |
|-------------------------------------------------|
| Issue ID: 10005                                 |
| Subject: Unable to save LRFR rating to database |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Withers, Richard      | 5/19/2010 5:10:32 PM |
| Modified By: mordoobadi             | 6/22/2010 1:24:24 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:23:17 PM

HRS AASHTO

2906

**Complete Issue Information**

FROM: Richard Withers DATE: 5/19/2010 1:26:00 PM Eastern Daylight Time

This is the same problem that Mississippi Dept of Transportation has previously encountered with the software as documented in issue 9172, most recently dated June 10, 2009. It appears that there has never been a resolution to this issue; the most recent response was that the problem was not reproducible. Inasmuch as MDOT is still encountering the problem, I would like to continue to pursue a resolution.

I am attaching two files: the first is a series of queries against the database which were requested from a year ago. The second is the email describing the problem from the end-user. It would appear that there are two resolutions to get past this. The first would be to simply remove the foreign key constraint that is being violated. The second would be to change the application to assure that the parent table has the necessary key present prior to it being inserted into the child table. While removing the constraint is both easy and possible, it certainly weakens the integrity of the data. Changing the application is something that MDOT cannot do on its own.

Please let me know what further actions we can take to assist you in finding a resolution to this problem.

Regards,  
Jim Lane  
jlane@mdot.state.ms.us  
601.359.7441

FROM: Mehrdad Ordoobadi DATE: 6/22/2010 9:21:04 AM Eastern Daylight Time

This issue has been fixed in the 6.1 release.

This issue is a duplicate of 8798.

Issue ID: 10007  
Subject: Number of Bolts in Girder Profile window Cover Plate tab

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 5/24/2010 11:52:15 AM  
Modified By: gcolgrove 5/23/2011 4:27:33 PM  
Priority: High  
Category: Bug - GUI 2

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:23:18 PM

HRS AASHTO

2907

### Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
| Ihnat, Joseph      | Assigned | High | Bug         |
|                    |          |      | Bug - GUI 2 |
| Lee, Herman        | New      | High | Unknown     |
| Ordoobadi, Mehrdad | Assigned |      | Bug         |
|                    | Resolved |      |             |
|                    | Accepted |      |             |
|                    | Closed   |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 5/24/2010 7:52:56 AM Eastern Daylight Time

The data type for DoSteelFlangeCoverPlateRangeSet GetNumBolts is short. GUI should restrict double and character inputs.

FROM: Joseph Ihnat DATE: 6/1/2010 3:31:42 PM Eastern Daylight Time

Fixed for version 6.2 (Beta 3).

FROM: Joseph Ihnat DATE: 6/16/2010 10:16:17 AM Eastern Daylight Time

Verified in beta build 3.

Issue ID: 10018

Subject: Error during bridge exchange

4/19/2016 3:23:18 PM

HRS AASHTO

2908



**Complete Issue Information**

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 5/26/2010 6:12:40 PM |
| Modified By: mordoobadi             | 6/4/2013 5:15:33 PM  |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 5/26/2010 2:13:08 PM Eastern Daylight Time  
Bridge Exchange FSys GFS TrainingBridge1 into a consultant database.  
Copy the structure def, then try to save the bridge, get this error:

Cannot delete an object that is marked read-only.  
02:11:14 PM - Line 340 in source file .\DoCmdTarget.cpp.

This procedure works OK for TB1 and PCITB1.

FROM: Mehrdad Ordoobadi DATE: 5/28/2010 8:41:56 AM Eastern Daylight Time  
Fixed for 6.2 Beta 2.

FROM: Joseph Ihnat DATE: 5/28/2010 9:04:44 AM Eastern Daylight Time  
OK in Beta 2 with 5/28 update.

## Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 10027                                            |
| Subject: Timber (grouped by TAG May 2010) - Superstructure |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Lee, Herman      | 5/30/2010 10:45:50 PM |
| Modified By: hlee              | 6/10/2011 8:31:09 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

## Complete Issue Information

Issue ID: 10047  
Subject: Can not save bridge

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Cote, Matt 6/11/2010 1:20:16 PM  
Modified By: hlee 6/24/2010 10:55:04 AM  
Priority: High  
Category: Support

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Information Needed |          | Bug      |
|                    | Resolved           |          | Support  |

4/19/2016 3:23:18 PM

HRS AASHTO

2911

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | boundaryst.xml      |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Matt Cote DATE: 6/11/2010 9:23:37 AM Eastern Daylight Time  
i get this error when I try and save.

Unable to save Bridge data!  
09:23:16 AM - Line 885 in source file .\UiBWSDoc.cpp.

Key attribute PREV\_EVENT\_ID in table ABW\_EVENT is not set properly.  
09:23:16 AM - Line 1009 in source file .\DmObject.cpp.

FROM: Herman Lee DATE: 6/14/2010 7:57:22 AM Eastern Daylight Time  
Please attach the bridge XML file to this incident if you are able to export the bridge to a XML file.

FROM: Mehrdad Ordoobadi DATE: 6/14/2010 10:38:49 AM Eastern Daylight Time  
The attached XML file appears to be corrupt.  
I recieved the attached XML file from Deborah and was able to import the bridge. I sent deborah a new XML file that she should be able to import and save.

|                                          |
|------------------------------------------|
| Issue ID: 10053                          |
| Subject: will not save or create reports |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Cote, Matt            | 6/15/2010 2:02:25 PM  |
| Modified By: hlee                   | 6/24/2010 10:54:48 AM |

4/19/2016 3:23:19 PM

**HRS AASHTO**

2912

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Support |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Ihnat, Joseph   | Assigned  | High     | Bug      |
|                 | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Quincy Truss_test model.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Matt Cote DATE: 6/15/2010 10:04:09 AM Eastern Daylight Time

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmSuperStruct (SaveOrder object 110).

Unable edit and update recordset.

FROM: Mehrdad Ordoobadi DATE: 6/17/2010 9:17:51 AM Eastern Daylight Time

There were a super structure and and super structure alternative with an empty names defined in the bridge. This caused the save to fail.

Instructed the user to provide the names and the save was successful.

**Complete Issue Information**

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10060                                       |
| Subject: Runtime error while changing steel material. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Lee, Herman      | 6/18/2010 1:34:03 PM |
| Modified By: jihnat            | 6/21/2010 2:53:28 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 6/18/2010 9:34:42 AM Eastern Daylight Time  
Submitted on behalf of Rachel Mertz (RLMertz@modjeski.com), Modjeski and Masters, Inc.

Received e-mail:

=====

I started with the first floorbeam definition, opened the sections tab (there was only one section defined for the first FB type), changed the top flange, web, and bottom flange material to carbon, hit Apply then OK.

Minimized that floorbeam definition and went to the next one. It has two section types. Started with the first one. Changed the top fl, web, and bottom fl material to carbon, hit Apply then OK. Opened the second section type. Tried following the same steps but that is when I got the runtime error.

RACHEL L. MERTZ, PE, SE | Project Engineer

4/19/2016 3:23:19 PM

HRS AASHTO

2914

**Complete Issue Information**

=====

A workaround for now is not to use the Apply button in the Cross Sections window. The OK button will save the Carbon material to the cross section and close the window.

FROM: Joseph Ihnat DATE: 6/21/2010 10:53:29 AM Eastern Daylight Time  
Same as 9548. This is fixed for version 6.2.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 10062                                     |
| Subject: Can't display certain truss output reports |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 6/18/2010 4:41:38 PM |
| Modified By: hlee              | 6/22/2010 4:19:28 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          | Support  |
|                 | Resolved           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 6/18/2010 12:43:53 PM Eastern Daylight Time  
From my consultant. Let me know if you need a structure file or can replicate the problem based on his description below. Note that this is not related to the beta testing.

This is a problem that's been present at least starting with Virtis 6.0. After doing a truss analysis, certain truss output reports will not display when attempting to open them through the "View analysis output" function. It is still occurring in Virtis 6.2 Beta 2. The only reports that open are the first and last, "Live Load Analysis Summary" and "Log File".

The reports may be viewed by using Windows Explorer and finding the files.

Tim Souther, PE

FROM: Herman Lee DATE: 6/18/2010 1:55:03 PM Eastern Daylight Time  
Below is copied from the Analysis Output Help topic. Please see whether this fixes the problem. Thanks.

Internet Explorer needs to be the associated application for opening xml files on your computer.

- 1) Right-click on any xml file in Windows Explorer.
- 2) Select Open With - Choose Program
- 3) Select IE in the list, also check "Always use the selected program...", click OK.

FROM: Tim Armbrecht DATE: 6/21/2010 10:44:59 AM Eastern Daylight Time  
Herman, thanks, your solution worked. However, is there a reason why the default browser isn't always selected? Why do we need to associate a program with these particular xml files when we don't need to do this step with other xml files in V/O?

FROM: Herman Lee DATE: 6/22/2010 12:05:31 PM Eastern Daylight Time  
I think the other files (Live Load Analysis Summary and Log File) has txt as the file extension. Those txt files will be opened by Notepad. Some users reported the same issue after they installed Windows Updates. The program associated with xml files switched from Internet Explorer to Microsoft Office XML Editor.

|                            |
|----------------------------|
| Issue ID: 10079            |
| Subject: can not save file |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Cote, Matt            | 6/23/2010 8:34:49 PM  |
| Modified By: mordoobadi             | 6/24/2010 11:09:33 AM |
| Priority: High                      |                       |
| Category: Unknown                   |                       |



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | StrgrReactUpdateProblem<br>(0010019).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Matt Cote DATE: 6/23/2010 4:36:05 PM Eastern Daylight Time  
This is the message that I receive when I try and save my file.

Unable to save Bridge data!  
04:36:00 PM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmConcRailing (SaveOrder object 166).  
04:36:00 PM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.  
04:36:00 PM - Line 780 in source file .\DmConcRailing.cpp.  
State:23000,Native:2601,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

Cannot insert duplicate key row in object 'dbo.abw\_conc\_railing' with unique index 'XAK1abw\_conc\_railing'. The statement has been terminated.

FROM: Herman Lee DATE: 6/24/2010 6:51:25 AM Eastern Daylight Time

4/19/2016 3:23:19 PM

HRS AASHTO

2917

**Complete Issue Information**

Please attach the bridge XML file to this incident if you are able to export the bridge to a XML file.

FROM: Mehrdad Ordoobadi DATE: 6/24/2010 7:08:02 AM Eastern Daylight Time  
The error message indicates that there are two appurtanances that have the same name. The names for the appurtanances must be unique. In order to fix this problem, find teh appurtanances with same name and change one of those names, then try to save.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10080                                        |
| Subject: Problems with Computed Stringer Reactions tab |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Armbrecht, Tim   | 6/23/2010 9:21:02 PM |
| Modified By: tarmbrecht        | 6/14/2011 2:54:07 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 6/23/2010 5:33:47 PM Eastern Daylight Time  
File attached. From my consultants (Mertz & Souther):

From: Mertz, Rachel L [mailto:RLMertz@modjeski.com]  
Sent: Monday, June 21, 2010 2:23 PM  
To: Armbrecht, Tim A  
Subject: virtis - accepting stringer reactions

Tim,

4/19/2016 3:23:20 PM

HRS AASHTO

2918

## Complete Issue Information

Under the floorsystem geometry for a FSG system, under the Computed Stringer Reactions tab, when I try to accept the new reactions, a new column titled "K" appears. Reactions are not accepted if this column is not filled in. The help section does not mention this variable. Do you know what it is? Thanks.

RACHEL L. MERTZ, PE, SE | Project Engineer

Modjeski and Masters, Inc.

-----  
I have confirmed this problem in both Virtis 6.1 and 6.2 Beta 3.  
Here it is in detail (RE: 0010019.xml, Virtis 6.2 Beta 3):

- Go to Floor System Geometry / STRINGER UNIT LAYOUT / Stringer Unit 1 Layout.
- Open Computed Stringer Reactions, examine and close.
- Do an analysis on each of the stringers, S1 through S5.
- Open Computed Stringer Reactions.
  - o Check the boxes under the Accept New Reactions column for Stringers S1, S3 & S5 (or, just click <Select All>) Note that the values for these stringers under the New Computed Reaction (kip) column are in red since they are different from the Previous Computed Reaction (kip) column values.
  - o Click <Apply> The new reaction values have replaced what was formerly in the Previous Reactions column and there is now an additional column with a top row heading labeled "K". There is no reference to the meaning or purpose of this column.
  - o Click <OK>.
- Open Computed Stringer Reactions again. The Computed Stringer Reactions table is displaying exactly as it was before the attempt to apply the new computed reactions with the former values back in the Previous Computed Reaction column and the red values back in the New Computed Reactions column. (Note: The same happens if <OK> is clicked instead of <Apply>.)
- Close, save and then re-open the model, then re-open the subject Computed Stringer Reactions. The table is now the same as it was before the analyses were previously performed on the stringers.

This presents two problems:

1. There appears to be no way to update values for the stringer reactions when changes have been made to the Virtis model.
2. The column "K" is mysterious.

Tim Souther, PE  
IDOT Local Bridge Unit

Note that this was discovered in my consultant's (Mertz) 6.1 version - not related to beta, though it has been confirmed that the problem exists in the 6.2 beta. However, Tim Souther believes this actually may be related to VI 7980.

FROM: Tim Armbrecht DATE: 6/25/2010 10:50:49 AM Eastern Daylight Time

Please note that this is a bridge that is currently in production. Rachel has to put this on hold because she can't delete the incorrect stringer reactions. Here is her followup:

-----  
Tim,

If we delete key results folders from the previous analysis, do you think this would reset the dead load reactions for the stringers and allow the reactions to be recalculated and used for an updated or

4/19/2016 3:23:20 PM

HRS AASHTO

2919

**Complete Issue Information**

revised model?  
-----

If it needs to wait until after July 1, fine, but after that, she will need a workaround or patch in order for her to complete her work for me.

FROM: Herman Lee DATE: 6/26/2010 8:20:20 PM Eastern Daylight Time  
I removed all the stringer reactions in the 6.1 bridge XML file received from Tim and sent it to Rachel so she could complete her work for IDOT.

FROM: Joseph Ihnat DATE: 6/6/2011 1:41:00 PM Eastern Daylight Time  
Found this to be working OK in 6.3 beta 3. Probably fixed by 10686. Also see 10452.

FROM: George Colgrove DATE: 6/6/2011 1:49:59 PM Eastern Daylight Time  
Analysis of bridge ran to completion

Problem above as reported by Joe has been fixed. The behaviour is as expected.

Verified fixed for 6.3 Beta 3

FROM: Tim Armbrecht DATE: 6/14/2011 10:54:07 AM Eastern Daylight Time  
Accepted

|                                  |
|----------------------------------|
| Issue ID: 10121                  |
| Subject: Virtis LRFR gives error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 7/14/2010 7:50:08 PM |
| Modified By: hlee              | 10/9/2012 6:56:14 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Assigned  |          |             |
| Lee, Herman     | Suspended |          | Maintenance |

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | log_file.PNG                          |             |
|      | parapet_load.PNG                      |             |
|      | Interior_Rolled_Girder_W_27_x_114.log |             |
|      | sd_07223120.xml                       |             |
|      | DL_Distribution.PNG                   |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 7/14/2010 3:51:16 PM Eastern Daylight Time  
Message saying that I can't use HL-93 for inventory, operating and fatigue trucks.

FROM: Herman Lee DATE: 7/15/2010 2:48:25 PM Eastern Daylight Time  
The Task Force would like this to be discussed further.  
Changed Category to Maintenance.

FROM: Herman Lee DATE: 10/9/2012 2:51:58 PM Eastern Daylight Time  
Similar request for AASHTO LRFD Engine in Incident 11551.

|                                            |
|--------------------------------------------|
| Issue ID: 10161                            |
| Subject: Parapet Loads not being applied - |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Thompson, Todd   | 7/28/2010 4:40:23 PM |
| Modified By: hlee              | 3/27/2015 6:39:51 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

4/19/2016 3:23:20 PM

HRS AASHTO

2921

## Complete Issue Information

---

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
| Lee, Herman     | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | floortruss.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/28/2010 12:49:41 PM Eastern Daylight Time

I'm reviewing the analysis of a simple span, non-composite steel girder system bridge. And I noticed an odd warning/error message in the Virtis LRFR Log file.

It states that:

Warning - Tributary Area was selected for Stage 1 dead load distribution method on the Superstructure Loads window DL Distribution tab!

Warning - The Parapet load of a Parapet location entered on the Structure Typical Section window Parapet tab is zero!

Warning - The Parapet load will not be applied!

Warning - Tributary Area was selected for Stage 1 dead load distribution method on the Superstructure Loads window DL Distribution tab!

Warning - The Parapet load of a Parapet location entered on the Structure Typical Section window Parapet tab is zero!

Warning - The Parapet load will not be applied!

I've reviewed the parapet load and how it's applied and everything looks ok. So I'm trying to figure out why it is not being applied.

I have option "by Tributary Area" chosen.

If I try "transverse simple span" -

4/19/2016 3:23:20 PM

HRS AASHTO

2922

## Complete Issue Information

Warning - Simple Beam Analysis was selected for Stage 1 dead load distribution method on the Superstructure Loads window DL Distribution tab!  
Warning - The Parapet load of a Parapet location entered on the Structure Typical Section window Parapet tab is zero!  
Warning - The Parapet load will not be applied!  
Warning - No load cases are specified for Stage 2 Model Span superstructure!

If I try "transverse continuous" option -  
It fails even faster  
Cannot compute deck dead load by continuous beam analysis!  
11:46:31 AM - Line 9215 in source file .\DoGirderSystemStructDef.cpp.

So I guess I'm struggling figuring out why the parapet load isn't getting picked up correctly or why the Continuous Beam Option fails.

FROM: Herman Lee DATE: 8/11/2010 11:15:43 AM Eastern Daylight Time  
When a dead load component on the typical section doesn't have any load distributed to the analyzed member, a message will be outputted to the analysis log.

The "Interior Rolled Girder W 27 x 114" member alternative is the Simple G2 member (first interior) in the "Single 41'-0" Span, 5 Girder System". When Tributary Area distribution is selected, both parapets don't have load distributed to the Simple G2 member. Two set of messages are outputted to the analysis log. When Simple Beam Analysis distribution is selected, the right parapet doesn't have load distributed to the Simple G2 member. One set of message is outputted to the analysis log.

The continuous beam analysis is not supported. Since the load distribution computation is performed in the domain, the AASHTO FE Engine needs to be implemented at the domain level in order to support the continuous beam analysis.

I'm changing the Category of this incident to Maintenance.

FROM: George Colgrove DATE: 8/31/2010 10:57:01 AM Eastern Daylight Time  
Will the Parapets be applied at the deck concrete placement? Usually the parapets are placed after the deck has cured. You have used DC1 for the parapets. Should you use DC2? This would be the case if the parapets are placed after the deck is cured.

I added a DC2 load case for stage 2 and moved the parapet load to DC2. The parapet load was included in the loadings. I did not add any shear studs for the deck or the like and this maintained the non-composite section properties, even though it says composite section stage 2 in the drop down for the load descriptions.

FROM: Todd Thompson DATE: 8/31/2010 1:51:55 PM Eastern Daylight Time  
My Beta 5 has expired so I can not check this out. Will do with Beta 6. (My 6.1 doesn't do Steel Virtis LRFR).

I did check with Brass LFR and that does not work as described.  
If I add a DC2 load case and assign the parapet loads to DC2  
Exterior Girder still gets the entire parapet load  
Interior Girder gets (5 girders) 2/5 of the parapet loads

4/19/2016 3:23:20 PM

HRS AASHTO

2923

**Complete Issue Information**

So Brass LFR really gets messed up when you do it this way.

So at a minimum, this workaround would produce odd results with LFR. Long-term solution really needs to have the ability to uniformly distribute these loads to all girder lines and not just exterior girders.

These parapets are placed on cured concrete.

FROM: Todd Thompson DATE: 9/7/2010 10:45:01 AM Eastern Daylight Time  
Checked with Beta 6 - Brass LFR still gets all messed up doing this work around approach.  
Still need a long-term solution.

FROM: Herman Lee DATE: 3/27/2015 2:33:16 PM Eastern Daylight Time  
Specifying user-defined DL distribution by percentage has been implemented in the 6.7 release.

|                                |
|--------------------------------|
| Issue ID: 10167                |
| Subject: Floor System Geometry |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Jones, Daniel    | 7/29/2010 4:44:23 PM |
| Modified By: rfulton           | 9/7/2010 6:41:56 PM  |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Daniel Jones DATE: 7/29/2010 12:50:06 PM Eastern Daylight Time  
The Floor System Geometry needs Add, Duplicate, and Delete capability. Once these are created they cannot be changed. In the original model all of the stringer units that were entered were two span

4/19/2016 3:23:20 PM

HRS AASHTO

2924



### Complete Issue Information

continuous configuration. Later, a simple span group definition was added but the Floor System Geometry tab would not allow a change from a two span continuous group definition to a simple span group definition. If the last unit was changed, there were no error messages, but the last bay did not have any stringers in it. If any other units were changed there were several error messages and the user could not exit this tab until the stringer unit was changed back.

Thanks,  
Daniel

FROM: Jim Duray DATE: 8/2/2010 1:43:48 PM Eastern Daylight Time  
Joe - let me know what you find.

FROM: Joseph Ihnat DATE: 8/3/2010 12:04:51 PM Eastern Daylight Time  
Herman - let Jim know what you find.

FROM: Herman Lee DATE: 8/12/2010 8:56:05 AM Eastern Daylight Time  
Robert Fulton gave me the attached bridge for this incident in last week User Group Meeting.

Below are the steps to replace the first two span continuous unit with 2 simple span units in the Span 5 superstructure definition:

1. In Superstructure Definition window, change Number of stringer units from 25 to 26.
2. In Floor System Geometry window, select S10 and End of Previous Unit for Unit 26.
3. Change Unit 16 from S10 to S31  
Change Unit 14 from S31 to S33  
Change Unit 13 from S33 to S31  
Change Unit 11 from S31 to S10
4. Change Unit 1 from S10 to S51  
Change Unit 2 from S10 to S51
5. For all the stringer member alternatives in Stringer Unit 1 and 2 Layouts, change the stringer definition from S10 to S51.

This is an existing issue in 6.1 Release. I'm changing the Folder to /Support Center.

|                                     |                     |
|-------------------------------------|---------------------|
| Issue ID: 10177                     |                     |
| Subject: Curved Steel beams support |                     |
| Folder: /Virtis/Support Center      |                     |
| Primary Contact: Lee, Herman        |                     |
| Submitted By: Waheed, Amjad         | 8/4/2010 6:01:15 PM |
| Modified By: hlee                   | 7/7/2013 4:55:03 PM |

4/19/2016 3:23:21 PM

HRS AASHTO

2925

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          | Support  |
|                 | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/4/2010 2:05:32 PM Eastern Daylight Time  
Currently Virtis/Opis can not support or load rate curved steel beams. Lots of steel beams/plate girders on main line are curved and they need to be entered and rated in Virtis. Please provide support for it.

FROM: Herman Lee DATE: 7/7/2013 12:54:17 PM Eastern Daylight Time  
Support for curved steel girder is available in the 6.5 release.

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 10178                   |
| Subject: Bridge Explorer behavior |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Ihnat, Joseph |                     |
| Submitted By: Waheed, Amjad    | 8/4/2010 6:06:22 PM |
| Modified By: jihnat            | 9/8/2010 2:00:33 PM |
| Priority: High                 |                     |
| Category: Support              |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/4/2010 2:09:09 PM Eastern Daylight Time  
When we have hundreds of bridges in Virtis and scroll the vertical slider to the bottom, it does not go to the last bridge in the list and we have to slide it again. I am not sure if it is a bug. Please check.

FROM: Dean Teal DATE: 8/11/2010 8:12:19 AM Eastern Daylight Time  
Check your pull down menu for  
View  
Preferences

Is the numeric value in the number of bridges to retrieve large enough to retrieve all your structures?  
Just a thought, I set ours to a large number

FROM: Joseph Ihnat DATE: 9/2/2010 12:18:39 PM Eastern Daylight Time  
Virtis may not retrieve all the bridges at once, if there are a lot, but you can control the number that it

4/19/2016 3:23:21 PM

HRS AASHTO

2927

### Complete Issue Information

retrieves using Dean's suggestion.

Does this solve your problem or are you seeing something else?

FROM: Amjad Waheed DATE: 9/2/2010 2:26:47 PM Eastern Daylight Time  
It solved the issue. Thanks.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 10179                                         |
| Subject: Multiple windows in Specification Check Window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 8/4/2010 6:09:15 PM  |
| Modified By: hlee              | 8/10/2010 7:10:21 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:23:21 PM

HRS AASHTO

2928

### Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

#### Description

FROM: Amjad Waheed DATE: 8/4/2010 2:27:17 PM Eastern Daylight Time  
Virtis 6.2 currently can not open multiple windows of Specification Check Windows. It will be desirable to be able to open multiple windows of specification check calculations side by side.

FROM: Herman Lee DATE: 8/10/2010 3:08:33 PM Eastern Daylight Time

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10189                                       |
| Subject: Flange lateral bending stress as User Input. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ruby, Jeff       | 8/11/2010 2:13:04 PM |
| Modified By: hlee              | 7/16/2014 2:01:42 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

#### History

4/19/2016 3:23:21 PM

HRS AASHTO

2929

**Complete Issue Information**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Virtis_import_error_2010.jpg |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jeff Ruby DATE: 8/11/2010 10:27:00 AM Eastern Daylight Time

As an enhancement it would be nice to be able to enter a user specified value for flange lateral bending stress,  $f$ . Currently Virtis/Opis only calculates flange lateral bending stress for the wind load. Once Virtis/Opis can handle curved girders or large skews with 3D analysis, this will be taken care of. Until then, it would be nice to be able to input a flange lateral bending stress for use in the applicable equations. See Article 6.10.1.6 and commentary for reference.

FROM: Herman Lee DATE: 7/16/2014 9:59:18 AM Eastern Daylight Time

Duplicate of BRDRSUP-283.

### Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 10201            |
| Subject: BARS Import error |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Waheed, Amjad         | 8/17/2010 2:36:33 PM |
| Modified By: mordoobadi             | 8/17/2010 5:31:56 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Assigned           |          | Bug      |
|                    | Resolved           |          |          |
|                    | Accepted           |          |          |
|                    | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name                         | Resource Identifier | Description |
|------------------------------|---------------------|-------------|
| Delete_Error.jpg             |                     |             |
| PONTIS_ABW_OVERFLOWData.html |                     |             |
| 00746 - 16170.xml            |                     |             |
| 00751 - wlp.xml              |                     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Amjad Waheed DATE: 8/17/2010 10:40:54 AM Eastern Daylight Time  
We have started getting an error (attached) when we import a BARS data file in Virtis. We have imported hundreds of files but this started happening yesterday. Our IT support says, I have unlimited quota in the database.

FROM: Mehrdad Ordoobadi DATE: 8/17/2010 1:29:48 PM Eastern Daylight Time  
This is something that your database administrator should look into. The error complains that the VIRTIS tablespace quota has been exceeded not the user quota.

|                                         |
|-----------------------------------------|
| Issue ID: 10215                         |
| Subject: Unable to modify/delete bridge |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Withers, Richard      | 8/25/2010 2:40:05 PM  |
| Modified By: hlee                   | 10/28/2010 4:38:37 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Richard Withers DATE: 8/25/2010 10:55:15 AM Eastern Daylight Time  
I have exported a bridge, 00751 - wlp.xml that I cannot delete from the Bridge Explorer Deleted Bridges



## Complete Issue Information

folder. In fact, I can't modify it at all. I have administrative privileges on my computer and in VIRTIS. I have attached the error message (Delete\_Error.jpg) that I get when trying to modify or delete the bridge. I can delete it from the All Bridges folder, but I can't do the final delete.

Bridge 00751 - wlp.xml was created by copying another bridge, 00746 - 16170.xml, which I have also attached. I can copy and then modify or delete other bridges in the same folder, but I can't copy 00746 - 16170 and then modify the new bridge. Help!

Thank you,

Richard Withers  
rwithers@mdot.state.ms.us

FROM: Mehrdad Ordoobadi DATE: 8/25/2010 11:41:34 AM Eastern Daylight Time  
What type of database are you using? Oracle, or SQL Server?

FROM: Richard Withers DATE: 8/25/2010 12:28:42 PM Eastern Daylight Time  
This is what I got from our DBA: Oracle 10g, version 10.2.0.3.0 on a Solaris 10, 64 bit OS.

FROM: Richard Withers DATE: 8/26/2010 12:05:42 PM Eastern Daylight Time  
\*\*\*\*UPDATE\*\*\*\*

This issue only happens with bridges input in metric. Could the conversion from metric to english cause an overflow issue with a field within a table?

FROM: Mehrdad Ordoobadi DATE: 9/3/2010 12:58:39 PM Eastern Daylight Time  
I doubt that the conversion to/from metric units could cause this issue.

Do you have an integrated (Virtis / Opis / Pontis) database?

FROM: Richard Withers DATE: 9/9/2010 5:13:55 PM Eastern Daylight Time  
Yes.

FROM: Mehrdad Ordoobadi DATE: 9/27/2010 10:06:18 AM Eastern Daylight Time

From: Ordoobadi, Mehrdad  
Sent: Monday, September 27, 2010 10:24 AM  
To: 'Withers, Richard'  
Cc: Bridgeware,  
Subject: Virtis/Opis issue 10215

Richard,

We have not been able to determine the cause of your not being able to remove the bridge from your Virtis database. We may understand the condition that is causing this problem if we can get some information from your database. Could you please ask your Oracle DBA to send us an export of the following tables from your Virtis/Opis database.

ABW\_BRIDGE  
ABW\_OVERFLOW  
ABW\_ASSET\_XREF  
BRIDGE

4/19/2016 3:23:22 PM

HRS AASHTO

2933

## Complete Issue Information

ROADWAY

Regards,  
Mehrdad Ordoobadi

FROM: Mehrdad Ordoobadi DATE: 9/28/2010 8:20:46 AM Eastern Daylight Time

From: Ordoobadi, Mehrdad  
Sent: Tuesday, September 28, 2010 9:19 AM  
To: Ordoobadi, Mehrdad; Withers, Richard  
Cc: Bridgeware,  
Subject: RE: Virtis/Opis issue 10215

Good Morning Richard,

I think that I may have found what is causing the problem with deleting the bridge (BID = 751) from your Virtis/Opis database:

Values for the columns LENGTH and KMPOST in table ABW\_OVERFLOW have too many digits beyond the decimal point. Please open the attached file "PONTIS\_ABW\_OVERFLOWData.html". You can see that the values for these columns are 174.49000549316401 and 13.019000053405801 for OVERFLOW\_ID = 60 (this corresponds to bridge BID = 751). There are more bridges like this for example the following bridges:

| BID |
|-----|
| 10  |
| 11  |
| 12  |
| 15  |
| 16  |
| 30  |
| 31  |
| 32  |
| 33  |
| 96  |
| 97  |
| 754 |
| 767 |
| 696 |
| 881 |
| 889 |
| 762 |
| 778 |

I suggest that your database administrator (DBA) run the following SQL Script file to round the values in LENGTH and KMPOST columns to 4 decimal places. Please ask you DBA to backup the database before making these changes.

```
UPDATE abw_overflow SET length = ROUND(length, 4), kmpost = ROUND(kmpost, 4);
```

4/19/2016 3:23:22 PM

HRS AASHTO

2934

## Complete Issue Information

Regarding the other bridge (BID = 746) there may be a different problem. Could you please send me the error message that you get from Virtis/Opis when deleting bridge 746.

Thanks,  
Mehrdad

FROM: Mehrdad Ordoobadi DATE: 10/8/2010 1:11:18 PM Eastern Daylight Time

From: Ordoobadi, Mehrdad  
Sent: Friday, October 08, 2010 2:14 PM  
To: 'Withers, Richard'  
Subject: RE: Virtis/Opis issue 10215

Richard,

I have investigated the problem with modifying and deleting some bridges in your database and have found the cause of this issue. It happens with some of the bridges that have non- empty values in the Latitude and/or Longitude fields in the bridge description window. This appears to be happening only when using an Oracle database. We have determined what needs to be done in the Virtis/Opis software to resolve this issue. But this will be corrected in the next release of Virtis/Opis software that is scheduled to be released next Summer. We have developed a work around that will help you avoid these types of errors.

The problem happens with some values (but not any value) in the latitude or longitude field. These fields can have real values with two decimal places. But when Virtis/Opis reads some of the values the values that is read is slightly different. For example the value in the database is 89.85 but Virtis/Opis reads it as 89.950000000001. To make the story short, When you update or delete the bridge Virtis/Opis is not finding the row in the ABW\_OVERFLOW table that existed before because it is looking for a row that has a value of 89.950000000001 in it and it does not exist. This causes the delete or update to fail.

Here is the work around.

OPTION 1 – I have noticed that you have values in the latitude or longitude columns in ABW\_OVERFLOW table just for 11 of the bridges in your database. If it is acceptable to you and your organization I suggest that you make those fields empty. Your database administrator can run the following SQL script to make those fields empty for all Virtis/Opis bridges. Note that this will not affect any Pontis bridge data.

```
UPDATE abw_overflow SET longitude = NULL, latitude = NULL;
```

OPTION 2 – This is a more conservative approach. Whenever you have a problem with a bridge, you can ask your DBA to empty the latitude and longitude columns just for that bridge. Here is a sample SQL script that your DBA should run if you needed to fix bridge with BID = 801:

```
UPDATE abw_overflow SET longitude = NULL, latitude = NULL WHERE overflow_id = (select overflow_id FROM abw_asset_xref WHERE virtis_bridge_id = 801 OR opis_bridge_id = 801);
```

4/19/2016 3:23:22 PM

HRS AASHTO

2935

**Complete Issue Information**

For another bridge the script should be modified. The two instances of 801 in the above SQL script should be replaced with the BID of the bridge that you want to fix.

Please let me know if you have any questions or concerns.

Regards,  
Mehrdad Ordoobadi

FROM: Mehrdad Ordoobadi DATE: 10/11/2010 11:06:17 AM Eastern Daylight Time  
From: Withers, Richard [mailto:RWithers@mdot.state.ms.us]  
Sent: Monday, October 11, 2010 10:00 AM  
To: Ordoobadi, Mehrdad  
Subject: RE: Virtis/Opis issue 10215

Mehrdad,

We went ahead with option 1 and it appears to have corrected the problem. Thanks for your assistance with this.

Richard

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 10219                                                         |
| Subject: Special Install for Database without reinstalling the software |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Colgrove, George | 8/26/2010 2:04:44 PM |
| Modified By: hlee              | 6/9/2011 9:02:20 PM  |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Resolved  |          | Support     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:22 PM

HRS AASHTO

2936

**Complete Issue Information**

**Documents**

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | BentRebarEntryIssues - 0760019 (6.2 Beta5).xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 8/26/2010 10:05:22 AM Eastern Daylight Time  
I think there should be a special install branch that just installs the database and not the software. If the software was already installed, it would be good to have an install path that only installs the database and related software, if necessary.

FROM: Herman Lee DATE: 8/26/2010 11:08:19 AM Eastern Daylight Time  
Uncheck all boxes in "Select Features" during installation will just install the database. Please let me know if you want this to be an enhancement request for making this option more clear.

FROM: George Colgrove DATE: 8/26/2010 11:35:37 AM Eastern Daylight Time  
Yes, please make this an enhancement to make more clear. Currently, this represents an undocumented feature and it is not apparent to the user.

FROM: Herman Lee DATE: 6/9/2011 5:01:46 PM Eastern Daylight Time  
Discarded by TAG April 2011.

|                              |
|------------------------------|
| Issue ID: 10220              |
| Subject: Bent rebar issue #1 |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Armbrecht, Tim     | 8/26/2010 6:43:58 PM |
| Modified By: tarmbrecht          | 5/13/2011 1:51:14 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

## Complete Issue Information

---

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Ambrecht DATE: 8/26/2010 2:51:23 PM Eastern Daylight Time  
From one of my consultnats (Souther):

Regard to entry of schedule-based bent reinforcement bars in reinforced concrete members:

- The Help for the entry of "Distance" for schedule based entry of Types 2 and 3 bent reinforcement could be more clear. (In the Help, see Girder Profile: Reinforcement. Since it is required vertical placement within the beam must be according to the of the end (Item "A") portion it should be so stated in the text. They are shown this way in the diagram, but this could be (and has been) interpreted as merely possible or suggested examples and not requirements. (A possible program enhancement would be to enable Distance entry for bent bars to be according to the distance of the middle portion from either the top or bottom of the beam.) Also, there should be an example diagram for Type 2 bent reinforcement bars.

Recommended modified text is as follows –

Distance

Enter the distance from the centroid of the reinforcing steel described in this row to the location selected in the "Measured From" column. Distance for Bent Type 3 bars is measured from the end section of the bar and for Type 2 bars from the middle portion. The reinforcing steel is assumed to be parallel to the location selected in the "Measured From" column as shown below.

An export file that can be used for this is "BentRebarIssues - 0760019 (6.2 Beta5).xml".

FROM: Herman Lee DATE: 8/27/2010 6:53:33 AM Eastern Daylight Time

I think it's a good suggestion to add a figure for Type 2 bar. Adding a sentence for Type 2 and Type 3 bar are necessary for satisfying 508 requirements.

FROM: Geoffrey Trees DATE: 10/4/2010 3:20:34 PM Eastern Daylight Time

4/19/2016 3:23:23 PM

HRS AASHTO

2938

**Complete Issue Information**

A figure and comment has been added to the help documentation.

FROM: Herman Lee DATE: 10/4/2010 5:14:21 PM Eastern Daylight Time  
Resolved for 6.3 release.

FROM: Xinmei Li DATE: 3/28/2011 5:43:25 PM Eastern Daylight Time  
Verified that sketches are added for 6.3 Alpha6.

FROM: Tim Armbrecht DATE: 5/13/2011 9:51:13 AM Eastern Daylight Time  
Accepted

|                                                    |
|----------------------------------------------------|
| Issue ID: 10221                                    |
| Subject: Bent rebar issue #2 - enhancement request |

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center                    |
| Primary Contact: Lee, Herman                      |
| Submitted By: Armbrecht, Tim 8/26/2010 6:51:27 PM |
| Modified By: hlee 6/4/2012 8:05:30 PM             |
| Priority: High                                    |
| Category: Enhancement                             |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 8/26/2010 2:52:41 PM Eastern Daylight Time  
From one of my consultants (Souther):

With regard to entry of schedule-based bent reinforcement bas in reinforced concrete members:

The bent portion is not included as adding to the shear capacity in that region of the beam as it would

4/19/2016 3:23:23 PM

HRS AASHTO

2939

**Complete Issue Information**

be in the design of the beam. Virtis should be modified to include the bent portions in the shear resistance of RC beams.

An export file that can be used for this is "BentRebarIssues - 0760019 (6.2 Beta5).xml" (see earlier incident)

FROM: Herman Lee DATE: 6/4/2012 3:43:32 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
10778, 11128 and 10221 should be combined.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 10223                                           |
| Subject: Selecting trucks in the Analysis Settings Dialog |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Colgrove, George | 8/27/2010 11:35:55 AM |
| Modified By: hlee              | 8/27/2010 11:43:45 AM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |

**Contacts**

4/19/2016 3:23:23 PM

HRS AASHTO

2940



**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Truss schematic.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 8/27/2010 7:35:56 AM Eastern Daylight Time

In the Analysis Settings window, I would like to have the ability to click one truck, then press shift, and select another truck down the list which then highlights the trucks between the two clicks in the list. By clicking on the "Add to Permit" button, it will send all highlighted bridges.

The same would be true, by clicking on several trucks while pressing the control key on the key board. This will make this list work like most Windows software.

Issue ID: 10225

Subject: Unable to view truss schematic

Folder: /Virtis/Support Center

Primary Contact: Trees, Geoffrey

Submitted By: Lee, Herman

8/27/2010 7:40:51 PM

4/19/2016 3:23:23 PM

HRS AASHTO

2941

## Complete Issue Information

|                       |                      |
|-----------------------|----------------------|
| Modified By: sthogaru | 4/12/2011 5:31:44 PM |
| Priority: High        |                      |
| Category: Bug         |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
|                    | Assigned |          | Support  |
| Ordoobadi, Mehrdad | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 10234.xml                   |             |
|      | 00229 - 80180012000S032.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 8/27/2010 3:41:47 PM Eastern Daylight Time

To reproduce:

1. Open TrussTrainingExample.
2. Select "Truss 1" and click on the "View schematic" button (see attached).

If I open the Truss window, verify the truss and cancel out the truss window, I'm able to view the truss schematic.

FROM: Herman Lee DATE: 8/31/2010 9:00:40 AM Eastern Daylight Time

This issue can only be reproduced using the TrussTrainingExample in Oracle database. There are characters at the end of each truss command line that the truss parser doesn't recognize. If I open the truss command window, hit delete and enter at the end of each line, the problem is fixed.

This issue is not critical for 6.2 release.

4/19/2016 3:23:23 PM

HRS AASHTO

2942

**Complete Issue Information**

FROM: Mehrdad Ordoobadi DATE: 9/3/2010 12:15:07 PM Eastern Daylight Time  
We will need to change the parser to tolerate the carriage returns at the end of lines. There is no other way that we could make the SQL script file that would not create the carriage return characters when running the creation scripts using SQL Plus.

FROM: Mehrdad Ordoobadi DATE: 9/3/2010 12:20:29 PM Eastern Daylight Time

FROM: Geoffrey Trees DATE: 9/14/2010 1:51:29 PM Eastern Daylight Time  
Resolved for 6.3 Release

FROM: Srujana Thogaru DATE: 4/12/2011 1:23:39 PM Eastern Daylight Time  
tested and found to be fixed for 6.3

|                              |
|------------------------------|
| Issue ID: 10234              |
| Subject: can't save xml file |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center      |                     |
| Primary Contact: Ordoobadi, Mehrdad |                     |
| Submitted By: Curtis, Beckie        | 9/2/2010 3:42:06 PM |
| Modified By: mordoobadi             | 9/3/2010 4:54:00 PM |
| Priority: High                      |                     |
| Category: Support                   |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 9/2/2010 11:43:24 AM Eastern Daylight Time  
Our consultant created this xml file and sent it to us. We are unable to save the file.

FROM: Herman Lee DATE: 9/2/2010 12:22:04 PM Eastern Daylight Time

4/19/2016 3:23:24 PM

HRS AASHTO

2943



## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |
|                    | Resolved |          | Bug      |
|                    | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | APD-471.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 9/3/2010 2:36:43 PM Eastern Daylight Time

My consultant (Souther) make some good points about the functionality of entering bearing stiffeners in 6.1. I think these are functionality bugs:

There are a few user friendliness issues regarding shear & bearing stiffener entry that should be addressed:

1. When either a Transverse or Bearing Stiffener Definition window is opened the cursor focus is on the <OK> button instead of the first data entry position. It takes four tabs or use of the manual pointer device to move the focus to where data entry can take place. (Also, there may be other incidences in Virtis/Opis where the opening focus should be moved to the most common starting point of a window.)

2. In the Bearing Stiffener Location data entry window, when "1" is entered for "Pairs of bearing stiffeners at this support =", the entry for "Offset (in)" value should be defaulted to "0.0000". For a single pair of bearing stiffeners that is nearly always the offset value. Currently, if left blank, the following error is returned when doing an analysis,

"Error generating LFD/ASD schedule commands!

For Support No. 1, the offset for a bearing stiffener pair is not specified!

Error generating STIF-BEAR-SCHEDULE or STIF-BEAR-GROUP commands!"

An alternative to having Virtis automatically enter "0.0000" is for a null entry in the field to be considered by Virtis to be zero.

3. The Stiffeners between Diaphragms window (opened from the Stiffener Ranges window) cannot be size adjusted (under window view) in order to be able to view all (or at least, more) of the data. Scroll bars must be used. Window resizing should be added to this window.

FROM: Joseph Ihnat DATE: 10/11/2010 12:05:10 PM Eastern Daylight Time

#2 is fixed for version 6.3

4/19/2016 3:23:24 PM

HRS AASHTO

2945

## Complete Issue Information

FROM: Joseph Ihnat DATE: 10/11/2010 3:19:00 PM Eastern Daylight Time  
#1 and #3 also fixed for version 6.3

FROM: Srujana Thogaru DATE: 4/12/2011 11:13:27 AM Eastern Daylight Time  
Tested and found to be fixed for 6.3

FROM: Tim Armbrecht DATE: 5/13/2011 9:51:43 AM Eastern Daylight Time  
Accepted.

|                                |
|--------------------------------|
| Issue ID: 10241                |
| Subject: Unable to save bridge |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 9/8/2010 12:34:43 PM |
| Modified By: sthogaru               | 4/11/2011 5:42:37 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Joseph Ihnat DATE: 9/8/2010 8:35:51 AM Eastern Daylight Time  
Submitted on behalf of Mike Meder:

I am having an issue with OPIS. I am not able to save anything within the program. Every time I try to save I get this error:

Unable to save Bridge data!  
Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 27).

4/19/2016 3:23:24 PM

HRS AASHTO

2946

**Complete Issue Information**

Error updating database record set.

[bridge is attached to this incident]

FROM: David Koenig DATE: 9/8/2010 9:01:53 AM Eastern Daylight Time  
This may be similar to Incident 9860, which we submitted back in May, which has not been addressed.

FROM: Mehrdad Ordoobadi DATE: 9/27/2010 11:35:12 AM Eastern Daylight Time  
The problem is caused by a value of 100 in the TRUCKPCT field. The database field accepts a 2 digit integer 0 to 99.  
Mike, please enter a number between 0 and 99 for the Truck PCT field in the Traffic tab of the bridge window.

If the user should be allowed to only enter values from 0 to 99 then the Data Dictionary should be updated to accept only values between 0 and 99. Currently it accepts values between -1 and 100. In resolving this issue, we should consider existing bridges in the clients' databases and bridge descriptions in XML or BBD file format.

If the user should be allowed to enter a value of 100 in the truck PCT field, we can fix the issue by changing the data type for the TRUCKPCT column to numeric(3,0) and then changing the data dictionary to accept values between 0 and 100. We should coordinate this with the Pontis team to see if this is an acceptable change to the structure of the Pontis database.

Secondly, the computation of the values in the Traffic tab is very annoying. It pops up a message whenever a field is selected. It should only ask the user when some value has changed.

FROM: Mehrdad Ordoobadi DATE: 9/27/2010 1:16:55 PM Eastern Daylight Time  
This does not appear to be related to 9860.

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 8:37:10 AM Eastern Standard Time  
Changed the upper limit for the TRUCKPCT field to 99 instead of 100.  
Fixed for 6.3.

FROM: Mehrdad Ordoobadi DATE: 4/8/2011 1:42:45 PM Eastern Daylight Time  
Modified the version conversion and migration scripts to change the values in the TRUCKPCT field to 99 if they are greater than 99.  
Fixed for 6.3.

FROM: Srujana Thogaru DATE: 4/11/2011 1:44:11 PM Eastern Daylight Time  
Tested and found to be fixed for 6.3

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 10249<br>Subject: SQL Server corruption/failure |
|-----------------------------------------------------------|

|                                                                       |
|-----------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ordoobadi, Mehrdad |
|-----------------------------------------------------------------------|

4/19/2016 3:23:24 PM

HRS AASHTO

2947

**Complete Issue Information**

|                            |                       |
|----------------------------|-----------------------|
| Submitted By: Horton, Doug | 9/10/2010 1:16:10 PM  |
| Modified By: hlee          | 12/10/2010 3:15:47 PM |
| Priority: High             |                       |
| Category: Support          |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Doug Horton DATE: 9/10/2010 9:27:15 AM Eastern Daylight Time  
VDOT is currently using Virtis 6.1 in local, standalone mode while we are updating our combined production database. We are using SQL Server Express 2005 as shipped with the install package. We have recently experienced several instances where Virtis works fine one day and then will not access the local databases the next. The error is something like "Unable to connect - SQL Server not installed or access denied". While this is not the exact message, it gets the point across - SQL Server is not functioning correctly. NO changes were made in any of the cases where this occurred. We have backups of the existing local databases, so we can add them back into the system. We tried the following:

- 1: We searched Microsoft and this database for possible solutions. Incident 9585 did not help as neither of the two conditions existed. Microsoft suggestions also did not correct the problem
- 2: Reinstallation of SQL Express 2005 was performed outside of the V/O install but the existing databases could not be accessed
- 3: The V/O 6.1 Install disk was used to load V/O and SQL Express 2005. The existing databases were

4/19/2016 3:23:24 PM

HRS AASHTO

2948



## Complete Issue Information

NOT overwritten. Virtis would still not open the existing databases.

2: We

FROM: Doug Horton DATE: 9/10/2010 9:55:39 AM Eastern Daylight Time

4: We then used the install disk to reinstall V/O and SQL Express, overwriting the existing databases. Virtis worked fine with the newly created blank databases.

5: We replaced the new databases with the previous databases and tried to access them without success (See ErrorMessage1)

6: We generated a new ODBC entry for the previous databases and tried to access them without success (See ErrorMessage2) - Based on the schema error, Virtis 6.1 was reregistered but this did not solve anything.

Is there something that V/O does when databases are added which makes their signatures or whatever unique?

Any suggestions would be appreciated. We can provide the database and log files for one of the previous databases if needed (Too large to upload - got caught in loop).

FROM: Joseph Ihnat DATE: 9/10/2010 10:38:19 AM Eastern Daylight Time

If it's working fine one day and then stops working, there's nothing in Virtis that will cause it to stop working.

I've seen two causes of the "Unable to connect - SQL Server not installed or access denied" error:

1) The SQL Server service may have stopped running (Windows Update may cause this). Open the SQL Server Configuration Manager and make sure the SQL Server (MSSQLSERVER) service is running and the start mode is set to Automatic.

2) Changing the computer name will cause this error and then the ODBC connection will need to be reconfigured.

ErrorMessage1 and ErrorMessage2 were not caused by VirtisOpis. These are SQL Server procedures that need to be performed a certain way.

For procedure (5) above, you should use SQL Server Management Studio to take the database offline, then copy in the new database files, making sure they're not readonly, then bring it back online.

FROM: Joseph Ihnat DATE: 9/10/2010 11:12:51 AM Eastern Daylight Time

I see that 9585 already explains my two causes above. I haven't seen any other cause. Will have to investigate.

FROM: Joseph Ihnat DATE: 9/10/2010 11:31:32 AM Eastern Daylight Time

This article lists many other potential causes: <http://support.microsoft.com/kb/328306>

FROM: Mehrdad Ordoobadi DATE: 9/20/2010 8:59:30 AM Eastern Daylight Time

From: Bridgewater,

Sent: Monday, September 20, 2010 9:18 AM

To: 'Horton, Douglas L., P.E.'

Subject: RE: Incident 10249

Good Morning Doug,

Were the information that we provided regarding this incident helpful? Do you still have problems with your SQL Express databases? As noted in the incident 10249 this Microsoft article maybe useful <http://support.microsoft.com/kb/328306> if you still experience problems with your SQL Server databases.

4/19/2016 3:23:24 PM

HRS AASHTO

2949

**Complete Issue Information**

Regards,  
Mehrdad Ordoobadi

FROM: Herman Lee DATE: 12/3/2010 9:48:09 PM Eastern Standard Time  
Information Needed E-mail sent on 12/3/10.

FROM: Herman Lee DATE: 12/10/2010 10:11:53 AM Eastern Standard Time  
E-mail from Doug Horton on 12/9/2010:

=====  
We were not able to make the old databases that were previously accessible available again. We tried all of the suggestions mentioned in the trouble report without success. We have recreated the major files that we "lost", so the item has been overcome by events.

We would still like to know what happened and how to correct it, but it is no longer an urgent matter. Perhaps we will re-visit this at a later time. I do not know how you want to mark the item, but it is not truly resolved.

Thanks for the great support!

Doug L. Horton, P.E.  
Virginia Department of Transportation  
Structure and Bridge Division  
1401 E. Broad Street  
Richmond, Virginia 23219

=====

|                                                    |
|----------------------------------------------------|
| Issue ID: 10251                                    |
| Subject: Software Version Number on Rating Reports |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 9/10/2010 3:48:26 PM |
| Modified By: dteal             | 5/11/2011 1:32:24 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:25 PM

**HRS AASHTO**

2950

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10254 test.xml      |             |
|      | Doc2.docx           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 9/10/2010 11:49:24 AM Eastern Daylight Time  
When printing a Rating Results Summary Report we have missed one important item. The software version.

The screen GUI of this table has the version in the lower left corner, but when selecting to print the report (to printer or PDF file) this information gets left off.

FROM: Todd Thompson DATE: 9/13/2010 9:11:42 AM Eastern Daylight Time  
Would be nice to have which engine also.

We have a large cluster of report related issues that needs to be addressed - hopefully sooner than later. We did create a master VI incident a couple of years ago to hang off all of the report related incidents.

FROM: Joseph Ihnat DATE: 12/13/2010 2:52:52 PM Eastern Standard Time  
Engine name/version added to printed report. Done for version 6.3

FROM: Srujana Thogaru DATE: 4/1/2011 8:53:23 AM Eastern Daylight Time  
Verified and found to be fixed for 6.3

FROM: Dean Teal DATE: 5/11/2011 9:32:24 AM Eastern Daylight Time  
Accepted in 6.3 beta 2

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10254                                        |
| Subject: distribution factors for mutlibeam structures |

|                                   |
|-----------------------------------|
| Folder: /Virtis/Support Center    |
| Primary Contact: Kennelly, Krisha |

4/19/2016 3:23:25 PM

HRS AASHTO

2951

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Armbrecht, Tim | 9/15/2010 4:18:49 PM |
| Modified By: tarmbrecht      | 5/13/2011 1:52:23 PM |
| Priority: High               |                      |
| Category: Bug                |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Support  |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 9/15/2010 12:32:45 PM Eastern Daylight Time  
From one of our designers:

Tim,

AASHTO Table 4.6.2.2.2b-1 (page 4-36) clearly states that the formula given is "Regardless of the number of loaded lanes". We think the distribution equations depict a best fit line from a set of research data points and AASHTO is aware that these equations can yield a slightly higher distribution factor for one lane loaded than two lanes loaded. This is odd however the difference is so miniscule they just direct you to use the same equation regardless of the number of loaded lanes.

Tim Souther was rating a structure for a one directional permit load so he entered a single lane on Virtis and noted the higher distribution factor for a single lane. See the attached Virtis computed LLDF for adjacent box beams. In my opinion, if Virtis was following the AASHTO code on this issue they wouldn't permit a single lane to be entered and/or show a comparison of the two. This only causes confusion among designers and gets them questioning the validity of the equations.

Kevin

I think Kevin and Tim Souther are suggesting that it is not reasonable for a single lane distribution to be higher than a two lane distribution. If a load rater had to choose between the two, he/she would

4/19/2016 3:23:25 PM

HRS AASHTO

2952

## Complete Issue Information

choose the two lane factor even if the intent is to run the vehicle on the bridge by itself. Since the situation described in the table says "regardless of number of loaded lanes", Virtis should be fixed so the the one lane and two lane are the same in this situation. Tim.

FROM: Krisha Kennelly DATE: 9/15/2010 1:33:07 PM Eastern Daylight Time

For the LFD load factor calcs, Virtis follows Std Spec Article 3.23.4.3 to compute the distribution factor. It is computed as  $S/D$  where  $D$  is a function of the number of lanes. Virtis computes the single lane DF using 1 lane and the multi lane DF using the total number of lanes on the structure. This article does not place restrictions on the single lane DF having to be less than the multi lane DF.

For the LRFD spec, the  $D$  value used to compute the DF is also a function of the number of lanes. Opis computes  $D$  using 1 for single lane and the number of lanes on the structure for the multi-lane. There is no restriction on single lane having to be less than multi lane.

I think AASHTO says 'Regardless of Number of Loaded Lanes' to simply distinguish that this structure type always uses the same equation  $S/D$  as opposed to other structure types that have 1 equation for single lane and a different equation for multi lane. Since the equation for  $D$  includes the number of lanes in it I think it should be evaluated for both single and multi lane.

(The attached document shows the Standard Spec LL distribution factors. Above discussion from Kevin references the LRFD specification.)

FROM: Krisha Kennelly DATE: 9/15/2010 3:25:10 PM Eastern Daylight Time

FROM: Tim Ambrecht DATE: 9/15/2010 3:53:38 PM Eastern Daylight Time  
Krisha, OK, thanks.

FROM: Krisha Kennelly DATE: 9/22/2010 3:08:59 PM Eastern Daylight Time  
email received 9/17/10

Tim,

We agree that the  $D$  value is a function of the number of design lanes. The AASHTO LRFD Bridge Design Specifications specifically defines the terms to be used in determining the distribution of loads. At the bottom of page 4-28 of AASHTO it states "The following notation shall apply to tables in Articles 4.6.2.2.2 and 4.6.2.2.3". Within the list of variables you will find a definition for  $NL$  as follows, " $NL$  = number of design lanes as specified in Article 3.6.1.1.1". In the text of Article 3.6.1.1.1 it defines the number of design lanes based on clear roadway width alone. There is no mention of the number of loaded lanes being used. We think there is an intentional distinction between design and loaded lanes.

We ran some numbers to see what happens if you assume  $NL$  to be defined by "loaded lanes" instead of "design lanes". Specifically we were looking to compare the distribution factor obtained using the maximum number of "loaded lanes" verses the least number (1) of "loaded lanes". The results appear to show that the distribution factor went slightly up when using the least number of loaded lanes. This seems odd and contrary to engineering judgment which tends to lean us towards using the current definition in the LRFD code as spelled out above that the number of "design lanes" should be used for determining  $NL$ .

Since our original inquiry we have discovered in Article 4.6.2.2 that if one lane is loaded with a special vehicle or evaluation permit vehicle, the design force ... is determined according to 4.6.2.2.5. This addresses our original condition that was related to a permit vehicle. It is interesting to note from

4/19/2016 3:23:25 PM

HRS AASHTO

2953

## Complete Issue Information

equation 4.6.2.2.4-1 that if all other routine traffic were restricted from the structure when a permit load crossed, the force effect distribution from the permit vehicle alone would be less than a single lane loaded. This also seems to support our stance. What do you think?

Kevin L. Riechers, P.E.  
Structural Standards Development Group Engineer  
Bureau of Bridges and Structures  
Illinois Department of Transportation  
Phone: (217) 782-9109 ; Fax (217) 782-7960  
e-mail: Kevin.Riechers@illinois.gov

email response sent 9/22/10:  
Hi Tim,

I agree with their interpretation. We can make this change for 6.3. For Load Factor, we will revise the bending moment distribution factor to use the number of design lanes for both the single and multi lane distribution factor calculations.

For LRFD, Opis assumes concrete box beams are Superstructure Type "f" in Table 4.6.2.2.1-1. This leads them to a different equation for the LRFD distribution factors.

In LRFD, the S/D calculation is used by Opis for precast tee beams. In that calculation, Opis is currently using the number of design lanes for both the single and multi lane calculations. Therefore, no change is required to the LRFD distribution factors.

I'll make note of this in the incident.

Krisha

FROM: Krisha Kennelly DATE: 10/17/2010 8:13:27 PM Eastern Daylight Time  
Fixed for 6.3.

User did not attach an xml file so I created the attached 10254 test.xml

FROM: Srujana Thogaru DATE: 4/1/2011 10:53:35 AM Eastern Daylight Time  
Tested and found to be fixed for 6.3

FROM: Tim Armbrecht DATE: 5/13/2011 9:52:23 AM Eastern Daylight Time  
Accepted.

Issue ID: 10262

Subject: Support Excel cut/paste data in Virtis/Opis data input tables

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:23:25 PM

HRS AASHTO

2954

**Complete Issue Information**

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Waheed, Amjad | 9/29/2010 3:22:21 PM |
| Modified By: jihnat         | 9/29/2010 4:41:53 PM |
| Priority: High              |                      |
| Category: Support           |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 9/29/2010 11:26:43 AM Eastern Daylight Time  
 Does Virtis or Opis support cutting data from Excel sheets and pasting into Virtis tables? We could not do it.

FROM: Joseph Ihnat DATE: 9/29/2010 12:40:28 PM Eastern Daylight Time  
 You can only select one cell at a time in Virtis. So you can only copy/paste from a single Excel cell at a time.

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 10263          |
| Subject: Virtis/Opis 6.2 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 9/29/2010 3:27:03 PM |
| Modified By: hlee              | 9/29/2010 3:57:00 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 9/29/2010 11:28:45 AM Eastern Daylight Time  
Is Virtis Opis 6.2 covered here? We got our DVD but we can not log in any incident as 6.2 is not available in the Version Name drop-down list.

FROM: Joseph Ihnat DATE: 9/29/2010 11:50:34 AM Eastern Daylight Time  
6.2 Release has been added to Support Center folder.



## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 10264                                 |
| Subject: Error performing prestress loss - LRFR |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Curtis, Beckie   | 9/30/2010 7:23:51 PM |
| Modified By: hlee              | 9/30/2010 8:58:10 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:23:26 PM

HRS AASHTO

2957

**Complete Issue Information**

00222 - 59159012000B010.xml

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 9/30/2010 3:26:49 PM Eastern Daylight Time  
I'm trying to run HL-93 on Span 3, Beam E and am receiving the following error:

Error - Error performing prestress loss LRFR specification checking!

Error - Analysis failed!

FROM: Herman Lee DATE: 9/30/2010 4:16:39 PM Eastern Daylight Time  
Duplicate of Incident 10231.  
I couldn't think of a workaround for this defect. Model the beams as girder line member is an alternative solution.

Issue ID: 10266  
Subject: U Shaped Girders - Strand Pattern Outside of Girder Section

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Jones, Daniel 10/6/2010 1:10:40 PM  
Modified By: hlee 10/7/2010 12:14:21 PM  
Priority: High  
Category: Support

**Complete Issue Information**

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Strand.jpg          |             |
|      | Tub.xml             |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Daniel Jones DATE: 10/6/2010 9:34:47 AM Eastern Daylight Time  
One is allowed to enter a strand pattern outside the girder cross section. Please reference the picture.

Thanks,  
Daniel

FROM: Herman Lee DATE: 10/7/2010 6:53:01 AM Eastern Daylight Time  
Virtis/Opis allows the strand grid (PS Beam window Strand Grid tab) and the PS shape to be specified independently. Please note that the purpose of the strand grid is to specify the possible prestress strand locations, not all strand grid locations need to have a prestress strand in the Strand Layout window.

Below is copied from Virtis/Opis Help's Strand Layout topic:

=====

**U Beam Strand Positioning Method**

The first row (measured from the bottom of the cross section) grid positions are centered about the centerline of the cross section. The first row is assumed to be in the bottom flange. The available grid positions are spaced horizontally based on the input spacing. The first row establishes the boundary for all rows below the top flanges. The first and last spacing of grid positions in other rows located in the bottom flange are based on the input spacing of the first row, the vertical distance to the first row, and the outside wall slope. Grid positions located in rows located in the top flanges are centered about the boundary established by the first row.

=====

**Complete Issue Information**

Issue ID: 10267  
 Subject: U Shaped Girder - Changing the Strand Configuration while Working in Strands in Rows

Folder: /Virtis/Support Center  
 Primary Contact: Lee, Herman  
 Submitted By: Jones, Daniel 10/6/2010 1:35:13 PM  
 Modified By: hlee 10/7/2010 12:21:01 PM  
 Priority: High  
 Category: Support

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | New      | High     | Support  |
|                  | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Daniel Jones DATE: 10/6/2010 9:43:23 AM Eastern Daylight Time  
 You cannot change the input in the "Strand Configuration Type" box while working in the "Description Type" labeled "Strands in Rows". Please reference the picture.

Thanks,  
 Daniel

FROM: Herman Lee DATE: 10/7/2010 8:14:26 AM Eastern Daylight Time  
 Only Straight/Debonded strand configuration type is supported in Virtis/Opis. Incident 9416 is the enhancement request for supporting the other strand configuration types.

4/19/2016 3:23:26 PM

HRS AASHTO

2960

## Complete Issue Information

Issue ID: 10270

Subject: LRFD article 6.10.11.2.4, bearing stiffener calculation inaccuracies

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: Skow, Wayne

10/12/2010 7:14:50 PM

Modified By: gcolgrove

4/18/2011 11:21:42 AM

Priority: High

Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Wayne Skow DATE: 10/12/2010 3:16:20 PM Eastern Daylight Time

The following issues were noticed in LRFD article 6.10.11.2.4:

4/19/2016 3:23:27 PM

HRS AASHTO

2961

**Complete Issue Information**

- The MOI calculated for each stiffener plate is from the face of the web ( $b \cdot h^3/3$ ) and not the centerline of the web.

- The offset of a stiffener from centerline doesn't seem to be taken into account when the web strip is calculated. Currently,  $9 \cdot tw$  is compared to the distance from the centerline of the bearing group to the end girder distance. This is incorrect if the user has specified an offset for the stiffener.

- If the web strip is reduced on one side due to the nearness of the member end, the opposite side is also reduced. The opposite side should be  $9tw$ .

FROM: Srujana Thogaru DATE: 10/20/2010 10:25:40 AM Eastern Daylight Time  
Fixed for 6.3 alpha build 1

FROM: Herman Lee DATE: 12/3/2010 9:11:12 PM Eastern Standard Time  
Resolved for 6.3 Release.

FROM: George Colgrove DATE: 4/18/2011 6:04:44 AM Eastern Daylight Time  
Verified as fixed

Issue ID: 10274  
Subject: LRFD Art App D6.1 prints out a & b instead of "Comp" and "Tens"

Folder: /Virtis/Support Center  
Primary Contact: Skow, Wayne  
Submitted By: Kennelly, Krisha 10/27/2010 2:11:45 PM  
Modified By: sthogaru 4/12/2011 3:09:16 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Assigned | High     | Cosmetic |
|                 | Resolved |          |          |

4/19/2016 3:23:27 PM

HRS AASHTO

2962

### Complete Issue Information

|               |          |      |         |
|---------------|----------|------|---------|
|               |          |      | Bug     |
| Lee, Herman   | Resubmit |      |         |
| Ihnat, Joseph | New      | High | Unknown |
|               | Assigned |      | Support |
|               | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 10/27/2010 10:12:34 AM Eastern Daylight Time  
In the release 6.2, a and b are printed out instead of "Comp" and "Tens".

Programmer notes:

But in 6.3 debug I see "Comp" and "Tens".

Please investigate so 6.3 release will show the words and not the letter for this article as well as the LFD articles.

FROM: Wayne Skow DATE: 10/27/2010 2:22:27 PM Eastern Daylight Time

The problem code was heavily nested. I removed the nesting and that cleared the problem up. The nested code must have confused the optimizing compile.

FROM: Srujana Thogaru DATE: 3/31/2011 4:39:05 PM Eastern Daylight Time

Release version of 6.3 Alpha 6 still shows a and b. Please reinvestigate.

FROM: Wayne Skow DATE: 4/4/2011 1:07:44 PM Eastern Daylight Time

this time i had to add the enumeration description to the enum StressType ([EnumDescription ("Comp"))).

FROM: Srujana Thogaru DATE: 4/12/2011 11:09:01 AM Eastern Daylight Time

Tested and found to be fixed for 6.3

|                       |
|-----------------------|
| Issue ID: 10277       |
| Subject: Software Key |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:23:27 PM

HRS AASHTO

2963

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Barreda, Jesus   | 10/29/2010 3:04:16 PM |
| Modified By: jhnat             | 10/29/2010 3:16:47 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lee, Herman      | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          | Enhancement |
|                  | Suspended |          |             |
|                  | Resolved  |          |             |
| Li, Xinmei       |           |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jesus Barreda DATE: 10/29/2010 11:07:29 AM Eastern Daylight Time

Hello,

This is Jesus Barreda from Butler County Engineer's Office, I just installed Virtis 6.2 and according to the letter received from Virtis we should ask you for a software key.

Could you provide us the needed software key.

Thanks

FROM: Joseph Ihnat DATE: 10/29/2010 11:12:15 AM Eastern Daylight Time

Registration keys are only issued for new users.

If you've installed Virtis 6.2 on a different computer than Virtis 6.1, you'll need to transfer your license

4/19/2016 3:23:27 PM

HRS AASHTO

2964



**Complete Issue Information**

from the Virtis 6.1 computer.  
Please see the Help topic "Program Activation Required" for instructions on transferring a license.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 10279                                                             |
| Subject: Incorrect distribution factors for prestress bulb - tee deck beams |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Li, Xinmei    |                       |
| Submitted By: Olsen, Jeff      | 11/1/2010 10:48:53 PM |
| Modified By: jolsen            | 9/12/2012 7:11:06 PM  |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jeff Olsen DATE: 11/1/2010 6:50:41 PM Eastern Daylight Time  
Prestressed I beams that are used as deck beams are type "j" beams according to AASHTO Table 4.6.2.2.1-1. In the Library Window for the Prestressed I Beam shapes there is a check box to designate that the beam is a deck beam. According to the AASHTO code this should designate the beam as a type "j". The distribution factor calculations in the output file show that a type "k" beam is designated. This is incorrect. Furthermore, the designer needs to designate whether these "j" beams are connected sufficiently to act as a unit or only to prevent relative displacement. There needs to be an additional button or check box to designate how the beams are connected. This designation needs to

4/19/2016 3:23:27 PM

HRS AASHTO

2965

### Complete Issue Information

dictate which distribution factors to use. As it currently sits, the user does not know which distribution factor equations from the LRFD code are being used without digging into the output files.

FROM: Xinmei Li DATE: 4/2/2012 5:28:01 PM Eastern Daylight Time  
Resolved for next 64 Alpha build.

|                                  |
|----------------------------------|
| Issue ID: 10285                  |
| Subject: Windows 7 Library Issue |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 11/9/2010 4:45:34 PM  |
| Modified By: dteal             | 11/24/2010 4:24:55 PM |
| Priority: High                 |                       |
| Category: Unknown              |                       |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Not Reproducible   |          |          |

### Contacts

4/19/2016 3:23:28 PM

HRS AASHTO

2966

### Complete Issue Information

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | AnalysisEvent.png    |             |
|      | AnalysisSettings.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/9/2010 11:49:32 AM Eastern Standard Time  
Using the Library materials-Prestressing Strand  
0.6" (7W-270) LR

this is a standard Library item  
It contains the Transfer Length (Std) = 30.00 in

When a bridge is exported from my XP computer and imported into a pc using windows 7, this material field is blanked out.

When I look at the library item on the windows 7 pc, this item is blank

FROM: Joseph Ihnat DATE: 11/18/2010 10:48:23 AM Eastern Standard Time  
What kind of database? Which edition of Windows 7? 32-bit or 64-bit?

FROM: Dean Teal DATE: 11/18/2010 10:56:46 AM Eastern Standard Time  
The W7 pc was a consultant  
Using the provided data base (SQL Server Express)  
I think he had a 64 bit W7 machine

FROM: Joseph Ihnat DATE: 11/18/2010 12:25:55 PM Eastern Standard Time  
I'm not able to reproduce this.

FROM: Dean Teal DATE: 11/24/2010 11:24:55 AM Eastern Standard Time  
Joe - I just finished installing V/O on a windows 7 laptop. I could not reproduce it either

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 10291                                                  |
| Subject: Missing data in Analysis Event Properties Review dialog |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Ihnat, Joseph |                        |
| Submitted By: Lee, Herman      | 11/12/2010 11:53:17 PM |
| Modified By: sthogaru          | 3/31/2011 7:57:10 PM   |

4/19/2016 3:23:28 PM

HRS AASHTO

2967

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
|                  | Assigned           |          | Bug      |
| Kennelly, Krisha |                    |          |          |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |
|                  | Information Needed |          |          |
|                  | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | POI Controls.xml    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/12/2010 6:54:01 PM Eastern Standard Time  
Please see attached screen captures. Looks like LRFR is not implemented in the Properties Review and Vehicle Properties dialogs.

FROM: Joseph Ihnat DATE: 11/16/2010 2:58:32 PM Eastern Standard Time  
Fixed for version 6.3

FROM: Srujana Thogaru DATE: 3/31/2011 3:54:37 PM Eastern Daylight Time  
Verified and Found to be fixed for 6.3

## Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 10294                        |
| Subject: Virtis LRFR Ignoring User POI |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 11/16/2010 2:11:05 PM |
| Modified By: bzhang               | 5/12/2011 10:03:49 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/16/2010 9:12:23 AM Eastern Standard Time

In the attached PS bridge, Member 2

Using Virtis LRFR Design Load Rating

I have selected User Defined POI only at midspan of the span 1 and 2

Perform rating and review results

I find a rating for the 90% Truck pair + lane rating location not at my user defined POI but instead at the ends of the beams.

The control doesn't appear to be working – is there a work around?

FROM: Herman Lee DATE: 11/16/2010 4:56:29 PM Eastern Standard Time

Continuous span support locations, simple span support locations and mid span locations of simple spans are always added for spec check without checking the Points of Interest control option.

I couldn't find a workaround for this defect in 6.2.

4/19/2016 3:23:28 PM

HRS AASHTO

2969

## Complete Issue Information

FROM: Dean Teal DATE: 11/18/2010 12:10:06 PM Eastern Standard Time

Then without a workaround i would have to consider this to be a bug

When the user requests information at a particular POI and gets results other than that POI then the program is not performing correctly and not giving the user what they asked for or what they expect.

FROM: Jeff Ruby DATE: 4/14/2011 8:14:50 AM Eastern Daylight Time

Testing for 6.3 Beta 1, I found this would greatly help if it would be possible to "turn off" ALL stress calculation, spec checks, etc. for all points except what is chosen as user POI. This is an unresolved incident in the mainenance plan for 6.3. The beta TAG discussed this issue Tuesday. Krishna mentioned "Not calculating" all points would be preferrable to "calculate all" and then only display what was requested. I agree, since performance (meaning it is very slow and takes a lot of memory) is an issue, especially with more than one truck.

The example I am thinking about is my 5-span, 850 ft steel bridge with 8 trucks. I had to give up after about an hour on my 2GB machine was using 1.5GB for Virtis LFR.

FROM: Krishna Kennelly DATE: 4/14/2011 1:32:15 PM Eastern Daylight Time

I don't think we can turn off all calculations and spec checks for points other than POI. For prestress we need to know the ps force at debond + transfer length, harp points, we need to know the loss at midspan, etc. For steel we need to know the moments and stresses at brace points, etc.

I was suggesting we turn off the rating articles at all points other than user defined poi's. Then we won't get any rating factors at points that aren't user defined poi's.

FROM: Krishna Kennelly DATE: 4/26/2011 2:59:19 PM Eastern Daylight Time

in 6.2 Release, if the user picks only "Generate at user-defined points" for the AASHTO LRFR engine:

1. Steel LRFR - rating factors only computed at POI's. Brace points and mid-brace points have only a few articles evaluated only to determine the stresses at these locations so Cb can be determined. Correct behavior.
2. RC LRFR - only user defined POI's are evaluated and rating factors are only computed here. Correct behavior.
3. PS LRFR - user defined POI's and prestress control points (simple span supports, midspan, harp points, debond + transfer lengths, dv points) are evaluated and rating factors are computed at these points. Incorrect behavior.

Fixed for 6.3, for prestress members if the user picks only "Generate user defined points" for any AASHTO engine, only those POI's will be evaluated and rating factors computed in the final round. The prestress control points are only considered in the first round where the Prestress Calculations occur.

FROM: Krishna Kennelly DATE: 5/4/2011 11:06:41 AM Eastern Daylight Time

Note that with this change you will only evaluate the critical shear location (dv from the support) when the "Generate at section change points" is selected.

4/19/2016 3:23:28 PM

HRS AASHTO

2970

**Complete Issue Information**

FROM: Bin Zhang DATE: 5/6/2011 1:33:53 PM Eastern Daylight Time

Verified in beta2 will the dll updates by May 6th.

1. If the I pick only "Generate user defined points" for any AASHTO engine, only those POI's appear in the stage 3 spec check
2. The prestress control points are only considered in the "Prestess Calculations" if I pick only "Generate user defined points" .
3. When the "Generate at section change points" is selected, the spec check works fine at the critical shear location (3.86 ft from the support in this case).

|                                                     |
|-----------------------------------------------------|
| Issue ID: 10295                                     |
| Subject: PS Interior Support Control Option Missing |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 11/16/2010 5:09:44 PM |
| Modified By: hlee                   | 3/9/2015 1:09:26 PM   |
| Priority: High                      |                       |
| Category: Maintenance               |                       |

**History**

| Primary Contact    | Status             | Priority | Category    |
|--------------------|--------------------|----------|-------------|
| Lee, Herman        | New                | High     | Unknown     |
| Kennelly, Krisha   | Information Needed |          |             |
|                    | Assigned           |          | Maintenance |
| Ihnat, Joseph      |                    |          |             |
| Trees, Geoffrey    |                    |          |             |
| Kennelly, Krisha   |                    |          |             |
| Ordoobadi, Mehrdad |                    |          |             |
| Thogaru, Srujana   |                    |          |             |
| Ordoobadi, Mehrdad | Resolved           |          |             |
|                    | Verified           |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:28 PM

HRS AASHTO

2971

## Complete Issue Information

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 0690016x-Corrected.xml |             |
|      | 0690016x.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/16/2010 12:10:22 PM Eastern Standard Time

I think we missed adding a control option for PS concrete

5.14.1.4.6 Suggests two analysis methods for interior supports for simple span precast girders made continuous.

It states:

Alternatively, the top of the precast girders at interior supports may be designed as reinforced concrete members at the strength limit state. In this case, the stress limits for the service limit state shall not apply to this region of the precast girder.

And the commentary states:

This option allows the top of the girder at the interior support to be designed as a reinforced concrete element using the strength limit state rather than a prestressed concrete element using the service limit state.

We should have added a control option to ignore the service limit state

If a designer has chosen to ignore the service limit state and apply strength limit state as reinforced concrete, when you checking ratings in LRFR you may get a  $RF < 1.0$  controlled by service III near the pier with no way to ignore it or work around it (cannot set a POI farther from the pier, see VI 10294)

FROM: Dean Teal DATE: 11/16/2010 12:32:08 PM Eastern Standard Time

I think that BRASS ignore service III and only uses strength limit states near the pier

FROM: Krisha Kennelly DATE: 11/16/2010 2:23:39 PM Eastern Standard Time

10282 is related to this incident.

Just so I understand what is needed:

Following sketch is a 2 span ps beam made continuous. region B is the region over the pier where the beams are made continuous by the deck rebar and a CIP concrete diaphragm.

4/19/2016 3:23:29 PM

HRS AASHTO

2972



## Complete Issue Information

A

BBBBBB

A

^

^ ^

^

1. Right now, the AASHTO LRFD/LRFR engine does not check the stress limits in 5.9.4.2 for the points in between the simple span supports at a pier (region B). It analyzes those points as a reinforced concrete girder using the rebar in the deck for the flexural resistance. It also does not compute a rating factor for SerIII tensile stress there.

2. For the other points (region A), the Service III tensile stress is checked and a rating factor is computed. See the attached picture for the rating article. Is this the rating that you would like to be ignored? Over what length of region A near the pier should this rating be ignored?

FROM: Dean Teal DATE: 11/18/2010 11:57:21 AM Eastern Standard Time

Comments to your #1:

I know it doesn't compute a rating factor for Service III tensile stress between bearing points, but it does "at or near" the bearing point. This is a huge problem is for LRFR having it control when Service III should never control a rating. Ratings should be controlled by strength conditions. If I was to debond the first 10" of the strands, the issue would go away – that would be an ugly work around!

Comments to your #2:

Yes, the Service III rating near the pier is what I would like to ignore.

Over what region? – The code states at or near the support - not an easy answer, is 1' enough? The simple answer is to follow BRASS's lead on this, make a check box to ignore tension in the top of beam. This way the agency has choices. KDOT's policy is to design the negative moment over the pier as a strength I condition and we ignore the fact that there is tension in top of the PS beam.

The way things are for Virtis LRFR in PS right now – if I have Service III control at the pier with the Virtis engine - being I can't choose to ignore it and I can't change my POI's to exclude it - the only work around I have is to change to the BRASS engine.

FROM: Aaron Kemna DATE: 11/18/2010 2:31:50 PM Eastern Standard Time

In my experience in design, you will only need this option near the supports. I have never had a problem at the nearest 1/10th pt. Ignoring final tensile stresses at the top of the beam at all locations is probably the easiest fix as long as Virtis is doing strength checks for negative moment at all applicable locations.

FROM: Dean Teal DATE: 11/22/2010 7:53:15 AM Eastern Standard Time

Aaron - what would you consider "near the supports"? What distance?

FROM: Aaron Kemna DATE: 2/4/2011 4:53:52 PM Eastern Standard Time

I think it can be argued that the intent is for the negative moment region between contraflexure points, but don't quote me on that. In design I don't think I ever had an issue at the 0.1 or 0.9 tenth point. I believe the best solution is to ignore tension in the top of the beam for final loads or have an option.

FROM: Krisha Kennelly DATE: 2/22/2011 1:49:26 PM Eastern Standard Time

This control option is being added as per Task Force direction via email on Feb 17, 2011. It will be in Version 6.3.

See attached document for screen shot of the control option.

4/19/2016 3:23:29 PM

HRS AASHTO

2973

## Complete Issue Information

Programmer assignments: (please assign to next person in the list after you finish your part):

Geoff - has already added the control option to the db.

Joe - please add to UI and help

Krishna - add to controller and Art. 6.2.4.1 PS Tensile Stress Service III Rating

Mehrdad - add to version conversion and migration

Srujana - add to report tool

FROM: Krishna Kennelly DATE: 2/22/2011 2:00:36 PM Eastern Standard Time

FROM: Joseph Ihnat DATE: 2/22/2011 2:38:15 PM Eastern Standard Time

Geoff has done the UI but it's not checked in yet.

FROM: Geoffrey Trees DATE: 2/22/2011 2:40:45 PM Eastern Standard Time

Database, db, de, dm, do and gui are done.

FROM: Joseph Ihnat DATE: 2/23/2011 11:06:04 AM Eastern Standard Time

Help is done.

FROM: Krishna Kennelly DATE: 2/24/2011 12:49:38 PM Eastern Standard Time

controller and article done.

Still needs migration and version conversion and report tool.

FROM: Mehrdad Ordoobadi DATE: 3/11/2011 11:33:43 AM Eastern Standard Time

Implemented in VersionConversion and Migration.

Surjana, please implement in report tool.

FROM: Srujana Thogaru DATE: 3/11/2011 12:54:09 PM Eastern Standard Time

Implemented for report tool and sql script sent to Mehrdad

FROM: Mehrdad Ordoobadi DATE: 3/11/2011 2:07:41 PM Eastern Standard Time

The SQL scripts created by Srujana was applied to the sample database in TFS.

FROM: George Colgrove DATE: 4/27/2011 1:29:58 PM Eastern Daylight Time

FROM: Herman Lee DATE: 6/10/2011 6:13:53 PM Eastern Daylight Time

Resolved for 6.3 Release.

Issue ID: 10296

Subject: Corrupted Bridge Model & Export File

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Armbrecht, Tim

11/16/2010 8:40:17 PM

Modified By: hlee

2/6/2011 1:19:50 PM

4/19/2016 3:23:29 PM

HRS AASHTO

2974

**Complete Issue Information**

|                   |
|-------------------|
| Priority: High    |
| Category: Support |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |
|                    | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | BridgeExchangeForLinkedBridg<br>e.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Tim Armbrecht DATE: 11/16/2010 3:43:18 PM Eastern Standard Time  
From Souther:

The export (0690016x.xml) is of a Virtis bridge model that would not save. After the failed save attempt I created an export file and attempted, w/o success, to import it.

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 9:17:14 AM Eastern Standard Time  
Tim, we fixed the corrupt bridge export file. No information was lost. Attached is the corrected bridge XML file. Note that you will get a warning message stating that the checksum is incorrect when importing this new XML file. Please ignore this warning message.

## Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 10297                                         |
| Subject: Bridge Exchange issue for Pontis linked bridge |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Lee, Herman           | 11/17/2010 5:19:41 PM |
| Modified By: mordoobadi             | 3/25/2011 3:54:43 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/17/2010 12:20:38 PM Eastern Standard Time  
I tried the Bridge Exchange feature for a Pontis linked bridge in the Agency repository database. I was able to use the Bridge Exchange feature to export the bridge and import to the consultant database. When I tried to use the Bridge Exchange feature to import back to the repository, I got the attached error. Is the Bridge Exchange feature available for Pontis linked bridge?

FROM: Mehrdad Ordoobadi DATE: 3/25/2011 11:49:16 AM Eastern Daylight Time  
Fixed in 6.3 Alpha 6.

4/19/2016 3:23:29 PM

HRS AASHTO

2976

## Complete Issue Information

Issue ID: 10298

Subject: Stringer Group Entry Problem (GFS/TFS)

Folder: /Virtis/Support Center

Primary Contact: Gao, Qiang

Submitted By: Armbrecht, Tim

11/17/2010 9:12:05 PM

Modified By: mkolis

8/29/2012 2:45:10 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Trees, Geoffrey | Assigned | High     | Unknown  |
| Lee, Herman     |          |          |          |
| Trees, Geoffrey |          |          |          |
| Gao, Qiang      | Resolved |          | Bug      |

4/19/2016 3:23:29 PM

HRS AASHTO

2977

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 11/17/2010 4:13:06 PM Eastern Standard Time  
Submitted on behalf of Tim Ambrecht, IL DOT:

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====

The discussion below is in the context of the attached export, StrgrGrpProb6.2(0690016).xml. And, while it specifically is for a truss-floorbeam-stringer (TFS) system, the same would also apply to a girder-floorbeam-stringer (GFS) system.

I entered the stringers in a TFS system and afterward made a slight change to the floorbeam spacing (fr/30.10415' to 30.1'). When re-opening the Stringer Group Definition Geometry (SGDG) window for the previously entered "Stringer Group" the following message appeared...

This was expected, but after clicking <OK> and selecting the new Floorbeam Spacing, the system would not make the change. Subsequently, after clicking <OK> to close that window, and then re-opening it, the same error box appeared and I confirmed that the Floorbeam Spacing specified in the Stringer Group Definition Geometry window was not changed. I have worked around this by deleting the initial Stringer Group entirely and re-creating it. However, the fact that it can't be revised by simply clicking the new floorbeam spacing.

Additionally...

The reason I changed from 30.10415' to 30.1' also indicates a program bug. With the former value, when the SGDG window was opened, there were two "Possible Floorbeam Spacing (ft)" values, 30.1041 & 30.1042, not the single 30.10415 that should have been there. In addition, under "Floorbeam Spacing (ft)" in the table the value displayed was 30.1042 which, when selecting the 30.1041 value, would not change.

Note: The initial entry w/the Floorbeam Spacing = 30.10415' is represented by Superstructure Definition named "Span 1a TFS". The revised entry w/the Floorbeam Spacing = 30.1' is represented by Superstructure Definition named "Span 1b TFS".

Tim Souther, PE  
%IDOT Bridge Ratings Unit

=====

FROM: Tim Ambrecht DATE: 5/13/2011 9:24:29 AM Eastern Daylight Time

4/19/2016 3:23:29 PM

HRS AASHTO

2978

**Complete Issue Information**

From my consultant (Souther) testing in 6.3B2:

RE: StrgrGrpProb6.2(0690016)-62.xml

Can't revise span length in Stringer Group. See Superstructure Definition, "Span 1a TFS". Stringer span options shown in Stringer Group (30.1041' & 30.1042') do not match the floorbeam spacing (30.10415'). See Superstructure Definition, "Span 1b TFS".

FROM: Geoffrey Trees DATE: 5/13/2011 10:42:45 AM Eastern Daylight Time  
The issue has not been resolved yet and the cause of the above behavior has not yet been determined.

FROM: Qiang Gao DATE: 6/7/2011 10:18:23 AM Eastern Daylight Time  
The problem is that the string comparison was used to determine whether the spacing pattern exists or not. For an example, 30.10415 could be rounded up to 30.1042 or 30.1041 due to some calculation error. If we don't consider the tolerance for double, the system would treat these two numbers as different spacing. Right now the prolem has been solved by considering a tolerance and using double comparison.

FROM: Qiang Gao DATE: 6/7/2011 10:27:55 AM Eastern Daylight Time  
It would be in 6.4 release.

FROM: Phil Litchfield DATE: 6/26/2012 4:51:09 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and appears to be fixed.

FROM: Matt Kolis DATE: 8/29/2012 10:45:10 AM Eastern Daylight Time  
Verified in VO64 Beta 4.

|                                               |
|-----------------------------------------------|
| Issue ID: 10312                               |
| Subject: Permissions for AASHTOWARE directory |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Ihnat, Joseph    | 11/29/2010 1:04:56 PM |
| Modified By: gcolgrove         | 5/19/2011 12:29:23 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          |          |

4/19/2016 3:23:30 PM

HRS AASHTO

2979

### Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
|             |          |      | Bug     |
| Lee, Herman | Verified |      |         |
|             | New      | High | Unknown |
|             | Assigned |      |         |
|             | Resolved |      | Bug     |
|             | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | virtis export question.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 11/29/2010 8:06:35 AM Eastern Standard Time

Received from Joe Gill (Gill Engineering):

We are trying to VIRTIS 6.2 to run on a new machine and it won't run. We get "File Error #7 file will not open".

FROM: Joseph Ihnat DATE: 11/29/2010 8:09:23 AM Eastern Standard Time

Granting "Full Control" to "Everyone" may resolve some of these issues.

FROM: Joseph Ihnat DATE: 12/10/2010 7:42:47 AM Eastern Standard Time

Setting permissions (during the install) on the install folder and the shared application folder.

Done for version 6.3

FROM: Bin Zhang DATE: 5/12/2011 4:45:29 PM Eastern Daylight Time

Verified in beta2 with the updates by May 13th

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10317                                        |
| Subject: Can not export LRFR factors from the library. |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
| Primary Contact: Lee, Herman   |

4/19/2016 3:23:30 PM

HRS AASHTO

2980



**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Metcalf, William | 12/2/2010 5:45:25 PM |
| Modified By: sthogaru          | 3/31/2011 7:39:59 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status  | Priority | Category |
|-----------------|---------|----------|----------|
| Lee, Herman     | New     | High     | Comment  |
| Ihnat, Joseph   | On Hold |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: William Metcalf DATE: 12/2/2010 12:49:54 PM Eastern Standard Time  
 Can not export LRFR factors from the library. You seem to be able to do LFD or LRFD. See attached picture as it is worth 1000 words.

FROM: Herman Lee DATE: 12/10/2010 2:57:45 PM Eastern Standard Time  
 This defect has been fixed for the 6.3 Release.

FROM: Srujana Thogaru DATE: 3/31/2011 3:38:14 PM Eastern Daylight Time  
 Verified and found to be fixed for 6.3

## Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 10326                                          |
| Subject: Virtual PC problem with copying bridge elements |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Colgrove, George | 12/15/2010 4:11:34 PM |
| Modified By: hlee              | 12/15/2010 6:06:43 PM |
| Priority: High                 |                       |
| Category: Comment              |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 12/15/2010 11:12:49 AM Eastern Standard Time

This is to post a problem with VirtisOpis when running version 6.2 in Windows 7 with version 6.1 running in a XP Virtual PC.

When trying to copy a bridge element, material type or whatever from version 6.2 from the Win7 environment to version 6.1 in the virtual PC environment, version 6.1 in the virtual PC crashes. I was able to reproduce this repeatedly.

This would be monumental to fix. I think we should just document this for users who will use the same

4/19/2016 3:23:30 PM

HRS AASHTO

2982

## Complete Issue Information

configuration.

Issue ID: 10341

Subject: Haunch load calculation problem for Floorline

Folder: /Virtis/Support Center

Primary Contact: Gao, Qiang

Submitted By: Gao, Qiang

12/29/2010 9:17:32 PM

Modified By: qgao

1/17/2011 2:23:33 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
| Gao, Qiang       | Resolved |          |          |

### Contacts

| Name            | Company | Email 1               | Phone 1 |
|-----------------|---------|-----------------------|---------|
| Krisha Kennelly |         | KKENNELLY@mbakercorp. |         |

4/19/2016 3:23:30 PM

HRS AASHTO

2983

## Complete Issue Information

com

## Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Torsional Constant J.pdf |             |
|      | 14662.xml                |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Qiang Gao DATE: 12/29/2010 4:25:32 PM Eastern Standard Time

Problem 1: DoStringerMbrAlt->ComputeHaunchLoadPerUnitLength method always return 0 for floorline bridges.

Reason (could be incorrect): floorline and floorsystem use different tables to store the 'haunch\_dim\_type' data (the former uses 'abw\_super\_struct\_spng\_mbr\_alt', while the latter uses 'abw\_beam\_def'). During the haunch load calculation, only DoSteelXXXBeamDef classes are used to get the 'haunch\_dim\_type' data so that the category of haunch cannot be determined, which results in the width, and hence load, of the haunch will be always 0.

Problem 2: When run the analysis for floorbeam haunch load, it shows:

Debug Assertion Failed!

Program: C:\Working\virtis\_TFS\Main\Debug\VirtisOpis.exe  
File: c:\working\virtis\_tfs\domain\abognrl\dogetobjectfunctions.cpp  
Line: 4460

Reason: Try to 'GetDeckPanelRangeSetObject' in 'ComputeBmDefHaunchLoad' function, but it is not supposed to do so to floorline bridges.

Have a nice holiday! :p

Qiang Gao

FROM: Qiang Gao DATE: 1/17/2011 9:23:50 AM Eastern Standard Time  
Fixed for 6.3 release.

Issue ID: 10345

Subject: Incorrect J used in LL DF calculation (BRASS)

Folder: /Virtis/Support Center

Primary Contact: Goodrich, Brian

4/19/2016 3:23:31 PM

HRS AASHTO

2984

**Complete Issue Information**

|                          |                       |
|--------------------------|-----------------------|
| Submitted By: Hart, Sean | 1/7/2011 3:09:43 PM   |
| Modified By: hlee        | 10/15/2011 9:31:45 PM |
| Priority: High           |                       |
| Category: Bug - BRASS    |                       |

**History**

| Primary Contact  | Status   | Priority | Category        |
|------------------|----------|----------|-----------------|
| Kennelly, Krisha | Assigned | High     | Unknown Support |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Torsional Constant J_2.pdf |             |
|      | 14662.xml                  |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/7/2011 10:11:08 AM Eastern Standard Time  
Submitted on behalf of Mike Pichura (MPichura@mbakercorp.com), Michael Baker Jr., Inc.

=====  
It appears that Virtis does calculate the distribution factors (LRFD) for PS adjacent box beams correctly. However, the BRASS engine is calculating them incorrectly. The problem is with the St. Venant Torsional Constant, J. We believe it is only using one side for the s/t portion of the equation rather than all four. I attached a copy of a hand calculation. Would you be able to submit a report? I'm not sure if this is a problem for spread box beam bridges as well.  
=====

FROM: Brian Goodrich DATE: 1/10/2011 10:23:57 AM Mountain Standard Time  
The box beam is exported to BRASS as an equivalent I girder. Therefore, BRASS thinks the section is a stocky open section and calculates the torsional constant according to AASHTO LRFD C4.6.2.2.1-2.

The solution is to export the torsional constant from the Virtis beam shape on the DIST-CONTROL-LL-SPAN command.

**Complete Issue Information**

|                                                         |
|---------------------------------------------------------|
| Issue ID: 10352                                         |
| Subject: Incorrect J used in LL DF calculation (Virtis) |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Hart, Sean          | 1/10/2011 9:37:14 PM  |
| Modified By: kkennelly            | 11/15/2012 2:38:20 PM |
| Priority: High                    |                       |
| Category: Support                 |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/10/2011 4:37:37 PM Eastern Standard Time  
Submitted on behalf of Mike Pichura (MPichura@mbakercorp.com), Michael Baker Jr., Inc.

=====  
For a PS adjacent circular voided box beam we believe both Virtis and the BRASS engine are calculating the St. Venant Torsional Constant, J incorrectly. See the attached hand calculations. We also verified our hand calculations with PennDOT's BSP program.  
=====

This issue for the BRASS engine is entered in Incident 10345.

## Complete Issue Information

FROM: Krisha Kennelly DATE: 11/15/2012 9:37:17 AM Eastern Standard Time  
The computation of J in Virtis uses Eq. C4.6.2.2.1-2 to match the BRASS implementation.

|                                                                       |                      |
|-----------------------------------------------------------------------|----------------------|
| Issue ID: 10355                                                       |                      |
| Subject: Doubling up on material area in the reinforced concrete deck |                      |
| Folder: /Virtis/Support Center                                        |                      |
| Primary Contact: Skow, Wayne                                          |                      |
| Submitted By: Colgrove, George                                        | 1/13/2011 7:15:37 PM |
| Modified By: gcolgrove                                                | 7/6/2011 6:26:31 PM  |
| Priority: High                                                        |                      |
| Category: Unknown                                                     |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Skow, Wayne      | Resolved |          |          |
|                  | Verified |          |          |
|                  | Closed   |          |          |

4/19/2016 3:23:31 PM

HRS AASHTO

2987

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 1/13/2011 2:17:00 PM Eastern Standard Time

Calculating the Section Properties

For AASHTO LRFD/LRFR the engine is not subtracting the area of reinforcing steel from the concrete deck. It then adds the entire deck area (transformed) with the reinforcing steel thus doubling up on that area.

BRASS subtracts the area of the reinforcing steel from the deck area then it transforms the area of the concrete. We should do the same for the AASHTO engine.

FROM: Krisha Kennelly DATE: 2/15/2011 2:50:27 PM Eastern Standard Time  
Agree.

Notes for developer:

1. Let's discuss moving the xxx\_Stl\_Elastic\_Section\_Properties class to 1 location and then have each spec edition derive a class from that 1 location. The section properties aren't based on a spec edition.
2. Revise the Area of the transformed slab to remove the transformed area of rebar ( $-A_{reinf}/(m \cdot n)$ ). Keep the centroid of the slab as is, don't adjust it for the rebar removed.

FROM: Wayne Skow DATE: 2/18/2011 9:15:42 AM Eastern Standard Time  
Both 1. and 2. are complete.

For 1., I compared the 4 versions (LRFD 4th/2008, LRFD 5th, LFD 17th, ASD 17th. LRFD 4th/2009 and LRFD 5th/2010 inherit from LRFD 4th/2008 and LRFD 5th). There were a few differences where fixes were made in some but not in all versions. I merged the variations into a single class in namespace AbanSpec.Articles.AASHTO which all versions now inherit. The differences between versions are where the results are stored and that is taken care of in a version's constructor. Bug fixes are now made in Abanspec/Articles/AAASHTO/Article\_Stl\_Elastic\_Section\_Properties.cs and will be common to all versions.

FROM: George Colgrove DATE: 4/29/2011 2:19:37 PM Eastern Daylight Time  
This has been fixed - verified

|                 |
|-----------------|
| Issue ID: 10358 |
|-----------------|

4/19/2016 3:23:31 PM

HRS AASHTO

2988



**Complete Issue Information**

|                                                          |
|----------------------------------------------------------|
| Subject: Virtis Crashes creating PS U Member Alternative |
|----------------------------------------------------------|

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 1/17/2011 3:19:28 PM |
| Modified By: sthogaru          | 3/31/2011 6:35:02 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Verified           |          | Bug      |
|                 | Closed             |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Wide Flange PS GUI not complete.jpg |             |
|      | Wide Flange PS GUI not complete.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Joseph Ihnat DATE: 1/17/2011 10:20:13 AM Eastern Standard Time

4/19/2016 3:23:31 PM

HRS AASHTO

2989

**Complete Issue Information**

Try to create a PS U member alternative in the BWS (any bridge), Virtis crashes.  
Fixed for version 6.3

FROM: Srujana Thogaru DATE: 3/31/2011 2:32:20 PM Eastern Daylight Time  
Verified and found to be fixed for 6.3

|                                          |
|------------------------------------------|
| Issue ID: 10369                          |
| Subject: Wide Flange PS GUI Not Complete |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: lhnat, Joseph |                       |
| Submitted By: Teal, Dean       | 1/18/2011 12:00:14 PM |
| Modified By: jihnat            | 5/11/2011 11:29:30 AM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 1/18/2011 7:01:40 AM Eastern Standard Time  
In the attached bridge. Look at the PS beam shape BT-42  
The upper right corner of the GUI is messed up  
Also see the attached .jpg

4/19/2016 3:23:32 PM

HRS AASHTO

2990

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 1/18/2011 10:00:35 AM Eastern Standard Time  
Did you mean upper left corner?

FROM: Dean Teal DATE: 1/18/2011 10:12:33 AM Eastern Standard Time  
Yes - the upper left (my other right)

Guess my wife didn't label my hands this morning :)

FROM: Joseph Ihnat DATE: 1/24/2011 2:05:53 PM Eastern Standard Time  
Similar problem on Cross Sections - Dimensions (Builtup).

FROM: Joseph Ihnat DATE: 2/7/2011 3:22:10 PM Eastern Standard Time  
The Bridge and Library PS I-Shape windows are fixed for version 6.3  
I was unable to reproduce the problem in the Builtup Cross Section window (reported by Ben Zhang).

FROM: Srujana Thogaru DATE: 3/31/2011 2:27:22 PM Eastern Daylight Time  
Verified and found to be fixed for 6.3

FROM: Dean Teal DATE: 5/10/2011 4:28:17 PM Eastern Daylight Time  
Accepted 6.3 beta 2

Issue ID: 10370  
Subject: Spec Chec Window - Press Escape to close

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Colgrove, George 1/18/2011 3:58:52 PM  
Modified By: hlee 6/9/2011 9:19:57 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |

4/19/2016 3:23:32 PM

HRS AASHTO

2991

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 1/18/2011 10:59:13 AM Eastern Standard Time

When in the Spec Check Window can we program the escape key to be used to close the window?  
When we open the window and wish to close it we need to move the mouse to the OK button. This can take up a lot of time when having to do it over and over. If one were to put their finger over the escape key, then if they open the spec check window, then wanted to go to the next one, all they need to do is press the escape key and the window will close.

One could have the list of specs on one side and the spec window on the other, then they could just click on the spec of choice, but there are a lot of times having the spec window as large (i.e. full screen) as possible is advantageous.

This enhancement could be very low cost and could provide great benefit.

FROM: Herman Lee DATE: 6/9/2011 5:19:22 PM Eastern Daylight Time  
Discarded by TAG April 2011.

Issue ID: 10400

Subject: LRFR Factors are not copied to new girder member alternative

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

4/19/2016 3:23:32 PM

HRS AASHTO

2992

**Complete Issue Information**

|                               |                      |
|-------------------------------|----------------------|
| Submitted By: Goodrich, Brian | 1/26/2011 3:29:18 PM |
| Modified By: sthogaru         | 3/31/2011 6:23:53 PM |
| Priority: High                |                      |
| Category: Bug                 |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brian Goodrich DATE: 1/26/2011 8:29:37 AM Mountain Standard Time

For a girder system structure definition, I copied a girder member alternative and pasted it within the same member. On the Factors tab, the LRFR checkbox and LRFR factors were not copied from the original. The LFD and LRFD factors copy fine.

FROM: Joseph Ihnat DATE: 1/26/2011 11:42:52 AM Eastern Standard Time

Looks like this is already fixed for version 6.3 (works OK in Alpha Build 2). I don't see an incident for it, though.

FROM: Joseph Ihnat DATE: 1/26/2011 12:32:08 PM Eastern Standard Time

While investigating this incident, I found a similar problem when the member alt is copied to another BWS. I fixed that problem for version 6.3.

FROM: Srujana Thogaru DATE: 3/31/2011 2:18:30 PM Eastern Daylight Time

Verified and found to be fixed for 6.3 Alpha build 6

4/19/2016 3:23:32 PM

HRS AASHTO

2993

## Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Issue ID: 10471                                     |
| Subject: Adding database conversion option to setup |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Colgrove, George | 2/25/2011 1:02:29 PM |
| Modified By: hlee              | 2/25/2011 2:42:41 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 2/25/2011 8:03:39 AM Eastern Standard Time

We should add the database conversion step to the install process. Once the software is installed, the installer should ask the user if they want to update the database. If they do, the database manager should pop up allowing the user to update the database at the point of install. Very good if the install is for a single machine install.

**Complete Issue Information**

Issue ID: 10481  
Subject: Analysis results be put in table form

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Colgrove, George                      2/28/2011 3:32:02 PM  
Modified By: hlee                                              2/28/2011 4:14:26 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 2/28/2011 10:32:08 AM Eastern Standard Time

From Bradley T. Jones PE, Bridge Engineer, KORDA:

I'd like to suggest that the analysis results be put in table form too. I figured out how to do the printing last week. You can also print out the analysis results using the same procedure, however, in order to print out the analysis you have to print out each separate DL and LL condition for each Limit State. That was a little too cumbersome but it can be done. It would be nice if that was included in a results output.

Brad

|                                |                     |
|--------------------------------|---------------------|
| Issue ID: 10504                |                     |
| Subject: Evaluation Software   |                     |
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Teal, Dean       | 3/2/2011 1:39:06 PM |
| Modified By: hlee              | 4/1/2011 5:20:10 PM |
| Priority: High                 |                     |
| Category: Support              |                     |

4/19/2016 3:23:33 PM

HRS AASHTO

2996



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name         | Resource Identifier | Description |
|--------------|---------------------|-------------|
| lowspace.png |                     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

EROM: Dean Teal DATE: 3/2/2011 8:40:52 AM Eastern Standard Time  
Ran into some snags with the Alaska DOT and using the evaluation software

1. Can't handle enough girder lines to enter the Timber example we have. Needed 13 and limited to 8 I think (or something like that)
2. While entering structures we exceeded the number of structures you can have in the database

Are these things we should address?

FROM: Herman Lee DATE: 3/2/2011 9:28:16 AM Eastern Standard Time  
Maybe we need to revisit whether these limits are reasonable for evaluation purpose.  
Dean, do you have suggestions for the limit of a practical evaluation use?

Current program limitations listed in the release notes:

|                                          | Academic | Evaluation |
|------------------------------------------|----------|------------|
| Maximum number of spans:                 | 3        | 3          |
| Maximum span length:                     | No limit | 200 ft     |
| Maximum number of girders per structure: | 10       | 8          |
| Maximum number of bridges:               | No limit | 30         |

FROM: Todd Thompson DATE: 3/3/2011 3:28:27 PM Eastern Standard Time  
It would be nice if the example/sample problems could be entered. We ran into problems using some of the sample problems not being able to be entered when we were working with Alaska.

FROM: Herman Lee DATE: 4/1/2011 1:08:16 PM Eastern Daylight Time

4/19/2016 3:23:33 PM

HRS AASHTO

2997

### Complete Issue Information

Evaluation software limitation was discussed in the March Task Force meeting. Virtis/Opis Task Force decided to remove these program limitations so the evaluation software is fully functional during the preset evaluation period.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10505                                       |
| Subject: Installer reports low disk space incorrectly |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Ihnat, Joseph |                     |
| Submitted By: Ihnat, Joseph    | 3/2/2011 3:55:01 PM |
| Modified By: gcolgrove         | 4/9/2011 1:23:45 PM |
| Priority: High                 |                     |
| Category: Unknown              |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 3/2/2011 10:55:36 AM Eastern Standard Time  
See attachment.

FROM: Joseph Ihnat DATE: 3/14/2011 3:08:45 PM Eastern Daylight Time  
Fixed for version 6.3

FROM: George Colgrove DATE: 4/7/2011 9:06:55 AM Eastern Daylight Time  
I was able to install VO 6.3 in both XP and Win7. Both went without a hitch. Both had sqlserver installed already.

I am created a new virtual machine and will installed VO along with SQL Server in that environment.

This new virtual box was a basic windows setup - with no dotNET, no SQLServer or any other supporting software that is needed for VirtisOpis. I installed the software from the provided ISO for

4/19/2016 3:23:33 PM

HRS AASHTO

2998

**Complete Issue Information**

Beta 1.

It installed:

dotNET 2.0 SP2, 3.0 SP2, 3.5 SP1, 4.0 Client Profile and Extended

SQLServer 2008, Browser, Native Client, Policies, Setup Support Files, VSS Writer

SQL Server Compact 3.5 SP1 English, Query Tools English

Microsoft Visual C++ 2010 x86 Redistributable

Microsoft Visual Studio Tools for Applications 2.0

Virtis Opis Version 6.3

The software installed with no errors or messages. This was installed in a virtual XP box with limited space so the aforementioned error would have been triggered. The software ran without incident.

FROM: George Colgrove DATE: 4/9/2011 8:44:10 AM Eastern Daylight Time

|                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|
| Issue ID: 10527                                                                                                 |
| Subject: Generation of FE model for AASHTO LRFD/LRFR engine and the NSG analysis did not use user input n value |

|                                   |                     |
|-----------------------------------|---------------------|
| Folder: /Virtis/Support Center    |                     |
| Primary Contact: Kennelly, Krisha |                     |
| Submitted By: Kennelly, Krisha    | 3/7/2011 6:57:28 PM |
| Modified By: gcolgrove            | 4/7/2011 7:31:55 PM |
| Priority: High                    |                     |
| Category: Bug                     |                     |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:34 PM

HRS AASHTO

2999

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 3/7/2011 1:57:57 PM Eastern Standard Time

The modular ratio, n, between the deck and beam was always being computed as Ebeam/Edeck even if the user had input a value for n in the UI. Now it will use the n value input by the user. If not input by the user, it will be computed.

Fixed for 6.3

FROM: George Colgrove DATE: 4/7/2011 9:26:53 AM Eastern Daylight Time

Verified fixed.

I checked the Area used in the FE model. This meant I had to turn on the FE models in the Analysis Settings:

>> Output tab, after analysis use eyeglass button to open the FE model for stage 2 or 3.

The Area of the beam includes the transformed concrete. I entered a drastically different value for n in VO 6.2 and ran AASHTO.

The composite girder area in the spec check was different than the area in the report.

In 6.3 I entered the same drastically different n and to see if the Area in 6.3 is different than 6.2.

The area in 6.3 obtained from the report matched the area in the 6.3 spec check article.

|                                       |
|---------------------------------------|
| Issue ID: 10552                       |
| Subject: Virtis/Opis 6.2 installation |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Horton, Doug     | 3/14/2011 9:21:27 PM  |
| Modified By: jihnat            | 3/15/2011 11:50:47 AM |
| Priority: High                 |                       |
| Category: Support              |                       |

4/19/2016 3:23:34 PM

**HRS AASHTO**

3000

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | Medium   | Unknown  |
| Ihnat, Joseph   | Assigned | High     |          |
|                 | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | FailedToOpenFileAtFirstTime.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 3/14/2011 5:27:20 PM Eastern Daylight Time

We are experiencing a problem with 6.2 installation on a user PC. The install starts fine and seems to be working. It progresses through registering the files and then produces a message to reboot and restart the install. It never gets to the SQLExpress 2008 installation. Rebooting and restarting terminates in the same message to reboot.

We tried 6.1 to see if it could be something with the computer, however the 6.1 install ran fine and completed.

We have no idea what may be causing the install to loop as it appears to be doing.

We have installed it successfully on several other PCs.

If you have not seen this issue, then it may be PC specific and we will have to re-image. Any suggestions or guidance could be appreciated.

FROM: Joseph Ihnat DATE: 3/15/2011 7:47:25 AM Eastern Daylight Time

There's some problem with the OS on that machine, though not sure exactly what.

Here's a procedure that worked for another user:

Open the registry editor (regedt32) and navigate to "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager". If there's a key named "PendingFileRenameOperations", rename it to "PendingFileRenameOperations\_".

4/19/2016 3:23:34 PM

HRS AASHTO

3001

**Complete Issue Information**

Then try rerunning the Virtis setup to install SQI Server.  
Rename the key back to what it was.

|                                                 |
|-------------------------------------------------|
| Issue ID: 10596                                 |
| Subject: Failed to open a multimedia attachment |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center                  |
| Primary Contact: Ihnat, Joseph                  |
| Submitted By: Shi, Weidong 3/25/2011 9:27:00 PM |
| Modified By: jihnat 9/20/2011 7:11:01 PM        |
| Priority: High                                  |
| Category: Bug                                   |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Weidong Shi DATE: 3/25/2011 5:27:10 PM Eastern Daylight Time  
OS: Windows XP sp2  
DB: MS SQL Server 2008 Express; Integrated DB (pontis5103 + viritis6.3)

Steps to reproduce the issue:

- select a bridge linked to a Pontis bridge (04 07603)
- go to Bridge Multimedia Attachments window
- select "Bridge" from Context drop down list
- there are 2 records shown in the attachment list and the first item is highlighted by default
- click Open
- the file could not be opened

However when selecting the second record, and then clicking the Open button, the corresponding file could be opened; and selecting the first record again, then the first file could be opened too.

**Complete Issue Information**

You can get the testing database at G:\USERS\WEIDONG\IntegratedDBForDebug

FROM: Herman Lee DATE: 3/26/2011 6:53:29 AM Eastern Daylight Time  
Please see whether this issue should be in Support Center instead of Alpha Testing.

FROM: Joseph Ihnat DATE: 3/31/2011 9:59:43 AM Eastern Daylight Time  
Changed folder to Support Center. Weidong was able to reproduce this in versiion 6.2 (probably always been like this).

FROM: Joseph Ihnat DATE: 9/20/2011 3:08:11 PM Eastern Daylight Time  
Fixed for 6.4.0

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 10598                                                                                      |
| Subject: Add a more descriptive error message when Analysis Progress dialog can't open the .log file |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Kennelly, Krisha | 3/26/2011 5:24:59 PM  |
| Modified By: jihnat            | 3/29/2011 12:44:52 PM |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:23:34 PM

HRS AASHTO

3003

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 3/26/2011 1:25:28 PM Eastern Daylight Time  
found while testing shortened path names

line 8720 of UiAnalysisProgressDlg.cpp issues a message about being unable to open a log file. Please make it a more descriptive message that it can't be opened because the path + filename exceeds 260 characters.

eg, the SpecCheckController now issues the following type of message:

\*\*\*WARNING\*\*\* - SpecCheckResults output file cannot be created due to path and filename length of 261 exceeds maximum allowable size of 260 characters!  
Revise the output folder or Bridge, Structure, Member and Member Alternative names!

FROM: Joseph Ihnat DATE: 3/29/2011 8:44:26 AM Eastern Daylight Time  
Changed folder to Support Center since this problem was present in previous release(s).  
Found and fixed same problem in a couple other places of the same file.  
Fixed for Beta Build 1.

|                                                 |
|-------------------------------------------------|
| Issue ID: 10642                                 |
| Subject: Prestressed Ibeam with negative haunch |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Cavanaugh, Scott    | 4/5/2011 8:35:02 PM  |
| Modified By: gtrees               | 9/27/2012 5:24:33 PM |
| Priority: Critical                |                      |
| Category: Bug                     |                      |

### History

4/19/2016 3:23:35 PM

HRS AASHTO

3004



**Complete Issue Information**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Gao, Qiang       | Assigned           | High     | Unknown  |
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |
|                  | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Resolved           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MLvsSL.PNG          |             |
|      | 05341 - T0663.xml   |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 4/5/2011 4:36:58 PM Eastern Daylight Time  
 Submitted on behalf of Scott Cavanaugh, HNTB:

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====

George / Herman,  
 Good morning. HNTB is currently modeling a simple prestressed I beam structure which happens to have negative haunch for all of the girders. Separate runs using the Virtis and BRASS engines seems to indicate that there is a problem with the ratings using the Virtis engine. See the below results for flexure. Any idea why this would be occurring with the Virtis engine? Note that the shear ratings have been turned off under control options in order to examine the controlling moment rating results. I will attach the .xml file for your reference.

Rating results of fascia girder at mid-span.

=====

**Complete Issue Information**

FROM: Qiang Gao DATE: 4/7/2011 7:15:03 PM Eastern Daylight Time  
I found that AASHTO will give a negative number (-0.24 kips) of haunch dead load, while BRASS doesn't output the haunch dead load at all (maybe it just ignores any negative number or zero for loads).  
I tried to remove the haunch from the girder (set y1 = 0.0, y2=0.0 and y3=0.0), AASHTO gives a close result with BRASS. So Herman and I guess the problem is probably in the cross section calculation. Maybe it is just not tolerant with the negative area number.  
I attached both the results with negative haunch and the results without haunch in "Documents" tab.  
Good luck!

FROM: Srujana Thogaru DATE: 5/18/2011 3:29:08 PM Eastern Daylight Time  
Fixed for 6.4 Release.

FROM: Srujana Thogaru DATE: 8/24/2011 8:58:31 AM Eastern Daylight Time  
Fixed for 6.3 Service Pack 1

FROM: Xinmei Li DATE: 9/8/2011 2:45:53 PM Eastern Daylight Time  
Verified for 6.3 Service Pack 1.  
I ran G1 with AASHTO engine LRFR analysis, rating factor is 1.841 vs. 1.832 (BRASS engine provided by Scott Cavanaugh in attached file).

FROM: Srujana Thogaru DATE: 10/24/2011 1:30:11 PM Eastern Daylight Time  
This fix for 6.3 service pack has been backed off.  
Code has been added in 6.3.1 to issue a warning message if a negative haunch is present in the cross section and the incident will remain open until the issue is fixed.

FROM: Srujana Thogaru DATE: 3/1/2012 2:49:58 PM Eastern Standard Time  
PS Cross-section computations have been updated to handle Negative haunch. Fixed for 6.4 Release.

FROM: Geoffrey Trees DATE: 9/27/2012 1:18:55 PM Eastern Daylight Time  
Verified with Jim.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 10643                                                               |
| Subject: Distribution Factor Calculations when Range of Applicability not met |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kemna, Aaron        | 4/5/2011 8:48:11 PM  |
| Modified By: kkennelly            | 5/22/2013 1:29:49 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

4/19/2016 3:23:35 PM

**HRS AASHTO**

3006

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | After Update.pdf    |             |
|      | Before Update.pdf   |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Aaron Kemna DATE: 4/5/2011 4:50:05 PM Eastern Daylight Time

I have an adjacent concrete voided slab beam bridge where the interior girders do not meet the I and J limitations for shear distribution factors. Thus, Virtis defaults to the Lever Rule. Then Virtis uses this value in calculating the exterior distribution factor (e\*g.interior). This can't be correct. These equations were set up to use the corresponding equations. I believe the Lever Rule should be used for the exterior beam. If you look throughout the tables, you will see that the exterior girder always uses the lever rule when the interior beam uses the lever rule except in one case where it uses the lesser of the equations or the lever rule. While I pointed to a specific bridge type, I think this is applicable for all cases where Virtis defaults to the Lever Rule for the adjacent interior girder and the exterior girder is dependant on that value. I will attach my bridge for reference.

P.S. For adjacent box beam bridges, AASHTO gives you the option to use the moment distribution factors for shear when the I and J limitations are not met (AASHTO 4.6.2.2.3a). I think Virtis should consider implementing this.

FROM: Aaron Kemna DATE: 4/5/2011 4:57:08 PM Eastern Daylight Time

Sorry, I'll try to get you the bridge tomorrow.

FROM: Herman Lee DATE: 8/31/2012 2:06:47 PM Eastern Daylight Time

4.6.2.2.3a not being considered is duplicate of Incident 11879.

FROM: Krisha Kennelly DATE: 4/15/2013 10:52:05 AM Eastern Daylight Time

Issue 11889 is the issue that addresses 4.6.2.2.3a not using the moment DF for shear. That issue has been resolved for 6.5.0.

This issue is resolved for 6.5.0. If the adj int beam uses the lever rule, the ext beam will also use the lever rule. This change was made for both shear and moment DF's.

Note shear in ext beams for structure type F in the LRFD spec: if I and/or J for the adj int beam is outside the range and the moment DF is used for shear for the adj int beam, this case is not addressed

4/19/2016 3:23:35 PM

HRS AASHTO

3007

**Complete Issue Information**

by Tables Table 4.6.2.2.3a-1 or Table 4.6.2.2.3b-1. So the ext beam shear DF will equal the lever rule as per Art. 4.6.2.2.3b.

FROM: Bin Zhang DATE: 4/24/2013 2:26:47 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

FROM: Aaron Kemna DATE: 5/15/2013 1:57:46 PM Eastern Daylight Time  
Looks like this is working as Krisha is describing it above. I found one issue that relates back to Incident 11049. When the lever rule is calculated for the exterior girder (Shear), the single-lane is equal to the multi-lane. I think BrR is saying that a second truck cannot be placed to affect the beam so it defaults to the single-lane value which uses the 1.2 MPF. A multi-lane check cannot use the single lane MPF. It is important to differentiate the two so the appropriate value can be used according to whatever criteria the MBE will use now and in the future. I'll attach an image of the DF calculations used by BrR.

FROM: Krisha Kennelly DATE: 5/21/2013 1:10:22 PM Eastern Daylight Time  
Hi Aaron, Please enter your latest comments as a new issue since it isn't exactly the same as this issue. I think your comments may be subject to TAG review and I don't want their review to hold up resolution of this issue. thanks.

FROM: Aaron Kemna DATE: 5/21/2013 3:33:13 PM Eastern Daylight Time  
Created new Incident for SL vs ML that does not deal with range of applicability.

FROM: Krisha Kennelly DATE: 5/22/2013 9:29:04 AM Eastern Daylight Time  
Ok, thanks. This issue marked as resolved.

Issue ID: 10647  
Subject: Analysis Progress Tree

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Colgrove, George 4/6/2011 2:17:32 PM  
Modified By: hlee 4/6/2011 3:14:44 PM  
Priority: Medium  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 |           | Medium   | Enhancement |
|                 | Suspended |          |             |

**Contacts**

4/19/2016 3:23:35 PM

HRS AASHTO

3008

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

**Tasks**

|      |               |         |
|------|---------------|---------|
| Name | Current State | Summary |
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 4/6/2011 10:18:31 AM Eastern Daylight Time

In the Analysis Progress Tree, could we have another character (like a dash ' - ') in the check boxes or have the check box greyed out if the girder associated with that check box either {not included} or otherwise not to be included in the analysis.

This way the overall check box for the entire structure will be based on all members that are being analyzed - and not on all girders that may or may not be included.

A girder not to be included in the analysis provides a visual 'X' in the check box which is carried on up to the top of the tree. This makes it seem that the bridge did not rate or was analyzed.

See images in Documents to see what the changes should look like.

|                                        |
|----------------------------------------|
| Issue ID: 10670                        |
| Subject: Slab stresses in 6.10.1.1.1.b |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Skow, Wayne      | 4/11/2011 6:38:39 PM |
| Modified By: hlee              | 5/9/2011 3:39:14 PM  |

4/19/2016 3:23:35 PM

HRS AASHTO

3009

**Complete Issue Information**

|                    |
|--------------------|
| Priority: Critical |
| Category: Bug      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Wayne Skow DATE: 4/11/2011 2:39:32 PM Eastern Daylight Time

The slab stresses reported in 6.10.1.1.1b are not divided by the modular ratio and are, therefore, much too large (generally, by 8 times)

FROM: Wayne Skow DATE: 4/12/2011 7:21:27 AM Eastern Daylight Time

Fixed in 6.10.1.1.1b in 4E2008i, 4E2009i, 5E and 5E2010i

**Complete Issue Information**

Issue ID: 10707  
Subject: Changes to Bridge window - Traffic tab

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 4/13/2011 2:37:02 PM  
Modified By: hlee 5/9/2011 5:34:48 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 4/13/2011 10:38:09 AM Eastern Daylight Time

1. Do not compute Recent ADTT when the window is open. Right after the window is opened, data in window should agree those in domain.
2. If Truck PCT or ADT or Directional PCT is NULL, lose focus recompute should set NULL to Recent ADTT.
3. If there is no change in value when lose focus in Truck PCT or ADT or Directional PCT, do not recompute.

FROM: Joseph Ihnat DATE: 4/14/2011 3:54:28 PM Eastern Daylight Time  
Fixed for version 6.3 (Beta Build 2).

## Complete Issue Information

Issue ID: 10719

Subject: Can't Retrieve Virtis Model - 016-0036

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Armbrecht, Tim

4/13/2011 3:56:50 PM

Modified By: hlee

5/7/2011 12:19:31 PM

Priority: High

Category: Unknown

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:23:36 PM

HRS AASHTO

3012



## Complete Issue Information

0160036.xml

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 4/13/2011 12:00:11 PM Eastern Daylight Time  
From my consultant (Souther):

The export file, 0160036.xml (attached) can't be imported into Virtis 6.2. I created it last night when the model would not save. When attempting to import it this morning, the following debug messages were generated...

1st -

Incomplete retrieval of data.

08:14:04 AM - Line 1229 in source file .\DoSuperStructDefList.cpp.

Data management object unavailable.

08:14:04 AM - Line 2492 in source file .\DoGirderMbr.cpp.

2nd-

Unable to create document!

08:17:39 AM - Line 2705 in source file .\UiDescDtopGridView.cpp.

Unable to open Bridge Workspace!

08:17:39 AM - Line 2704 in source file .\UiDescDtopGridView.cpp.

Could you forward it to Baker to see if they can retrieve it?

This business of Virtis models that won't save seems to be a somewhat common occurrence in v. 6.2. Unfortunately, it usually cannot be reproduced. What I've submitted above is the closest I can get to reproducing the problem. I can often recover the lost data by exporting and then recreating it using some of the data from the export.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Mehrdad Ordoobadi DATE: 5/5/2011 10:08:10 AM Eastern Daylight Time  
I examined the bridge export file and was not able to determine the cause of this data corruption.

Do you remember what you were doing before you try to save the bridge?

FROM: Tim Armbrecht DATE: 5/6/2011 11:01:24 AM Eastern Daylight Time  
Mehrdad, he can't remember what he did, and he just went ahead and re-entered the data. I guess it's a dead end here, so let's go ahead and close the incident.

Issue ID: 10727

Subject: Member Loads Displayed Incorrectly in the Analysis Chart and Report

4/19/2016 3:23:36 PM

HRS AASHTO

3013

## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Crudele, Brenda  | 4/13/2011 5:39:12 PM |
| Modified By: hlee              | 3/27/2015 6:35:51 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

## History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Unknown     |
|                 | Suspended          |          | Enhancement |
|                 | Information Needed |          |             |
|                 | Suspended          |          |             |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Brenda Crudele DATE: 4/13/2011 1:58:26 PM Eastern Daylight Time

If a vertical point load is input in the member loads window, when the shear diagram for that load is viewed in the charts it should be a vertical line at the location of load. The shear force in the diagram goes up diagonally to the next POI. The program should automatically place a POI in the left and right side of a point load to account for this.

This is also true for an applied moment input under the member loads window.

FROM: Jim Duray DATE: 4/19/2011 8:37:33 AM Eastern Daylight Time

I confirmed this issue and am changing it to a "Release" issue since it is not new to this development cycle and has existed since the first release. BRASS LFD does not report two values of shear at a location for DL. Neither does the AASHTO engine. I am setting the category to "Maintenance". This issue has been discussed in the past.

FROM: Herman Lee DATE: 3/27/2015 2:32:52 PM Eastern Daylight Time

4/19/2016 3:23:36 PM

HRS AASHTO

3014

**Complete Issue Information**

Reporting actions for both side of an analysis point has been implemented in the 6.7 release.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 10743                                                           |
| Subject: Ignoring the Rebar Development Length for Deep Section Provision |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Huang, George    | 4/13/2011 9:46:52 PM  |
| Modified By: hlee              | 4/20/2011 12:04:34 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Huang DATE: 4/13/2011 6:01:28 PM Eastern Daylight Time  
In the construction for RC-T-beam, the concrete for the lower part of the girder and top part of girder with deck might be poured separately with a web construction joint. The provision of longer development length for deep beam should not be applied to the top reinforcement. The option of ignoring the deep section provision need to be provided.

**Complete Issue Information**

FROM: Krisha Kennelly DATE: 4/19/2011 2:45:37 PM Eastern Daylight Time  
George, What deep section provision are you referring to in the spec?

For LFD, Virtis uses the Std Spec Article 8.25.2.1 for a 1.4 factor for top bars placed with more than 12" of concrete below.

For LRFD, a similar article is considered.

12" doesn't seem very deep, is there another article you are referring to? Please view the Virtis help topic "Export of Schedule Based Reinforced Concrete Members" to see what articles are considered in computing the development lengths.

FROM: George Huang DATE: 4/19/2011 4:37:31 PM Eastern Daylight Time  
Krisha, Std Spec Article 8.25.2.1 is the provision I referred to. I agree with you that 12" is not very deep, sorry for the confusion.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10778                                        |
| Subject: Bending and Shear Capacity for Bend Over Bars |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Huang, George    | 4/21/2011 5:01:55 PM |
| Modified By: hlee              | 3/27/2015 6:30:46 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Huang DATE: 4/21/2011 1:11:31 PM Eastern Daylight Time  
For many old RC bridges, the bend over bars are used for longitudinal reinforcement. In the current AASHTO LFR engine, the bend over bars are not used to calculate the shear and bending capacities at the bending location. We would like to have the option to include the bend over bar in the capacity calculation. The bridge file, 10C0163.xml, using bend over bars is included.

FROM: George Huang DATE: 4/21/2011 1:14:05 PM Eastern Daylight Time  
By the way, similar discussions can be found in VI 8940.

FROM: Herman Lee DATE: 6/4/2012 3:42:47 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
10778, 11128 and 10221 should be combined. Caltrans has 320 structures affected by this enhancement.

FROM: Herman Lee DATE: 3/27/2015 2:25:33 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 10803<br>Subject: Virtis/Opis Help for Harped and straight debonded Type |
|------------------------------------------------------------------------------------|

|                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Trees, Geoffrey<br>Submitted By: McCaffrey, Brian 4/27/2011 6:20:53 PM |
|---------------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:23:37 PM

HRS AASHTO

3017

**Complete Issue Information**

|                     |                      |
|---------------------|----------------------|
| Modified By: mkolis | 8/29/2012 6:53:11 PM |
| Priority: High      |                      |
| Category: Bug       |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Li, Xinmei      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Resolved  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 4/27/2011 2:21:52 PM Eastern Daylight Time  
Specify that "Harped and straight debonded Type" is only supported for I, Box and Tee beams in Virtis/Opis Help.

FROM: Geoffrey Trees DATE: 3/23/2012 9:57:45 AM Eastern Daylight Time  
Added.

FROM: Herman Lee DATE: 3/25/2012 3:37:17 PM Eastern Daylight Time  
Fixed for 6.4 Release.

FROM: Matt Kolis DATE: 8/29/2012 2:53:11 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

## Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 10813                               |
| Subject: Enhancement for Shear Stirrup Wizard |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Li, Xinmei    |                       |
| Submitted By: Armbrecht, Tim   | 4/29/2011 7:51:22 PM  |
| Modified By: hlee              | 4/25/2013 12:54:39 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Xinmei Li DATE: 4/29/2011 3:52:03 PM Eastern Daylight Time  
Moved from incident 10754

Submitted on behalf of Tim Armbrecht, IL DOT:

3. The Wizard, when used for one span, deletes all entries for all other spans. It should be that the stirrups should be entered using the Wizard for each span without affecting the other spans.
4. The use of symmetry does not allow one span to be specified "Even number spaces" and another to be "Odd number spaces", when this may be the way they are actually configured.
5. "Extends to deck" must be selected or not selected for all stirrups even though neither selection may be correct for all stirrups.

4/19/2016 3:23:37 PM

HRS AASHTO

3019

**Complete Issue Information**

FROM: Herman Lee DATE: 6/4/2012 4:06:14 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
10813 and 11044 should be combined.

FROM: Krisha Kennelly DATE: 8/1/2012 4:16:08 PM Eastern Daylight Time  
as per Opis UG meeting:  
1. add wizard for horizontal shear reinforcement

FROM: Herman Lee DATE: 4/25/2013 8:53:09 AM Eastern Daylight Time  
Resolved for 6.5 release.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10821                                      |
| Subject: Negative values in the parapet dimensioning |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 5/3/2011 2:38:26 PM  |
| Modified By: hlee              | 9/26/2011 2:07:48 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact           | Status   | Priority | Category |
|---------------------------|----------|----------|----------|
| Duray, Jim                | New      | High     | Unknown  |
| Ihnat, Joseph             | Assigned |          |          |
| Duray, Jim<br>Lee, Herman | Resolved |          | Bug      |



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/3/2011 10:41:59 AM Eastern Daylight Time  
From my consultant (Shoup):

I got a "unable to determine parapet, median or generic loads entered on the structure typical section window!". I removed the (-12) value in the parapet description in the appurtenances section and was able to run the structure. See attached files for reference.

FROM: Joseph Ihnat DATE: 5/6/2011 1:23:25 PM Eastern Daylight Time  
Probably always been able to enter negative values, only Brass didn't seem to mind.

FROM: Herman Lee DATE: 6/10/2011 8:26:32 AM Eastern Daylight Time  
With the -12" dimension in the "Rail-base Parapet (21X12)", the parapet is a line located outside the deck. That's why the AASHTO Engine complains it is not attached to the deck.

FROM: Tim Armbrecht DATE: 6/28/2011 9:33:39 AM Eastern Daylight Time  
Unlike BRASS, the new AASHTO engine will not run when it determines that an appurtenance is not within the bounds of the deck. This is a problem for us in that we have often described parapets for which this will happen.

A typical case would be when there is a parapet, applied as a Stage 2 DL, on top of a curb that may be applied as either a Stage 1 or 2 DL. In order for this to appear correctly in the cross-section view, the parapet is described with a portion that extends from the deck surface to the top of the curb as having a zero thickness. Therefore, all of this portion is located at the point indicated for "Distance At Start/End" under the Parapet tab in the Structure Typical Section window. Since this point is typically 2 inches off of the deck, Virtis 6.3 returns an error message as follows:

Error - Concrete railing not attached to the deck!

Error - Unable to determine parapet, median, or generic loads entered on the Structure Typical Section window!

Error - Analysis failed!

Admittedly, the way we do this is a workaround to make the cross-section look similar to the plans. We should be able to enter the model so that the cross-section appears as on the plans without having to do a workaround. To this end, I propose that an additional field be added to specify the vertical position of the bottom of a parapet, median, railing, generic appurtenance and sidewalk. This would be entered under the applicable tab in the "Structure Typical Section" window. The default value should be set at

4/19/2016 3:23:37 PM

HRS AASHTO

3021

**Complete Issue Information**

0.000”.

As an example of a bridge model with a parapet on curb, I've attached RC-Tee 1-sp(0260029)63B4.xml.

FROM: Joseph Ihnat DATE: 7/19/2011 12:28:10 PM Eastern Daylight Time  
I don't see a UI issue. Jim, what do you want to do with this?

FROM: Jim Duray DATE: 9/23/2011 4:25:24 PM Eastern Daylight Time  
I think we should relax the error to a warning and allow the analysis to proceed. If Tim wants the additional field for specifying the vertical location of the appurtenance we should make it an enhancement request.

FROM: Jim Duray DATE: 9/23/2011 4:30:40 PM Eastern Daylight Time

FROM: Herman Lee DATE: 9/26/2011 8:26:46 AM Eastern Daylight Time  
Changed to warning message when the appurtenance is not attached to the deck.  
Fixed for 6.3 Service Pack 1.

Submitted Incident 11117 (Additional field for the vertical location of appurtenance) for the enhancemenet request.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 10829                                                       |
| Subject: Incorrect Analysis Method in Analysis Events window for LRFR |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 5/5/2011 4:01:08 PM  |
| Modified By: mkolis            | 8/29/2012 8:07:16 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 5/5/2011 12:01:52 PM Eastern Daylight Time  
Run LRFR analysis on TrainingBridge1, Save Analysis Results.  
Open Analysis Events window, click Unload, then click Set As Current. Analysis Method changes from LRFR to LRFD.

FROM: Herman Lee DATE: 5/5/2011 12:07:01 PM Eastern Daylight Time  
Please assign to the appropriate person after your investigation. Thanks.

FROM: Joseph Ihnat DATE: 6/15/2011 10:42:51 AM Eastern Daylight Time  
Fixed for version 6.4

FROM: Matt Kolis DATE: 8/29/2012 4:07:16 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

|                                       |
|---------------------------------------|
| Issue ID: 10832                       |
| Subject: Builtup cross section angles |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Li, Xinmei       | 5/6/2011 8:35:21 PM  |
| Modified By: mkolis            | 8/29/2012 6:57:27 PM |
| Priority: Critical             |                      |

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Li, Xinmei      | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Xinmei Li DATE: 5/6/2011 4:37:04 PM Eastern Daylight Time

In builtup cross section window, select angles from the list and click okay to save it. Then go to the beam shapes angle window and change angle dimensions. When open builtup cross section window again, the old dimensions still display in the table while horizontal leg is updated with new dimensions. Found out this while investigating 10792.

FROM: Xinmei Li DATE: 7/12/2011 10:48:40 AM Eastern Daylight Time  
Resolved for 6.4.

FROM: Matt Kolis DATE: 8/29/2012 2:57:26 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

**Complete Issue Information**

Issue ID: 10929  
Subject: RC Slab and Tee Beam Web Depth

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Jackson, Amanda 6/3/2011 1:50:40 PM  
Modified By: xli 7/1/2011 2:01:21 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amanda Jackson DATE: 6/3/2011 9:53:57 AM Eastern Daylight Time  
I can't find anywhere in the Help where it tells me if the depth of the web in reinforced concrete slab and tee beam girder definitions is from the top of the full slab or the top of the structural slab. I've been entering them from the top of the full slab, which could be giving me the wrong rating. Please clarify.

FROM: Xinmei Li DATE: 6/27/2011 10:35:57 AM Eastern Daylight Time  
If you're entering depth in the cross section window dimensions tab, it means total depth including Slab Sacrificial Wearing surface. In order to consider this in rating analysis, you will need to go to superstructure definition window, analysis tab, check appropriate boxes.  
If you still get wrong rating, please attach your bridge along with comparison of the right rating and analysis results.

FROM: Amanda Jackson DATE: 7/1/2011 9:58:45 AM Eastern Daylight Time  
That is what I needed to know. I don't think there is anything wrong with the ratings, but I will check it more closely one of these days. If I discover a problem, I will log another incident. I think we can mark

## Complete Issue Information

this one resolved.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 10949                                                       |
| Subject: Post Tensioning (grouped by TAG April 2011) - Superstructure |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Lee, Herman      | 6/9/2011 1:37:08 PM |
| Modified By: hlee              | 6/9/2011 1:40:10 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:23:38 PM

HRS AASHTO

3026

**Complete Issue Information**

**Description**

Issue ID: 10950  
Subject: 3-D Analysis (grouped by TAG April 2011) - Superstructure

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 6/9/2011 1:34:30 PM  
Modified By: hlee 6/9/2011 1:41:55 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:23:39 PM

**HRS AASHTO**

3027

**Complete Issue Information**

|             |           |      |             |
|-------------|-----------|------|-------------|
| Lee, Herman | Suspended | High | Enhancement |
|-------------|-----------|------|-------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

Issue ID: 10951

Subject: Administrative Tools (grouped by TAG April 2011)



**Complete Issue Information**

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Lee, Herman      | 6/9/2011 1:32:20 PM |
| Modified By: hlee              | 6/9/2011 1:48:02 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

**History**

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | High     | Unknown        |
| Lee, Herman        | Assigned |          |                |
| Ordoobadi, Mehrdad |          | Critical | Bug<br>Unknown |
|                    |          | Urgent   | Bug            |
|                    | Resolved |          |                |
|                    | Resubmit |          |                |
| Zhang, Bin         | Assigned |          |                |
| Ordoobadi, Mehrdad | Resolved |          |                |
|                    | Accepted |          |                |
|                    | Closed   |          |                |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | FibmRunFails-StrgrReact |             |

4/19/2016 3:23:39 PM

HRS AASHTO

3029

**Complete Issue Information**

(0310001)63B4.xml  
 FlbmRatingNotChanged  
 (0600035)-63B3.xml  
 VI10960(031001).xml  
 Floorbeam Stringer Reactions  
 for Flb 02.docx

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

Issue ID: 10960  
 Subject: Virtis 6.3 Beta 3 - Model Changes Not Reflected in Floorbeam Rating

Folder: /Virtis/Support Center  
 Primary Contact: Ordoobadi, Mehrdad  
 Submitted By: Armbrecht, Tim 6/9/2011 8:39:42 PM  
 Modified By: mordoobadi 6/4/2013 5:14:54 PM  
 Priority: Urgent  
 Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 6/9/2011 4:41:13 PM Eastern Daylight Time  
From my consultant (Souther):

In investigating VI #10871 ("Floorbeams Won't Run"), which has been resolved, another issue presented itself. When making revisions to the model that changes the dead loads, re-analysis of the floorbeams does not result in a different load rating. The rating factors for stringers do reflect the revisions after re-analysis but the former computed dead load reactions are still displayed in the Computed Stringer Reactions tables.

There is a workaround but it is rather involved, laborious and time consuming. It is as follows:

- Make appropriate model revisions.
- Save and close the model.
- Re-open the model.
- Do an analysis of each stringer unit affecting the floorbeams in question and "Accept" the new computed reactions for each one.
- Do the re-analysis for each of the floorbeams.

To test this problem, in the attached export file, change the wearing surface Load Case from "Wearing Surface" to "Not Assigned" and do an analysis of Floorbeam Member, "Flbm3-x" and the stringers that affect it. Then, after doing the workaround, go from Not Assigned back to Wearing Surface and observe the Computed Stringer Reactions table.

When such model revisions are made, they should immediately be reflected in the results from the re-analysis of any affected members.

FROM: Herman Lee DATE: 6/10/2011 12:41:48 PM Eastern Daylight Time  
I was able to reproduce this in 6.2 so it is not new to 6.3.

FROM: Jim Duray DATE: 6/15/2011 1:06:15 PM Eastern Daylight Time

FROM: Mehrdad Ordoobadi DATE: 6/15/2011 3:19:21 PM Eastern Daylight Time  
I investigated this issue and believe the reason that the dead load reactions are not invalidated when the wearing surface properties is changed is because we only consider direct properties of the floorbeams and stringers when we check to see if the dead load reactions are up to date. Currently any change that is made to some domain object that is not related to stringers or floorbeams will not cause the dead load reactions to be marked invalid but if a change is made to the properties of the stringers or floorbeams or related objects they will cause the existing dead load reactions to be marked invalid. For example if the density of a material that is used by a stringer is changed the dead load reactions will be marked as invalid. But when the thickness of a wearing surface or its assigned load case is changed in the typical section window the dead load results will not be invalidated. Because these do not cause a change in the properties of the stringer in the domain. In fact there are more situations that a change in the values in the user interface should cause the dead load reaction results to be invalidated but they are currently not considered. Here is a list of windows that if you make changes to the values in them those changes will not affect the validity of the dead load reactions but they should.

4/19/2016 3:23:39 PM

HRS AASHTO

3031

## Complete Issue Information

- Structure Typical Section
- o Deck
- o Parapet
- o Median
- o Railing
- o Generic
- o Sidewalk
- o Lane Position
- o Wearing surface
- Superstructure loads
- Appurtenances
- Superstructure Definition

I think there could be many more.

I believe this has been like this since floor system was implemented and I think now is too late to try to fix this issue and include it in 6.3.

FROM: Tim Armbrecht DATE: 6/30/2011 3:33:37 PM Eastern Daylight Time  
After the latest update, now the floorbeam analysis doesn't work at all. From Souther:

RE: VI# 10960/10871/10861 file name - FlbmRunFails-StrgrReact(0310001)63B4.xml (attached)  
It is understood that the issue about re-running floorbeams for changed dead loading will not be fixed until after the production release of Virtis 6.3. When very slightly modifying a "direct property for the stringers & floorbeams, say concrete density from .150kcf to .1499kcf, the stringer dead-load reactions are re-computed, which can subsequently be viewed in the Floorbeam Stringer Reactions window. However, the floorbeam analysis terminates with the following...

...

Info - Finished generating virtual stringer Stage 3 Virtual Stringer Model...  
Info - Generating load cases for all models...  
Error - Unable to determine stringer dead load reactions!

Error - Analysis failed!

Since the reactions were in fact computed, this message is in error. The same error occurs whenever the analysis is executed for a floorbeam with the "Up To Dated" column boxes checked. It occurs for both Truss and Girder System floorbeams.

If this can't be corrected prior to acceptance of 6.3, it should be corrected along with VI# 10960.

Since the new reactions can be viewed in the Floorbeam Stringer Reactions window a workaround can be performed by selecting the "Override Computed" column boxes and entering the corresponding values in the "User Defined Reaction" column, then re-analyzing the bridge model.

Tim Souther, PE

FROM: Qiang Gao DATE: 7/1/2011 9:15:32 AM Eastern Daylight Time  
Regarding Tim's comments on 6/30/2011. I cannot reproduce the problems. The analysis for each floorbeam can be completed without any error even I changed the density (from 0.150kcf to 0.1499kcf). The "up to dated" checkboxes in "Advanced floorbeam stringer reactions" dialogue are always checked and readonly. By the way, my version is 6.3 beta4 with all the updates. I discussed with Herman and

4/19/2016 3:23:39 PM

HRS AASHTO

3032

## Complete Issue Information

we will test it again after 6.3 is released.

FROM: Mehrdad Ordoobadi DATE: 3/6/2012 10:36:05 AM Eastern Standard Time  
Fixed for 6.4.

FROM: Phil Litchfield DATE: 6/26/2012 5:48:03 PM Eastern Daylight Time  
(From Consultant Souther):

Incident is not completely resolved in 6.4 beta 2. The issue reported was that changes made in data within a Floorbeam-Stringer System type Superstructure Definition that would affect dead load and rating of a floorbeam are not immediately included in the floorbeam rating if the floorbeam was previously analyzed during the present session.

RE: VI10960(031001).xml

In Supstr. Def. Span 8 TFS, run Flbm 02(d). Apply any affected Computed Stringer Reactions. Note the applied Stage 2 Dead Loads and the load ratings for the floorbeams. Now, change the wearing surface thickness from 1.75" to 3" and then run Flbm 02(d) again. The stringer reactions are not recomputed as evidenced by no new Computed Stringer Reactions for Stage 2 Dead Loads and no change in the floorbeam load ratings. The increased wearing surface loading should be immediately reflected in subsequent analyses of the floorbeams.

In order for loading modifications that affect stringer reactions to be reflected in the floorbeam ratings, one must close and then reopen the Virtis Model then rerun the floorbeam analysis.

There is another problem that is happening in the referenced Virtis Model. When attempting to analyze all of the floorbeams within the Span 3 TFS Superstructure Definition and the Floorbeams marked "(error)" in Span 8 TFS terminate with an error. The error message box states, "Unable to complete analysis." The error occurs after the stringer reaction computations are completed, during Floorbeam analysis as follows:

Processing vehicle HS 20-44 (As Requested)...

Info - Finished loading influence lines with selected vehicles for Stage 3 Stringer Model...

Info - Performing transverse live load analysis for Stage 3 Span Model...

Info - Computing transverse live load combinations...

Error - Unable to perform analysis!

Error - Analysis failed!

FROM: Mehrdad Ordoobadi DATE: 7/10/2012 9:59:37 AM Eastern Daylight Time

Observation: Changing the wearing surface thickness is affecting the stage 1 reactions and not the stage 2 reactions. See the attachment "Floorbeam Stringer Reactions for Flb 02.docx"

Observation: When all of the stringer reaction data is removed from the database manually and an analysis is performed no values are reported for Stage 2. Computed reactions are all empty.

FROM: Mehrdad Ordoobadi DATE: 7/10/2012 10:13:32 AM Eastern Daylight Time

Ben, please investigate why stage 2 results are not populated and stage 1 results are increased when the wearing surface thickness is increased.

FROM: Phil Litchfield DATE: 8/8/2012 12:49:01 PM Eastern Daylight Time

Checked in 6.4 Beta 3, and problem still exists.

FROM: Herman Lee DATE: 8/19/2012 12:38:06 AM Eastern Daylight Time

4/19/2016 3:23:39 PM

HRS AASHTO

3033

**Complete Issue Information**

"Changing the wearing surface thickness is affecting the stage 1 reactions and not the stage 2 reactions." is related to Incident 10990.  
Ben, please verify the fix for this incident in 6.4 Acceptance Build.

FROM: Bin Zhang DATE: 8/21/2012 2:08:35 PM Eastern Daylight Time  
I verified the Implemented code to cleanup previously accepted reactions.  
Please note that the stringer reaction from the wearing surface is 0.53 kip for the new calculation while the number was 0.16 kip for the old calculation. This difference happened due to the bug fix of #11646. Please read the incident #11646 (incorrect calculation of the stringer reactions for wearing surfaces) for details.

FROM: Herman Lee DATE: 8/23/2012 9:06:39 AM Eastern Daylight Time  
The floor beam analysis problem in VI10960(031001).xml was caused by incorrect stringer locations (FE nodes) in the FE models. The floor beam length (24.0625') is less than the distance between the trusses (25.3958') in the model. The stringer locations should be measured from the start of the floor beam instead of the location of the left truss.

Fixed for 6.4 Release. Note that this problem is different than the one submitted for this incident.

FROM: Phil Litchfield DATE: 6/4/2013 10:40:17 AM Eastern Daylight Time  
Fixed in 6.4.1.

FROM: Mehrdad Ordoobadi DATE: 6/4/2013 10:58:41 AM Eastern Daylight Time  
Accepted by Phil Litchfield on 6/4/2013.

Issue ID: 11011  
Subject: Consolidate repetitive output

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Colgrove, George 6/28/2011 1:05:26 PM  
Modified By: hlee 4/30/2013 2:44:44 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | Medium   | Enhancement |
|                 | Suspended | High     |             |
|                 | Rejected  |          |             |

**Contacts**

4/19/2016 3:23:40 PM

HRS AASHTO

3034

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | missing_haunch_width.doc   |             |
|      | Verification Document.docx |             |
|      | sd_53380131_63_Beta4U3.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Colgrove DATE: 6/28/2011 9:06:32 AM Eastern Daylight Time

In the AASHTO Spec Check reports, the format is as follows:

-----

Spec identification

-----

Left location

Left Formulas, variable definitions and other information

Left Inputs

Left calcs/results

-----

Right location

Right Formulas, variable definitions and other information

Right Inputs

Right calcs/results

-----

These should be re ordered to consolidate repetitive information

-----

Spec identification

Formulas, variable definitions and other general information <-----

-----

4/19/2016 3:23:40 PM

HRS AASHTO

3035

**Complete Issue Information**

Left location

Left Inputs

Left calcs/results

-----  
Right location

Right Inputs

Right calcs/results  
-----

FROM: Herman Lee DATE: 4/30/2013 10:41:46 AM Eastern Daylight Time  
Left and right sides of a POI may use different formulas and have different variable definitions.

Issue ID: 11018  
Subject: Spec Check - Not displaying/using haunch width - AASHTO LF engine

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Thompson, Todd 6/30/2011 4:12:45 PM  
Modified By: sthogaru 8/29/2012 1:28:34 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Skow, Wayne      | Assigned |          |          |
| Kennelly, Krisha |          |          |          |
| Li, Xinmei       |          |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:40 PM

HRS AASHTO

3036



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 6/30/2011 12:15:51 PM Eastern Daylight Time

As I try to track down why I'm getting about 60% less for a bridge, I've come across some oddities.

When I was looking at the Spec Checker and the properties used - I noticed that the haunch width is being displayed as zero. The haunch depth is correct.

And the haunch DL's appear to be correct.

Not sure if this is just a report problem or if the haunch width is actually being used as zero?

Same bridge as from VI 11017

FROM: Todd Thompson DATE: 6/30/2011 1:51:21 PM Eastern Daylight Time

I believe the lower RF results where the result of how BRASS can consider which sections are composite/non-composite vs AASHTO LF engine. I revised my model and get consistent RF results now, but the spec checker still displays 0 haunch width when it shouldn't.

FROM: Krisha Kennelly DATE: 6/30/2011 3:05:09 PM Eastern Daylight Time

This is just a reporting problem, the haunch width is correctly being used to compute DL as you noted. The concrete haunch area is not considered in the composite section properties. Only the haunch depth is used to position the slab for the composite section properties.

this reporting problem actually also exists in 6.2 in the AASHTO LRFR engine but was submitted during 6.3 beta testing (Beta 3 Update 3)

FROM: Krisha Kennelly DATE: 6/30/2011 3:30:42 PM Eastern Daylight Time

issue changed to support category since it is a release bug.

FROM: Krisha Kennelly DATE: 3/6/2012 9:56:25 AM Eastern Standard Time

Programmer notes:

This fix is only needed for schedule based beams.

In ScSuperSteelGirderElement::PopulateCompositeInfo(), first determine if the beam is schedule based.

if it is schedule based, don't call the following line in this function:

```
VERIFY(SetDeDoubleValue(CrossSectionPtr->GetHaunchWidth(), xsecProp->SlabHaunchWidth));
```

instead, add a function to ScSuperSteelGirderElement to compute the haunch width for steel girders, stringers and floorbeams. This new function should be similar to the commented out code in

4/19/2016 3:23:40 PM

HRS AASHTO

3037

**Complete Issue Information**

DoGirderMbrAlt::FillCrossSectionData() that starts with the line /\* ##### Haunch width is set to zero. CrossSection haunch width is only

then after you compute the haunch width in the new function, you can set xsecProp->SlabHaunchWidth equal to the computed haunch width.

FROM: Xinmei Li DATE: 3/12/2012 4:49:56 PM Eastern Daylight Time Resolved for 64 release.

FROM: Krisha Kennelly DATE: 3/19/2012 1:57:39 PM Eastern Daylight Time Notes for alpha tester: Test schedule based steel rolled beams and plate girders, int and ext beams. Run in 6.3.1 and note the section properties. Run in 6.4 and verify the haunch width is now properly displayed but the section properties did not change from 6.3.1.

FROM: Srujana Thogaru DATE: 8/29/2012 8:57:45 AM Eastern Daylight Time Above fixed has been verified with 6.4 Beta 4. Verification document document attached.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 11019                                                 |
| Subject: Export/Import of Parameters from Configuration Browser |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Waheed, Amjad    | 7/1/2011 5:15:21 PM |
| Modified By: hlee              | 7/1/2011 7:21:27 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Duplicate |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:23:40 PM

HRS AASHTO

3038

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Assistant Administrator Amjad Waheed DATE: 7/1/2011 1:20:11 PM Eastern Daylight Time  
Export/Import of Parameters from Configuration Browser

Currently, it is not possible to export or import Parameters defined in the Configuration Browser. The information contained in the Parameters are usually common all over the states and an administrator should be able to share with consultants/county engineers. Export/Import of Parameters from the Configuration Browser functionality needs to be provided.

FROM: Herman Lee DATE: 7/1/2011 3:13:48 PM Eastern Daylight Time  
Export/Import system defaults is a planned enhancement for the 6.4 release.

This incident is part of the requests in Incident 10700. I'm changing the Status to Duplicate.

Issue ID: 11026

Subject: error message for LRFD LL DF computation

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: Zhang, Bin

7/12/2011 7:18:46 PM

Modified By: xli

8/30/2012 1:48:23 AM

Priority: High

Category: Bug

### History

4/19/2016 3:23:40 PM

HRS AASHTO

3039

**Complete Issue Information**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Unknown  |
| Lee, Herman      | New      | High     | Unknown  |
| Ihnat, Joseph    | Assigned |          | Support  |
|                  | Resolved |          |          |
|                  | Closed   |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 7/12/2011 3:19:58 PM Eastern Daylight Time  
 Submitted on behalf of Sally D. Doles from LONCO, INC. The original email was listed as below.  
 \*\*\*\*\*

I am doing a LRFR rating for a composite concrete deck on steel girders and am having issues with the live load distribution factors (xml file attached). I have entered all of the information for the girders and am able to use the Virtis "Compute Distribution Factors" button for the exterior girder, but when I try to use the "Compute" button for the interior girder I get the following message:  
 Unable to perform analysis!  
 Line 313 in source file .\AbxLfrdDistFactCompUiCtrl.cpp

Under the Virtis/Opis Technical support online, on the tutorial page, STL 6 - Virtis Steel plate Girder Tutorial says that the Virtis LRFR Engine will compute the live load distribution factors at runtime if the table is left blank. I also tried this and got the following message:  
 Unable to perform analysis!  
 Line 598 in source file .\AbxVirtisStdUiCtl.cpp  
 \*\*\*\*\*

FROM: Bin Zhang DATE: 7/12/2011 3:49:51 PM Eastern Daylight Time  
 When the input for "lane position" in "structure typical section" is not appropriate (figure 1), the LRFD LL DF could not be automatically computed by the program. (figure 2)

The error message does not tell the user the appropriate information (figure3). The error message

**Complete Issue Information**

should state the "lane position" definition error in "structure typical section", so the users could have correct information to modify their input data.

Please read the attached document with figures for detail. The XML file for the bridge model was also attached in the document.

FROM: Srujana Thogaru DATE: 8/23/2011 8:44:03 AM Eastern Daylight Time  
Error message added to notify if the lane positions were entered incorrectly. Fixed for 6.4 releases.

FROM: Xinmei Li DATE: 8/29/2012 9:34:43 PM Eastern Daylight Time  
Verified that the error message was added when the lane positions were entered incorrectly for 6.4 Beta4.

|                                                |
|------------------------------------------------|
| Issue ID: 11030                                |
| Subject: Can you change output folder location |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Thompson, Todd   | 7/18/2011 3:59:28 PM |
| Modified By: jihnat            | 7/18/2011 6:26:23 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 7/18/2011 12:01:33 PM Eastern Daylight Time  
Can you change the output folder location?  
Since our state has My Documents on a network drive for each user - our IT folks are concerned it will fill up that drive. (I know in Beta testing I accumulated 10's of GB's of output data)

**Complete Issue Information**

And they want to revise that to something like c:\work instead of My Documents.

Version 6.3

FROM: Joseph Ihnat DATE: 7/18/2011 12:12:53 PM Eastern Daylight Time  
It is set in the Preferences window (View-Preferences-Analysis tab) and will need to be set for each user.

FROM: Todd Thompson DATE: 7/18/2011 1:33:37 PM Eastern Daylight Time  
Sorry - got sidetracked thinking it was in the registry (a change we had to manually make between Beta 1 and Beta 2). And I missed the obvious. Sorry.

Thanks and this can be closed.

Todd

|                           |
|---------------------------|
| Issue ID: 11035           |
| Subject: Technical Note ? |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ihnat, Joseph      |                       |
| Submitted By: Laughlin, Christopher | 7/20/2011 11:58:22 AM |
| Modified By: jihnat                 | 7/20/2011 12:09:38 PM |
| Priority: High                      |                       |
| Category: Support                   |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Support  |
|                 | Resolved |          |          |

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 7/20/2011 8:03:00 AM Eastern Daylight Time  
Question on technical notes

- 17 replaces the file: abaspecctrl.dll
- 18 replaces the file: abocncb.dll
- 19 replaces the file: abaspecctrl.dll

Since 17 and 19 replace the same file, is it safe to say 19 is inclusive of 17 ?

Please respond ASAP as we are moving 6.2 to production this weekend.

Thanks !

FROM: Joseph Ihnat DATE: 7/20/2011 8:08:26 AM Eastern Daylight Time  
Yes. TN 19 includes the fix for TN 17.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 11036<br>Subject: 6.3 release won't install on my computer |
|----------------------------------------------------------------------|

|                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Metcalf, William 7/20/2011 2:29:32 PM |
|-------------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:23:41 PM

HRS AASHTO

3043

### Complete Issue Information

|                    |                      |
|--------------------|----------------------|
| Modified By: jhnat | 7/20/2011 7:25:15 PM |
| Priority: High     |                      |
| Category: Support  |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Support  |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | sample_DB_Problems.doc |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 7/20/2011 10:31:10 AM Eastern Daylight Time

All the beta versions installed no problem, but when I try to install the release version I got it gets to near the end of the install then tells me it needs to restart my computer (I don't remember virtis having to restart my computer in the past) once the computer restarts after I log in it just goes to a black screen for a minute or two then the "you have to restart your computer" message pops up again and this seems to continue ad infinum.....

I'm kind of in a spot here b/c our database has already been migrated and the scripts run so until we get this resolved or go through the pain of restoring from a backup we basically can't use virtis.

FROM: Joseph Ihnat DATE: 7/20/2011 3:23:51 PM Eastern Daylight Time

There was interference from another app (LANDesk) that he was able to resolve by removing a registry key.

4/19/2016 3:23:41 PM

HRS AASHTO

3044



## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 11041                                 |
| Subject: Can't get SQL Server Sample DB working |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Thompson, Todd   | 7/27/2011 3:13:54 PM |
| Modified By: jihnat            | 7/28/2011 1:34:29 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/27/2011 11:16:17 AM Eastern Daylight Time

I'm trying to get a laptop ready for our OPIS user to take with the SQL Server Express Sample DB for the Montana UG Training next week.

But I keep getting an error message and it appears to be happening in the ODBC connection creation area of the install.

I've attached the screen shot of the error but we don't know what is broken so we know what to fix.

THis machine is XP and i don't think it ever had Virtis Opis on it before.

I was hoping to have this ready before next weeks meeting.

4/19/2016 3:23:41 PM

HRS AASHTO

3045

## Complete Issue Information

FROM: Joseph Ihnat DATE: 7/27/2011 3:34:26 PM Eastern Daylight Time  
It looks like Virtis/Opis 6.3 (a beta?) may have been installed at one time. As far as I can tell, the error indicates that the database has been marked as "suspect" by SQL Server.  
Unless you would like to try to recover the database, you can try deleting it from SQL Server Management Studio. Then rerun the Virtis setup to configure the ODBC connection.

FROM: Todd Thompson DATE: 7/27/2011 3:43:03 PM Eastern Daylight Time  
I'll give that a try - but this laptop never ever had 6.3 Beta installed and I'm pretty sure it's never had Virtis Opis installed before.

FROM: Todd Thompson DATE: 7/28/2011 9:21:12 AM Eastern Daylight Time  
Used SQL Server Management Studio to delete the databases, manually deleted the ODBC Profiles. Reinstalled software and it worked.

Evidently something broke during the initial install and this was the only way to fix it, as re-installation by itself would not work. Again this PC never ever had 6.3 (or any alpha or beta) installed. In fact I'm pretty sure it never had any version of Virtis Opis installed. It was just an extra laptop we grabbed to bring to the Virtis Opis Training in Helena.

But this can be closed.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 11043                                                |
| Subject: Fatal error occurred while computing Prestress Losses |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Metcalf, William      | 7/28/2011 9:05:51 PM |
| Modified By: xli                    | 9/9/2011 3:18:37 AM  |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Thogaru, Srujana   | Assigned |          |          |
| Kennelly, Krishna  |          |          | Bug      |
|                    | Resolved |          |          |
|                    | Assigned |          |          |
| Ordoobadi, Mehrdad |          |          |          |

4/19/2016 3:23:42 PM

HRS AASHTO

3046

**Complete Issue Information**

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Resolved  |      |             |
|                  | Verified  |      |             |
| Lee, Herman      | New       | High | Unknown     |
| Kennelly, Krisha | Assigned  |      |             |
|                  |           |      | Maintenance |
|                  | Suspended |      | Enhancement |
|                  | Assigned  |      |             |
| Trees, Geoffrey  |           |      |             |
| Kennelly, Krisha |           |      |             |
|                  | Resolved  |      |             |
|                  |           |      | Maintenance |
| Trees, Geoffrey  | Resubmit  |      |             |
|                  | Resolved  |      |             |
|                  |           |      |             |
|                  | Verified  |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 11049 help changes.png |             |
|      | pic04591.jpg           |             |
|      | A7662.xml              |             |
|      | 11049.docx             |             |
|      | LLDF for 02 0068.xlsx  |             |
|      | 02 0068nyb.xml         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:23:42 PM

HRS AASHTO

3047

**Complete Issue Information**

FROM: William Metcalf DATE: 7/28/2011 5:12:07 PM Eastern Daylight Time  
the error is in G4 of the CPGCCD. I get this error for multiple structures this is just an example. (or some form of P/S loss error sometimes it references section 9.17) i added the xml file:

Building Spec Check Domain objects.

Typ. Interior - Stage 1

Typ. Interior - Stage 2

Typ. Interior - Stage 3

Computing Prestress Losses.

System Error - Contact Technical Support: Missing data in article: "9.16.2.1 - Prestress Losses - General" - stage 2, round 2

Fatal error occurred while computing Prestress Losses.

Error - Error performing prestress loss LFR specification checking!

Error - Analysis failed!

FROM: Srujana Thogaru DATE: 8/10/2011 9:35:49 AM Eastern Daylight Time

Error is due to missing of "ALRFD\_IndexPsNonCompositeDLTable.Midspan\_MDL1\_ExclGirder" from "ALRFD\_IndexPsStageTables.NonCompositeDL" table from Stage1 in stage 2 of article 9.16.2.1.3 during computation of PS Loss at end of Span 3 (208.5 ft).

Reason for missing data is computations are not performed at location 208.5 ft in stage 1. Please refer to the attached PDF for details.

FROM: William Metcalf DATE: 8/10/2011 11:36:59 AM Eastern Daylight Time

So is there a way to fix this or what is the status?

FROM: Krisha Kennelly DATE: 8/15/2011 9:15:34 AM Eastern Daylight Time

Problem is similar to 10751. There is some bad data in the abw\_mbr\_alt\_support table. This bridge appears to have been copied from a ps bridge with more spans and the data in the in the abw\_mbr\_alt\_support table was not modified to reflect the lesser number of spans. Testing in 6.3 shows that copying a ps bridge and then reducing the number of spans does not leave the bad data anymore. The BRASS engine is not able to analyze the simple spans for DL and continuous spans for LL so it wasn't using the data in the abw\_mbr\_alt\_support\_table so the bad data wasn't exposed before.

I've attached a modified version of your xml file that has this bad data removed, 'revised 11043.xml'.

If you have other bridges with an error like this you can send them to us and we can remove the bad data so you can run them while a fix is put into a service pack.

FROM: William Metcalf DATE: 8/16/2011 10:43:55 AM Eastern Daylight Time

Krisha,

I do have some others what is the best way for me to send them to you?

FROM: Herman Lee DATE: 8/18/2011 11:10:47 AM Eastern Daylight Time

Bridgeware e-mail from Billy Metcalf:

=====

Actually when I run it from the bridge explore I get this error message "Error moving to the next record

**Complete Issue Information**

in database record set.” But the rating appears to be ok. This did not happen when run from inside the bridge file.

=====

FROM: Krisha Kennelly DATE: 8/23/2011 4:11:35 PM Eastern Daylight Time  
The AASHTO engine model generation and spec controller have been modified to ignore this bad data.

Mehrdad - please add code to the domain to set this bad data to null when the bridge is retrieved from the db or an xml file.

FROM: Mehrdad Ordoobadi DATE: 8/26/2011 1:34:12 PM Eastern Daylight Time  
Updated the domain to set the Bearing distances for first and last support to null if they are not.

FROM: Xinmei Li DATE: 9/8/2011 11:01:35 PM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 11049                                                |
| Subject: LRFR Distribution Factors - Multi-lane vs Single Lane |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Kemna, Aaron       | 8/3/2011 5:19:05 PM   |
| Modified By: akemna              | 12/21/2012 7:20:47 PM |
| Priority: High                   |                       |
| Category: Maintenance            |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:23:42 PM

HRS AASHTO

3049

**Complete Issue Information**

FROM: Aaron Kemna DATE: 8/3/2011 1:24:08 PM Eastern Daylight Time

Currently, Virtis sets the ML DF equal to the SL DF when the SL DF is calculated to be greater than the ML DF. This is incorrect for Permits with the Frequency set to "Unlimited Crossings". For this case, the lower ML DF should be used. The load factors in the table were calibrated to the ML DFs in AASHTO. What Virtis is doing is conservative, but is also unnecessary. If the user manually enters the values correctly, the design truck and legal load ratings will be incorrect (AASHTO engine) because the lower ML DF values will be used instead of the controlling SL DF value. The SL and ML DF need to be seperated out and the program needs to compare and choose the appropriate values.

BRASS has similar issues, but has some really bad flaws when design, legal & permit trucks are mixed. I'll put a incident in for this, once I check their new release so everyone can be made aware.

FROM: Krisha Kennelly DATE: 8/15/2011 1:30:51 PM Eastern Daylight Time  
Subject to TAG and/or Task Force direction on how to handle this situation.

FROM: Herman Lee DATE: 3/1/2012 8:29:58 AM Eastern Standard Time  
Received e-mail from Vinacs Vinayagamoorthy (murugesu\_vinayagamoorthy@dot.ca.gov), Caltrans.

=====  
=

The Virtis software calculates, when compute from typical section key, the LLDF internally and populates the values in the system.

1. In some cases, calculation shows that LLDF for one lane (when MPF of 1.2 is included) is higher than the two or more lane live load distribution factor. In those cases, software populates the Multi-Lane DF with single lane distribution factor.

Though this seems correct, it is creating a problem for us to rate the bridges for "Routine" permit trucks. According to MBE (see below), we are supposed to analyze bridges using LLDF of Two or more Lanes. When the software places the one lane distribution factor (in the multi lane distribution factor), we are essentially using the LLDF with MPF of 1.2.  
(Embedded image moved to file: pic04591.jpg)

2. Also, we noticed that the AASHTO Engine uses LLDF listed within the multi-lane distribution factor column when establishing the demand for HL93 and Legal Trucks. As a result, if we enter One Lane distribution factor (with 1.2 MPF) and two or more lane distribution factor within multi-lane system, rating factor of HL93 and Legal were incorrectly calculated.

The software should be codes such that the user to enter One Lane DF in the 1 Lane column and Two or more Lane (excludes of single lane DF) in the multi-Lane column. The software will then uses the largest (one vs two or more) DF to establish HL93 and legal truck demands. The permit trucks for single trips are established using LLDF of 1 lane (without 1.2 factor) and Annual or Routine trucks are established suing Two or more lane DF.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====  
=

**Complete Issue Information**

FROM: Krisha Kennelly DATE: 4/20/2012 12:55:03 PM Eastern Daylight Time

The following questions were posed to Bala Sivakumar for his input as a developer of the MBE Specification on the interpretation of Table 6A.4.5.4.2a-1 regarding the distribution factor to use for routine permits.

=====  
Is it the intent of the MBE Specs to use the same distribution factor when evaluating design loads, legal loads and routine permits, or can a user "mix and match" distribution factors? For example, can a structure be evaluated using a single lane DF for design loads, multi-lane for legal loads and a single lane for routine permits?

<<BS>>Keep in mind that the LRFR calibration in the MBE was done using LRFD distribution factors as the method of analysis. That is the variability in the distribution method was part of the calibration. We now have a ballot item that addresses the use of refined analysis and provides an adjustment to the load factors when using 3D methods. Also the live load factors were selected so that the two lane distribution will govern the design and legal loads for multi lane bridges. That is you don't need to check the single lane, except if you have a single lane bridge. So if you check only the single lane for the design load or a routine permit on a multi-lane bridge, you may not be checking for the worst loading on the bridge when trucks are on more than one lane. We find that many states have large numbers of routine permits that multiple presence is a possibility. So the load rating may be unconservative with only the single lane DF check. Also note that the single lane DF in LRFD can be lower than the Std Spec values. It needs to be applied correctly for rating.

For the case where the single lane DF exceeds the multi lane DF, some Virtis users want to use the larger single lane DF to evaluate design and legal loads. For routine permits, they want to use the smaller multi-lane DF. Is that the correct approach, and the intent of the MBE? I

<<BS>> would refer you to Report 454 where you will find tables with one-lane and two-lane DFs compared for girder bridges. The one lane DF > Two lane DF may happen, say an exterior girder using the lever rule. If the single lane DF is greater than the 2 lane DF, we should use the higher DF with the load factors in the MBE to be on the conservative side. This would apply to routine permits as well. Recommendation is to use the higher DF in all cases.

As you can see the LRFR calibration only considered the typical case where the two lane DF > one lane DF. If the bridge varies from this use the higher DF with the LRFR load factors.

=====  
Based on his response, Virtis is accurately interpreting the MBE Specification. This issue is an enhancement request to allow for a different interpretation of the Specification. They are considering adding this clarification to the Specification as a ballot item for 2013.

FROM: Aaron Kemna DATE: 4/20/2012 2:53:24 PM Eastern Daylight Time

My comment about the AASHTO engine needing to choose the appropriate value still applies. The user may enter the factors manually choosing to enter the smaller ML factor. It would be reasonable for the user to assume that the engine will pick the appropriate value.

FROM: Krisha Kennelly DATE: 5/29/2012 9:37:55 AM Eastern Daylight Time  
entered following email chain:

From: Armbrecht, Tim A [mailto:Tim.Armbrrecht@illinois.gov]  
Sent: Monday, April 23, 2012 9:28 AM

4/19/2016 3:23:42 PM

**HRS AASHTO**

3051









## Complete Issue Information

We need to roll it back and introduce the older way.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

FROM: Krisha Kennelly DATE: 9/18/2012 10:01:08 AM Eastern Daylight Time  
Based on emails the following will be done:

1. Revise the computation of LFD and LRFD distribution factors in Virtis to not set the multi lane DF equal to the single lane DF when the single lane DF exceeds the multi lane DF.
2. Revise the export to determine the number of lanes on the structure.  
If the structure can hold more than 1 lane, use the largest of single/multi lane DF for the Design and Legal loads.  
For Routine permits, use the max of single lane/1.2 and multi lane DF.  
For Special permits, use the single lane DF/1.2.

If the structure can only hold 1 lane, use the single lane DF for Design and Legal Loads.  
For routine permits, use single lane/1.2.  
For special permits, use single lane/1.2.

The single lane loaded checkbox on the Advanced Vehicle Properties window and the LRFR routine/special permit settings will still take preference during the export.

FROM: Aaron Kemna DATE: 9/18/2012 1:31:51 PM Eastern Daylight Time  
Here's a sample bridge. The current distribution factors were calculated by the old method. The new factors should give smaller ML values for the exterior girders.

FROM: vinacs vinayagamoorthy DATE: 9/19/2012 2:41:35 PM Eastern Daylight Time  
Attached is one model 02 0068nyb.xml. Also, attached an excel spread sheet (LLDF for 02 0068) that shows the LLDF for one Lane and MultiLane that should be displayed in the GUI. Also, it shows the the LLDF that would/should be used for different trucks (HL93+Legal, Routine Permits, Special Permits).

FROM: Krisha Kennelly DATE: 9/20/2012 12:26:13 PM Eastern Daylight Time

FROM: Krisha Kennelly DATE: 9/21/2012 9:21:04 AM Eastern Daylight Time  
Coding is done for Version 6.4.1.

Geoff, please adjust the help for 6.4.1 as shown in the attached png file.

FROM: Geoffrey Trees DATE: 10/17/2012 2:16:43 PM Eastern Daylight Time  
Added new material to help. Krisha, I am reassigning this to you since I am not sure if it should be closed or not.

4/19/2016 3:23:43 PM

HRS AASHTO

3055

**Complete Issue Information**

FROM: Matt Kolis DATE: 10/30/2012 2:31:39 PM Eastern Daylight Time

Verified the following:

- 1. Verify the compute button does not set the multi lane DF equal to the single lane DF when the single lane DF exceeds multi lane. For LFD and LRFD DF's.
- 2. Verify the export to AASHTO LFD engine uses max of single/multi DF if the bridge carries 2 or more lanes.
- 3. Verify the export to AASHTO LRFD/LRFR follows the rules listed by me in the Issue on 9/18
- 4. Verify help changes

The help menu has not been completely updated. See attached 11049.docx.

FROM: Geoffrey Trees DATE: 11/2/2012 2:07:00 PM Eastern Daylight Time

Fixed help

FROM: Matt Kolis DATE: 11/6/2012 3:02:53 PM Eastern Standard Time

Verified help in Alpha 2.

FROM: Aaron Kemna DATE: 11/16/2012 4:42:05 PM Eastern Standard Time

Verified for Beta 1. ML is populated correctly and Design, Legal and Permit loads appear to be using the correct distribution factors.

FROM: Matt Kolis DATE: 11/30/2012 9:54:53 AM Eastern Standard Time

Verified in 6.4.1 Beta 2.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 11051                                               |
| Subject: Configure ODBC during Install has blank radio button |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 8/3/2011 7:54:38 PM  |
| Modified By: bzhang            | 8/31/2012 1:39:14 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:43 PM

HRS AASHTO

3056

## Complete Issue Information

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 9-9-2011 10-17-36 AM.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 8/3/2011 3:55:51 PM Eastern Daylight Time

It's possible for the Configure ODBC page of the Virtis/Opis install to have a radio button with no text. This can happen when the install script finds a version of Microsoft SQL Server that it has not been programmed to handle on the user's computer.

FROM: Joseph Ihnat DATE: 8/4/2011 8:48:28 AM Eastern Daylight Time

Any workaround would depend on the version of SQL Server that is installed.

Run regedt32 and navigate to

HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\CurrentVersion

The version number is in the CurrentVersion key.

FROM: Joseph Ihnat DATE: 2/28/2012 7:46:00 AM Eastern Standard Time

Fixed for 6.4

Issue ID: 11058

Subject: Unable to save point-of-interest engine properties

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Goodrich, Brian

8/15/2011 4:25:51 PM

Modified By: xli

9/9/2011 5:51:59 PM

Priority: High

4/19/2016 3:23:43 PM

HRS AASHTO

3057

**Complete Issue Information**

Category: Bug

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | New      | High     | Unknown  |
| Trees, Geoffrey    | Assigned |          | Bug      |
|                    | Resolved |          |          |
|                    | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 8/15/2011 12:26:38 PM Eastern Daylight Time  
Submitted on behalf of Brian Goodrich, BridgeTech.

Received e-mail on 8/11/2011:

=====  
Herman,

My version of Virtis 6.3 does not appear to be saving any of the BRASS point-of-interest engine properties to memory. I haven't made any changes to the POI part of the AbxBrass2 module. The engine properties for the analysis event, structure definition, and member alternative work just fine. BRASS is the only engine with POI engine properties, so I don't know if this would be happening for any engine. Are you able to duplicate this or see how this is happening?

Brian

=====

FROM: Herman Lee DATE: 8/15/2011 2:03:43 PM Eastern Daylight Time  
Resolved for 6.3 Service Pack.

FROM: Xinmei Li DATE: 9/9/2011 10:03:11 AM Eastern Daylight Time

4/19/2016 3:23:43 PM

**HRS AASHTO**

3058

**Complete Issue Information**

Tested with 6.3 Service Pack1.

When I open POI window Engine tab, there is system error comes up, see attached screen shot. To reproduce, use BID 18, create new POI for floorbeam 1, click engine tab, you will get error.

FROM: Xinmei Li DATE: 9/9/2011 1:01:22 PM Eastern Daylight Time  
The above problem is verified fixed for girder members for 6.3 service pack 1.

FROM: Herman Lee DATE: 9/9/2011 1:19:44 PM Eastern Daylight Time  
Above error is caused by a seperate defect in version 6.2. Please confirm the fix in 6.3 Service Pack.

FROM: Xinmei Li DATE: 9/9/2011 1:35:03 PM Eastern Daylight Time  
Verified fixed for floorbeam and stringer members for 6.3 service pack 1.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 11060                                                    |
| Subject: GetParent function missing from IDoSteelAnalysisPointList |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Goodrich, Brian    | 8/17/2011 6:37:39 PM |
| Modified By: sthogaru            | 8/29/2012 1:53:02 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brian Goodrich DATE: 8/17/2011 12:37:58 PM Mountain Daylight Time  
The GetParent function is missing from IDoSteelAnalysisPointList in Virtis/Opis 6.3. The other analysis point list objects like IDoPsConcreteAnalysisPointList and IDoReinfConcreteAnalysisPointList have a GetParent function.

4/19/2016 3:23:43 PM

HRS AASHTO

3059

**Complete Issue Information**

FROM: Mehrdad Ordoobadi DATE: 8/26/2011 1:59:43 PM Eastern Daylight Time  
Geoff, could you please add the GetParent() function to the IDoSteelAnalysisPointList class.

FROM: Geoffrey Trees DATE: 9/16/2011 11:34:16 AM Eastern Daylight Time  
Resolved for 6.4.

FROM: Srujana Thogaru DATE: 8/29/2012 9:38:23 AM Eastern Daylight Time  
GetParent() function has been added to DoSteelAnalysisPointList. Verified in 6.4 Beta 4 debug.

Issue ID: 11061  
Subject: Cannot save imported bridge - ABW\_BOLT\_DEF error

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Withers, Richard 8/17/2011 7:47:54 PM  
Modified By: mordoobadi 5/3/2012 6:19:54 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

4/19/2016 3:23:44 PM

HRS AASHTO

3060



**Complete Issue Information**

|                 |          |      |         |
|-----------------|----------|------|---------|
|                 |          |      | Support |
|                 | Assigned |      | Bug     |
| Trees, Geoffrey | Assigned | High | Bug     |
|                 | Resolved |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | EngineTab.png       |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Richard Withers DATE: 8/17/2011 4:05:24 PM Eastern Daylight Time  
 A consultant created and load rated the attached bridge named "VIRTIS\_WB\_NATCHEZ\_FINAL.xml". After successfully importing the bridge, I tried to save it. I got the attached error message named "bolt\_def\_error.jpg". It looks like an oracle database error. What do I need to do to correct this problem?

Let me know if you need any further information.

Thank you,  
Richard Withers

FROM: Mehrdad Ordoobadi DATE: 8/26/2011 1:11:10 PM Eastern Daylight Time  
 The error indicates that the value in the "Library Designation" field for the Bold Definition "Rivets" is not properly set. It is perhaps because your consultant had a custom library bolt in their database that you don't have in your database. To fix this please open the Bolt Definition "Rivets" and choose an item other than the "User Specified", click OK, and Save the bridge.

FROM: Herman Lee DATE: 8/31/2011 8:06:54 AM Eastern Daylight Time  
 E-mail from Richard Withers:

=====  
 Mehrdad, below is a screenshot from my consultant showing the bolt definition screen for his connector named "Rivets". This is exactly how my screen looks. I can't save the bridge with the Library designation set to "User Specified". When I change the Library designation to something other than "User Specified" I can save the bridge. However, this changes the allowable shear stresses, nominal slip resistance, design slip resistance, etc. Obviously, this will change the load rating of the structure.

The consultant does not have a custom library bolt in his database. What can I do so that I can input his specifications for this connector?

**Complete Issue Information**

Thanks,  
Richard

=====

Reply e-mail:

=====

Richard,

A workaround for now is to change the Library designation to something other than "User Specified". After you changed the Library designation, don't hit the "Compute from library..." button so the stresses, resistances and strengths will remain the same. Please note that the data inside the "Rivets" definition are not used by the BRASS LFD engine.

We will further investigate the save problem you are having. When you drop down the Library designation, do you have two "User Specified" selections in the list?

Thanks,  
Herman

=====

FROM: Herman Lee DATE: 8/31/2011 9:46:44 AM Eastern Daylight Time  
E-mail from Richard Withers:

=====

Herman,

This is a screenshot of my "Rivets" window. It only has one "User Specified" selection.

=====

See attached PDF file for the e-mail (with screenshots).

FROM: Mehrdad Ordoobadi DATE: 5/3/2012 12:34:48 PM Eastern Daylight Time  
Fixed in Virtis/Opis 6.4 Alpha 4.

Issue ID: 11062  
Subject: Empty selections in the Analysis Settings Engine Properties drop-down

Folder: /Virtis/Support Center  
Primary Contact: Trees, Geoffrey  
Submitted By: Lee, Herman 8/17/2011 8:02:48 PM  
Modified By: gtrees 8/22/2011 5:48:41 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:23:44 PM

HRS AASHTO

3062

**Complete Issue Information**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Box Beam.xml        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 8/17/2011 4:03:24 PM Eastern Daylight Time  
See attached for the issue.

To reproduce:

1. Open Analysis Settings window from Bridge Explorer.
2. Open the LRFR Design Load Rating template.
3. Select the Engine tab and hit the drop-down button for the engine properties.

FROM: Geoffrey Trees DATE: 8/22/2011 1:16:45 PM Eastern Daylight Time  
Resolved for 6.4 Release.

## Complete Issue Information

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 11074                                                 |
| Subject: Prestressed Box Beam - Circular Void crashes in Virtis |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Thogaru, Srujana    | 8/22/2011 5:04:11 PM |
| Modified By: xli                  | 8/30/2012 2:02:22 AM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Unknown  |
|                  | Resolved |          | Bug      |
|                  | Verified | Critical |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Srujana Thogaru DATE: 8/22/2011 1:05:10 PM Eastern Daylight Time  
Box beam with circular void does not handle situation where shear key depth entered as Zero.

Attached is the bridge XML file for this issue. Error occurs at super structure 12m Simple Span(Box Beam) member alt G1.

FROM: Srujana Thogaru DATE: 8/22/2011 2:25:44 PM Eastern Daylight Time

4/19/2016 3:23:44 PM

HRS AASHTO

3064

**Complete Issue Information**

Fixed for 6.4 release.

FROM: Xinmei Li DATE: 8/29/2012 9:55:54 PM Eastern Daylight Time  
Verified for 6.4 Beta4.

|                                          |
|------------------------------------------|
| Issue ID: 11078                          |
| Subject: Error in LRFD Article 5.9.4.1.2 |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Thogaru, Srujana    | 8/22/2011 7:24:25 PM |
| Modified By: xli                  | 8/30/2012 3:01:15 PM |
| Priority: Critical                |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 8/22/2011 3:25:13 PM Eastern Daylight Time

4/19/2016 3:23:44 PM

HRS AASHTO

3065

**Complete Issue Information**

Check during computation of Initial allowable tension in article 5.9.4.1.2 is not performed.

If user has not entered initial allowable tension article should compute the value using equation  $0.0948 \cdot \sqrt{f'_{ci}} \leq 0.2 \text{ ksi}$ .

Check for 0.2Ksi is not performed.

FROM: Srujana Thogaru DATE: 8/23/2011 8:27:02 AM Eastern Daylight Time  
Fixed in 4th and 5th edition article. Fixed for 6.4 release.

FROM: Xinmei Li DATE: 8/30/2012 10:16:08 AM Eastern Daylight Time  
Tested with BID7 LRFD analysis, removed initial allowable tension in GUI, article still checked 0.2.  
Verified for 6.4 Beta4.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11079                                                          |
| Subject: Invalid analysis method in LRFD Distribution Factor computation |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Armbrecht, Tim      | 8/23/2011 11:56:22 AM |
| Modified By: sthogaru             | 8/29/2012 2:22:14 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |

4/19/2016 3:23:45 PM

HRS AASHTO

3066

**Complete Issue Information**

|             |                    |      |         |
|-------------|--------------------|------|---------|
|             | Resolved           |      |         |
|             | Verified           |      |         |
| Lee, Herman | New                | High | Unknown |
| Zhang, Bin  | Assigned           |      |         |
|             | Information Needed |      |         |
|             |                    |      | Support |
|             | Assigned           |      |         |
|             | Information Needed |      |         |
|             | Assigned           |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 110413.xml          |             |
|      | 11080.docx          |             |
|      | 1010165.xml         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 8/23/2011 7:57:17 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT.

Please see attached PDF file for the e-mail with embedded graphics.

=====

From: Litchfield, Phillip R  
Sent: Monday, August 22, 2011 2:59 PM  
To: Armbrecht, Tim A  
Subject: Virtis Error

Tim,

Have you heard anything about the cause of this error. The beam is defined over the length of the structure. This is the second time I've seen this error, neither time have I found the cause.

Phil

4/19/2016 3:23:45 PM

HRS AASHTO

3067

**Complete Issue Information**

Phillip R. Litchfield, P.E.  
Illinois Department of Transportation  
Bureau of Bridges and Structures  
Email: phillip.litchfield@illinois.gov

=====

FROM: Krisha Kennelly DATE: 8/23/2011 9:35:46 AM Eastern Daylight Time  
The error is not related to the beam definition. It is related to the Analysis Setting window must have 'Rating' selected or the default Analysis Settings template is set to a rating template.

A workaround is to open the Analysis Settings window and select 'Design Review'. Then open the Live Load Distribution window and click the Compute button.

A proper fix will be in Service Pack 1.

FROM: Krisha Kennelly DATE: 8/23/2011 11:27:53 AM Eastern Daylight Time  
Fixed for SP 1.

Testing scripts:

1. Set the default Analysis Settings template to the HS20 LFD rating. Open the Analysis Settings window, set 'Rating'. Open the Live Load Distribution: LRFD tab, hit the compute button. Verify it works.
2. Set the default Analysis Settings template to the HL93 Design Review. Open the Analysis Settings window, set 'Rating'. Open the Live Load Distribution: LRFD tab, hit the compute button. Verify it works.

FROM: Xinmei Li DATE: 9/9/2011 10:22:28 AM Eastern Daylight Time  
Verified both 1 and 2 are fixed for 6.3 service pack 1.

FROM: Srujana Thogaru DATE: 8/29/2012 10:15:57 AM Eastern Daylight Time  
Test 1 and 2 verified with 6.4 beta 4.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 11080                                                       |
| Subject: Virtis locks up for specific truck and structure combination |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Zhang, Bin    |                      |
| Submitted By: Armbrecht, Tim   | 8/24/2011 7:38:32 PM |
| Modified By: hlee              | 9/6/2011 7:03:11 PM  |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:23:45 PM

**HRS AASHTO**

3068



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | 39 0130L mjj.xml           |             |
|      | Issue 11082 hand calcs.pdf |             |
|      | pic07744.jpg               |             |
|      | pic15068.jpg               |             |
|      | Output.png                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Ambrecht DATE: 8/24/2011 3:40:53 PM Eastern Daylight Time  
From my staff (Litchfield):

I tried to run this structure and truck combination (both attached), and virtis continues to lock up. Tried the truck on a different structure and it ran fine. Also, HS20 truck runs fine on the structure too. I'm not sure if it's the PC or structure file.

Thanks,

Phillip R. Litchfield, P.E.  
Illinois Department of Transportation  
Bureau of Bridges and Structures  
Phone: (217) 785-2146  
Fax: (217) 782-7960  
Email: phillip.litchfield@illinois.gov

FROM: Bin Zhang DATE: 8/24/2011 4:08:13 PM Eastern Daylight Time  
I tried this structure and truck combination in Virtis63, Virtis63 locked up for a couple minutes (figure 1), and then it run successfully to complete.  
Does figure 1 show what you experienced when virtis locked up? I attached the figures in the documents (11080.docx).

FROM: Tim Ambrecht DATE: 8/25/2011 3:11:11 PM Eastern Daylight Time  
The program does lockup at the same place. However, it takes more than a few minutes. He gave up at 45 minutes. Do we need to just wait and see how long it takes before it "unlocks"?

FROM: Tim Ambrecht DATE: 8/26/2011 2:51:35 PM Eastern Daylight Time  
He ran it past 45 minutes and got an error mmessage that said "Unable to run FE Engine for 3D model. Out of memory"

4/19/2016 3:23:45 PM

HRS AASHTO

3069

**Complete Issue Information**

FROM: Bin Zhang DATE: 8/30/2011 10:40:31 AM Eastern Daylight Time  
Virtis locked up because it was performing linear solution... You don't need to do anything during this process.

I think it's a memory issue. I ran Virtis63 on a WinXP OS with 1G RAM and 1.5G virtual memory. I would suggest Phillip to install more RAM if he needs to conduct such large scale rating analysis very often. He can assign a larger virtual memory (paging file) for his computer as a temporary solution. Please let me know if these 2 solutions does not work for Phillip.

FROM: Tim Armbrecht DATE: 9/1/2011 10:31:12 AM Eastern Daylight Time  
We have 3GB physical memory on our machines.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 11082                                          |
| Subject: Effective Flange width of heavily Skewed bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 8/25/2011 3:44:19 PM |
| Modified By: kkennelly                | 8/24/2012 6:51:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact  | Status        | Priority | Category |
|------------------|---------------|----------|----------|
| Lee, Herman      | New           | High     | Bug      |
| Li, Xinmei       | Assigned      | Critical |          |
|                  |               | High     |          |
|                  | Investigation |          |          |
|                  | Assigned      |          |          |
| Kennelly, Krisha |               |          |          |
| Lee, Herman      |               |          |          |
|                  | Resolved      |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:23:45 PM

HRS AASHTO

3070

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Xinmei Li DATE: 8/25/2011 11:45:14 AM Eastern Daylight Time

Submitted by Vinacs Vinayagamoorthy  
-----

We came across a bridge where the Virtis underestimated the Effective Flange width. Further inquiry revealed that the Virtis uses girder spacing established at bb of the bridge. Unfortunately, section taken is too far from the actual girder location and yielded very low effective flange width.

Attached is the Framing Plan of the bridge. Though the girder spacing of the 1st interior girder is about 9.86ft, the girder spacing at the BB at Reference Line came out as 3.5ft. I am wondering this error occurs within Virts 6.3 as well. If it does, we need to create a incident. Please let me know whether this occurs within 6.3 as well.

(Embedded image moved to file: pic15068.jpg)

Attached is the bridge xml file.

Problem could be found by using Structure Alternative: Span 1 (MDL 1 of 1) ; Then Go to DECK GUI and let the software establish the effective flange width by clicking on Compute by Typical Section.

(See attached file: 39 0130L mjj.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

FROM: Xinmei Li DATE: 8/25/2011 11:47:53 AM Eastern Daylight Time  
I imported the attached bridge and confirmed that the issue still exists in 6.3 release version.

FROM: Xinmei Li DATE: 8/25/2011 1:12:21 PM Eastern Daylight Time  
Also need to check if dead load due to slab is properly established. (requested by Vinacs)

FROM: Xinmei Li DATE: 8/29/2011 10:30:23 AM Eastern Daylight Time  
The export of dead load due to slab is checked fine. Since Deck slab tributary width varies along the girder system structure definition, is exported and an additional triangle dead load is added to the model for the extra slab dead load. Skew is considered while computing the minimum deck slab tributary width. See attached screen shot for more details.

4/19/2016 3:23:45 PM

HRS AASHTO

3071

**Complete Issue Information**

FROM: Xinmei Li DATE: 2/2/2012 3:39:15 PM Eastern Standard Time  
 Spacing was not correctly computed in CDoGirderSystemStructDef::ComputeGirderSpacing.

FROM: Xinmei Li DATE: 4/5/2012 3:49:02 PM Eastern Daylight Time  
 Krisha, can you take a look when you get a chance.

FROM: vinacs vinayagamoorthy DATE: 6/11/2012 10:13:51 AM Eastern Daylight Time  
 We are noticing that the live load distribution calculation also get wrong results, since the cross section is created at the reference line. We believe the girder spacing should be established at 10th point of the girder (not along the reference lines).

FROM: Krisha Kennelly DATE: 8/24/2012 2:41:47 PM Eastern Daylight Time  
 Fixed for 6.4 beta 4 build.

When computing the deck effective flange width, the girder spacing is now computed perpendicular to the girder at points along the girder. See attached hand calcs that show how we compute the eff flange width for G2 in Span 1 in the attached bridge.

When computing the distribution factors, the girder spacing is still computed perpendicular to the structure def ref line but it is now being computed in the correct locations along the girder. (The spacing has to be perpendicular to the structure def ref line since: a) the girders are splayed they each have a different angle and b) the parapets, etc. are located relative to the structure def ref line.)

Issue ID: 11099  
 Subject: Slab DL Distribution for Adjacent Members

Folder: /Virtis/Support Center  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Kemna, Aaron 9/12/2011 8:41:05 PM  
 Modified By: akemna 6/28/2012 1:56:02 PM  
 Priority: High  
 Category: Bug

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          | Bug      |

4/19/2016 3:23:46 PM

**HRS AASHTO**

3072

**Complete Issue Information**

|  |
|--|
|  |
|--|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 15793.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Aaron Kemna DATE: 9/12/2011 4:42:20 PM Eastern Daylight Time  
For adjacent members with a slab, the slab weight distributed should be equal to the top flange width of the member. When you select Tributary Width, BRASS or AASHTO just looks at the centerline of the girders and distributes the loads accordingly. These programs need to look at the top flange widths and set minimum and maximum values accordingly.

FROM: Krisha Kennelly DATE: 9/13/2011 2:43:50 PM Eastern Daylight Time  
Hi Aaron,

Do you have an xml file that illustrates this problem or can you give me some more information like what type of member (PS box?) and some numbers (girder spacing and top flange width) showing what you would like?

thanks.

FROM: Aaron Kemna DATE: 9/14/2011 9:18:46 AM Eastern Daylight Time  
I'll attach a file. I get errors for G1 and G3 of Structure 3 (may be others). I was going to wait for the service pack to test this bridge again. If you run into the same problem and determine it's an error, feel free to enter a new incident. As for the DL Distribution issue, The issue occurs when you have different width members side by side. The bridge I am sending has a 4' box beam for G1 next to a 3' beam for G2 next to 4' beam for G3. This gives 3'-6" beam to beam spacing when measuring to CL of girder. Thus, when Tributary Width is selected for the distribution method, the resulting slab width distributed to say G2 is 3'-6" when it should be 3'-0". Since it's difficult for a program to understand adjacent beam construction, I think limits could be set according to the top flange width so that the slab width distributed is no less than the beam width and does not run into the next beam width. Another option would be to have an option set up that identifies structures with adjacent construction.

FROM: Krisha Kennelly DATE: 11/18/2011 1:07:28 PM Eastern Standard Time  
Fixed for 6.4.

When computing the slab dead load (or any structure typical section dead load like parapets, sidewalks, etc.) the actual beam width is used for adjacent ps beams (any type of ps beam: box, I, Tee, U that is adjacent) instead of the average beam spacing. (Developer note: change was made in

4/19/2016 3:23:46 PM

HRS AASHTO

3073

**Complete Issue Information**

DoGirderSsystemStructDef)

This change only affects the AASHTO ASD, LFD, LRFD, LRFR engines and the Virtis Std Engine. It does not affect the BRASS engine.

FROM: Matt Kolis DATE: 5/3/2012 4:32:31 PM Eastern Daylight Time  
Slab load distribution was verified in VO64 Alpha Build 3.

FROM: Aaron Kemna DATE: 6/28/2012 9:56:02 AM Eastern Daylight Time  
Verified for Virtis 6.4 Beta Build 2

|                                                            |
|------------------------------------------------------------|
| Issue ID: 11100                                            |
| Subject: RC I beam definition does not pick up the fillets |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Pichura, Mike       | 9/15/2011 7:56:33 PM |
| Modified By: kkennelly            | 5/4/2012 3:06:19 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 9/15/2011 3:58:05 PM Eastern Daylight Time  
Submitted on behalf of Mike Pichura (MPichura@mbakercorp.com), Michael Baker Jr., Inc.

The RC I beam definition does not pick up the fillets in Virtis 6.2 with the Virtis LRFR when doing spec

4/19/2016 3:23:46 PM

HRS AASHTO

3074

**Complete Issue Information**

checks. It picks up all other beam dimensions correctly. Cross Section Properties in spec checks states that "No fillets specified" and the computed area doesn't include fillets. 6.3 has the same problem.

FROM: Srujana Thogaru DATE: 9/22/2011 8:38:00 AM Eastern Daylight Time  
setdimensions function for RC I beam modified to include Fillet Dimensions.

Fixed for 6.4 Release.

FROM: Matt Kolis DATE: 5/4/2012 7:34:16 AM Eastern Daylight Time  
Verified for VO64 Alpha Build 3.

|                            |
|----------------------------|
| Issue ID: 11113            |
| Subject: Error Closing V/O |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 9/23/2011 12:13:18 PM |
| Modified By: hlee              | 9/26/2011 12:03:40 PM |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |

**Contacts**

4/19/2016 3:23:46 PM

HRS AASHTO

3075

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | 029-0072.xml                    |             |
|      | VI 11115.pdf                    |             |
|      | 029-0072 Spec Check output.txt  |             |
|      | VI 11115 bar input.png          |             |
|      | 029-0072 Virtis LRFR Output.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 9/23/2011 8:15:35 AM Eastern Daylight Time  
I got this attached error several times when closing Virtis/Opis  
It has come up on Windows 7 (64) and XP  
We are using Oracle 11g  
The windows comes up when I close V/O

FROM: Herman Lee DATE: 9/23/2011 8:42:53 AM Eastern Daylight Time  
Were there any other error messages displayed before closing Virtis/Opis?  
How often does the error occur?  
Can the error be reproduced at will?

FROM: Dean Teal DATE: 9/24/2011 10:35:05 AM Eastern Daylight Time  
Only 1 merror message - the one I sent as an attachment  
It happens often but not every time  
It happens to both databases - oracle server and standalone provided database  
Wehn I restart virtis I DO NOT get a message about recovery

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 11115                                                                   |
| Subject: Question Regarding Reinforced Concrete Code Check - Computed Bar Spacing |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Armbrecht, Tim      | 9/23/2011 1:44:42 PM  |
| Modified By: hlee                 | 8/15/2012 12:14:51 PM |

4/19/2016 3:23:46 PM

**HRS AASHTO**

3076



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |
|                  | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | pic31955.jpg                      |             |
|      | pic28647.jpg                      |             |
|      | 53 0534.xml                       |             |
|      | pic03063.jpg                      |             |
|      | 11116 temporary<br>workaround.png |             |
|      | pic13987.jpg                      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Ambrecht DATE: 9/23/2011 9:47:49 AM Eastern Daylight Time

From my consultant (Chamberlain):

Tim, can you forward this on to Baker to determine where the program is pulling the "actual spacing" from? This is a line girder of a slab bridge and I have entered all the reinforcement, which includes spacing, however when the program is checking cracking it seems to be getting 0 for the actual spacing, resulting in several areas that fail the code check for cracking. I have attached the output from one such location. Design checker is flagging crack control, but VIRTIS is using 0 for the actual spacing.

FROM: Srujana Thogaru DATE: 10/19/2011 1:14:48 PM Eastern Daylight Time

BarLocation array in DoGirderMbrAlt.cpp Line 32718 was not stored correctly. Horizontal Location and Bar dia are similar values in all the rows in the array.

4/19/2016 3:23:46 PM

HRS AASHTO

3077

**Complete Issue Information**

FROM: Krisha Kennelly DATE: 11/17/2011 10:17:35 AM Eastern Standard Time  
Virtis uses the values input by the user for side cover, spacing, number of bars and cg location to place the bars within the cross section and then computes the clear spacing between bars based on their locations.

See attached VI 11115 bar input.png to see the rebars at the 11.625' location that was attached to the issue. This shows the 4 bars at this location.

The attached VI 11115.pdf shows where Virtis puts these bars based on the side cover all being entered as 1". This puts the b3(E) and b4(E) bars in at the same location so the clear spacing is computed as zero.

I do notice a problem that when computing the clear spacing the software is considering all rebar in the section and not just the layer closest to the surface. That will be fixed for Version 6.4.

FROM: Krisha Kennelly DATE: 11/17/2011 1:10:33 PM Eastern Standard Time  
Code has been fixed to consider only the rebar in a row when computing the bar spacing. Fixed for version 6.4.

This fix will not change the outcome of the attached bridge however since the user has entered bars on top of each other. The software will still compute the bar spacing as zero for this case.

FROM: Matt Kolis DATE: 5/18/2012 12:52:34 PM Eastern Daylight Time  
Resubmit - VO 64 Alpha Built 5

FROM: Herman Lee DATE: 8/15/2012 8:09:37 AM Eastern Daylight Time  
Matt, please see Krisha's 11/17/2011 description of the problem.

|                                              |
|----------------------------------------------|
| Issue ID: 11116                              |
| Subject: Issues in exporting cross sections. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: vinayagamoorthy, vinacs | 9/23/2011 9:17:40 PM |
| Modified By: vvinayagamoorthy         | 9/14/2012 8:00:04 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:47 PM

**HRS AASHTO**

3078

**Complete Issue Information**

**Documents**

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | RC-Tee<br>1-sp(0260029)63B4.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/23/2011 5:19:44 PM Eastern Daylight Time  
Submitted on behalf of Vinacs M Vinayagamoorthy, Caltrans:

Received e-mail:

=====  
Herman

I am attaching a xml file that works with the default tolerance level (default set up of Virtis when shipped by Bakers) in the individual machine (consultant database), These models are created by Vritis 6.2 version.

(Embedded image moved to file: pic03063.jpg)

However, when imported into the our main database, that has the following tolerance level, it does not work.

(Embedded image moved to file: pic28647.jpg)

When I ran it using BRASS the following error pops up:

(Embedded image moved to file: pic13987.jpg)

When I ran it using Virtis Engine, the following error pops up:  
(Embedded image moved to file: pic31955.jpg)

In the past, we have been assuming that if the consultant creates the model using very "stringent" tolerance and then imported to our main database, where the tolerance is relaxed, would work without any problem.  
Unfortunately, it is not the case.

This issue is NOT with the analysis engine (as Srujana suggested in the past - given below), because the export program from both engines are not able to create sections.

When I changed the tolerance level to match the tolerance used to create the model, the software analyzed the bridge without any problem.

Previously reported bridge:

4/19/2016 3:23:47 PM

HRS AASHTO

3079

**Complete Issue Information**

We had similar problem earlier. I contacted the Bridgeware. Srujana checked that out, but she mentioned the problem is with BRASS engine and asked to contact Brian. (Bridge Model is 04\_0163RR.xml). I still have doubt about this finding.

I think the problem is not with BRASS engine. It has something to do with tolerance level set up and some data is not populated correctly. Or how the export program functions.

(See attached file: 53 0534.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

Developer Notes:

Error message when trying to rate the G2 member alternative in the attached bridge:

=====  
Error getting ConcBeamDefWebProfile to left of 0.0100000 ft!  
Current tolerance for ft is 0.0500000.  
=====

Two issues for further investigation:

- With tolerance set to 0.05, export considers the point at 0.01 ft the same as the point at 0.0 ft and failed to locate the cross section to the left of 0.0.
- The point at 0.01 ft is coming from Reinf. Set # 6. It's a Type 3 bar with A = 0.01 ft. The dev length computation log has "###Error! Bar is not long enough to be considered developed at start and at end. Bar will not be exported!". The point at 0.01 ft should not be included.

FROM: Krisha Kennelly DATE: 10/3/2011 2:41:50 PM Eastern Daylight Time  
Workaround has been added to this issue:

Workaround for this issue is to slightly modify the "T3-TBS-1.25" Sq(=1#11)-33ksi-B1" Bar Mark Definition to have the dimensions shown in the attached '11116 temporary workaround.png'.

This slight modification in the bar dimensions will allow the girder to be analyzed using the tolerances of 0.05 in and 0.05 ft.

FROM: Krisha Kennelly DATE: 10/4/2011 2:08:56 PM Eastern Daylight Time  
Fixed for version 6.4.

Developer notes: The point at 0.01' was being evaluated to determine the development length of the rebar. It could not be ignored like the developer above said.

Code changed in MoveDistance() in DoRangeSetCmdTarget and DoSteelAssemblyRangeSet so that a point within the tolerance to the right of the starting range returns the starting range.

FROM: Herman Lee DATE: 10/5/2011 7:46:47 AM Eastern Daylight Time  
The point at 0.01 ft should not be included in cutting the cross section since there's an error in the

4/19/2016 3:23:47 PM

HRS AASHTO

3080

**Complete Issue Information**

development length computation.

FROM: Matt Kolis DATE: 5/4/2012 10:50:07 AM Eastern Daylight Time  
Verified in VO64 Alpha Build 4.

FROM: vinacs vinayagamoorthy DATE: 9/14/2012 4:00:04 PM Eastern Daylight Time  
Works fine with the new build 4

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 11117                                                     |
| Subject: Additional field for the vertical location of appurtenance |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 9/26/2011 1:57:13 PM |
| Modified By: hlee              | 9/26/2011 2:05:38 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/26/2011 9:58:05 AM Eastern Daylight Time  
Below request is moved from Incident 10821.

=====

We should be able to enter the model so that the cross-section appears as on the plans without having to do a workaround. To this end, I propose that an additional field be added to specify the vertical position of the bottom of a parapet, median, railing, generic appurtenance and sidewalk. This would be entered under the applicable tab in the "Structure Typical Section" window. The default value should

4/19/2016 3:23:47 PM

HRS AASHTO

3081

**Complete Issue Information**

be set at 0.000”.

As an example of a bridge model with a parapet on curb, I've attached RC-Tee 1-sp(0260029)63B4.xml.

A typical case would be when there is a parapet, applied as a Stage 2 DL, on top of a curb that may be applied as either a Stage 1 or 2 DL. In order for this to appear correctly in the cross-section view, the parapet is described with a portion that extends from the deck surface to the top of the curb as having a zero thickness. Therefore, all of this portion is located at the point indicated for “Distance At Start/End” under the Parapet tab in the Structure Typical Section window.

=====

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 11120                                                                              |
| Subject: Revise the selection of default engines on System Defaults window based member type |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 9/26/2011 5:10:22 PM |
| Modified By: vvinayagamoorthy         | 9/14/2012 7:34:33 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

**History**

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Lee, Herman     | New       | High     | Change Request |
|                 | Suspended |          | Enhancement    |
|                 | Resolved  |          |                |

**Contacts**

4/19/2016 3:23:47 PM

HRS AASHTO

3082

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                                  | Description |
|------|------------------------------------------------------|-------------|
|      | FW_ Hole Dimensions - Riveted Built-up X-Section.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 9/26/2011 1:11:24 PM Eastern Daylight Time  
Suggested by Caltrans while reviewing mockups to incorporate culverts into Virtis.

See attached file for more explanation.

FROM: Jim Duray DATE: 5/31/2012 10:24:13 AM Eastern Daylight Time  
General Preferences addresses this capabilitiy. Changing status to Resolved.

FROM: vinacs vinayagamoorthy DATE: 9/14/2012 3:34:33 PM Eastern Daylight Time  
I accept this

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11121                                       |
| Subject: Hole Dimensions - Riveted Built-up X-Section |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Armbrecht, Tim   | 9/27/2011 11:42:15 AM |
| Modified By: wskow             | 9/27/2011 3:35:40 PM  |
| Priority: High                 |                       |

4/19/2016 3:23:47 PM

**HRS AASHTO**

3083

**Complete Issue Information**

|                   |
|-------------------|
| Category: Support |
|-------------------|

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Unknown  |
|                  | Resolved |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A7452a.xml          |             |
|      | beta calc wrong.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/27/2011 7:43:12 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT.

Please see attached PDF file for the e-mail with embedded graphics.

=====

From: Souther, Timothy E  
Sent: Monday, September 26, 2011 3:43 PM  
To: Armbrecht, Tim A  
Cc: Shoup, Scott M  
Subject: Hole Dimensions - Riveted Built-up X-Section

I would like for Baker to clarify the proper way to enter the hole dimension, "Number", for a riveted built-up beam coverplate. An example would be as follows:  
The coverplates, top and bottom, are 14" x 3/4" plates on a girder made up of a 3/8" x 46" web and 6"x6"x3/4"angles. They are fastened to each of the angles by two rows (gage = 2 3/16") of alternately spaced (pitch = 4") 7/8" diameter rivets. The rows adjacent to and each side of the web are spaced 5 3/8" apart.

The questions are as follows:  
What should be entered for the field "Number"?  
Does Virtis compare the area deduction based on S2/4g with the area deduction based on a right angle section with two holes and then use the more critical?

4/19/2016 3:23:48 PM

HRS AASHTO

3084



**Complete Issue Information**

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

=====

FROM: Wayne Skow DATE: 9/27/2011 9:51:20 AM Eastern Daylight Time  
Presently, the user interface does not accomodate this bolt configuration. The article sees 4 bolts but only 1 pitch/gage combination. In this particular case, it results in a net section reduction of 3 holes where the correct answer should be 2.

The answer to your second question is no. It simply takes the number of bolts x diameter, then subtracts the s^2/4g effect to get the area reduction. It does not check multiple configurations.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 11123                                     |
| Subject: Computation of beta for LRFD spec is wrong |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Kennelly, Krisha    | 9/27/2011 5:13:53 PM |
| Modified By: mkolis               | 5/7/2012 6:16:46 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 9/27/2011 1:14:08 PM Eastern Daylight Time  
see G2 in attached bridge. Output is attached for point at 117.252'.

The beta value differs between LRFD and LFD. They should be the same.

4/19/2016 3:23:48 PM

HRS AASHTO

3085

**Complete Issue Information**

It looks like the LRFD article is using the wrong value for the Acbeam.

FROM: Srujana Thogaru DATE: 9/29/2011 10:28:16 AM Eastern Daylight Time  
Fixed in 4th and 5th Edition Articles.

Fixed for 6.4 release.

FROM: Matt Kolis DATE: 5/7/2012 2:16:46 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 5.

|                         |
|-------------------------|
| Issue ID: 11124         |
| Subject: Tutorial Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Li, Xinmei    |                      |
| Submitted By: Teal, Dean       | 9/28/2011 7:32:52 PM |
| Modified By: dteal             | 8/25/2012 3:12:57 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          | Support  |
|                 | Resolved |          |          |

4/19/2016 3:23:48 PM

HRS AASHTO

3086

**Complete Issue Information**

|  |
|--|
|  |
|--|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 620236 partial.xml  |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 9/28/2011 3:34:36 PM Eastern Daylight Time

In the tutorial PS2- 3 span Spread PS Box Beam

If you use the AASHTO engine the LFD rating will have zero capacity (not what is shown)

FROM: Xinmei Li DATE: 1/6/2012 9:52:51 AM Eastern Standard Time

Document is updates with 6.3 version, see attached file.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 11125                                                 |
| Subject: error from automatic distribution calculation for LRFR |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center      |
| Primary Contact: Ordoobadi, Mehrdad |

4/19/2016 3:23:48 PM

HRS AASHTO

3087

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Metcalf, William | 10/3/2011 4:10:13 PM  |
| Modified By: hlee              | 2/10/2012 10:47:30 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: William Metcalf DATE: 10/3/2011 12:11:25 PM Eastern Daylight Time

The attached is a partially defined bridge. When I try to run the LRFR calculate distribution factor from typical section it gives me a weird error.

FROM: Srujana Thogaru DATE: 10/3/2011 2:14:05 PM Eastern Daylight Time

Please select P/S strand type in Prestress Properties window and selected correct material type in Beam Details window and run the LRFD calculate distribution factor from typical section results in no error.

FROM: William Metcalf DATE: 10/3/2011 4:22:14 PM Eastern Daylight Time

ok here is another issue with the same bridge if i delete the member alternative for either G1 or G3 (i did not try G2) then try to save it will not let me save and it gives me the following error message:

Unable to save Bridge data!

Delete process failed while deleting CDmSuperStructSpngMbrAlt (SaveOrder object 245).

Error deleting record from database record set.

I am currently running service pack 1 beta 2

FROM: Mehrdad Ordoobadi DATE: 10/6/2011 9:34:34 AM Eastern Daylight Time

Please avoid this issue by saving the bridge in two steps.

4/19/2016 3:23:48 PM

HRS AASHTO

3088

**Complete Issue Information**

Step 1 - When you want to remove the member alternative, go to the parent member window and uncheck the Existing and current checkboxes. Click OK and then Save the bridge.  
Step 2 - Remove the bridge alternative then Save the bridge again.

We are going to investigate this issue.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 4:23:12 PM Eastern Standard Time  
This issue related to VI 11208 , 11233, 11166, and 11181.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11128                                                                         |
| Subject: Virtis Enhancement - Generate POI @ Stirrup Space Increase in Concrete Members |

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center                    |
| Primary Contact: Lee, Herman                      |
| Submitted By: Armbrecht, Tim 10/7/2011 2:09:34 PM |
| Modified By: hlee 6/4/2012 8:05:36 PM             |
| Priority: High                                    |
| Category: Enhancement                             |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 10/7/2011 10:10:40 AM Eastern Daylight Time  
Locations where shear stirrup spacing increases in RC & PS Concrete members should be considered as section change locations. Therefore, when <Generate at section change points> under Control Options tab is selected, a POI should be generated there. For example, say we have stirrup bars "A", "B" & "C" spaced 6" between A & B and 12" between B & C. This program enhancement would result in a POI being generated just to the right of stirrup B.

The benefit of this will be a substantial reduction of user input time by eliminating the need to manually enter many necessary POI's.

4/19/2016 3:23:48 PM

HRS AASHTO

3089

## Complete Issue Information

FROM: Herman Lee DATE: 6/4/2012 3:43:05 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
10778, 11128 and 10221 should be combined.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 11129                                                       |
| Subject: Virtis Enhancement: LLDF Computation for Non-splayed Girders |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Armbrecht, Tim   | 10/7/2011 2:11:08 PM |
| Modified By: hlee              | 7/14/2015 1:38:33 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Closed    |          | Maintenance |

## Contacts

4/19/2016 3:23:49 PM

HRS AASHTO

3090

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Doc5.docx              |             |
|      | VI 11132.xml           |             |
|      | VDOTSpecLIBsV63v3a.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 10/7/2011 10:15:29 AM Eastern Daylight Time

It is understandable in a steel or concrete girder system with some splayed girders that live-load distribution can't be computed for the girders affected by variable spacing. However, when attempting to have Virtis compute the LLDF for beams not affected by the variable beam spacing an error message is produced.

Since the spacing for the girder in question is not variable, there should be no reason that the LLDF could not be computed by the system.

I propose that Virtis be modified so that the LLDF may be computer generated. For reference see LLDF\_Comp\_Splayed-bm\_Bridge(0220108).xml. The girders that would be subject to this enhancement are #5 through #14.

FROM: Herman Lee DATE: 7/14/2015 8:00:49 AM Eastern Daylight Time

6.7 release is capable of computing the Std Spec and LRFD Spec LL distribution factors for splayed girder system.

|                                     |
|-------------------------------------|
| Issue ID: 11132                     |
| Subject: Trouble computing lcracked |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Kolis, Matt   |                       |
| Submitted By: Howells, Russell | 10/12/2011 6:22:47 PM |
| Modified By: hlee              | 5/23/2012 1:23:10 PM  |
| Priority: High                 |                       |

4/19/2016 3:23:49 PM

HRS AASHTO

3091

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | 00050 -<br>Picardy_Ave_Ward_Creek.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krishna Kennelly DATE: 10/12/2011 2:23:02 PM Eastern Daylight Time  
Submitted for Baker VDOT work.

Attached bridge, Member G2, Mbr Alt "4 steel - NG".

Run a permit vehicle in an LRFR rating.

Art 5.7.3.4 cracked will assert and end due to lcr for positive flexure not being able to be computed.

in RCCrossSectionProperties::ComputeBeamCracked(), Section.Split() is called to split the beam into 2 polygons along the Trial NA.

when the Trial NA equals the top flange thickness of 8.5", the Split function returns the following 2 polygons:

for NA depth = 8.4999695  
Polygon 1: (ends up being the whole beam)  
point 0 36.9375 , 30.5313  
point 1 0.0000 , 30.5313  
point 2 0.0000 , 39.0313  
point 3 105.3750 , 39.0313  
point 4 105.3750 , 30.5313  
point 5 68.4375 , 30.5313  
point 6 68.4375 , 0.0000

4/19/2016 3:23:49 PM

HRS AASHTO

3092



**Complete Issue Information**

point 7 36.9375 , 0.0000

Polygon 2: (ends up being a line)

point 0 36.9375 , 30.5313

point 1 0.0000 , 30.5313

point 2 105.3750 , 30.5313

point 3 68.4375 , 30.5313

FROM: Krisha Kennelly DATE: 10/13/2011 12:24:26 PM Eastern Daylight Time  
Fixed for 6.4.

Code in RcCrossSectionProperties::ComputeBeamCracked() was modified to check if the NA is falling along a flange edge line and shifted slightly if it is.

FROM: Matt Kolis DATE: 5/7/2012 2:05:26 PM Eastern Daylight Time  
VO64 Alpha Build 5 gives the attached error when running VDOT permit vehicles BP-90 and BP-115.

FROM: Krisha Kennelly DATE: 5/22/2012 11:59:03 AM Eastern Daylight Time  
i can't reproduce this in 6.4 beta 1. please retry and if it happens again list all steps that lead to this error.

FROM: Matt Kolis DATE: 5/23/2012 8:40:33 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

|                                                |
|------------------------------------------------|
| Issue ID: 11134                                |
| Subject: error when trying save imported file. |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Metcalf, William | 10/17/2011 3:42:14 PM |
| Modified By: hlee              | 10/17/2011 4:10:39 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: William Metcalf DATE: 10/17/2011 11:46:16 AM Eastern Daylight Time  
when I try to import a file (these are a different version so they get migrated) then i try to save it I get the following error:

File error while writing data.  
File exception!  
Error accessing file [Bridgeld\_5996.bak]!  
The file could not be accessed.

however the bridge appears to save i just don't know if everything is getting save correctly? (i'm using version 6.3.1 beta 2.

attached one of the files im trying to import.

FROM: Herman Lee DATE: 10/17/2011 11:49:51 AM Eastern Daylight Time  
This is probably a permissions issue. Try granting "Full Control" to "Everyone" for the folder where Virtis is installed (eg. C:\Program Files\AASHTOWARE\Virtis63).

|                                                |
|------------------------------------------------|
| Issue ID: 11135                                |
| Subject: Section change not ignored (Cb = 1.0) |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Zhang, Bin    |                       |
| Submitted By: Silvis, Bryan    | 10/17/2011 6:44:11 PM |
| Modified By: bzhang            | 4/13/2012 5:48:34 PM  |
| Priority: Critical             |                       |

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Bryan Silvis DATE: 10/17/2011 3:02:09 PM Eastern Daylight Time

According to AASHTO Article 6.10.8.2.3, the lateral torsional buckling resistance may be determined assuming the transition to the smaller section does not exist provided the transition is less than or equal to 20 percent of the unbraced length from the brace point with the smaller moment and the lateral moment of inertia of the flange or flanges of the smaller section is larger than one-half the corresponding value in the larger section.

In the attached .xml file, the criteria is satisfied, but a Cb value of 1 is used. See "Route 29 Sketch.pdf" for drawing and hand calculations and "Virtis LRFR Engine Cb Calculation at Pier.txt" for program results.

Bryan

FROM: Bin Zhang DATE: 11/1/2011 4:54:35 PM Eastern Daylight Time

It's a program bug, the bPrismatic definition should be modified in the SCSuperSteelGirderElement.cpp file.

FROM: Bin Zhang DATE: 1/6/2012 8:47:26 AM Eastern Standard Time  
resolved for the VO6.4

FROM: Bin Zhang DATE: 4/13/2012 1:18:29 PM Eastern Daylight Time

Verified in VO6.3.1 with today's dll update. The "Section Prismatic in Unbraced Length" check is Yes now. Cb is now calculated using the equation (6.10.8.2.3-7) at that cross section.

4/19/2016 3:23:50 PM

HRS AASHTO

3095

**Complete Issue Information**

Issue ID: 11136  
Subject: Virtis/Opis 6.3 install Windows XP

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Vaisa, Chris 10/17/2011 8:24:55 PM  
Modified By: hlee 10/18/2011 11:33:58 AM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Chris Vaisa DATE: 10/17/2011 4:29:53 PM Eastern Daylight Time  
We are currently underway on deploying Windows 7 machines throughout our department. However, I have just been informed that our V/O users are slated for deployment in the next few months at the least. Are there any known issues of V/O 6.3 installs on Windows XP machines?

FROM: Herman Lee DATE: 10/18/2011 7:28:13 AM Eastern Daylight Time  
There're no known issues of Virtis/Opis on Windows XP machines.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 11137                            |
| Subject: Overwriting Previous Span Lengths |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Lee, Herman   |                        |
| Submitted By: Silvis, Bryan    | 10/18/2011 6:28:20 PM  |
| Modified By: hlee              | 12/28/2011 12:36:18 PM |
| Priority: High                 |                        |
| Category: Support              |                        |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
| Lee, Herman     | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00026 - 29426.xml   |             |

4/19/2016 3:23:50 PM

HRS AASHTO

3097

### Complete Issue Information

Structure Typical Section.png  
GirSysSuperDef.pdf  
00002 - 06106111000S110.xml  
00040 - 06106111000S110  
V6.4.xml  
AASHTO Eng - V6.3.1B2  
06111-S11.pdf  
AASHTO Eng - V6\_3  
06111-S11.pdf  
06111-S11 comparison.xls

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bryan Silvis DATE: 10/18/2011 2:45:02 PM Eastern Daylight Time  
For the attached file, the load rater over-wrote previous span lengths in the Girder System Superstructure Definition. However, the span lengths shown in the Member window do not update past 3 decimal places. When rating analysis is run, the Analysis Progress window show the span lengths for the incorrect spans in the Member window not the corrected value from the Girder System Superstructure.

The .xml file and screenshots of the Girder System, Member and Analysis Progress windows are attached.

Checked for Version 6.3 and same problem exists.

FROM: Joseph Ihnat DATE: 12/27/2011 3:32:29 PM Eastern Standard Time  
Herman, I don't know what the issue is. Please investigate.

FROM: Herman Lee DATE: 12/28/2011 7:13:34 AM Eastern Standard Time  
In the Structure Typical Section window, the left overhang at the start and at the end of the bridge are different (see attached "Structure Typical Section.png" file). That's why the computed span lengths for the girders are slightly different than the entered span lengths along the superstructure reference line.

Issue ID: 11140

Subject: Tensile stress rating issue AASHTO engine, LFD

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: McMunn, Creightyn

10/19/2011 8:38:10 PM

Modified By: cmcmunn

12/13/2012 2:09:51 PM

Priority: High

4/19/2016 3:23:51 PM

HRS AASHTO

3098

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Assigned | High     | Unknown     |
| Goodrich, Brian | Resolved |          | Bug - BRASS |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Web Profile.xlsx    |             |
|      | pic17113.jpg        |             |
|      | pic17039.jpg        |             |
|      | 02 0157 EAE.xml     |             |
|      | RE_ Tolerance.pdf   |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Creightyn McMunn DATE: 10/19/2011 4:50:50 PM Eastern Daylight Time  
When running Span 1, Typical Interior Beam with Service Pack 2 installed, the AASHTO engine yields a rating factor of 0.000. This did not happen in the release version of 6.3.

FROM: Srujana Thogaru DATE: 10/20/2011 3:47:23 PM Eastern Daylight Time  
PS tensile stress rating factor shows as zero in the rating summary results window because of a bug fix done in 6.3 service pack, which was not considering the RF from PS tensile stress before.

Reason for the PS tensile stress RF's to be zero in the current bridge is that jacking stress ratio in PS Properties window entered as 70.

FROM: Creightyn McMunn DATE: 10/21/2011 9:01:15 AM Eastern Daylight Time  
Thank you. I fixed the tensile stress issue but I am now getting 0.00 RF for Span 1 Fascia and Span 6 Fascia. "Design Flexure - Concrete" is controlling, where "Design Shear - Concrete" was controlling in v6.3 release (with rating factors greater than 1.0). See attached documents.

FROM: Srujana Thogaru DATE: 10/24/2011 1:19:34 PM Eastern Daylight Time  
The difference in the ratings is due to Virtis does not handle negative haunch. This is an duplicate

4/19/2016 3:23:51 PM

HRS AASHTO

3099

## Complete Issue Information

incident of 10642.

Code has been added to issue a warning message and stop the analysis if there is negative haunch in the cross-section.

FROM: Bin Zhang DATE: 10/24/2011 1:35:39 PM Eastern Daylight Time  
verified in Service Pack 1 Beta 2 Update 2, a warning message will appear saying "Negative haunch depths are not allowed!" and the analysis will stop if there is negative haunch in the cross-section.

FROM: Creightyn McMunn DATE: 9/10/2012 3:16:34 PM Eastern Daylight Time  
This error is still happening in V6.4 Beta 4. When running the attached xml file, I do not get a warning message about negative haunches, nor does the analysis stop.

FROM: Srujana Thogaru DATE: 9/14/2012 11:33:21 AM Eastern Daylight Time  
Negative haunches are implemented in 6.4 and there will not be any warning messages issued in 6.4.

As explained above : PS tensile stress rating factor shows as zero in the rating summary results window because of a bug fix done in 6.3 service pack, which was not considering the RF from PS tensile stress before.

Reason for the PS tensile stress RF's to be zero in the current bridge is that jacking stress ratio in PS Properties window entered as 70.

Change in "Design Flexure - Concrete" is controlling in span 6 from "Design Shear - Concrete" is due to VI 11237.

FROM: Creightyn McMunn DATE: 9/26/2012 3:58:18 PM Eastern Daylight Time  
I am still getting a 0.00 rating factor for Span 1 Fascia and Span 6 Fascia. I have already corrected the issue with the jackson stress ratio (see V6.4 file attached). I'm not sure if it's related to the negative haunch issue because Span 2-5 Fascia also has a negative haunch and gives ratings greater than 0.00. See attached spreadsheet for a comparison of results between versions. (Side note: I believe the increase in rating factors for Span 2-5 Interior Beam is due to the implementation of the '79 Shear Specs in the AASHTO engine.) When reviewing the Spec Check,  $\Phi * Mn = 0.00$  at the first and last points of interest for Span 1 Fascia and Span 6 Fascia.

FROM: Jim Duray DATE: 10/3/2012 7:31:21 AM Eastern Daylight Time  
The problem was with the calculation of the lower left corner of the deck (used to reference the deck object to the beam object). For the case of a negative haunch the reference pt on the deck did not have the same coordinates as the corresponding pt on the composite beam. This resulted in the possibility of the NA intersecting the composite beam but not the deck object thus preventing convergence to a capacity. I modified (for 6.4.1) the I narrow and I wide cross sections.

Srujana - please apply my changes to the other PS shapes.

FROM: Srujana Thogaru DATE: 10/10/2012 9:08:34 AM Eastern Daylight Time  
Applied similar changes as I narrow and I wide cross sections for other PS Shapes.

FROM: Matt Kolis DATE: 10/31/2012 9:59:23 AM Eastern Daylight Time  
Verified Span 1 Fascia and Span 6 Fascia do not give zero ratings (LFR).

FROM: Creightyn McMunn DATE: 11/15/2012 4:05:24 PM Eastern Standard Time

4/19/2016 3:23:51 PM

HRS AASHTO

3100



**Complete Issue Information**

I verified rating factors greater than 0.00 for Span 1 and Span 6 Fascias using AASHTO LFR.

FROM: Matt Kolis DATE: 12/6/2012 9:26:53 AM Eastern Standard Time  
Verified in 6.4.1 Beta 2.

FROM: Creightyn McMunn DATE: 12/13/2012 9:09:51 AM Eastern Standard Time  
Verified rating factors greater than 0.00 for Span 1 & Span 6 fascias in v6.4.1 Beta 2.

|                                       |
|---------------------------------------|
| Issue ID: 11144                       |
| Subject: MoveDistance tolerance issue |

|                                                             |
|-------------------------------------------------------------|
| Folder: /Virtis/Support Center                              |
| Primary Contact: Goodrich, Brian                            |
| Submitted By: vinayagamoorthy, vinacs 10/21/2011 6:56:47 PM |
| Modified By: hlee 4/12/2013 3:53:47 PM                      |
| Priority: High                                              |
| Category: Bug - BRASS                                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 10/21/2011 2:57:03 PM Eastern Daylight Time  
Submitted on behalf of Murugesu Vinayagamoorthy, Caltrans.

Received e-mail:

=====

Herman

Last time, when we had encountered problems with the default Tolerance (for BentUp bars), you have suggested me to send you the problems encountered by us due to the Tolerance level set in our software.

4/19/2016 3:23:51 PM

HRS AASHTO

3101

**Complete Issue Information**

Attached is the Tolerance that is set as default when we installed in the machine.

(Embedded image moved to file: pic17039.jpg)

We have entered the data using this Tolerance only. There were no warning messages popped up during data entry.

(See attached file: 02 0157 EAE.xml)

When we analyzed the bridge using BRASS engine in Virtis 6.2, the following error popped up. (Embedded image moved to file: pic17113.jpg)

There is no error message popped up when we analyzed this bridge using Virtis Engine.

However, when we changed the Tolerance for "in" unit to 0.0001 then BRASS engine ran it successfully.

Could you please see whether this issue can be resolved within Virtis Data Entry? Also, could you please run it using AASHTO engine and see whether we have any issues, if w the tolerance level is lowered to 0.000001 (5 zero)

Brian: Could you please let me know whether this is due to BRASS alone or related to Virtis Database?

=====

I don't think the issue can be resolved within Virtis data entry. There's no gap in the web profile input. The MoveDistance domain function should be able to locate the web at the distance indicated in the error message.

I tested the G1 girder in 6.3 with the AASHTO Engine. The rating completed without problem.

FROM: Herman Lee DATE: 11/15/2011 4:10:56 PM Eastern Standard Time

Developer Note:

In CBrassCrossSections::FillBrassCrossSection, distance in inches is passed into GetSectionAtDistance. As a result, tolerance for inches is used when checking for gaps in MoveDistance. It's more reasonable to pass in feet since the distance is entered in feet in the user interface.

FROM: Brian Goodrich DATE: 11/29/2011 8:01:04 AM Mountain Standard Time

I logged this issue as BRASS Incident 231.

FROM: Herman Lee DATE: 4/12/2013 11:51:27 AM Eastern Daylight Time

Updated Status to Resolved per BridgeTech request.

Brian Goodrich email on 4/12/2013:

"Incidents 9321 and 11144 were resolved in the BRASS-GIRDER(LRFD) 2.1.3 released in June 2012."

Issue ID: 11147

4/19/2016 3:23:51 PM

HRS AASHTO

3102

**Complete Issue Information**

|                                                      |
|------------------------------------------------------|
| Subject: Library / Agency Std. Gage Vehicle Problems |
|------------------------------------------------------|

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Ordoobadi, Mehrdad |                        |
| Submitted By: Armbrecht, Tim        | 10/25/2011 11:39:57 AM |
| Modified By: hlee                   | 6/4/2012 9:41:24 PM    |
| Priority: High                      |                        |
| Category: Enhancement               |                        |

**History**

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Lee, Herman      | New                | High     | Unknown     |
| Kennelly, Krisha | Suspended          |          | Enhancement |
| Lee, Herman      | Information Needed |          |             |
|                  | Suspended          |          |             |
|                  |                    |          | Maintenance |
| Trees, Geoffrey  | Assigned           |          |             |
| Kennelly, Krisha | Resolved           |          |             |
|                  | Verified           |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier                                                                              | Description |
|------|--------------------------------------------------------------------------------------------------|-------------|
|      | RE_ AASHTO Virtis_Opis - Michael Baker Jr., Inc. - priority requires additional information..pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

## Complete Issue Information

### Description

FROM: Herman Lee DATE: 10/25/2011 7:40:45 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IDOT.

=====

RE: Save/Delete Problems with Agency Standard Gage Vehicles (use export: VehStdGageAgcy.xml in O:\Ratings\Unprotected\Souther\ v. 6.3)

When attempting to create a new Standard Gage Agency Vehicle, upon using the Save command a message comes up

Save operation failed: Vehicle  
09:42:46 AM - Line 493 in source file VehView.cpp.  
Assignment of data to recordset variables failed.  
09:42:46 AM - Line 787 in source file DmLibVehicleAxle.cpp.  
Key attribute AXLE\_ID in table ABW\_LIB\_VEHICLE\_AXLE is not set properly.  
09:42:46 AM - Line 1009 in source file DmObject.cpp.

This does not happen if no axle information is input for the vehicle. In either case, the named vehicle then appears in the Library list of Agency vehicles but with no axle information.

For an existing vehicle if any change is made and is saved, the previously existing axle information is eliminated. In addition, if any changes to axle information or vehicle name are attempted to be saved, the above "Save operation failed" message appears or the following message appears:

Unable to save Vehicle data!  
10:07:05 AM - Line 506 in source file VehView.cpp.

Some vehicles cannot be deleted. One example from the attached Library export is the vehicle named, "120K - 6 Axle". When I attempt to delete it the following message comes up:

Error deleting record from database record set.  
10:16:06 AM - Line 298 in source file DmLibVehicle.cpp.  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The DELETE statement conflicted with the REFERENCE constraint "R\_1552". The conflict occurred in database "RATINGS", table "dbo.abw\_results\_ll\_action", column 'll\_vehicle\_id'. The statement has been terminated.

The DELETE statement conflicted with the REFERENCE constraint "R\_1552". The conflict occurred in database "RATINGS", table "dbo.abw\_results\_ll\_action", column 'll\_vehicle\_id'.  
The statement has been terminated.

However, this is not consistent with all of the listed agency vehicles, some of which can be deleted.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

4/19/2016 3:23:51 PM

HRS AASHTO

3104

**Complete Issue Information**

=====

FROM: Bin Zhang DATE: 10/25/2011 8:53:31 AM Eastern Daylight Time  
I am able to import the VehStdGageAgcy.xml into the library successfully (Virtis6.3.0). I tried to delete, create, save the vehicles with and without the axle information. No problems have been detected so far. Further investigation on the SQL database is necessary to figure out the reasons.

FROM: Bin Zhang DATE: 10/26/2011 3:28:24 PM Eastern Daylight Time  
After we save the live load actions into the database, we also saved the information of the loading vehicle into the database. That's the reason why we could not delete that vehicle any more in the library.

FROM: Aaron Kemna DATE: 1/12/2012 2:42:02 PM Eastern Standard Time  
I am finding similar problems. I tried modifying some of our vehicles by clicking the LRFR check box. I could not save and got the error described above. Before 6.3 I deleted a bunch of vehicles without incident if that helps.

FROM: Aaron Kemna DATE: 1/12/2012 2:50:08 PM Eastern Standard Time  
OK, I shut down Virtis and Re-opens. I had no problems modifying the vehicles. I assume this is related to Zhang's comments because I had previously ran the vehicles before I tried to modify them.

FROM: Herman Lee DATE: 6/4/2012 4:20:22 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
Error message should provide better description of the problem and provide workaround if available.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 11152                                                   |
| Subject: Lump Sum loss method not available in AASHTO LRFR engine |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Murgoitio, Shanon   | 10/26/2011 7:31:32 PM |
| Modified By: mkolis               | 11/30/2012 3:18:07 PM |
| Priority: High                    |                       |
| Category: Maintenance             |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Help suggestions.docx     |             |
|      | Support Help Topic 3.docx |             |
|      | Support Link.png          |             |
|      | 11154.docx                |             |
|      | About.png                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Load Rater Shannon Murgoitio DATE: 10/26/2011 3:36:17 PM Eastern Daylight Time  
Are there plans to incorporate the Lump Sum loss method capabilities into the AASHTO LRFR engine?  
Idaho uses the Lump Sum loss method for load rating prestressed girders in LRFR and the capability was in the BRASS LRFD engine.  
Thank you,  
Shanon Murgoitio

FROM: Herman Lee DATE: 10/26/2011 6:36:02 PM Eastern Daylight Time  
Currently there's no plan to incorporate the Lump Sum loss method capabilities into the AASHTO LRFR engine.

FROM: Load Rater Shanon Murgoitio DATE: 11/8/2011 4:58:21 PM Eastern Standard Time  
Idaho would like to request the AASHTO LRFR engine be enhanced to accomodate user input lump sum losses.

FROM: Herman Lee DATE: 6/4/2012 4:20:50 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
The Beta TAG would like to obtain more information on the way Idaho uses Lump Sum Loss method for load rating in LRFR.

FROM: Herman Lee DATE: 6/5/2012 1:47:52 PM Eastern Daylight Time  
Attached additional information provided by Shanon Murgoitio, ITD.

FROM: Krisha Kennelly DATE: 10/17/2012 9:53:39 AM Eastern Daylight Time  
Code has been implemented for 6.4.1.

Geoff - please work with Srujana to get the engine help adjusted.

FROM: Geoffrey Trees DATE: 10/17/2012 2:25:42 PM Eastern Daylight Time  
Added material to help.

FROM: Matt Kolis DATE: 10/30/2012 4:02:00 PM Eastern Daylight Time

4/19/2016 3:23:52 PM

HRS AASHTO

3106

### Complete Issue Information

Verified the following:

1. Check that the LRFD loss articles are correct for a user enter lump sum loss. (5.9.5.2.3, 5.9.5.1; spot check some articles that use the loss – like Strand Stress Calculations)
2. Verify help changes

FROM: Matt Kolis DATE: 11/30/2012 10:18:07 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

|                                   |
|-----------------------------------|
| Issue ID: 11154                   |
| Subject: Support Access Direction |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Ihnat, Joseph |                        |
| Submitted By: Teal, Dean       | 10/27/2011 2:22:45 PM  |
| Modified By: dteal             | 12/11/2012 12:32:36 PM |
| Priority: High                 |                        |
| Category: Enhancement          |                        |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Unknown     |
|                 | Assigned           |          | Enhancement |
|                 | Information Needed |          |             |
| Ihnat, Joseph   | Assigned           |          |             |
|                 | Resolved           |          |             |
|                 | Verified           |          |             |
|                 | Resubmit           |          |             |
|                 | Resolved           |          |             |
|                 | Verified           |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:52 PM

HRS AASHTO

3107

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 803470.xml          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 10/27/2011 10:27:00 AM Eastern Daylight Time

In the Help Pulldown we need to add one item

Support

It would be helpful to have instructions on how to get support, steps to take, what to expect, first contact

It was high on the customer survey that users didn't know where to go for support. Support instructions come with the DVD and most likely never gets to the users.

FROM: Herman Lee DATE: 10/31/2011 1:32:32 PM Eastern Daylight Time

The one page support instructions come with the DVD are available in the BRIDGEWare Startup Guide.

We changed the Virtis/Opis Technical Support website information in the About box to a hyperlink in the 6.3 Service Pack (see attached file). Users can click on the link to open the Technical Support website. Please note that the support e-mail address is also listed in the About box. Is this adequate? Thanks.

FROM: Herman Lee DATE: 10/5/2012 1:49:47 PM Eastern Daylight Time

Task Force decided to add a Help topic for Support and provide a link to it from the Help menu. Enhancement for 6.4.1.

FROM: Herman Lee DATE: 10/11/2012 10:32:40 AM Eastern Daylight Time

Attached mockup for the link (Support Link.png).

FROM: Krisha Kennelly DATE: 10/17/2012 9:56:01 AM Eastern Daylight Time

Joe - please work with Herman to implement this. He has a document with the help topic.

FROM: Joseph Ihnat DATE: 10/25/2012 1:17:23 PM Eastern Daylight Time

Done for 6.4.1

FROM: Matt Kolis DATE: 10/30/2012 3:03:32 PM Eastern Daylight Time

The Base System License, Standalone End User description needs updated. See attached document.

FROM: Matt Kolis DATE: 10/30/2012 3:32:38 PM Eastern Daylight Time

Verified.

4/19/2016 3:23:52 PM

HRS AASHTO

3108



**Complete Issue Information**

FROM: Herman Lee DATE: 11/11/2012 1:59:39 PM Eastern Standard Time  
Attached the Help topic for Support (Support Help Topic 3.docx) for completeness.

FROM: Matt Kolis DATE: 11/30/2012 10:06:18 AM Eastern Standard Time  
I think a few notes in the Support menu under the Help menu could be indented to provide a cleaner look and also match the Support Help Topic 3.docx. See attached Help suggestions.docx.

FROM: Herman Lee DATE: 12/1/2012 9:03:37 PM Eastern Standard Time  
I think that section should change to a HTML table.

FROM: Joseph Ihnat DATE: 12/3/2012 8:58:00 AM Eastern Standard Time  
Fixed.

FROM: Matt Kolis DATE: 12/4/2012 7:50:10 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: Dean Teal DATE: 12/11/2012 7:32:36 AM Eastern Standard Time  
Accepted 6.4.1 Beta 2

|                                     |
|-------------------------------------|
| Issue ID: 11159                     |
| Subject: gvies error i have no clue |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Metcalf, William    | 10/31/2011 8:23:11 PM |
| Modified By: kkennelly            | 5/4/2012 3:07:28 PM   |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          | Bug      |
| Kennelly, Krisha |          |          |          |
| Thogaru, Srujana | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Number 3.xml                 |             |
|      | Number 2.xml                 |             |
|      | System Error Bridge Name.xml |             |
|      | Number 4.xml                 |             |
|      | 04187 - 040-104.xml          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 10/31/2011 4:26:20 PM Eastern Daylight Time

Failed to perform element specification checks.

Index was out of range. Must be non-negative and less than the size of the collection.

Parameter name: index

```
at System.Collections.ArrayList.get_Item(Int32 index)
at AbanSpec.Articles.AASHTO.LRFD.FifthEdition.ALRFD_5E_05_11_04_02.DoSpecificationCheck
(SpecUnits eUnits)
at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits eUnits)
at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits units)
at CSCSuperStructure.DoLoadResistancePsElementSpecCheck(CSCSuperStructure* ,
CSCSuperPSGirderElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double\,double>*
arrayLocations, CArray<double\,double>* arraySpanLengths, CList<__int64\,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64\,__int64> \*\,CList<__int64\,__int64> \>*>*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>*>* arrayElementNamesByStage,
CList<CList<CList<__int64\,__int64> \*\,CList<__int64\,__int64> \> \*\,CList<CList<__int64\,__int64>
\*\,CList<__int64\,__int64> \> \>*>* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bFinalRound)
at CSCSuperStructure.DoPsElementSpecCheck(CSCSuperStructure* , CSCSuperPSGirderElement*
pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits eUnits, String
sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double\,double>*
arrayLocations, CArray<double\,double>* arraySpanLengths, CList<__int64\,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64\,__int64> \*\,CList<__int64\,__int64> \>*>*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>*>* arrayElementNamesByStage,
CList<CList<CList<__int64\,__int64> \*\,CList<__int64\,__int64> \> \*\,CList<CList<__int64\,__int64>
\*\,CList<__int64\,__int64> \> \>*>* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bFinalRound)
at CSCSuperStructure.DoElementSpecCheck(CSCSuperStructure* , CSCSuperStructureElement*
```

4/19/2016 3:23:52 PM

HRS AASHTO

3110

## Complete Issue Information

pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId, CStringT<char>, StrTraitMFC\_DLL<char>, ATL::ChTraitsCRT<char> > >\* sLocUnitDisplay, Int64\* IStart, Int64\* ITotalLength, Int64\* ISerializedLength, List<int>\* listSerialized, CArray<double>, double>\* arrayLocations, CArray<double>, double>\* arraySpanLengths, CList<int64>, int64>\* arrayElementIndexSpecCheckDomains, CList<CList<int64>, int64> \\*, CList<int64>, int64> \\*>\* arrayIndexElementsByStage, CList<CStringArray \\*, CStringArray \\*>\* arrayElementNamesByStage, CList<CList<CList<int64>, int64> \\*, CList<int64>, int64> \\*> \\*, CList<CList<int64>, int64> \\*, CList<int64>, int64> \\*> \\*>\* arrayIndexSpecCheckDomainsByStage, Int32\* iInnerCounter, Int32\* iInnerTotalCount, Boolean\* bFatalError, Boolean bLastRoundOfSpecCheck, Boolean bLTBRoundOfSpecChecks)  
at CSCSuperStructure.DoLoadResistanceSpecificationCheck(CSCSuperStructure\* , Int32 ISysUnits)  
Fatal error occurred while processing specification checks.  
Error - Error performing LRFR specification checking!

Error - Analysis failed!

i'm using 6.3.1 beta 2

FROM: Srujana Thogaru DATE: 11/2/2011 9:04:28 AM Eastern Daylight Time  
Reason for the above error is that the PS strands in Span2 are not defined stand layout window.

Please define the PS strands in span2 in stand layout window and run the analysis, which completes without any errors.

A warning message will be added, if stands are not defined in the stand layout window for 6.4 release.

Krishna, can you please add a warning message if stands are not defined in the stand layout window.

FROM: Krishna Kennelly DATE: 3/6/2012 9:30:51 AM Eastern Standard Time  
Developer notes:  
Please add validation in the export to check for this.

in gui/abaxaashtoengine/ CAbxAashtoStdEngine and CAbxAashtoLrfdEngine both classes have a ValidatePrestressExport function. Both functions have a loop where they retrieve the PsBeamSpan. in those loops, add a check that the StrandLayout (which belongs to the BeamSpan) has more than zero strands. if they have zero strands, issue an error message and return FALSE.

FROM: Srujana Thogaru DATE: 3/6/2012 9:52:47 AM Eastern Standard Time

Message has been added for 6.4 Release.

FROM: Matt Kolis DATE: 5/4/2012 11:05:11 AM Eastern Daylight Time  
Verified in VO64 Alpha Build 4 the error message was added.

Issue ID: 11161

Subject: System Error When editing bridge name

4/19/2016 3:23:52 PM

HRS AASHTO

3111

**Complete Issue Information**

|                                               |
|-----------------------------------------------|
| Folder: /Virtis/Support Center                |
| Primary Contact: Ordoobadi, Mehrdad           |
| Submitted By: Teal, Dean 11/3/2011 4:15:45 PM |
| Modified By: hlee 11/9/2011 5:30:37 PM        |
| Priority: High                                |
| Category: Support                             |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |
|                  | Resolved |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 09242.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 11/3/2011 12:17:31 PM Eastern Daylight Time  
For the attached bridge

If I edit the name in the bridge description tab  
from  
WWCC, Sk00, cu00, WB US-50 over Anderson Ave.  
to  
WWCC WB US-50 over Anderson Ave.

I get  
SYSTEM ERROR  
Unable to save Bridge data!  
Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 19).  
Unable edit and update recordset.

This is repeatable and I can do it on other bridges

FROM: Mehrdad Ordoobadi DATE: 11/3/2011 3:50:44 PM Eastern Daylight Time

4/19/2016 3:23:52 PM

HRS AASHTO

3112

## Complete Issue Information

Dean I wasn't able to reproduce this issue.

I am wondering if you could send us 4 XML files for a bridge at different stages.

1 - XML file created from the Bridge Explorer

2 - XML file created in BWS right after the bridge is opened without making any changes.

3 - XML file after you change the name in the bridge description window and click OK to close the window.

4 - XML file after you click save which fails.

These information may help us understand what is going on.

FROM: Dean Teal DATE: 11/3/2011 4:15:15 PM Eastern Daylight Time  
the 4 exports you requested have been uploaded in the order you requested them

FROM: Mehrdad Ordoobadi DATE: 11/4/2011 8:23:17 AM Eastern Daylight Time  
Dean,

Thank you very much for the information. Could you please send me the Debug description of the System Error that you are getting as well.

Thanks,  
Mehrdad

FROM: Mehrdad Ordoobadi DATE: 11/4/2011 8:30:06 AM Eastern Daylight Time  
Also, what is the version of your Oracle database server and on what environment is it installed.

FROM: Dean Teal DATE: 11/7/2011 8:14:47 AM Eastern Standard Time  
Oracle Version = 10g

Debug Text:  
Unable to save Bridge data!  
07:13:01 AM - Line 886 in source file UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 19).  
07:12:59 AM - Line 489 in source file DmBridgeCache.cpp.

Unable edit and update recordset.  
07:12:59 AM - Line 664 in source file DmOverflow.cpp.

The update or delete operation did not affect any rows.

FROM: Mehrdad Ordoobadi DATE: 11/7/2011 4:37:07 PM Eastern Standard Time  
Dean, we looked into this issue and have not found out why you are getting an error after you make a change to the structure name and save. We are not able to reproduce the error. We will need to get a copy of your database to be able to investigate this further.

I will send you an email with the information on how to send us the file.

Thanks,  
Mehrdad

4/19/2016 3:23:52 PM

HRS AASHTO

3113

**Complete Issue Information**

FROM: Mehrdad Ordoobadi DATE: 11/8/2011 11:44:27 AM Eastern Standard Time  
I got a copy of your database and I am not able to reproduce the error. This is in debug 6.3 SP1. I will try it in 6.3.0 release build.

FROM: Mehrdad Ordoobadi DATE: 11/8/2011 12:47:38 PM Eastern Standard Time  
I am not able to reproduce the problem using the version 6.3 release software.

FROM: Mehrdad Ordoobadi DATE: 11/8/2011 1:49:07 PM Eastern Standard Time  
Dean,

I used your database and tried to reproduce the problem that you reported, but I wasn't successful.

I can think of two things:

- 1 – A problem with the ODBC driver
- 2 – A problem with permissions to Virtis/Opis tables.

Could you please send me the version of the ODBC driver that you are using? To find the driver information go to ODBC data source administrator and find the ODBC connection that you use and read the driver name in the Driver column. Then select the Drivers tab and find the item with matching name and read the version number from the version column.

Could you also ask your DBA to execute the following SQL commands in the SQL Plus while connected as a regular user (not the schema owner).

```
SET ROLE VIRTIS_USER_READ_WRITE_ROLE identified by READ_WRITE;  
UPDATE abw_overflow SET strucname = 'WWCC WB US-50 over Anderson Ave.' WHERE  
overflow_id = 4187;
```

And see if these succeed or fail.

Thanks,  
Mehrdad

FROM: Dean Teal DATE: 11/9/2011 11:21:15 AM Eastern Standard Time  
Changing from the Microsoft ODBC driver to the Oracle ODBC driver solved the problem

Please close this issue

|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 11165<br>Subject: Problem with rebar distances referencing top of girder for Type 3 Bar marks with sacrificial wear |
|-------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Kennelly, Krisha<br>Submitted By: Goodrich, Brian<br>11/9/2011 9:09:07 PM |
|------------------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:23:53 PM

**HRS AASHTO**

3114

**Complete Issue Information**

|                     |                     |
|---------------------|---------------------|
| Modified By: mkolis | 5/5/2012 8:52:26 PM |
| Priority: High      |                     |
| Category: Bug       |                     |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
| Ihnat, Joseph      | Resolved |          |          |
|                    | Closed   |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0270077a.xml        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 11/9/2011 4:10:08 PM Eastern Standard Time  
Submitted on behalf of Brian Goodrich, BridgeTech.

Received e-mail:

=====

=

RCTrainingBridge1 looks fine, but it only has Straight and Type 1 bar marks. Elizabeth's bridge has Type 3 bar marks. I sent Elizabeth's XML file to you earlier but I now see that it was blocked. I'll upload it to the FTP server as Elizabeth\_09242.zip in the Incoming\Virtis folder.

Brian

4/19/2016 3:23:53 PM

HRS AASHTO

3115

**Complete Issue Information**

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Wednesday, November 09, 2011 12:32 PM  
To: Brian Goodrich  
Subject: RE: Problem with rebar distances referencing top of girder

Brian,

GetVertDist should return the distance measured from the top of the structural top flange regardless of the "Consider structural slab thickness..." checkboxes. I tested both the cross section based and schedule based tee beam in RCTrainingBridge1. The numbers look ok. Could you check what GetVertDist returns in RCTrainingBridge1 in your development?

Herman

From: Brian Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]  
Sent: Wednesday, November 09, 2011 11:12 AM  
To: Lee, Herman  
Cc: 'Elizabeth Befikadu'  
Subject: Problem with rebar distances referencing top of girder

Herman,

Elizabeth Befikadu submitted a problem regarding the location of rebar in an R/C tee beam. For bars measured from the top of the girder, the distances are including the actual top flange thickness rather than the just structural thickness. She has both "Consider structural slab thickness..." boxes checked. The BRASS export is using the domain function to generate cross sections from the schedule-based input and then using the GetVertDist function of IDoReinfConcreteCrossSectionReinfSetPtr. I have a note in the BRASS export that the "Rebar is measured from the effective flange thickness, not the actual." Furthermore, the Virtis help with respect to rebar input states "Top of girder is the top of the structural top flange."

Has this issue been reported and/or addressed already? Do you agree that the distance returned from GetVertDist should be measured from the top of the structural top flange?

Thanks,  
Brian

=====  
=

FROM: Krisha Kennelly DATE: 11/16/2011 10:43:09 AM Eastern Standard Time  
I have verified that this is a bug.

A work around is to reference the Type 3 bar marks relative to the bottom of the girder. This will work for the attached bridge since it has a constant web depth over the length of the beam. If the beam has a varying web depth, this work around would not work.

Code has been fixed for Version 6.4 (DoGirderMbrAlt.cpp)

FROM: Matt Kolis DATE: 5/5/2012 4:52:26 PM Eastern Daylight Time  
Fix has been verified in VO64 Alpha Build 4.

4/19/2016 3:23:53 PM

**HRS AASHTO**

3116



### Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 11166                  |
| Subject: Bridge model won't save |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Armbrecht, Tim   | 11/10/2011 1:01:33 PM |
| Modified By: bzhang            | 8/29/2012 1:20:27 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
|                    | Information Needed |          |          |
| Ordoobadi, Mehrdad | Assigned           |          | Support  |
|                    | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | VO_Win7_32Error.docx |             |
|      | VO_XP_Error.doc      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 11/10/2011 8:03:17 AM Eastern Standard Time  
From my consultant (Souther):

Could not save the attached Bridge model to the Virtis Ratings Database. This occurs after deleting

4/19/2016 3:23:53 PM

HRS AASHTO

3117

## Complete Issue Information

the Superstructure Definition, "1-Span PSD (old)". The following message was produced...

Unable to save Bridge data!  
03:15:45 PM - Line 886 in source file UiBWSDoc.cpp.

Delete process failed while deleting CDmSuperStructSpngMbrAlt (SaveOrder object 245).  
03:15:45 PM - Line 515 in source file DmBridgeCache.cpp.

Error deleting record from database record set.  
03:15:45 PM - Line 1099 in source file DmSuperStructSpngMbrAlt.cpp.  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The DELETE statement conflicted with the REFERENCE constraint "R\_3127". The conflict occurred in database "RATINGS", table "dbo.abw\_spng\_mbr\_alt\_events\_report". The statement has been terminated.

The DELETE statement conflicted with the REFERENCE constraint "R\_3127". The conflict occurred in database "RATINGS", table "dbo.abw\_spng\_mbr\_alt\_events\_report".  
The statement has been terminated.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Mehrdad Ordoobadi DATE: 11/30/2011 12:27:04 PM Eastern Standard Time  
It appears to be caused by having analysis results (corresponding to the structure definition that is being deleted) saved to the database.  
A work around is to remove the analysis results before deleting the structure definition and saving the bridge.

FROM: Tim Armbrecht DATE: 12/1/2011 9:19:40 AM Eastern Standard Time  
What is going to be the fix? Automatically delete the results when the structure definition is deleted?

FROM: Mehrdad Ordoobadi DATE: 12/5/2011 11:37:58 AM Eastern Standard Time  
Virtis/Opis currently removes the analysis results automatically when the whole bridge is deleted. It does not automatically delete the corresponding results when a structure definition or member or member alternative is deleted.

The ideal fix for this, as you are suggesting, is to automatically delete the results when the structure definition is deleted.

FROM: Mehrdad Ordoobadi DATE: 5/8/2012 9:40:21 AM Eastern Daylight Time  
Herman suggested an alternative fix for this issue is to pop up a message asking the user to first delete the analysis results before saving.

FROM: Mehrdad Ordoobadi DATE: 5/8/2012 2:54:08 PM Eastern Daylight Time

4/19/2016 3:23:53 PM

HRS AASHTO

3118

**Complete Issue Information**

We need to add code to the GUI to see bridge analysis events exist when a structure definition, girder. member alt is deleted. If an analysis event exists for the bridge then a message will pop-up asking the user to first delete the analysis events before deleting.

FROM: Joseph Ihnat DATE: 5/18/2012 2:30:11 PM Eastern Daylight Time  
GUI code added for 6.4

FROM: Phil Litchfield DATE: 6/26/2012 4:53:45 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and appears to be fixed.

FROM: Bin Zhang DATE: 8/29/2012 9:18:20 AM Eastern Daylight Time  
Re-backcheck for the acceptance build.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 11167                                                              |
| Subject: Error in V/O 6.3 on Win XP when accessing Steel Shapes-Rolled Beams |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Vaisa, Chris          | 11/16/2011 3:21:59 PM |
| Modified By: hlee                   | 2/17/2012 5:19:57 PM  |
| Priority: High                      |                       |
| Category: Support                   |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Chris Vaisa DATE: 11/16/2011 10:24:48 AM Eastern Standard Time  
Receiving error in V/O 6.3 on Win XP when accessing Steel Shapes-> Rolled Beam-> Standard and Agency drop down. Error reads: Error opening database record set.

Same area is working properly under Win 7 64-bit. Has this issue been raised before? Any help would

4/19/2016 3:23:54 PM

HRS AASHTO

3119

**Complete Issue Information**

be greatly appreciated!

Thank you!

FROM: Herman Lee DATE: 11/16/2011 10:47:43 AM Eastern Standard Time  
Please attached a screen capture of the Debug error message to this incident.

FROM: Mehrdad Ordoobadi DATE: 11/30/2011 11:23:39 AM Eastern Standard Time  
I see two issues:

- 1 - The reason that the SET ROLE command fails is that your users should have been granted access to Virtis/Opis read-only and read/write roles. Please ask your database administrator to review the Virtis/Opis help file section "Adding Users to the Virtis/Opis Database".
- 2 - The error "Error opening database record set" maybe due to a bug in Oracle software if your Oracle software is older than version 10.2.0.3. Also make sure that you are using the Oracle ODBC driver and not Microsoft ODBC driver for Oracle, and the version of your ODBC driver matches your Oracle server's software version. Please let us know if this does not help and we would need a copy of your database to investigate this issue further.

Regards,  
Mehrdad Ordoobadi

FROM: Mehrdad Ordoobadi DATE: 11/30/2011 1:49:49 PM Eastern Standard Time

FROM: Herman Lee DATE: 12/5/2011 1:55:08 PM Eastern Standard Time  
E-mail from Chris Vaisa, NMDOT:

- =====
- 1 – The users all have read/write access to the Virtis/Opis database.
  - 2 – Our version of Oracle may be an issue; I have requested that our DBA upgrade the database to a version of Oracle that exceeds 10.2.0.3.

Any other ideas would be greatly appreciated.

Thank you  
Chris

FROM: Herman Lee DATE: 12/5/2011 3:42:51 PM Eastern Standard Time  
E-mail from Chris Vaisa, NMDOT:

=====

Also,

This error does not pop up in the 64-bit version of Virtis/Opis no matter what user logs in utilizing the same databases and user rights (read/write permission) as the ones connecting with the 32-bit Virtis/Opis. The only thing different is the 64 and 32 bit version of Opis/Virtis that the client logs into.

=====

**Complete Issue Information**

FROM: Mehrdad Ordoobadi DATE: 12/5/2011 3:46:55 PM Eastern Standard Time  
Thanks for the information. Please let us know if the database and ODBC driver upgrade resolves this issue or not.

FROM: Herman Lee DATE: 1/2/2012 12:31:29 PM Eastern Standard Time  
Information Needed E-mail sent on 1/2/12.

FROM: Herman Lee DATE: 1/3/2012 11:32:24 AM Eastern Standard Time  
E-mail from Chris Vaisa, NMDOT:

=====  
With the past few weeks being the holiday season, our DBA has not had a chance to update the database to 10g or greater. I was told that upgrading the database would solve this issue. However, I am not sure that is the case when I am having no complaints from users who are using Windows 7 64-bit hitting the exact same database with equal rights as those who are trying to access the same database working with 32-bit Windows XP or 7. I was also told that it was a permissions issue, which I also do not believe to be true as the same thing with the database is occurring. Anyone using Windows 7 64-bit has had not one complaint and only those with Windows XP or 7 32-bit has the issues. All users have the same rights in both of our databases but only experience issues when not using Windows 7 64-bit. Tech support has offered those 2 suggestions, since I have tested users rights and that does not seem to resolve the issue, I will remind our DBA to upgrade the database and will post something back when that is completed.

Thank you  
Chris

=====  
FROM: Herman Lee DATE: 2/17/2012 11:27:34 AM Eastern Standard Time  
Information Needed E-mail sent on 2/17/12.

FROM: Herman Lee DATE: 2/17/2012 12:18:46 PM Eastern Standard Time  
E-mail from Chris Vaisa, NMDOT:

=====  
Problem has been resolved, please take this issue and set it to resolved.

Thanks  
Chris

=====  
Issue ID: 11169  
Subject: Missing dimension line for u beams

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Kennelly, Krisha | 11/18/2011 3:00:28 PM |
| Modified By: mkolis            | 5/5/2012 9:05:50 PM   |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Not Reproducible   |          |          |
|                    |                    |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | virtis error nsg1.jpg |             |
|      | virtis error nsg2.jpg |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 11/18/2011 10:00:56 AM Eastern Standard Time  
See attached screen shot. A dimension line is missing. You can see it appear and then disappear when the window is resized.

FROM: Joseph Ihnat DATE: 11/18/2011 12:19:03 PM Eastern Standard Time  
Fixed in 6.4

FROM: Matt Kolis DATE: 5/5/2012 5:05:50 PM Eastern Daylight Time  
Fix has been verified in VO64 Alpha Build 4.

## Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 11171                  |
| Subject: Can not save NSG trucks |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Metcalf, William      | 11/22/2011 7:57:16 PM |
| Modified By: hlee                   | 5/4/2012 12:45:49 PM  |
| Priority: High                      |                       |
| Category: Support                   |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 11/22/2011 3:00:50 PM Eastern Standard Time

We have been having a problem for a long time with having difficulty saving trucks when we were inputting. We would have to fill in a name and save then close virtis and restart and then enter the truck information otherwise it would give an error when trying to save. Now for NSG truck we can not get it to save no matter what.

FROM: William Metcalf DATE: 11/22/2011 3:46:42 PM Eastern Standard Time

i have attached some pictures of 2 different error msg I got.

FROM: Mehrdad Ordoobadi DATE: 11/30/2011 12:18:19 PM Eastern Standard Time

4/19/2016 3:23:54 PM

HRS AASHTO

3123

**Complete Issue Information**

Is this for new trucks or existing trucks?

I verified in the 6.3.1 that I was able to create new NSG trucks and add axles and wheels and then save them. Then I was able to add new axles and wheel and save successfully.

FROM: William Metcalf DATE: 12/7/2011 4:46:01 PM Eastern Standard Time  
it is for new trucks. We can save them in the agency vehicles folder, which has many trucks. But we can save them in the "user defined" folder

FROM: Mehrdad Ordoobadi DATE: 5/3/2012 3:26:16 PM Eastern Daylight Time  
I am still not able to reproduce this issue.

|                                 |
|---------------------------------|
| Issue ID: 11173                 |
| Subject: Control Options Access |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Teal, Dean       | 11/29/2011 3:30:15 PM |
| Modified By: jihnat            | 9/7/2012 4:15:02 PM   |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Closed   |          |          |

**Contacts**

4/19/2016 3:23:55 PM

HRS AASHTO

3124



**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | A7672.xml                                |             |
|      | Model Modification Failure (0010019).xml |             |
|      | VirtisSaveError63.zip                    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 11/29/2011 10:32:28 AM Eastern Standard Time

As the administrator and trouble shooter there are many times I have to review someones structure for one reason or another.

I can not view all the control options unless you check the bridge out (you can't scroll down the list)

Very Annoying!!

FROM: Joseph Ihnat DATE: 12/7/2011 3:26:55 PM Eastern Standard Time

Fixed for 6.4

FROM: Matt Kolis DATE: 5/18/2012 10:42:47 AM Eastern Daylight Time

Verified in VO64 Alpha Build 5.

Issue ID: 11181

Subject: Model Won't Save after Modifications

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Armbrecht, Tim

12/6/2011 3:43:48 PM

Modified By: plitchfield

6/26/2012 8:55:13 PM

Priority: High

4/19/2016 3:23:55 PM

HRS AASHTO

3125

**Complete Issue Information**

|               |
|---------------|
| Category: Bug |
|---------------|

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ihnat, Joseph      | Assigned           |          |          |
|                    | Information Needed |          |          |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Not Reproducible   |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Application Error.jpg |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Tim Armbrecht DATE: 12/6/2011 10:46:56 AM Eastern Standard Time  
From my consultant (Souther):

After certain modifications as indicated below the subject Virtis model produces an error when an attempt is made to save it. The error message is as follows:

Unable to save Bridge data!

04:55:42 PM - Line 886 in source file UiBWSDoc.cpp.

Delete process failed while deleting CDmSpngMbrDef (SaveOrder object 178).

04:55:41 PM - Line 494 in source file DmBridgeCache.cpp.

Error deleting record from database record set.

04:55:41 PM - Line 1310 in source file DmSpngMbrDef.cpp.

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The DELETE statement conflicted with the REFERENCE constraint "C\_1278". The conflict occurred in database "Submittals", table "dbo.abw\_super\_struct\_spng\_mbr\_alt". The statement has been terminated.

4/19/2016 3:23:55 PM

HRS AASHTO

3126

**Complete Issue Information**

The DELETE statement conflicted with the REFERENCE constraint "C\_1278". The conflict occurred in database "Submittals", table "dbo.abw\_super\_struct\_spng\_mbr\_alt". The statement has been terminated.

The steps taken that resulted in this error are exactly as follows:

1. Copy Floorbeam Definition, "W21x44 (End)", from Superstructure Definition, "Span 4 (78') GFS", to Superstructure Definition, "Span 6 (78') GFS", using either drag and drop or copy and paste.
2. Rename the copied Floorbeam Definition in Span 6 so that it is called, "W21x44 (End)".
3. Under Span 6, link the Floorbeam Member Alternatives for Floorbeam Members Flbm01 and Flbm17 to Floorbeam Definition "W21x44 (End)".
4. Under Span 6, Delete the FLOORBEAM DEFINITION, "21CB58 (End)".
5. Attempt to save the model.

This problem is a specific example of something that has happened often on many different Virtis bridge models when I have done similar copy and paste modifications. This is the first time I have been able to reproduce an exact sequence that has resulted in the save error.

FROM: Aaron Kemna DATE: 12/8/2011 3:54:57 PM Eastern Standard Time  
We have recently upgraded to Virtis 6.3 with Service Pack 1- 32 bit. Don't ask what took so long. We are now running into this issue. My case involves deleting and copying an exterior girder. A similar action was performed for another girder without issue. The bridge was ran before I made the modifications if it has something to do with the Analysis Results. I'll attach the bridge (A7672) and an .mht file. I used a Windows recorder to create a file which shows the screen shots to replicate the error.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 4:03:38 PM Eastern Standard Time  
This maybe related to VI 11208 , 11233, 11166.

I have verified that this issue is not reproducible with version 6.4 development code.

FROM: Phil Litchfield DATE: 6/26/2012 4:55:13 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and appears to be fixed.

|                                  |
|----------------------------------|
| Issue ID: 11183                  |
| Subject: Repeatable Log In Crash |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 12/7/2011 12:40:55 PM |
| Modified By: mordoobadi             | 7/11/2012 3:08:59 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:23:55 PM

HRS AASHTO

3127

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name              | Resource Identifier | Description |
|-------------------|---------------------|-------------|
| Error Message.png |                     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 12/7/2011 7:42:38 AM Eastern Standard Time

This crash is repeatable

When logging in, type in the wrong password

You will get a log in error message "Unable to connect to data source. Login denied"

Now type in the correct password and you will get –

"VirtisOpis Application has encountered a problem and needs to close." (see attached image) And will bail on the login completely.

FROM: Joseph Ihnat DATE: 12/8/2011 1:00:24 PM Eastern Standard Time

I'm not able to reproduce the crash with a SQL Server database, in either the 32-bit or 64-bit program. What kind of database are you running?

FROM: Dean Teal DATE: 12/8/2011 1:11:15 PM Eastern Standard Time

Oracle 11g

FROM: Mehrdad Ordoobadi DATE: 7/11/2012 11:08:24 AM Eastern Daylight Time

We are not able to reproduce this error.

Issue ID: 11186

Subject: Need error message during analysis when no superstructure definition is assigned.

4/19/2016 3:23:55 PM

HRS AASHTO

3128

## Complete Issue Information

|                  |                        |                       |  |
|------------------|------------------------|-----------------------|--|
| Folder:          | /Virtis/Support Center |                       |  |
| Primary Contact: | Lee, Herman            |                       |  |
| Submitted By:    | Lee, Herman            | 12/13/2011 1:38:41 PM |  |
| Modified By:     | mkolis                 | 5/18/2012 12:27:54 PM |  |
| Priority:        | High                   |                       |  |
| Category:        | Bug                    |                       |  |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Resolved | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 12/13/2011 8:39:12 AM Eastern Standard Time  
To reproduce:

1. Open TrainingBridge1 Bridge Workspace.
2. Open "Simple Span Bridge" Superstructure Alternative window.
3. Select "None" for Superstructure Definition. Click OK to close the window.
4. Setup an analysis settings and select "Simple Span Bridge" superstructure alternative (or "Single Span Structure" superstructure) to perform an analysis.
5. Analysis Progress window opened with no error message.

FROM: Matt Kolis DATE: 5/5/2012 5:21:25 PM Eastern Daylight Time  
No error message is provided in VO64 Alpha Build 4. Steps 1-3 were followed and the LRFR Design Load Rating analysis was performed on the "Simple Span Structure" Superstructure Definition.

FROM: Herman Lee DATE: 5/7/2012 7:36:44 AM Eastern Daylight Time  
Please make sure you have the "Simple Span Bridge" superstructure alternative or "Single Span Structure" superstructure (NOT the superstructure definition) selected in the Bridge Workspace tree. Attached is the error message.

FROM: Matt Kolis DATE: 5/18/2012 8:27:54 AM Eastern Daylight Time  
Verified in VO64 Alpha Build 5.

4/19/2016 3:23:55 PM

HRS AASHTO

3129

## Complete Issue Information

Issue ID: 11187

Subject: Need to attach Analysis Results to the Bridge Workspace tree.

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

12/13/2011 1:57:54 PM

Modified By: mkolis

5/7/2012 2:50:17 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 12/13/2011 8:58:14 AM Eastern Standard Time

This issue is for floor/truss system and line superstructure definitions.

To reproduce:

1. Open FSys FS TrainingBridge2 Bridge Workspace.
2. Setup an analysis settings and select "Alternative" superstructure alternative to perform an analysis.
3. After the analysis, results are not available for all the analyzed components.

4/19/2016 3:23:56 PM

HRS AASHTO

3130

**Complete Issue Information**

FROM: Matt Kolis DATE: 5/7/2012 10:50:17 AM Eastern Daylight Time  
Verified rating results are available for all analyzed members in VO64 Alpha Build 4.

Issue ID: 11188  
Subject: How do I get a user name and password for downloading SP1 for Virtis/Opis 6.3?

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Jones, Daniel 12/13/2011 3:05:10 PM  
Modified By: hlee 12/13/2011 3:20:19 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:23:56 PM

HRS AASHTO

3131

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0030034.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Daniel Jones DATE: 12/13/2011 10:08:06 AM Eastern Standard Time  
I need to be able to download SP1 for Virtis/Opis 6.3, but I am not able since I do not have a user name or password. What do I need to do to get a user name and password?

Thanks,  
Daniel Jones

FROM: Herman Lee DATE: 12/13/2011 10:10:51 AM Eastern Standard Time  
Responded via e-mail to Daniel.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 11190                                              |
| Subject: Unable to save Bridge data when changing load cases |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Armbrecht, Tim        | 12/15/2011 5:06:40 PM |
| Modified By: plitchfield            | 6/25/2012 8:34:23 PM  |

4/19/2016 3:23:56 PM

HRS AASHTO

3132



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Lee, Herman        | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          |          |
|                    | Not Reproducible |          | Support  |
|                    | Accepted         |          |          |
|                    | Closed           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | NSG_errormessage when saving.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrrecht DATE: 12/15/2011 12:09:39 PM Eastern Standard Time  
From my consultant (Staggemeyer):

I found an error with virtis when entering SN 003-0043.

I wanted to delete a load case description (FWS) but couldn't since it was referenced elsewhere in the model. This load case was being used in the structural typical section (in the parapet tab). I changed the load case from 'FWS' to 'Curb'. Then I went to the Load Case Description window and successfully deleted the 'FWS' load case. I tried to save these changes and got the following error message:

Unable to save Bridge data!  
Delete process failed while deleting CDmSuperLoadCase (SaveOrder object 148).  
Error deleting record from database record set.

I got this message while working from superstructure definition 'Span 3 WF' but this error occurs at

4/19/2016 3:23:56 PM

HRS AASHTO

3133

**Complete Issue Information**

every other superstructure definition as well.

If I save immediately after changing the load case from 'FWS' to 'Curb' and BEFORE deleting 'FWS' from the Load Case Description window then I do not get this error message.

I have attached the .xml file for SN 003-0034.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:53:44 PM Eastern Standard Time  
This maybe related to VI 11208 , 11233, 11166.

These are fixed in version 6.4.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:57:51 PM Eastern Standard Time  
Verified that this issue is not reproducible with the current 6.4 development code.

This issue is a duplicate of VI 11208 , 11233, 11166.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11193                                       |
| Subject: NSG Trucks - can't seem to save them anymore |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Thompson, Todd        | 12/19/2011 9:55:37 PM |
| Modified By: mordoobadi             | 9/7/2012 6:17:03 PM   |
| Priority: High                      |                       |
| Category: Support                   |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 12/19/2011 4:57:17 PM Eastern Standard Time

4/19/2016 3:23:56 PM

HRS AASHTO

3134

**Complete Issue Information**

6.3.0

I was able to create a couple of NSG trucks today and I had another load rater create one. But now I can't edit and save any existing NSG trucks. And I can't create any new NSG trucks.

I'm trying to process an overweight permit but when one can't save or create NSG trucks, it's becoming a critical problem.

Not sure if anybody else has been having problems with this?

FROM: Todd Thompson DATE: 12/19/2011 5:00:42 PM Eastern Standard Time  
I tried to add a regular agency truck and I can't save either.

Not sure what has happend?

Did I max out the table size for truck definitions?

FROM: Todd Thompson DATE: 12/19/2011 5:01:40 PM Eastern Standard Time  
I also can not edit existing agency trucks.

FROM: Todd Thompson DATE: 12/21/2011 9:20:07 AM Eastern Standard Time  
Just exiting and restarting the Virtis Application did not work or help.

After rebooting my PC - I was able to finally able to edit or add trucks again.

But I'm not having problems now, so not sure what caused the problem.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:51:42 PM Eastern Standard Time  
Please let us know if you see this again.

FROM: Todd Thompson DATE: 9/7/2012 1:15:37 PM Eastern Daylight Time  
Let's go ahead and close this. It is intermittent and hard to reproduce.

FROM: Mehrdad Ordoobadi DATE: 9/7/2012 2:16:32 PM Eastern Daylight Time  
Accepted by Todd Thompson.

Issue ID: 11203  
Subject: Analysis module folder names

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Goodrich, Brian 12/27/2011 6:26:37 PM  
Modified By: mkolis 5/5/2012 9:24:42 PM  
Priority: High  
Category: Bug

4/19/2016 3:23:57 PM

**HRS AASHTO**

3135

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          | Bug      |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | MemAltCopyCantSaveError<br>(0160540).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 12/27/2011 1:27:41 PM Eastern Standard Time  
Submitted on behalf of Brian Goodrich, BridgeTech.

Received e-mail:

=====  
Herman,

I'm running TrainingBridge1 with Virtis/Opis 6.3 and the output is directed to the following directory:

C:\ProgramData\AASHTOWARE\VirtisOpis63\TrainingBridge1\SimpleSpanStructure\G1\PlateGirder

Spaces in the path are now being removed instead of being replaced with underscores, except for the analysis module names. However, the analysis module names like "Virtis LFD", "BRASS LFD", etc. have the space replaced with an underscore when creating the directory structure. I'm adding a new analysis module named "BRASS-GIRDER LFD" and the folder name is coming out as "BRASS-GIRDERLFD" when I'm expecting to be "BRASS-GIRDER\_LFD". This is the folder where the EngineFiles.LST and .LOG files are written by Virtis/Opis.

4/19/2016 3:23:57 PM

HRS AASHTO

3136

**Complete Issue Information**

To investigate this issue, I changed the analysis module named "BRASS LFD" to "JUNK LFD" and the folder name came out to be "JUNKLFD". This leads me to believe that something special is done for the older analysis module names, but I want to make sure. Is there some way that the analysis module export can dictate this folder name? I would like the folder names to be BRASS-GIRDER\_LFD, BRASS-GIRDER\_LRFD, and BRASS-GIRDER\_LRFR rather than having the space removed.

Thanks,  
Brian

=====

In Virtis/Opis 6.3, analysis files should be stored under the Analysis Output Folder specified in the Preferences dialog's Analysis tab.

**Developer Note:**

Need to modify RemoveInvalidCharacters in SysMiscFunctions.cpp to:

1. Compare the pass in string with the registered engine names in the database.
- Or
2. Have an optional parameter to indicate the pass in string is an engine name.

FROM: Joseph Ihnat DATE: 1/18/2012 3:18:46 PM Eastern Standard Time  
Fixed for 6.4, implemented a solution similar to option 2.  
New function declaration is "void RemoveInvalidCharacters(CString& sName, BOOL bSqueezeOutUnderscores = TRUE)".  
So for new engine names, call as "RemoveInvalidCharacters(sAnalysisModuleName, FALSE);".  
The old names are still hard-coded so as not to change program behavior (no other code was changed).

FROM: Matt Kolis DATE: 5/5/2012 5:24:41 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 11208                                          |
| Subject: Virtis: Mem Alt Copy Op Causes Can't Save Error |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center      |                     |
| Primary Contact: Ordoobadi, Mehrdad |                     |
| Submitted By: Armbrecht, Tim        | 1/4/2012 7:58:57 PM |
| Modified By: mordoobadi             | 6/4/2013 5:14:26 PM |
| Priority: High                      |                     |
| Category: Bug                       |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

4/19/2016 3:23:57 PM

HRS AASHTO

3137

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 41896 - 1091771.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 1/4/2012 3:01:00 PM Eastern Standard Time  
Probably related to 11181. From my consultant (Souther):

When an attempt is made to replace the existing MEMBER ALTERNATIVE, "90"-138" WPG-Comp" in one Member "C - Centerline" with the one with the same name in another Member, "B - 1st E Int", within the Superstructure Definition, "9-Span Cont./Hinged WPG", and then attempt to save the model, it won't save and the following message is generated:

Unable to save Bridge data!  
Delete process failed while deleting CDmSuperStructSpngMbrAlt (SaveOrder object 245).  
Error deleting record from database record set.

To duplicate, follow this procedure...

- Copy MEMBER ALTERNATIVE, "90"-138" WPG-Comp" from Member, "B - 1st E Int", to Member "C - Centerline".
- Check the "Current" box for the just copied MEMBER ALTERNATIVE.
- Delete the former MEMBER ALTERNATIVE from Member "C - Centerline".
- Try to save the Virtis model.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 2:29:14 PM Eastern Standard Time  
A fix for VI 11067 has caused this issue. This issue is now fixed in version 6.4.

FROM: Tim Armbrecht DATE: 2/16/2012 8:43:23 AM Eastern Standard Time  
Fix that was sent to me appears to have solved the problem. Thanks.

FROM: Matt Kolis DATE: 5/5/2012 5:33:11 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 11215<br>Subject: Unable to delete Bridge From Virtis |
|-----------------------------------------------------------------|

**Complete Issue Information**

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Campisi, Paul         | 1/12/2012 4:24:48 PM |
| Modified By: hlee                   | 5/4/2012 12:46:49 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Paul Campisi DATE: 1/12/2012 11:31:34 AM Eastern Standard Time  
 I am unable to delete the attached bridge from Virtis. The error message is as follows:

Unable to delete bridge!  
 11:24:35 AM - Line 3146 in source file .\UiDescDtopGridView.cpp.

Delete process failed while deleting CDmSuperStructMbrSpan (SaveOrder object 678).  
 11:24:35 AM - Line 474 in source file .\DmBridgeCache.cpp.

Error deleting record from database record set.  
 11:24:35 AM - Line 1099 in source file .\DmSuperStructMbrSpan.cpp.

The update or delete operation did not affect any rows.

Thanks

Paul Campisi  
 NYSDOT  
 Office of Structures

4/19/2016 3:23:57 PM

HRS AASHTO

3139

## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:48:49 PM Eastern Standard Time  
I was not able to reproduce the error with the attached bridge in version 6.4 development code.

|                                       |
|---------------------------------------|
| Issue ID: 11220                       |
| Subject: Built-up Section Enhancement |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Jackson, Amanda  | 1/23/2012 6:23:22 PM  |
| Modified By: hlee              | 6/27/2014 12:49:00 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 1/23/2012 1:24:09 PM Eastern Standard Time  
Requesting an enhancement to the AASHTO engine to include the vertical legs of flange angles in built-up sections when determining section properties and girder capacity.

Because built-up sections are defined in Virtis as having angles for the top and bottom flanges, it shouldn't be too difficult to correctly calculate the web depth and other properties used in the spec checker. For example, AASHTO defines D as the "clear unsupported distance between flange

4/19/2016 3:23:57 PM

HRS AASHTO

3140



### Complete Issue Information

components” for most of the articles in chapter 10 of the 17th edition (2002). This should be calculated as the distance between the ends of the vertical legs of the flange angles. Using the distance from inside of flange to inside of flange is too conservative in many cases. Calculating the flange properties correctly will also make it possible to correctly calculate the web properties, and remove the issue of assuming the web is continuous to the top of the flange plates. The input information is already available in Virtis. The only thing that needs to be changed is the way the AASHTO engine calculates these values.

FROM: Herman Lee DATE: 6/27/2014 7:32:58 AM Eastern Daylight Time  
Same request in BRDRSUP-303 ("D" dimension for Rivet Plate Girders).

|                                        |
|----------------------------------------|
| Issue ID: 11221                        |
| Subject: Girder spacing keeps changing |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Huang, George       | 1/25/2012 2:03:30 PM  |
| Modified By: ghuang               | 6/26/2012 10:26:03 PM |
| Priority: Critical                |                       |
| Category: Bug                     |                       |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | Assigned | High     | Bug      |
| Ihnat, Joseph    |          | Critical |          |
| Kennelly, Krisha | Resolved |          |          |

4/19/2016 3:23:58 PM

HRS AASHTO

3141

**Complete Issue Information**

|                    |          |      |     |
|--------------------|----------|------|-----|
|                    | Verified |      |     |
| Ordoobadi, Mehrdad | Assigned | High | Bug |
|                    | Resolved |      |     |
|                    | Resubmit |      |     |
|                    | Resolved |      |     |
|                    | Verified |      |     |
|                    | Accepted |      |     |
|                    | Closed   |      |     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LRFR Library.xml    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/25/2012 9:04:37 AM Eastern Standard Time  
 Submitted on behalf of George Huang, Caltrans.

Received e-mail:

=====

Herman,

Apparently this error doesn't happen in Virtis 6.3.0 but in Virtis6.3.1.

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 01/24/2012 01:14 PM-----

George  
 Huang/HQ/Caltrans  
 /CAGov To

4/19/2016 3:23:58 PM

**HRS AASHTO**

3142

**Complete Issue Information**

01/24/2012 11:24 AM Herman Lee  
cc  
Murugesu  
Vinayagamoorthy/HQ/Caltrans/CAGov@D  
OT  
Subject  
Girder Spacing Keep Changing by  
Itself.

Hi Herman,

Sorry for keeping you busy today. There is another problem with VIRTIS 6.3. When we switch between the Framing Plan Details and Typical Section for this bridge, the girder spacing keep changing (reducing) after every window switch. You can see it in the attached screen shots.

Thanks.

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance

=====

I'm able to reproduce the problem in 6.3.1 and also in 6.4 development.

FROM: Joseph Ihnat DATE: 1/26/2012 11:33:40 AM Eastern Standard Time  
I'm able to reproduce this in 6.3.0 and 6.2.0. I didn't try any farther back than that.

FROM: Herman Lee DATE: 2/3/2012 12:12:41 PM Eastern Standard Time  
Resolved by Krisha.

FROM: Bin Zhang DATE: 2/3/2012 2:51:26 PM Eastern Standard Time  
Verified in VO631 with the caltran dll updates.

FROM: George Huang DATE: 2/9/2012 4:44:59 PM Eastern Standard Time  
The issue is resolved with the patch for VO6.3.1.

FROM: Matt Kolis DATE: 5/5/2012 5:35:59 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

FROM: George Huang DATE: 6/26/2012 6:26:02 PM Eastern Daylight Time  
Verified in Virtis 64 beta build 2.

Issue ID: 11222  
Subject: Unable to save LRFR factor

Folder: /Virtis/Support Center

4/19/2016 3:23:58 PM

HRS AASHTO

3143

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: vinayagamoorthy, vinacs | 1/25/2012 2:45:08 PM |
| Modified By: mordoobadi               | 6/4/2013 4:44:25 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
|                  | Assigned           |          |          |
| Thogaru, Srujana | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          | Bug      |
|                  | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description                |
|------|---------------------|----------------------------|
|      | P00081033.xml       | PRESTRESS-LOAD-DEMANDS.ABR |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 1/25/2012 9:45:51 AM Eastern Standard Time  
Submitted on behalf of Vinacs M Vinayagamoorthy, Caltrans.

Importing the attached Library file will crash the system.

Developer Note:

6.4 development ASSERT (ICurrentId < 0) in CDmIdMgr::SetPrimaryKeyId

abmgnl.dll!CDmIdMgr::SetPrimaryKeyId(long ICurrentId=1, long IRealId=1) Line 154 + 0x1d bytes

4/19/2016 3:23:58 PM

HRS AASHTO

3144

**Complete Issue Information**

C++  
abmlib.dll!CDmLibLrfrLegalLoads::GetNextPKId(CDeLibLrfrLegalLoads \*  
pDeLibLrfrLegalLoads=0x12fbabd8) Line 877 + 0xe bytes C++  
abmlib.dll!CDmLibLrfrLegalLoads::UpdateDatabase() Line 770 + 0xc bytes C++  
abmlib.dll!CDmLibLrfrLegalLoads::Save(int bUpdateDataStatus=0) Line 340 + 0x8 bytes C++

FROM: Mehrdad Ordoobadi DATE: 5/4/2012 8:36:54 AM Eastern Daylight Time  
Fixed in 6.4.

FROM: Herman Lee DATE: 6/29/2012 12:24:55 PM Eastern Daylight Time  
Incident 11678:

=====  
This was a problem in Version 6.3. Later it was corrected in Version 6.4Beta 1. However, it is  
reoccurring in Version 6.4Beta 2.

When I import the attached LRFR Agency defined library, program crashed.  
=====

FROM: Mehrdad Ordoobadi DATE: 7/9/2012 12:44:35 PM Eastern Daylight Time  
The export file was created before the fix. the fix that was made on 5/4/2012. Fixes export issue. The  
attached XML file was created when there was a problem with the export and its import crashes  
because the export file is not good.

FROM: George Huang DATE: 8/10/2012 4:01:04 PM Eastern Daylight Time  
Vinacs verified in V6.4 beta build 3.

FROM: Bin Zhang DATE: 8/29/2012 9:36:09 AM Eastern Daylight Time  
Verified for acceptance build

FROM: vinacs vinayagamoorthy DATE: 9/5/2012 2:59:47 PM Eastern Daylight Time  
I tested this feature in beta 4 (acceptance) build and confirm it is working

Issue ID: 11224  
Subject: Report Tool analysis event combines 3 tables

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Olsen, Jeff 1/26/2012 5:44:39 PM  
Modified By: sghosh 5/9/2013 3:20:50 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:23:58 PM

HRS AASHTO

3145

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 39014-S01 Error.bmp         |             |
|      | 00314 - 39139014000S010.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Olsen DATE: 1/26/2012 1:02:45 PM Eastern Standard Time

I am using the Report tool to create an output file of moment and shear demands. When the deadload tables are created, the stage 1 load cases 2, 3, and 4 are lumped into a table labeled Load case 4. All other tables are for individual load cases. Please revise this to break load cases 2, 3, and 4 into individual tables. An example report is attached.

FROM: Srujana Thogaru DATE: 2/4/2013 8:50:53 AM Eastern Standard Time

Can you please attach the bridge xml file for the above mentioned problem so that we can clearly address the issue.

FROM: Jeff Olsen DATE: 2/4/2013 10:38:55 AM Eastern Standard Time

I dont have the original file that I used, but created a different one that is giving the same error. I have attached the xml file of a sample prestressed bridge and a template (abr) to create a report. Analyze one of the beams in the file, then use the template to create a report using the report tool. You will see that for the non-composite deadload cases, the self weight and PS transfer forces are being reported individually, but the haunch and deck loads are being lumped in the same table which is labled as load case 3 (haunch). They should be broken out separately.

FROM: Srujana Thogaru DATE: 4/30/2013 2:15:57 PM Eastern Daylight Time

Haunch Load(load case 3) and Deck Load (Load Case 2) are combined in a single table in 6.4.1. In 6.5. release these two load cases are shown in separate tables. Fixed in 6.5 Beta 1

FROM: Subhadeep Ghosh DATE: 5/9/2013 11:16:53 AM Eastern Daylight Time

Verified for 6.5 Beta 1.

4/19/2016 3:23:59 PM

HRS AASHTO

3146

## Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 11230                                            |
| Subject: Unable to Save after deleting Member Alternatives |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: McMunn, Creightyn     | 1/31/2012 10:10:43 PM |
| Modified By: cmcmunn                | 9/13/2012 1:24:25 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Creightyn McMunn DATE: 1/31/2012 5:16:01 PM Eastern Standard Time

We have encountered an error in Virtis on multiple structures.

Please see the attached screenshot for the error message. We have received this message on several structures when trying to delete member alternatives after copying superstructure definitions. If we try to delete a member alternative and then try to save the file we get the error message shown in the screenshot and are unable to save the file.

For an example, please see the attached .xml file for Task 38 (S01 of 39014) and perform the following steps for the Span 1 superstructure definition:

1. Change the link for Girder D to None
2. Change the links for Girders B, E, and F from Girder C to Girder D
3. Copy the member alternative from Girder C to Girder D

4/19/2016 3:23:59 PM

HRS AASHTO

3147

**Complete Issue Information**

- 4. Double click Girder C and uncheck the existing and current check boxes
- 5. Delete the member alternative for girder C.
- 6. Click the Save button on the toolbar

When we perform these steps we get the error message shown in the attached screenshot and are unable to save the file.

As a workaround, we have been able to redefine the superstructure definition and get it to work. However, this takes a decent amount of extra time. If there is a simpler workaround or fix that we are unaware of, please let us know.

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:46:32 PM Eastern Standard Time  
This is a duplicate 11208 and 11233.

FROM: Creightyn McMunn DATE: 9/10/2012 3:50:51 PM Eastern Daylight Time  
Works in V6.4 Beta 4 for the attached xml.

FROM: Mehrdad Ordoobadi DATE: 9/10/2012 4:09:29 PM Eastern Daylight Time  
Accepted by Creightyn McMunn.

|                                      |
|--------------------------------------|
| Issue ID: 11232                      |
| Subject: Reports Enhancement Request |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Teal, Dean       | 2/1/2012 6:51:43 PM |
| Modified By: hlee              | 2/2/2012 1:08:28 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



## Complete Issue Information

### Description

FROM: Dean Teal DATE: 2/1/2012 1:53:48 PM Eastern Standard Time  
Herman - add this to the reports bucket if you feel it is of value

Comment from a designer:

General comment that could be passed along to the committee – the AASHTO engine seems very good in many ways, but a HUGE mark against it is that there is no “output” file... as in, a single file that echoes back the inputs (members and dead/live loads), shows intermediate computations, and report the analysis and summary of specification checks in a single file (i.e. for quality purposes – links the inputs to the outputs in such a way that the program “guarantees” that the specific inputs resulted in those specific outputs).

FROM: Herman Lee DATE: 2/2/2012 8:00:23 AM Eastern Standard Time  
Added to the Report bucket for consideration by the Report TAG.

|                                     |                      |
|-------------------------------------|----------------------|
| Issue ID: 11233                     |                      |
| Subject: Corrupted Bridge Model     |                      |
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Armbrecht, Tim        | 2/2/2012 1:47:30 PM  |
| Modified By: plitchfield            | 6/26/2012 8:56:44 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

4/19/2016 3:23:59 PM

HRS AASHTO

3149

### Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |
| Li, Xinmei         | Assigned | High     | Bug      |
|                    | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00534 Errors.pdf    |             |
|      | 00534.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 2/2/2012 8:47:57 AM Eastern Standard Time  
Submitted on behalf of Tim Ambrecht, Illinois DOT.

Received e-mails:

=====  
From: Souther, Timothy E  
Sent: Wednesday, February 01, 2012 2:43 PM  
To: Ambrecht, Tim A  
Subject: Virtis: Corrupted Bridge Model (Part 2)

The attached export file, "0162439a.xml" is similar to the one I just previously sent, except I isolated what appears to be the original event that prevented the model from being saved. It happened after deleting the Member Alternative (36WF135) under Member 12 - 4th N Int. The steps leading to the failure are as follows:

- Uncheck the "Current" box.
- Delete the Member Alternative.

The resulting debug error message is as follows:

Unable to save Bridge data!

02:40:57 PM - Line 886 in source file UiBWSDoc.cpp.

Delete process failed while deleting CDmSuperStructSpngMbrAlt (SaveOrder object 245).

02:40:55 PM - Line 494 in source file DmBridgeCache.cpp.

Error deleting record from database record set.

02:40:55 PM - Line 1099 in source file DmSuperStructSpngMbrAlt.cpp.

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

4/19/2016 3:23:59 PM

HRS AASHTO

3150

**Complete Issue Information**

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The DELETE statement conflicted with the REFERENCE constraint "R\_2588". The conflict occurred in database "RATINGS", table "dbo.abw\_super\_struct\_spng\_mbr\_fk". The statement has been terminated.

The DELETE statement conflicted with the REFERENCE constraint "R\_2588". The conflict occurred in database "RATINGS", table "dbo.abw\_super\_struct\_spng\_mbr\_fk".  
The statement has been terminated.

However, if the model is saved immediately after the first step and then again after the second step the save operations are successful.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

=====  
From: Souther, Timothy E  
Sent: Wednesday, February 01, 2012 1:56 PM  
To: Armbrecht, Tim A  
Subject: Virtis: Corrupted Bridge Model

The attached export file was created when the source bridge model would not save. I don't have the message that occurred when that happened. After exporting the model I then closed it without saving. Then it was reopened and the export was brought in using the import procedure. The plan was to copy the superstructure Definition into the model but Virtis would not do that producing an error stating, "Copy of structure definition failed!" I then tried to import and save the export file into a different database (Submittals) but it could not be saved. Please ask Baker to investigate and determine the cause of this apparent corruption in the bridge model data. It should be emphasized that this is not an infrequent occurrence with Virtis that seems to occur when a large number of operations are performed. I also submitted two other generally similar incidents within the past few months.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

=====  
FROM: Herman Lee DATE: 2/2/2012 8:55:46 AM Eastern Standard Time  
Mehrdad, is this a duplicate of 11208 and 11166?

FROM: Mehrdad Ordoobadi DATE: 2/10/2012 3:42:49 PM Eastern Standard Time  
Yes this is a duplicate of 11208. 11208 is fixed for version 6.4.

11166 is a different issue.

FROM: Phil Litchfield DATE: 6/26/2012 4:56:44 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and appears to be fixed.

**Complete Issue Information**

Issue ID: 11235  
Subject: Incorrect haunch validation message

Folder: /Virtis/Support Center  
Primary Contact: Li, Xinmei  
Submitted By: Pichura, Mike 2/2/2012 8:17:30 PM  
Modified By: mkolis 5/5/2012 9:54:35 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status    | Priority | Category                   |
|-----------------|-----------|----------|----------------------------|
| Lee, Herman     | Suspended | High     | Enhancement<br>Maintenance |
|                 | Duplicate |          |                            |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/2/2012 3:18:14 PM Eastern Standard Time  
Submitted on behalf of Mike Pichura, Michael Baker Jr., Inc.

Received e-mail:

=====

Herman,

I am entering a two span continuous girder-floorbeam system into Virtis 6.3. I am getting 17 errors (see attached). However, the bridge runs fine.

Any idea of what could be causing the errors and how to resolve them?

I know I can delete the haunches and manually enter a dead load, but I would prefer not to since this is

4/19/2016 3:23:59 PM

HRS AASHTO

3152

**Complete Issue Information**

going to be an example for VDOT.

Thanks,

Mike

=====

**Developer Note:**

Confirmed the problem is caused by a defect in CDoSuperStructSpngMbrAlt::ValidateBmDefListData. The pass in member length shouldn't be set to a large number.

FROM: Xinmei Li DATE: 4/4/2012 9:23:11 AM Eastern Daylight Time  
Floor System Floorbeam Mbr object has infinite length, phony dMbrLength is passed to the validation method.

Added code to compute real length by adding cantilevers and length between main members.  
Resolved for the next 6.4 Alpha build.

FROM: Matt Kolis DATE: 5/5/2012 5:54:35 PM Eastern Daylight Time  
Verified haunch errors no longer exist in VO64 Alpha Build 4.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 11236                                        |
| Subject: Support settlement load in the AASHTO Engine. |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center        |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: vinayagamoorthy, vinacs | 2/6/2012 6:28:28 PM |
| Modified By: hlee                     | 3/5/2014 6:17:07 PM |
| Priority: High                        |                     |
| Category: Maintenance                 |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:24:00 PM

HRS AASHTO

3153

### Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

#### Description

FROM: Herman Lee DATE: 2/6/2012 1:29:16 PM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

FROM: Herman Lee DATE: 3/5/2014 1:01:43 PM Eastern Standard Time  
Duplicate of BRDRSUP-190: Support Settlement works in BRASS LFD and not AASHTO LFD

|                                        |
|----------------------------------------|
| Issue ID: 11241                        |
| Subject: Printing Batch Rating Results |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 2/16/2012 12:43:57 PM |
| Modified By: dteal             | 2/16/2012 3:20:14 PM  |
| Priority: High                 |                       |
| Category: Support              |                       |

4/19/2016 3:24:00 PM

HRS AASHTO

3154

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 53153031000B020.xml            |             |
|      | PS Box Rect Void Dist 36.662 L |             |
|      | Bm Cap Det.txt                 |             |
|      | Michigan Overload Trucks.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/16/2012 7:51:33 AM Eastern Standard Time

When rating a batch of bridges from the explorer window - when completed one of the buttons at the bottom is to SAVE

When you press save the cursor busy hour glass comes for a short time, then goes away

What has happened?

Did anything get saved?

If so, where did it get saved to?

FROM: Herman Lee DATE: 2/16/2012 9:25:22 AM Eastern Standard Time

The SAVE button will save all of the displayed rating results to the database and closes the window.

This button is only available if the displayed results have not been previously saved.

**Complete Issue Information**

|                                            |
|--------------------------------------------|
| Issue ID: 11243                            |
| Subject: Moment capacity calculation issue |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Lee, Herman      | 2/17/2012 2:59:05 PM  |
| Modified By: jduray            | 7/12/2012 10:11:56 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/17/2012 10:00:43 AM Eastern Standard Time  
Submitted on behalf of Daniel Yalda (YaldaD@michigan.gov), Michigan DOT.

Received Bridgeware e-mail:

=====  
Ben,  
I got this xml file when I ran using AASHTO engine I'll get like50% (Interior beams ) less nominal moment capacity when I use the virtis engine. Somehow the engine is miscalculating the moment capacity of the section when it's an interior beams I don't have this problem with fascia ones. I've attached the file with the Michigan legal loads for you to check. The bridge alternative that I was using is the Superstructure # 3. you can change the engine to the AASHTO and see the interior beams.  
Thanks

Dan

=====



**Complete Issue Information**

Developer Note:

Below are the Mn at mid span for each engine:

Virtis LFD - 1990.8  
BRASS LFD - 2017.77  
AASHTO LFD - 1207.33 (The attached beam capacity iteration shows switching between 1982 and 1207 and ended up with 1207)

To reproduce these numbers, use G2 in "Span 1 (Length based on beam C)" superstructure definition.

FROM: Jim Duray DATE: 7/11/2012 4:16:04 PM Eastern Daylight Time  
Resolved. We now get a capacity of 1982.8.

FROM: Jim Duray DATE: 7/12/2012 6:08:15 PM Eastern Daylight Time

Issue ID: 11247  
Subject: Schedule based entry for steel built-up member.

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 2/21/2012 6:12:46 PM  
Modified By: hlee 2/21/2012 6:18:52 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Herman Lee DATE: 2/21/2012 1:13:33 PM Eastern Standard Time  
Submitted on behalf of Tim Armbrecht, IDOT.

Received e-mail:

=====

Herman, has anyone already suggested schedule – based entry for steel in VI as an enhancement? If not, I'll propose it.

Timothy A. Armbrecht, P.E., S.E.  
Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures

Email: Tim.Armbrecht@illinois.gov  
From: Souther, Timothy E  
Sent: Thursday, January 26, 2012 9:02 AM  
To: Armbrecht, Tim A  
Subject: Virtis Enhancement Proposal - Schedule-based Built-up Girders

The current cross-section based entry of steel built-up plate girders is unduly time-consuming and prone to data-entry error. In addition built-up girders cannot be reviewed utilizing schematic diagrams. I propose that a schedule-based option be developed. The benefit to users would be to increase productivity and confidence in Virtis model development.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

=====

|                                |
|--------------------------------|
| Issue ID: 11248                |
| Subject: File Locations Differ |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 2/22/2012 2:43:42 PM |
| Modified By: jhnat             | 9/7/2012 4:14:30 PM  |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

4/19/2016 3:24:01 PM

HRS AASHTO

3158

### Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Support  |
|                    | Resolved |          |          |
|                    | Verified |          | Bug      |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/22/2012 9:53:36 AM Eastern Standard Time

In working with 3 installations I have found that the files created when a bridge is analyzed can not always be found.

XP - the files are in C:\Documents and Settings\teal\My Documents\AASHTOWARE\VirtisOpis63 see attached

Windows 7 64 bit Desktop - the files are in Libraries\documents\My documents\AASHTOWARE\VistisOpis63 see attached

Windows 7 64 bit LapTop - I can not find the files at all? This laptop had 6.2 installed in the root directory being W7 was not totally supported and this was a work around (if it makes any difference)

Questions:

1. Do I have any control as to where these files are located?
2. Where should I look for my files on my laptop?

FROM: Joseph Ihnat DATE: 2/22/2012 10:31:20 AM Eastern Standard Time

This was one of the enhancements in version 6.3. The default location is your "My Documents" folder,

4/19/2016 3:24:01 PM

HRS AASHTO

3159

**Complete Issue Information**

which is a different location on XP and Windows 7.

1) The Preferences window, Analysis tab, allows you to change this. Please see this window's Help for a little more info.

2) For version 6.2 and earlier versions, the files should be found under the folder where Virtis/Opis is installed.

FROM: Dean Teal DATE: 2/22/2012 10:42:04 AM Eastern Standard Time  
Thanks

|                                                  |
|--------------------------------------------------|
| Issue ID: 11249                                  |
| Subject: Check Out Indicator for Superstructures |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 2/22/2012 2:54:13 PM |
| Modified By: hlee                   | 1/2/2013 3:05:33 PM  |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 2/22/2012 10:08:51 AM Eastern Standard Time

When a bridge is checked out, it shows up in the bridge explorer as such

When a superstructure only is checked out there is no indicator that shows up at all. You have no way of knowing unless you actually open up the bridge file.

Am I missing something here?

Is there some way of knowing?

FROM: Dean Teal DATE: 3/20/2012 7:45:58 AM Eastern Daylight Time

4/19/2016 3:24:01 PM

HRS AASHTO

3160

## Complete Issue Information

To make matters even worse, when you find one of these superstructure Definitions checked out, it doesn't tell you "who" has it checked out. You have to do a trial and error by authorizations to find out who!!

FROM: Mehrdad Ordoobadi DATE: 3/29/2012 1:56:23 PM Eastern Daylight Time  
This is not a new issue. This behavior is how it was implemented originally in early versions of Virtis/Opis.

This is not a critical bug and we would try to get a fix for it in version 6.4.

An approach to fix this issue is:

- \* show an icon indicating that at least one structure definition in the bridge is checked out. The name (s) of the user(s) who checked out the structure definition(s) in a bridge will not be displayed in the bridge explorer grid. If we want the bridge explorer to display the names of the users who have structure definitions checked out it would affect the performance of the bridge explorer.
- \* Add a new window that reports on bridge check-out status. A new bridge explorer pop-up menu item will be added to display selected bridge's check-out status.

FROM: Mehrdad Ordoobadi DATE: 5/9/2012 3:50:35 PM Eastern Daylight Time  
Added code to show bridge structure definition check out status.

FROM: Bin Zhang DATE: 8/29/2012 10:28:27 AM Eastern Daylight Time  
Verified for acceptance build.  
An icon to indicate a superstructure check out was added in the bridge workspace.

FROM: Dean Teal DATE: 11/15/2012 4:53:18 PM Eastern Standard Time  
This is working in 6.4.0

FROM: Mehrdad Ordoobadi DATE: 11/16/2012 9:42:28 AM Eastern Standard Time  
Accepted by Dean Teal.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 11250                                                 |
| Subject: Unable to override diaphragm schedule at pier location |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 2/22/2012 4:55:45 PM |
| Modified By: bzhang            | 4/24/2013 9:08:26 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:24:01 PM

HRS AASHTO

3161

**Complete Issue Information**

|             |          |      |     |
|-------------|----------|------|-----|
| Lee, Herman | Assigned | High | Bug |
|             | Resolved |      |     |
| Lee, Herman | Resolved | High | Bug |
|             | Assigned |      |     |
|             | Resolved |      |     |
|             | Closed   |      |     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | pic18949.jpg        |             |
|      | Doc1.docx           |             |
|      | 02 0035RJ.xml       |             |
|      | pic27882.jpg        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/22/2012 11:56:02 AM Eastern Standard Time  
 Submitted on behalf of Tom Eberhardt (teberhardt@elrobinson.com), E.L. Robinson Engineering of Ohio Co.

Received Bridgeware e-mail:

=====

To whom it may concern,

I am relatively new to Virtis and was wondering whether this is the correct avenue to direct general modeling questions or if there is another email address or forum out there for that.

My question is whether there is a trigger in Virtis to not allow the program to assume that the bottom flange is braced at the CL bearing of a pier. In looking at the output in the spec check, it appears that it is assuming the CL bearing to be a brace point. In reality I only have a cross frame at location 142.703 and 157.703 and nothing at point 153.00 (the CL pier).

Steel Rolled Shape - At Location = 153.0000 (ft) - Left Stage 3

Section at Brace Point

4/19/2016 3:24:01 PM

HRS AASHTO

3162

**Complete Issue Information**

Moment Gradient Modifier, Cb, Calculation  
-----

INPUT:

Section Prismatic in Unbraced Length: Yes  
Section is Unbraced Cantilever: No

Left Brace Location = 142.7030 (ft)  
Middle of Unbraced Length Location = 147.8515 (ft)  
Right Brace Location = 153.0000 (ft)

Steel Rolled Shape - At Location = 153.0000 (ft) - Right Stage 3

Section at Brace Point

Moment Gradient Modifier, Cb, Calculation  
-----

INPUT:

Section Prismatic in Unbraced Length: Yes  
Section is Unbraced Cantilever: No

Left Brace Location = 153.0000 (ft)  
Middle of Unbraced Length Location = 155.3515 (ft)  
Right Brace Location = 157.7030 (ft)

I put a "point of interest" at the CL bearings and checked the "Override diaphragm schedule", and put in the left and right distances, but left the "Diaphragm at this location" empty. It gives the same results shown above.

Any assistance with this matter is greatly appreciated. Thank you.

Tom

Thomas J. Eberhardt, Jr., P.E.  
E.L. Robinson Engineering of Ohio Co.  
Project Manager  
1801 Watermark Drive, Suite 310  
Columbus, OH 43215

=====

FROM: Herman Lee DATE: 12/6/2012 11:45:27 AM Eastern Standard Time  
Fixed a defect in using the POI window, Bracing tab, Diaphragm at this location checkbox.

Resolved for the 6.5 release.

4/19/2016 3:24:01 PM

HRS AASHTO

3163

**Complete Issue Information**

FROM: Bin Zhang DATE: 4/24/2013 4:31:37 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11251                                           |
| Subject: LL distribution factor ranges validation problem |

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center                                                                |
| Primary Contact: Lee, Herman                                                                  |
| Submitted By: vinayagamoorthy, vinacs                      2/22/2012 9:38:18 PM               |
| Modified By: jihnat                                                      8/21/2012 4:23:35 PM |
| Priority: High                                                                                |
| Category: Bug                                                                                 |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/22/2012 4:39:09 PM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received e-mail:

=====  
Herman

We have several bridges where the girder splays and skew angle differ at each bent.

We tried to enter the variable LLDF along the girder to account for the variation. Since we cannot enter the linear variation of LLDF along the girder (for LRFD data entry), we are trying to enter it as "stepped" case.

4/19/2016 3:24:01 PM

HRS AASHTO

3164



**Complete Issue Information**

In this attached bridge, program fails to analyze. It says the LLDF is entered properly. I am allowed to enter only six digit number for the length. Even then, it says I did not enter the values properly.

As far as I could see, all the ranges for the LLDF for this girder is entered, yet the program gives error message.

Could you please check this for me?

Structure Definition: Testing Bridger  
Member Alternatvie G2 - Copy of Plate

(Embedded image moved to file: pic18949.jpg)

(Embedded image moved to file: pic27882.jpg)

(See attached file: 02 0035RJ.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

Developer Note:

The validation should use the same unit the user used to enter the ranges.

Resolved for 6.4 Release.

FROM: Matt Kolis DATE: 5/7/2012 8:18:01 AM Eastern Daylight Time  
The xml file gives an "unable to determine concrete deck load" error as can be seen in the attached word document.

FROM: Herman Lee DATE: 5/11/2012 10:37:19 AM Eastern Daylight Time  
The error was caused by the implementation of a 6.4 release enhancement. The error has been fixed. Matt, please reverify this incident in Alpha 6.

FROM: Matt Kolis DATE: 5/23/2012 9:57:27 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

FROM: vinacs vinayagamoorthy DATE: 5/31/2012 3:04:26 PM Eastern Daylight Time  
Herman suggested us to enter the start distance from the Support 1 to get around this bug. However, in this Versiion 6.4beta build, I entered the start distance from the closest support next to the start point. When LRFR analysis is run, it states  
"Error - Shear distribution factor ranges overlap."  
"Error - Moment distribution factor ranges overlap."

FROM: George Huang DATE: 8/10/2012 6:07:34 PM Eastern Daylight Time  
Verified in V64 beta build 3.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 11254<br>Subject: AASHTO LRFR does not calculate de correctly |
|-------------------------------------------------------------------------|

**Complete Issue Information**

|                                                      |
|------------------------------------------------------|
| Folder: /Virtis/Support Center                       |
| Primary Contact: Kennelly, Krisha                    |
| Submitted By: McMunn, Creightyn 2/29/2012 9:23:06 PM |
| Modified By: cmcmunn 12/13/2012 7:45:06 PM           |
| Priority: High                                       |
| Category: Bug                                        |

**History**

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
| Thogaru, Srujana | Assigned  |          |          |
|                  | Duplicate |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 07319_AL.xml        |             |
|      | haunches.jpg        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Creightyn McMunn DATE: 2/29/2012 4:39:12 PM Eastern Standard Time  
 de is defined as the horizontal distance from the centerline of the exterior web of exterior beam at deck level to the interior edge of curb or traffic barrier (ft). When I looked at the LRFD dist calcs for the exterior beams of two different box beam bridges, AASHTO calculated de as the distance from the centerline of the exterior beam (not web) to the edge of the traffic barrier.

de for 46062 should be -0.92 ft instead of +0.92 ft. de for 82022 should be -1.63 ft instead of +0.52 ft. In both cases this resulted in overly conservative distribution factors.

See attached .xmls and output.

FROM: Creightyn McMunn DATE: 6/4/2012 3:05:20 PM Eastern Daylight Time  
 Is there an update regarding this issue?

4/19/2016 3:24:02 PM

HRS AASHTO

3166

**Complete Issue Information**

FROM: Krisha Kennelly DATE: 9/10/2012 11:15:15 AM Eastern Daylight Time  
Please work on this under FPMaintenance for version 6.5.

FROM: Xinmei Li DATE: 9/13/2012 1:19:40 PM Eastern Daylight Time  
Resolved for 6.5.

FROM: Herman Lee DATE: 11/21/2012 7:39:07 PM Eastern Standard Time  
The fix will be included in the 6.4 Service Pack (6.4.1) release.

FROM: Laura Volle DATE: 11/30/2012 2:36:56 PM Eastern Standard Time  
The attached bridges were imported into Virtis 6.4.1 and analyzed. The reports that are attached for comparison are not being produced after analysis.

FROM: Krisha Kennelly DATE: 12/3/2012 11:43:36 AM Eastern Standard Time  
Fixed for 6.4.1 beta 2.

Note the computed value of de for 82022 is -1.29 ft. See attached calculation.

FROM: Laura Volle DATE: 12/3/2012 2:48:50 PM Eastern Standard Time  
This has been tested in 6.4.1 beta 2 and is now properly working. Verified.

FROM: Creightyn McMunn DATE: 12/13/2012 2:45:06 PM Eastern Standard Time  
I verified that de is being calculated properly in v6.4.1 Beta 2.

It should be noted, however, that the program takes de as the distance from the centerline of the exterior web of the exterior beam to the start of the travelway. The code defines de as the distance from the centerline of the exterior web of the exterior beam to the "interior edge of curb or traffic barrier". I don't think this matters much because the two should coincide but wanted to point it out as the user could set the travelway to a location other than edge of curb of traffic barrier.

Issue ID: 11262  
Subject: Prestressed Concrete I-Girder Bridge Model, Analysis Fails if Model Includes Negative Haunches

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Vaisa, Chris 3/7/2012 2:44:43 PM  
Modified By: hlee 3/10/2012 12:20:35 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 03538 - 63163103000S060.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Chris Vaisa DATE: 3/7/2012 9:48:56 AM Eastern Standard Time  
Refer to the attached version 5.6 model, "07319\_AL.xml". Like many models of older bridges that are present in the NMDOT Virtis database, this model includes negative haunches. In previous versions (using the BRASS engine), the negative haunch was used to more accurately model the actual physical condition of an embedded top flange. However, in version 6.3.1, models with negative haunches cannot be analyzed; please see attached screen shot haunches.jpg:

FROM: Srujana Thogaru DATE: 3/9/2012 3:17:05 PM Eastern Standard Time  
Fixed for 6.4 Release.Duplicate of VI 10642

Issue ID: 11264

Subject: Live Load point load not being applied

4/19/2016 3:24:02 PM

HRS AASHTO

3168

**Complete Issue Information**

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Lee, Herman    |                       |
| Submitted By: McMunn, Creightyn | 3/7/2012 10:06:27 PM  |
| Modified By: cmcmunn            | 11/14/2012 7:26:00 PM |
| Priority: High                  |                       |
| Category: Support               |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Creightyn McMunn DATE: 3/7/2012 5:17:35 PM Eastern Standard Time  
 When running "G1" from the "Span 1 and Span 2" superstructure definition in the AASHTO engine, the live load being applied as a point load at 28' from support 1 is not being considered. The dead loads entered as DC1 and DC2 are being considered.

FROM: Herman Lee DATE: 3/8/2012 7:28:45 AM Eastern Standard Time  
 AASHTO Engine only supports DC and DW member loads. The engine will warn the user during the analysis.

```
=====
Warning - Only Girder Member concentrated loads of type DC or DW are supported!
Warning - The Girder Member concentrated load of type L,LL entered on the Girder Member Loads
window will not be applied!
=====
```

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 11296                                  |
| Subject: Virtis 6.3 - Question on Service Pack 1 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Laughlin, Christopher | 3/12/2012 5:55:06 PM |
| Modified By: hlee                   | 3/12/2012 8:01:02 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Christopher Laughlin DATE: 3/12/2012 2:03:39 PM Eastern Daylight Time  
Does Service Pack 1 address all previously released Technical Notes ? (TN 21, 22 and 23) or do we still need to apply separately ?

We are about to install the original delivered disk, apply service pack 1 and then technical notes 24, 25 and 26. Will this get us to to the latest release with all technical issues addressed ? or is there a better way ?

4/19/2016 3:24:02 PM

HRS AASHTO

3170

**Complete Issue Information**

Also, do I understand correctly that if we choose to continue using the BRASS engine, that we have to purchase a license from Wyoming ?

Thank you !

Chris Laughlin  
Florida DOT  
850.410.5514  
christopher.laughlin@dot.state.fl.us

FROM: Herman Lee DATE: 3/12/2012 3:40:47 PM Eastern Daylight Time  
- TN 21 is for the database migration from 6.2 to 6.3. Some agencies would like migration to the latest supported specification version. Please review the TN for more information.  
- TN 22 is for the optional scripts come with the 6.3 installation.  
- TN 24 is for the 64-bit Oracle ODBC Driver.

Service Pack 1 includes TN 23. After Service Pack 1 is installed, you need to apply TN 25 and 26.

For licensing the BRASS Engine, please contact WYDOT.

=====  
Purchasing, billing and licensing assistance may be obtained from:  
Telephone: (307) 777-4489  
E-mail: BRASSBilling@wyo.gov  
=====

Issue ID: 11297  
Subject: Virtis BRASS vs. AASHTO conversion scripts

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Laughlin, Christopher 3/12/2012 6:06:33 PM  
Modified By: hlee 3/12/2012 7:40:44 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:03 PM

**HRS AASHTO**

3171

## Complete Issue Information

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Import_Export.pdf     |             |
|      | Import_Export (1).pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Christopher Laughlin DATE: 3/12/2012 2:11:53 PM Eastern Daylight Time  
On July 27, 2011 an email was received regarding the BRASS Engine to AASHTO Engine database scripts. (see attached PDF with email correspondance)

Have these scripts been revised and re-released ?

Thank you !

Chris Laughlin  
Florida DOT  
850.410.5514  
christopher.laughlin@dot.state.fl.us

FROM: Herman Lee DATE: 3/12/2012 3:34:11 PM Eastern Daylight Time  
Yes, please see Technical Note 22 in the Support website.

Issue ID: 11298

Subject: Can't import bridge info into Bridge Workspace

Folder: /Virtis/Support Center

Primary Contact: Trees, Geoffrey

Submitted By: Armbrecht, Tim

3/12/2012 7:44:00 PM

Modified By: bzhang

8/29/2012 5:25:53 PM

4/19/2016 3:24:03 PM

HRS AASHTO

3172



## Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 02145 - 41141027000S010.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 3/12/2012 3:46:28 PM Eastern Daylight Time  
Attached are two pages from the Virtis help section which shows that one should be able to replace an existing bridge with a new file (from a consultant export). However, when in the "Bridge Workspace" the File/Import is not available as an option (only File/Export). I have not noticed another way to do this. So either the help documentation is incorrect or Virtis has an issue when trying to do this.

FROM: Mehrdad Ordoobadi DATE: 3/29/2012 1:43:04 PM Eastern Daylight Time  
The import from Bridge Workspace was disabled a few years ago. The online help needs to be corrected.

FROM: Tim Armbrecht DATE: 3/29/2012 3:31:02 PM Eastern Daylight Time  
So there is no way to "replace" a file/record with a new one? Or need to use the Bridge Exchange feature?

FROM: Mehrdad Ordoobadi DATE: 3/29/2012 4:31:21 PM Eastern Daylight Time  
That's correct. The Bridge Exchange feature can be used only if the bridge originated from the same database. The original items cannot be modified when you use bridge exchange.

FROM: Geoffrey Trees DATE: 5/25/2012 1:25:30 PM Eastern Daylight Time  
Fixed for 6.4 release.

FROM: Bin Zhang DATE: 8/29/2012 1:18:50 PM Eastern Daylight Time

4/19/2016 3:24:03 PM

HRS AASHTO

3173



**Complete Issue Information**

FROM: Matt Kolis DATE: 5/5/2012 5:52:04 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

|                                    |
|------------------------------------|
| Issue ID: 11303                    |
| Subject: Database Migration Wizard |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Laughlin, Christopher | 3/14/2012 12:38:25 PM |
| Modified By: hlee                   | 3/14/2012 1:17:47 PM  |
| Priority: High                      |                       |
| Category: Support                   |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MigrationWizard.png |             |

4/19/2016 3:24:03 PM

HRS AASHTO

3175

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Christopher Laughlin DATE: 3/14/2012 8:39:46 AM Eastern Daylight Time  
Is there a migration wizard to go from 6.2 to 6.3 ? Our DBA tech has one that he said he used last upgrade, but I do not find it on any disk. File name is VirtisOpisDBMigrationWizard.exe

FROM: Christopher Laughlin DATE: 3/14/2012 9:06:40 AM Eastern Daylight Time  
Update: Looks like the migration wizard has not been in use since moving from 5.6 to 6.0. Correct ? If so, are there any step by step instructions or any scripts to migrate from 6.2 to 6.3 ? thanks and sorry for the duplicate issue I logged, I thought the first one did not go through, my bad !

FROM: Herman Lee DATE: 3/14/2012 9:10:54 AM Eastern Daylight Time  
The Migration Wizard is installed with the Virtis Software, in the C:\Program Files\AASHTOWARE\VirtisOpis63\Migration Wizard folder. You could access it through the Start Menu (please see attached MigrationWizard.png file).

|                           |
|---------------------------|
| Issue ID: 11304           |
| Subject: Migration Wizard |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Laughlin, Christopher | 3/14/2012 12:42:46 PM |
| Modified By: hlee                   | 3/14/2012 1:17:57 PM  |
| Priority: High                      |                       |
| Category: Support                   |                       |

### History

4/19/2016 3:24:04 PM

HRS AASHTO

3176

**Complete Issue Information**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          | Support  |
|                 | Resolved           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Doc1.docx           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 3/14/2012 8:44:29 AM Eastern Daylight Time  
 Is there a migration wizard to go from 6.2 to 6.3 ? Our DBA Tech says he used one during our last update (VirtisOpisDBMigrationWizard.exe). I do not see on any disk. Any ideas ?

FROM: Herman Lee DATE: 3/14/2012 9:10:51 AM Eastern Daylight Time  
 Duplicate of Incident 11303.

## Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 11313                             |
| Subject: Error: No such element 'xul_utils' |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Pandey, Sita Ram | 3/20/2012 3:54:04 PM |
| Modified By: hlee              | 3/20/2012 5:26:14 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Box Beam - Circular Void.docx |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Daniel Whittemore DATE: 3/20/2012 11:56:28 AM Eastern Daylight Time  
When attempting to print a file, an error box appears with the message Error: No such element 'xul\_utils', along with a Traceback: with a long set of codes.

FROM: Herman Lee DATE: 3/20/2012 12:29:44 PM Eastern Daylight Time  
Which file were you trying to print?  
Please attach a screenshot of the error message. Thanks.

FROM: Herman Lee DATE: 3/20/2012 1:17:53 PM Eastern Daylight Time  
The error message is coming from the print driver in your machine. Please contact your IT department

4/19/2016 3:24:04 PM

HRS AASHTO

3178

**Complete Issue Information**

regarding the print driver installation problem. If you have another Virtis license in your office, please see whether you are able to print the BWS report in the other machine.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 11326                                         |
| Subject: Virtis - Box Beam Circular Void Library Window |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kolis, Matt      | 3/26/2012 6:25:18 PM |
| Modified By: mkolis            | 5/5/2012 9:56:24 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Matt Kolis DATE: 3/26/2012 2:28:33 PM Eastern Daylight Time  
The 3-void box in the box beam circular void library window does not appear correctly. The ",D2"

4/19/2016 3:24:04 PM

HRS AASHTO

3179

**Complete Issue Information**

portion of the label appears to be missing until the cursor is placed on the check box. Please see attached document.

FROM: Joseph Ihnat DATE: 3/26/2012 3:39:16 PM Eastern Daylight Time  
Also noticed similar problem with bridge PS Box shape window and PS Tee window (library and bridge).  
Problem was found to exist in version 6.3, probably earlier versions as well.  
Changed folder to Support Center. Fixed in 6.4.

FROM: Matt Kolis DATE: 5/5/2012 5:56:24 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 11346                                                         |
| Subject: Issures in LRFD Substructure Design Settings - limit state tab |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Li, Xinmei       | 4/10/2012 11:33:51 PM |
| Modified By: jihnat            | 4/30/2012 11:33:27 AM |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Mlynarski, Mark | New    | High     | Unknown  |



**Complete Issue Information**

|               |          |      |         |
|---------------|----------|------|---------|
| Ihnat, Joseph | Assigned |      |         |
| Lee, Herman   | Assigned | High | Unknown |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 06c0009_Overhang.pdf |             |
|      | 06c0009mas.xml       |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Xinmei Li DATE: 4/10/2012 7:34:15 PM Eastern Daylight Time

Format: When this window is resized, it will be nice if the limit states selection control is resized, too, like the grid.

Tab: The grid control should be the first tab stop instead of the last.

Help: The first line for "All other limit states", it should be "service limit states, strength limit states, and extreme event limit states" instead of "service limit state, strength limit state, and extreme event limit state".

Behavior: The three drop down lists in the grid: default should be set if not selected by user yet.

When new factors are added or existing factors are revised a message should be sent to this tab if it's open so that it can be updated accordingly.

When user changes the selection for "Analysis Module" "Spec Version" or "Factors" in grid, he will lose the selections in limit state list, this information should be included in the warning message.

Copy from Library button: When use Copy from Library button to add new design settings, if the selected factor is not an existing factor a new factor will be added to the bridge but the limit states selections are not populated in the newly added factor.

FROM: Mark Mlynarski DATE: 4/26/2012 1:55:45 PM Eastern Daylight Time

Fixed 'Help' issue

FROM: Joseph Ihnat DATE: 4/30/2012 7:32:23 AM Eastern Daylight Time

This is not a new window. Changed folder to Support Center.

|                                    |
|------------------------------------|
| Issue ID: 11351                    |
| Subject: Exterior Girder Haunch DL |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:24:05 PM

HRS AASHTO

3181

**Complete Issue Information**

|                                       |                      |
|---------------------------------------|----------------------|
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 4/12/2012 7:17:03 PM |
| Modified By: hlee                     | 4/12/2012 7:22:43 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 4/12/2012 3:17:18 PM Eastern Daylight Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received e-mail:

=====  
Herman

Our engineer reports that the AASHTO LFD, AASHTO LRFR engines are not properly establishing the dead load of overhangs whenever the thickness of the deck at the end is smaller the deck thickness entered in the typical section. It appears to increase the load instead of reducing it.

We had this problem with BRASS engine in the past, It took some time to fix it with BRASS engine. I hope this could be fixed sooner.

His detailed comparison and the virtis file that is used to investigate this issue is attached,

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 11361                            |
| Subject: Transforming girder reinforcement |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Price, Adam      | 4/18/2012 2:27:02 PM |
| Modified By: hlee              | 4/18/2012 3:13:27 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Adam Price DATE: 4/18/2012 10:32:38 AM Eastern Daylight Time  
It would be helpful if Opis/Virtis had the capability to transform prestressing and mild reinforcement in prestressed girders. How hard would it be to add this feature? Conspan is able to do this, and if I choose to transform in Conspan, then I cannot get a comparable rating with Opis/Virtis.

## Complete Issue Information

Issue ID: 11366

Subject: Virtis Enhancement request: Coverplates on Both Surfaces of Flanges

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

4/20/2012 6:35:19 PM

Modified By: hlee

4/20/2012 6:59:21 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:24:05 PM

HRS AASHTO

3184

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 4/20/2012 2:36:01 PM Eastern Daylight Time  
Currently Virtis only allows coverplates to be specified on the top of top flanges and the bottom of bottom flanges. Occasionally, steel wide flange beams and welded plate girders have been strengthened by adding coverplates to the "inside" faces of the flanges (bottom of top flanges and top of bottom flanges). Such beams can't be properly modeled in Virtis.

This proposal is to enhance Virtis so that coverplates may be specified on both top and bottom surfaces of steel beams.

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 11388                                                                                                |
| Subject: AASHTO engine (LFR, LRFR, LRFD) does not compute the rolled girder properties based on its dimensions |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: vinayagamoorthy, vinacs | 4/30/2012 1:02:05 PM  |
| Modified By: vvinayagamoorthy         | 12/17/2012 8:44:03 PM |
| Priority: High                        |                       |

**Complete Issue Information**

Category: Maintenance

**History**

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Lee, Herman        | New      | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned |          |             |
| Duray, Jim         |          |          | Maintenance |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | Virtis Bridge Exchange Errors.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 4/30/2012 9:03:28 AM Eastern Daylight Time  
 I submitted this enhancement incident on behalf of Vinacs from CalTran.  
 Currently AASHTO engine (LFR, LRFR, LRFD) does not compute the rolled girder properties based on its dimensions, it uses the properties information entered by the user. While CalTrans prefers the feature that AASHTO engine establishes Ix and A if it is NOT entered. The chain of e-mails and also the word file are attached to the incident.

The original email was listed below. Response e-mail is attached as a PDF file.

\*\*\*\*\*

\*\*\*\*\*

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]

Sent: Friday, April 27, 2012 10:30 AM  
 To: Lee, Herman  
 Cc: George Huang  
 Subject: Not sure whether I discussed this issue with Bakers in the past

Herman

**Complete Issue Information**

How the data entered for the Rolled Shape significantly affects the rating of steel girder bridge.

For example, AASHTO LFD requires that the values of A, Ix and Iy be entered. In other words, if the user did not populate these field the AASHTO LFD and LRFD will not run. However, AASHTO LRFR will run the analysis by establishing the numbers based on dimensions given for the shape.

Plot thickens further: AASHTO LRFR ignores the values entered by the user. In other words, even if we enter the values for Ix, Iy and A, those values are NOT used, rather all the numbers used in the analysis is based on dimension given.

BRASS engine establishes the Ix and Iy and A, only when those fields were left Empty.

Full summary of behavior of Each engine is studied and listed in the word document.

We have modeled a lot of bridges using BRASS engine, where A, Ix, Iy, and Z entered. We think the approach taken by the BRASS engine was based on previous input from many State Engineers and should be duplicated by the AASHTO engines.

We would like to have the AASHTO LFD and AASHTO LRFR matches BRASS engine approach (as described in the attached document).  
(See attached file: Issue 5 Rolled Girder Properties in Virtis 6\_3\_1.docx)

Vinacs M Vinayamoorthy  
Senior Bridge Engineer  
916-227-2676

\*\*\*\*\*  
\*\*\*\*\*

FROM: Krisha Kennelly DATE: 10/8/2012 1:32:26 PM Eastern Daylight Time  
Subhadeep has done the coding for this enhancement for 6.4.1 for the AASHTO Std/LRFD/LRFR engines. If the A and I aren't entered on the Steel I Shapes: Properties tabs, these engines will compute the A and I based on the flange and web dimensions that are entered, fillets are ignored. If the A and I are entered on this tab, they are used by the engines.

Geoff - please revise the AASHTO engine help to read:

If the area and inertia are not entered, the engine will compute them based on the flange and web dimensions. Fillets are ignored.

FROM: Geoffrey Trees DATE: 10/17/2012 2:19:30 PM Eastern Daylight Time  
Added material to help.

FROM: Matt Kolis DATE: 10/31/2012 9:41:20 AM Eastern Daylight Time  
Verified steel shape properties in the FE model and spec articles if the A and I are left blank in the steel rolled I shape window. For LFD/LRFD/LRFR.

Help menu does not appear to have been updated. See attached document.

4/19/2016 3:24:06 PM

**HRS AASHTO**

3187

## Complete Issue Information

FROM: Geoffrey Trees DATE: 11/2/2012 1:54:06 PM Eastern Daylight Time

The help documents were updated. Looks like they didn't make it into the alpha install for some reason. I will mention this to Joe.

FROM: Matt Kolis DATE: 11/7/2012 7:48:40 AM Eastern Standard Time

Verified in Alpha 2.

FROM: vinacs vinayagamoorthy DATE: 11/20/2012 9:54:06 AM Eastern Standard Time

This incident is to make the features available within BRASS engine also available within AASHTO Engines. Two of the features that are included in the BRAASS engine are considered in this fix. AASHTO engines are modified so that it uses the Area and Moment of Inertia given in the Property table, if they are available.

The third feature of the BRASS is NOT included in this fix is that the analysis engine utilizes the Z entered in the property table. AASHTO engine establishes Z using the member dimensions, this typically results in smaller Z. Can this be included also in this fix?

FROM: Krisha Kennelly DATE: 11/26/2012 10:20:06 AM Eastern Standard Time

the following rules were sent to Vinacs and he concurred with this implementation:

1. LRFD/LRFR spec articles will not be changed to use the user input Z. The LRFD Spec App D6.1 says to compute Z as the program is currently doing. This will match the BRASS LRFR engine implementation.
2. The LFD article to compute noncomposite plastic moment will be revised to compute  $M_p = F_y * Z$  user input Z and PNA at mid-height of the rolled section only if:
  - a. No cover plates exist
  - b. No rebar existsIf a and b aren't met, Z and PNA are computed as they are now.
3. The LFD article to compute composite plastic moment for negative moment will be revised to compute  $M_p = F_y * Z$  user input Z and PNA at mid-height of the rolled section only if:
  - a. No cover plates exist
  - b. No rebar existsIf a and b aren't met, Z and PNA are computed as they are now.
4. The LFD article to compute composite plastic moment for positive moment will not be modified since the slab has to be included in the PNA and  $M_p$  calculation.

Wayne - please modify the LFD articles in 2 and 3 as above.

Then assign to Geoff to revise the AASHTO Std Engine Help:

If the plastic section modulus,  $Z_x$ , is entered it will be used to compute the plastic moment capacity of non-composite sections not containing cover plates or slab reinforcement. If the value is not entered or if the section is composite or contains cover plates or slab reinforcement, the engine will compute  $Z_x$  based on the flange and web dimensions, ignoring fillets.

FROM: Wayne Skow DATE: 11/27/2012 10:46:34 AM Eastern Standard Time

4/19/2016 3:24:06 PM

HRS AASHTO

3188



**Complete Issue Information**

The enhancement has been added. It involved projects AbaSpecCtrl and AbanSpec.

FROM: Geoffrey Trees DATE: 11/27/2012 3:49:59 PM Eastern Standard Time  
Help has been updated.

FROM: Krisha Kennelly DATE: 11/28/2012 10:43:32 AM Eastern Standard Time  
Using the user input Z property has been implemented for 6.4.1 beta 2.

FROM: Krisha Kennelly DATE: 11/29/2012 10:34:55 AM Eastern Standard Time  
The change to the engine help was to be to only the Std engine help, not the LRFD/LRFR engine help.

FROM: Geoffrey Trees DATE: 11/29/2012 2:29:19 PM Eastern Standard Time  
Sorry, I misread above. It is now fixed.

FROM: Laura Volle DATE: 11/30/2012 2:55:29 PM Eastern Standard Time  
Verified help and calculation of Z in 6.4.1 beta 2

|                                 |
|---------------------------------|
| Issue ID: 11396                 |
| Subject: Bridge Exchange Errors |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Armbrecht, Tim   | 5/1/2012 8:44:04 PM   |
| Modified By: hlee              | 9/13/2012 12:43:18 PM |
| Priority: High                 |                       |
| Category: Maintenance          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 5/1/2012 4:47:40 PM Eastern Daylight Time

4/19/2016 3:24:06 PM

HRS AASHTO

3189

## Complete Issue Information

From my consultant (Shoup). I have attached his Word document with the list of errors. I'm also setting up a separate incident for enhancements.

In reviewing the bridge exchange feature in Virtis I don't think it will work for us (at least at this time). It is working for simple bridges but has issues with the TFS and GFS systems (see attached error list). This would be the majority of the structures that we would want to use this feature on.

I would set up an incident with Baker to fix the issues with all of the errors that I am getting. It looks like Virtis is locking out the stringers so that you can't run them even if you don't change anything. This appears to continue through to the floorbeams and girder or truss sections.

FROM: Mehrdad Ordoobadi DATE: 5/8/2012 10:24:48 AM Eastern Daylight Time  
A Floor System bridge cannot be analyzed when the bridge is not checked out or when it is being exchanged because the process requires stringer dead load reactions to be saved to the bridge description. When the bridge is not checked out, changes cannot be made to stringer dead load reactions.

FROM: Mehrdad Ordoobadi DATE: 5/11/2012 2:06:01 PM Eastern Daylight Time  
New stringer alternative or a new floorbeam can be created while the bridge is being exchanged. But when during an analysis the dead load reactions are written to the objects that existed and are not editable.

FROM: Tim Armbrecht DATE: 6/7/2012 12:12:17 PM Eastern Daylight Time  
Will there be responses to some of the other questions/comments submitted? (Such as making truss alternatives?)

Based on Mehrdad's response these structures are not ratable when they are out for Exchange. If that is the case, then why is the Exchange option offered?

We can understand your response, but if we want to make a new floorbeam alternative with deterioration then we cannot rate it because it will not allow the stringer dead load reactions to be calculated and written. Our consultants could make the modifications but would not be able to know what the actual rating is of the new member. This is unworkable. We feel there should be a way to set up a temporary save of the information so that the members can at least run and attain a rating value (without changing the original dead load reactions from the model). There needs to be a way around this in the Exchange option to make it viable to use. This can and should be a very useful tool as we evolve our practices to including consultant's work in our database.

FROM: Phil Litchfield DATE: 9/11/2012 5:09:24 PM Eastern Daylight Time  
Has any of these errors been resolved in the 6.4 beta? We can't test it with the beta sample database if there were.

FROM: Mehrdad Ordoobadi DATE: 9/12/2012 10:25:57 AM Eastern Daylight Time

----- email sent on 7/10/2012 -----

From: Ordoobadi, Mehrdad  
Sent: Tuesday, July 10, 2012 11:53 AM  
To: Duray, Jim; Lee, Herman  
Subject: VI 11396

4/19/2016 3:24:06 PM

HRS AASHTO

3190

## Complete Issue Information

Please review the incident 11396

Tim is asking for a better handling of the situation. That is being able to rate the floor system bridge when the bridge is being exchanged.

These are the solutions that I can think of:

1. Disable the floor system analysis when the bridge is being exchanged (as Tim is suggesting). The user will be able to copy the bridge and then try to do the rating of the copied bridge.
2. Add an option to Virtis/Opis application to "open the bridge for analysis" (or some other terminology). Then the user will be able to perform an analysis and review the results.
  - a. The domain will be editable but the save will be disabled.
  - b. The user needs to save and close the bridge that is being exchanged and has modified and then open it for analysis and do the analysis and review the results. The bridge explorer analysis should use this option during the analysis too.

The first option is much cheaper it just requires some documentation and disabling of the analysis when the bridge is not checked out or is being exchanged.

The second option is expensive. I will need to spend some time to see how much effort is involved in implementing this option.

Thanks,  
Mehrdad

----- email reply on 7/10/2012 -----

From: Lee, Herman  
Sent: Tuesday, July 10, 2012 2:11 PM  
To: Ordoobadi, Mehrdad; Duray, Jim  
Subject: RE: VI 11396

Another solution for evaluation:

When the stringer dead load reactions object is not editable, is it feasibility to use a temp object to continue the analysis? If "Automatically save the new computed stringer reactions" is selected in the Preferences, also need to tell the user that the stringer dead load reactions will not be saved.

Herman

Issue ID: 11397

Subject: Enhancement - Bridge Exchange

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Armbrecht, Tim

5/1/2012 8:47:51 PM

Modified By: hlee

5/2/2012 12:34:23 PM

Priority: High

Category: Enhancement

4/19/2016 3:24:06 PM

HRS AASHTO

3191

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI 11403.docx       |             |
|      | Triangular Load.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/1/2012 4:50:50 PM Eastern Daylight Time

From my consultant (Shoup). We would be interested in these enhancements sooner than later. Can I get a ballpark estimate as to the amount of effort it would take?

I would suggest that Virtis sets up an "alternate" for the trusses. Currently if a consultant was going to make changes on the truss section they would have to copy the whole "structure definition" and then change it. It might be easier to have an alternative to the main truss with the changes.

One enhancement that would make this feature better would be to have a "Verification" when bringing it back into the main database. I am thinking of a temporary condition where all of the changes are "highlighted" all the way up the layout tree. Then we could easily open up highlighted items until we get to what has changed and then easily approve it. Once we have been through the structure we could "approve" it and it would go back to the normal Virtis file.

One other issue we may have to look out for is the "Existing" check boxes on the alternatives. Usually we check these off except for the one we want rated. When I copied the alternatives and made the changes I wanted and then brought it back into our system it automatically check this alternative as "existing".

**Complete Issue Information**

Issue ID: 11403  
Subject: Linearly varying distributed member loads not exported correctly to the AASHTO engines

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 5/2/2012 5:30:36 PM  
Modified By: sthogaru 8/30/2012 1:15:31 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          |          |
| Zhang, Bin      | Assigned           |          | Bug      |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          | Unknown  |
|                 | Assigned           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | LFDRReport.XML              |             |
|      | Xsl Files.zip               |             |
|      | LFDRReport.XSL              |             |
|      | Analysis Tab Screenshot.jpg |             |

**Complete Issue Information**

|                                                  |
|--------------------------------------------------|
| 11410.docx                                       |
| 090-0179.xml                                     |
| LRFDRreport.pdf                                  |
| P0202.xml                                        |
| House_Load_4_6_12.xml                            |
| Report tool warning message<br>for the Truss.png |
| IE Trusted Sites Zone<br>Settings.png            |
| 0160158.xml                                      |
| LRFDRreport.XML                                  |
| XSL_Error.gif                                    |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 5/2/2012 1:31:17 PM Eastern Daylight Time  
G1 in attached bridge has a member distributed load varying from 0 to 1.0. The beam element load over the first FE element is not exported.

FROM: Krisha Kennelly DATE: 5/2/2012 2:49:30 PM Eastern Daylight Time  
fixed for version 6.4

FROM: Srujana Thogaru DATE: 8/30/2012 9:12:16 AM Eastern Daylight Time  
Verified with 6.4 Beta 4. Verification document attached.

|                                                      |
|------------------------------------------------------|
| Issue ID: 11410                                      |
| Subject: Error when gerating .xml report from virtis |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Zhang, Bin    |                     |
| Submitted By: Armbrecht, Tim   | 5/4/2012 5:15:18 PM |
| Modified By: plitchfield       | 9/7/2012 4:51:36 PM |
| Priority: High                 |                     |
| Category: Unknown              |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Doc1.docx           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/4/2012 1:16:30 PM Eastern Daylight Time  
Any idea what could cause this message? From my consultant (Chamberlain):

The XML page cannot be displayed  
Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

---

Access is denied. Error processing resource 'file:///C:/ProgramData/AASHTOWARE/VirtisOpis63/XslFiles/LRFDRReport.xsl'.

FROM: Herman Lee DATE: 5/4/2012 2:16:06 PM Eastern Daylight Time  
Please attached the XML and XSL files to this incident for us to determine whether the error is caused by the report files. Thanks.

FROM: Tim Armbrecht DATE: 5/9/2012 12:18:27 PM Eastern Daylight Time  
I have attached the .XML and .XSL report files from an analysis of just the (truss, West Outer) truss definition from structure 016-0158. Also included an export of the structure in question.

FROM: Herman Lee DATE: 5/9/2012 4:11:18 PM Eastern Daylight Time  
Report Tool's LFD Analysis Output and LRFD Analysis Output are not available for truss analysis. The Truss Rating Results Report can be access from the Analysis Output window.

Report Tool needs to provide better feedback to the user.

FROM: Bin Zhang DATE: 5/10/2012 2:10:41 PM Eastern Daylight Time  
A report tool warning message can be added for the truss, something like the "Report tool warning message for the Truss" attached in the document.

FROM: Tim Armbrecht DATE: 5/22/2012 10:15:43 AM Eastern Daylight Time  
Response from my consultant (Chamberlain):

Tim,

This may be correct for the reporting of trusses, however I am not running any trusses and I cannot

4/19/2016 3:24:07 PM

HRS AASHTO

3195

## Complete Issue Information

generate any.xml reports since the installation of the Windows 7 machines. It appears the problem is related specifically to LRFD reporting as I can generate an .xml report for LFD projects. The single span wide flange project I entered today will not generate any .xml reporting. I am attaching the file (090-0179.xml) for Baker to investigate. Seems like we had this problem a long time ago and I believe it had something to do with settings or permissions in internet explorer.

I get the following error, regardless of what machine and what file when trying to generate LRFD reports.

This has occurred since the installation of windows 7 and it happens with other users as well.

Error:

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

---

Access is denied. Error processing resource 'file:///C:/ProgramData/AASHTOWARE/VirtisOpis63/XslFiles/LRFDReport.xsl'.

FROM: Bin Zhang DATE: 5/22/2012 12:38:10 PM Eastern Daylight Time

The LRFD report is only for the Opis LRFD design analysis, and it is not available for the Virtis LRFR rating analysis. I tried the LRFD analysis output report for the member alternative of G1 using the 090-0179.XML bridge, I didn't experience any issues. I attached the LRFD report here in the document. Please let me know if you still have an issue with the Opis LRFD report.

FROM: Tim Armbrecht DATE: 5/23/2012 12:14:38 PM Eastern Daylight Time

I'm not seeing your attachment? Yes, we know the report is for the Opis LRFD design analysis. We have been using it in this way until Win7 64-bit was installed on our machines. Now it won't generate the reports that we have been able to generate since the installation on Win7. I understand that it works for you and not for us. Please investigate possible and potential causes for this. Do we need to adjust our setting in IE? This seems to be a specific error, so I would think you can go to the Microsoft knowledge base and see if this has been reported before.

FROM: Tim Armbrecht DATE: 5/23/2012 12:23:33 PM Eastern Daylight Time

Look at VI 8013 & 8014. What did you do there?

FROM: Bin Zhang DATE: 5/22/2012 6:27:23 PM Eastern Daylight Time

1. Please check your C drive (C:\ProgramData\AASHTOWARE\VirtisOpis64) to see if the "Xsl Files" folder exist or not (figure 1).
  2. Please follow figure 2 and 3 to change the folder option if the "C:\ProgramData" folder is hidden on your computer.
  3. Copy the "Xsl Files" to the "C:\ProgramData\AASHTOWARE\VirtisOpis64" if it is missing.
- I am not sure if this is the problem, please let me know if it works or not. Thanks!

Please read the 11410.docx for the figures.

FROM: Aaron Kemna DATE: 6/4/2012 3:01:45 PM Eastern Daylight Time

We ran into the same problem here recently. A rater was trying to access the "Advanced Rating Results Summary Report" for a non-standard gauge rating and got the same error reported above. I will attach a screen shot of where the report was trying to be accessed. We already tried the above resolution, but the XSL File folder was there. I know I can get this same error outside of Virtis so this could be an operating system issue. Maybe a recent update?

4/19/2016 3:24:07 PM

HRS AASHTO

3196



**Complete Issue Information**

FROM: Aaron Kemna DATE: 6/4/2012 3:28:27 PM Eastern Daylight Time  
I am attaching the bridge xml file and the truck xml file in case that helps. P0202 & House

FROM: Bin Zhang DATE: 6/7/2012 9:27:19 AM Eastern Daylight Time  
Aaron, I think the issue you experienced is different from the one above. I just created a new incident for you, the iuuse ID is #11628.

FROM: Joseph Ihnat DATE: 6/7/2012 2:29:37 PM Eastern Daylight Time  
The error message ("Access is denied. Error processing resource.") seems to occur when the xml and xsl files are in different domains (i.e. one or the other is on a network path). Similar to not being able to open a chm file on a network. This is a Windows security "feature" (for lack of a better word).

FROM: Herman Lee DATE: 6/7/2012 3:30:24 PM Eastern Daylight Time  
A workaround is to change the Internet Explorer "Access data sources across domains" setting to either "Enable" or "Prompt". (See attached IE Trusted Sites Zone Settings.png file)  
Please let us know whether this works for you.

FROM: Phil Litchfield DATE: 6/25/2012 4:24:09 PM Eastern Daylight Time  
Attached a screenshot of the Analysis tab on the Preferences window (View menu | Preferences).

FROM: Herman Lee DATE: 7/3/2012 9:01:24 AM Eastern Daylight Time  
Information Needed E-mail sent on 7/3/12.

FROM: Herman Lee DATE: 8/6/2012 2:58:52 PM Eastern Daylight Time  
Information Needed E-mail sent on 8/6/12.

FROM: Phil Litchfield DATE: 8/6/2012 3:25:51 PM Eastern Daylight Time  
This workaround does not fix the problem.

|                                        |
|----------------------------------------|
| Issue ID: 11422                        |
| Subject: Any xml file, Validate window |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Kolis, Matt      | 5/8/2012 3:00:53 PM   |
| Modified By: jihnat            | 5/31/2012 11:49:37 AM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Mlynarski, Mark | New    | High     | Unknown  |

### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
| Kennelly, Krisha | Assigned |      | Enhancement |
| Ihnat, Joseph    |          |      |             |
| Mlynarski, Mark  | New      | High | Unknown     |
| Kennelly, Krisha | Assigned |      | Bug         |
|                  | Resolved |      |             |
|                  | Verified |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | VI-11447-TestingPlan.docx  |             |
|      | Fatigue POI Location.docx  |             |
|      | 00233 - STSS-0087-MGRB.xml |             |
|      | CopyOfTrainingExample2.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Matt Kolis DATE: 5/8/2012 11:03:22 AM Eastern Daylight Time

When using the "Validate" window on any xml file, the Edit - Find function does not work properly. See attached word document for screenshot. This is the case in VO64 Alpha Build 5 and possibly previous builds.

FROM: Krisha Kennelly DATE: 5/15/2012 10:26:14 AM Eastern Daylight Time

this would be a Support issue since this window has not changed for version 6.4.

FROM: Joseph Ihnat DATE: 5/31/2012 7:47:04 AM Eastern Daylight Time

Same behavior in 6.3

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 11447                                             |
| Subject: Fatigue Point Location measured from top of member |

**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Foremsky, Dave      | 5/14/2012 3:24:44 PM |
| Modified By: mmlynarski           | 4/8/2013 10:30:04 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Mlynarski, Mark  |          |          | Bug      |
| Thogaru, Srujana |          |          |          |
|                  | Resolved |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | SubstructureExample01_5.8.2.7_issue..xml |             |
|      | 6.3.1_release_ScreenShot_004.jpg         |             |
|      | 11467.png                                |             |
|      | 6.4.1_beta2_ScreenShot_001.              |             |

4/19/2016 3:24:08 PM

HRS AASHTO

3199

**Complete Issue Information**

jpg  
6.3.  
1\_release\_ScreenShot\_003.jpg  
005-101.xml

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dave Foremsky DATE: 5/14/2012 11:25:00 AM Eastern Daylight Time  
On the POI form, there may be a problem with defining the vertical distance from the top of the girder. The first point shown below was defined as 0" from Top of Member:

This POI is in Cross Section #2:

Where it looks like the depth of the member is 38.5", not 36" as shown below:

| ADTT(SL) |      |              |                   |                   |                |                     |
|----------|------|--------------|-------------------|-------------------|----------------|---------------------|
| 75 year  |      |              |                   |                   |                |                     |
| Detail   | Cat. | T6.6.1.2.3-2 | Max M<br>(kip-in) | Min M<br>(kip-in) | Limit<br>State | Dist from<br>Bottom |
| UDPoi    | A*   | 530          | 306.11            | -325.84           | FAT-I          | 36.00               |
| UDPoi    | A*   | 530          | 306.11            | -325.84           | FAT-I          | 0.00                |

(full report has screenshots showing the input values)

FROM: Krisha Kennelly DATE: 10/12/2012 1:05:16 PM Eastern Daylight Time  
originally entered as an alpha bug, folder changed to support.

FROM: Krisha Kennelly DATE: 1/11/2013 11:56:48 AM Eastern Standard Time  
Fixed for version 6.5.

Alpha tester should test fix for all steel beam types : rolled, plate and builtup.

FROM: Mark Mlynarski DATE: 4/8/2013 4:03:44 PM Eastern Daylight Time  
Tested Plate Girder(TrainingBridge1)/Rolled Beam (see attached)/Built-Up (TrainingBridge2).  
See attached test plan.

|                                               |
|-----------------------------------------------|
| Issue ID: 11467                               |
| Subject: RC Shear Check 5.8.2.7 inconsistency |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Ruby, Jeff          | 5/16/2012 6:58:04 PM |

### Complete Issue Information

|                    |                       |
|--------------------|-----------------------|
| Modified By: jruby | 12/19/2012 6:50:11 PM |
| Priority: High     |                       |
| Category: Bug      |                       |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Caltrans.zip        |             |
|      | 00053 - 62626.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 5/16/2012 3:16:47 PM Eastern Daylight Time

Even though for the attached slab bridge we usually ignore shear, there is an inconsistency in the specification checks for 5.8.2.5 and 5.8.2.7. Attached Image 6.3.1\_release\_ScreenShot\_003.jpg shows the results for the shear spec check at 5.0245 ft left in span 1 for Superstructure Definition "SGB Design Check 5/16/2012". There is no shear reinforcement in this slab so the spec check fails for Load Comb. 1 and 2 max. Everywhere else, shear steel is not required. Now if you will notice the attached Image 6.3.1\_release\_ScreenShot\_004.jpg, the spec check fails at the locations that "DO NOT" require any shear reinforcement. Also, the 2 high shear locations are not checked to see if they meet the maximum spacing requirement.

Here is what I propose to clear up this inconsistency:

- 1) On checking article 5.8.2.7, forget about checking whether  $V_u > 0.5 \cdot \phi \cdot (V_c + V_p)$ , check 5.8.2.7 everywhere.
- 2) If shear steel isn't needed based on 5.8.2.5, then don't let the status of 5.8.2.7 "Fail" at this section.

FROM: Krisha Kennelly DATE: 5/29/2012 12:33:36 PM Eastern Daylight Time

I think the source of this problem is that 5.8.2.7 has a bug in it.

In 5.8.2.7, if  $V_u \leq 0.5 \cdot \phi \cdot (V_c + V_p)$ , then the article should Pass. Instead the article is checking s

4/19/2016 3:24:08 PM

HRS AASHTO

3201

## Complete Issue Information

against the max allowable spacing.

refer to the attached flowchart (11467.png) for this article. I think it is correct, the implementation of the article is not following the flowchart.

Mark - please revise the article to follow the flowchart for all versions of the spec.

After this fix is made, 5.8.2.7 and 5.8.2.5 should be consistent as to when the article should be evaluated.

FROM: Srujana Thogaru DATE: 9/19/2012 9:58:06 AM Eastern Daylight Time  
Error in checking  $V_u \leq 0.5 \cdot \phi(V_c + V_p)$  has been fixed in 5E and 4E of 5.8.2.7 article. 5.8.2.7 article is now in consistency with 5.8.2.5.

Fixed for 6.5 Release.

FROM: Srujana Thogaru DATE: 11/21/2012 1:36:24 PM Eastern Standard Time  
Above fixes are applied for 6.4.1 release.

FROM: Jeff Ruby DATE: 11/26/2012 11:15:29 AM Eastern Standard Time  
My Spec versions in 6.4.1 Beta 1 have:  
LFRD 4th 2008i  
LFRD 4th 2009i  
LFRD 5th  
LFRD 5th 2010i  
LFRD 6th

I am assuming it needs to be fixed in all of these? Above only mentions 5E and 4E.

FROM: Matt Kolis DATE: 11/30/2012 3:29:05 PM Eastern Standard Time  
Verified change in Virtis 6.4.1 Beta 2.

FROM: Krisha Kennelly DATE: 12/3/2012 2:16:49 PM Eastern Standard Time  
Jeff - it is fixed in all versions of the spec. The interims are derived from the base class (4E and 5E) if there were no changes in the interim. The 6E is derived from the 5E as well.

FROM: Matt Kolis DATE: 12/4/2012 4:22:42 PM Eastern Standard Time  
Verified

FROM: Jeff Ruby DATE: 12/10/2012 3:44:22 PM Eastern Standard Time  
Accepted in 6.4.1 Beta 2

FROM: Jeff Ruby DATE: 12/10/2012 4:12:09 PM Eastern Standard Time  
Ooops! spoke too soon. In the substructure module (should be the same as the superstructure module), the  $V_u > 0.5 \cdot \phi(V_c + V_p)$  comparison doesn't handle negative shear correctly for 5.8.2.7. (See the beta 2 screenshot 001).

For the -104.9 and the -95.9, the check whould be "TRUE" and the resulting calculations should take the absolute value of the  $V_u$ .

But, for 5.8.2.5 it does.

4/19/2016 3:24:08 PM

HRS AASHTO

3202

**Complete Issue Information**

I attached the bridge I used for this. I used "Pier #1, Pier Alt Real Drilled Shafts Try #2, Column1:Drilled Shaft at 5.94ft"

FROM: Srujana Thogaru DATE: 12/12/2012 11:10:05 AM Eastern Standard Time  
Above mentioned issue regarding substructure analysis of article 5.8.2.7 was fixed for 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/18/2012 2:01:27 PM Eastern Standard Time  
Verified.

FROM: Jeff Ruby DATE: 12/19/2012 1:50:11 PM Eastern Standard Time  
Accepted 6.4.1 Beta 3

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11482                                                                         |
| Subject: Virtis 6.3 Instantaneous Loss in PS Beam due to Elastic Shortening Calculation |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Lee, Herman         | 5/18/2012 5:19:33 PM |
| Modified By: mmlynarski           | 12/4/2012 2:51:58 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 5/18/2012 1:20:28 PM Eastern Daylight Time  
Submitted on behalf of Theresa Bergquist, Parsons. (Theresa.Bergquist@parsons.com)

Received Bridgeware Support E-mail:  
=====

**Complete Issue Information**

I am currently rating a simply supported prestressed girder bridge in Virtis 6.3 (LRFR) and do not get the same result as Virtis for the calculation of loss due to elastic shortening. I think Virtis is pulling the wrong em value into eqn AASHTO LRFD C5.9.5.2.3a-1. Per the code, em is defined as the average prestressing steel eccentricity at midspan. This has been defined for my beam as 15.5853in, the calculation of fpES shows an em as 20.5853inch which is the distance from the NA to the bottom of the beam.

This change results in a significant increase in loss and lowers my inventory rating to 1.003, which is lower than expected.

I've attached a copy of the .xml file for reference.

Can you please take a look and let me know your findings.

Thanks for your help,  
Theresa Bergquist  
Engineer I

400 Woods Mill Road South Suite 330  
Chesterfield, Missouri 63017  
Theresa.Bergquist@parsons.com  
www.parsons.com

=====

Developer Note:  
LRFD 5.9.5.2.3 needs to handle "P and CGS only" strand description. A workaround is to use the "Strands in rows" description.

FROM: Herman Lee DATE: 8/24/2012 3:43:22 PM Eastern Daylight Time  
Vinacs Vinayagamoorthy, Caltrans, reported similar issue. See attached Caltrans.zip file.  
Please confirm the fix with the bridge file in the zip.

FROM: Srujana Thogaru DATE: 9/18/2012 9:00:16 AM Eastern Daylight Time  
When strands are defined as "P and CGS only", Mid CGS is not properly retrieved.

This error has been fixed in articles for LRFD/LRFR 3E, 4E, 5E - 5.9.5.2.3 and in LFD/LFR in 17E-9.16.2.12 and 9.16.2.1.3.

Above fix is also tested with Caltrans.zip bridge XML file. Fixed for 6.5 Release.

FROM: Srujana Thogaru DATE: 11/26/2012 8:52:51 AM Eastern Standard Time  
Above fix will be included in the 6.4 Service Pack (6.4.1) release.

FROM: Matt Kolis DATE: 11/30/2012 3:10:11 PM Eastern Standard Time  
Verified current bridge and Caltrans bridge in Virtis 6.4.1 Beta 2.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 11492<br>Subject: 64-bit Install fails if user changes folder for SQL Server database |
|-------------------------------------------------------------------------------------------------|



## Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Ihnat, Joseph    | 5/21/2012 5:36:08 PM |
| Modified By: b Zhang           | 8/29/2012 5:27:45 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Lee, Herman     | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Suspended          |          | Enhancement |
|                 | Resolved           |          |             |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Joseph Ihnat DATE: 5/21/2012 1:37:25 PM Eastern Daylight Time

The 64-bit install will fail if the user chooses a folder for the SQL Server database other than the default.

32-bit works OK.

FROM: Joseph Ihnat DATE: 6/20/2012 12:52:42 PM Eastern Daylight Time

Fixed for version 6.4

FROM: Bin Zhang DATE: 8/29/2012 1:26:55 PM Eastern Daylight Time

Verified for acceptance build.

4/19/2016 3:24:09 PM

HRS AASHTO

3205

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 11533                            |
| Subject: User defined shapes and materials |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 5/30/2012 2:03:14 PM |
| Modified By: awaheed           | 4/25/2013 6:39:41 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Assistant Administrator Amjad Waheed DATE: 5/30/2012 10:06:50 AM Eastern Daylight Time  
Is there a way that a shape/material defined by a user in Bridge Workspace could be saved in the library (if the user has the right to add to the library)?

FROM: Herman Lee DATE: 5/30/2012 11:12:59 AM Eastern Daylight Time  
Materials/Beam Shapes created in the Bridge Workspace cannot be saved back to the Library.

4/19/2016 3:24:09 PM

HRS AASHTO

3206

**Complete Issue Information**

Amjad, do you want to change this incident to an enhancement request?

FROM: Assistant Administrator Amjad Waheed DATE: 5/30/2012 11:22:24 AM Eastern Daylight Time  
Yes

FROM: Herman Lee DATE: 5/30/2012 1:25:56 PM Eastern Daylight Time  
Changed Folder to Support Center.

FROM: Herman Lee DATE: 4/25/2013 8:54:21 AM Eastern Daylight Time  
Resolved for 6.5 release.

FROM: Amjad Waheed DATE: 4/25/2013 2:39:41 PM Eastern Daylight Time  
I am OK with making this an enhancement. Thanks Herman.

|                        |
|------------------------|
| Issue ID: 11544        |
| Subject: Export/Import |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Curtis, Beckie   | 5/30/2012 3:31:29 PM |
| Modified By: hlee              | 3/27/2015 6:56:06 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

4/19/2016 3:24:09 PM

HRS AASHTO

3207

**Complete Issue Information**

|          |
|----------|
| Resolved |
|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | MDOT Culvert Drawing.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 5/30/2012 11:34:17 AM Eastern Daylight Time

User should have option of importing/exporting analysis events including trucks. If this requires writing over the existing truck library this might still be the preferred option.

FROM: Jim Duray DATE: 6/6/2012 11:32:14 AM Eastern Daylight Time

Exporting the trucks with the Analysis Settings template is not included in the scope of this task. The difficulty with doing this that needs to be worked out is the vehicle ids in the database are specific to that database. It is not feasible to "write over the existing truck library" because vehicle ids are used by other items in the database and that reference would be altered by an overwrite.

One approach is to include the vehicles in the export and during the import search the target db for the vehicles in the template (by comparing each vehicle). Assign the proper id if a match is found and import the vehicles if no match is found.

FROM: Herman Lee DATE: 10/9/2012 4:09:05 PM Eastern Daylight Time

Changed Folder from Beta Testing to Support Center.

FROM: Herman Lee DATE: 3/27/2015 2:53:02 PM Eastern Daylight Time

Exporting and importing analysis templates including vehicle information has been implemented in the 6.7 release.

|                                   |
|-----------------------------------|
| Issue ID: 11555                   |
| Subject: Precast Culverts - 6.4.0 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Thompson, Todd   | 5/30/2012 6:34:44 PM |

4/19/2016 3:24:09 PM

HRS AASHTO

3208

**Complete Issue Information**

|                       |                     |
|-----------------------|---------------------|
| Modified By: hlee     | 6/7/2013 2:55:25 PM |
| Priority: High        |                     |
| Category: Maintenance |                     |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 5/30/2012 2:37:32 PM Eastern Daylight Time  
Enhancement Request

All of our precasters use WWF for reinforcement and some of the precast culverts use a combination of WWF and rebar for reinforcement.

So - 100% of our precast culverts use WWF  
I'm not confident on the % of precast culverts that have WWF and rebar.

We really need WWF to be able to use Virtis Opis for Precast Concrete Culverts.  
One could come up with a quasi equivalent area of resteel to substitute for WWF but your service checks may not be accurate.

FROM: Herman Lee DATE: 5/30/2012 6:51:40 PM Eastern Daylight Time  
Changed Folder to Support Center.

FROM: Beckie Curtis DATE: 5/31/2012 10:35:17 AM Eastern Daylight Time  
Regardless of whether wwf or rebar is used, it would be beneficial to have the ability to enter reinforcement by area of steel for each location instead of individual bars. I've attached a sample MDOT shop drawing for reference.

FROM: Herman Lee DATE: 6/7/2013 10:30:30 AM Eastern Daylight Time

4/19/2016 3:24:09 PM

HRS AASHTO

3209

**Complete Issue Information**

Modeling and analysis of culvert with welded wire reinforcements will be supported in the 6.6 release. Duplicate of Incident 11642.

|                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|
| Issue ID: 11562                                                                                           |
| Subject: Enhancement request - Allow for beam top flange Lateral Support to be entered at point locations |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Armbrecht, Tim   | 5/30/2012 7:41:03 PM  |
| Modified By: hlee              | 4/25/2013 12:52:13 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 5/30/2012 3:43:51 PM Eastern Daylight Time  
Currently, under Member Alternative, Lateral Support may only be applied to top flanges as a continuous restraint over a specified length. In cases where a top flange is not in contact with a deck, such as with some main girders and floorbeams, the top flange lateral support is provided at point locations, which cannot currently be modeled.

Maybe related to 5416 and 8858. We would need this for the AASHTO Engine.

FROM: Herman Lee DATE: 4/25/2013 8:50:26 AM Eastern Daylight Time  
Resolved for 6.5 release.

## Complete Issue Information

Issue ID: 11563

Subject: Enhancement request - Copy Bracing from One Bay to Multiple Bays

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

5/30/2012 7:45:21 PM

Modified By: plitchfield

4/29/2013 6:44:11 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:24:10 PM

HRS AASHTO

3211

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Tim Armbrecht DATE: 5/30/2012 3:46:07 PM Eastern Daylight Time  
Enable copying of bracing from one bay to multiple bays at once

FROM: Herman Lee DATE: 4/25/2013 8:56:01 AM Eastern Daylight Time  
Resolved for 6.5 release.

|                                                    |
|----------------------------------------------------|
| Issue ID: 11566                                    |
| Subject: Enhancement request - Truss Supports Deck |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Armbrecht, Tim   | 5/30/2012 7:52:40 PM  |
| Modified By: hlee              | 5/30/2012 10:22:05 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |



## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |
|                  | Resubmit |          |          |
| Thogaru, Srujana | Resolved |          | Bug      |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | PS I Wide Dist .000 R Bm Cap Ver.txt |             |
|      | Support Flexure Rating.png           |             |
|      | 3d ibeam.xml                         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/30/2012 3:53:27 PM Eastern Daylight Time

Provide the capability to indicate that a Deck Truss directly supports the deck in a Truss Floor System model. This is similar to the check-box indicating whether or not a Main Girder supports the deck in a Girder Floor System model.

Such models with deck trusses that directly support the deck may currently be modeled but inconvenient workarounds must be employed. These workarounds can also result in confusion for those who must work with the model in the future.

4/19/2016 3:24:10 PM

HRS AASHTO

3213

**Complete Issue Information**

Issue ID: 11576  
Subject: negative moment at end of prestressed beam (incl. harped strands when computing the capacity)

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Curtis, Beckie 5/31/2012 1:06:08 PM  
Modified By: bwagner 10/1/2012 5:39:02 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Unknown     |
| Kennelly, Krisha | Assigned           |          |             |
| Lee, Herman      |                    |          |             |
|                  | Information Needed |          | Enhancement |
|                  | Suspended          |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Beckie Curtis DATE: 5/31/2012 9:25:14 AM Eastern Daylight Time  
a very small negative moment is being generated at the end of this skewed prestress beam, and the capacity is set at 0. there are even draped strands, so if this even needs to be checked it shouldn't be close to 0 for the capacity and therefore the rating.

FROM: Jim Duray DATE: 6/11/2012 2:45:31 PM Eastern Daylight Time  
I added a check for harped strands when the applied moment is negative. For negative moment, if there are harped strands at the location or there is mild steel, the negative capacity is computed. Otherwise, the capacity is set to zero. Previously we only checked for mild steel (in anticipation of the

**Complete Issue Information**

mild steel enhancement).

FROM: Subhadeep Ghosh DATE: 8/31/2012 1:12:03 PM Eastern Daylight Time  
Checked the issue with 3 span PCITrainingBridge5, using harped strands at the supports. The analysis was executed for Analysis Type: Line Girder; Rating Method: LFD and Rating Vehicles: HS 20-44 for Member: G2. The Flexure Rating when checked for Stage 3 Span 2 1 ft (as shown in the screenshot: Support Flexure Rating) reflected zero capacity for negetive live load moments. Hence, I believe the above fix did not apply.

FROM: Subhadeep Ghosh DATE: 9/4/2012 1:43:29 PM Eastern Daylight Time  
Reinvestigated the incident with attached single span bridge for 3-D AASHTO LFD, to generate small negative moment at the support. Found the capacity to be zero inspite of using harped strands. Checked the detailed report and found the harped strands are being ignored. Attached is the detailed report for 0.00 (Support)

FROM: Jim Duray DATE: 9/5/2012 10:34:27 AM Eastern Daylight Time  
Because we are using the strands in computing the capacity we are using the phi factor for P/S (1.0).

FROM: Herman Lee DATE: 9/5/2012 10:39:28 AM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center.  
Resolved for 6.4 release.

FROM: Subhadeep Ghosh DATE: 9/26/2012 3:25:13 PM Eastern Daylight Time  
Verified for Beta 5

|                                                      |
|------------------------------------------------------|
| Issue ID: 11585                                      |
| Subject: Cross Frames member that made Double Angles |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 5/31/2012 5:05:05 PM |
| Modified By: hlee                     | 6/7/2012 5:26:19 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:11 PM

HRS AASHTO

3215

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 5/31/2012 1:10:03 PM Eastern Daylight Time  
 We have quite a few Xframes that utilizes double angle standard shapes. However, we will not be able create this type of shape, since Double Angel Steel shapes cannot be created.

In order to do the above scenario, Virtis needs to add one of the following option  
 (1) Option to add multiple shapes to the same member (so we could enter the same angle twice)  
 (2) Option to add "Double angle" shape

FROM: Jim Duray DATE: 6/1/2012 8:26:58 AM Eastern Daylight Time  
 It appears from the mockups that we did not plan for double angles.

FROM: Herman Lee DATE: 6/4/2012 9:24:50 AM Eastern Daylight Time  
 I checked the comments we received for the mockups. Supporting double angles was not discussed or requested.  
 Vinacs, do you want to change this incident to an enhancement request?

FROM: Herman Lee DATE: 6/7/2012 12:58:05 PM Eastern Daylight Time  
 E-mail from Vinacs Vinayagamoorthy:

=====  
 Herman

I reviewed some of the older plans to see whether they had been using double angles in the cross frames. The steel bridges built prior to 1958 has the double angles. It is being used on for all members (top, bottom and diagonal). So, I would place it as an enhancement.

I also notices that they replaced the double angle to Structural Tee after 1958.

I beleve we could trick the double angle and find and an equivalent Structural Tee, if necessary.

Vinacs M Vinayagamoorthy  
 Senior Bridge Engineer

=====

|                                          |
|------------------------------------------|
| Issue ID: 11586                          |
| Subject: XFrames within Diaphragm Wizard |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

**Complete Issue Information**

|                                       |                      |
|---------------------------------------|----------------------|
| Primary Contact: Duray, Jim           |                      |
| Submitted By: vinayagamoorthy, vinacs | 5/31/2012 5:10:14 PM |
| Modified By: hlee                     | 10/9/2012 6:45:00 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lee, Herman     | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Virtis_Duplicate_bars_Culvert.jpg |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 5/31/2012 1:16:06 PM Eastern Daylight Time  
 It would be very useful, if the Default Xframes identified within the wizard so that it will populate the diaphragms automatically in all bays.

FROM: Herman Lee DATE: 10/9/2012 2:44:14 PM Eastern Daylight Time  
 Changed Folder from Beta Testing to Support Center.

**Complete Issue Information**

Issue ID: 11613  
Subject: Duplicate Bar Mark Definitions in Culvert module

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Waheed, Amjad 6/1/2012 3:13:34 PM  
Modified By: hlee 7/7/2013 5:11:14 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 6/1/2012 11:15:33 AM Eastern Daylight Time  
It seems like it is possible to create duplicate bark mark definitions in the Culvert module. I believe that should not be the case. (see attached).

FROM: Herman Lee DATE: 6/4/2012 10:06:35 AM Eastern Daylight Time  
Since an item in the Bridge Workspace is identified by its unique id instead of its name, it's possible to create duplicate items in the Bridge Workspace. For example, two concrete materials with the same names or two superstructure definitions with the same names. Above suggestion for unique item name should be considered when we redesign the UI.

4/19/2016 3:24:11 PM

HRS AASHTO

3218

## Complete Issue Information

FROM: Amjad Waheed DATE: 6/4/2012 11:27:01 AM Eastern Daylight Time  
I believe, if duplicate bar types will be allowed in the Bar Mark Definitions, it will be confusing to the user at the time of assigning reinforcement which bar is which.  
Also the Bars shall be sorted out by BAR MARKS in the Bar Mark Definitions. At present, it is not possible to sort them by any order. Thanks.

FROM: Herman Lee DATE: 6/4/2012 12:24:32 PM Eastern Daylight Time  
I consider above suggestions as enhancements since the way the bar mark definitions implemented in culvert is consistent with the way implemented in reinforced concrete member.

I changed the Category to Enhancement for further discussion.

FROM: Amjad Waheed DATE: 10/4/2012 3:02:34 PM Eastern Daylight Time  
Herman: I do not think this is enhancement. It is confusion that two different bars can have same names under the Bar Mark Definitions. How would the user know out of two same Bar names, which one will get assigned.

FROM: Herman Lee DATE: 10/4/2012 4:11:22 PM Eastern Daylight Time  
I agree it will be confusing if the user entered two different bar marks using the same name. We could add checking for duplicate name when user click OK or Apply.

FROM: Herman Lee DATE: 10/9/2012 4:08:29 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center.

FROM: Herman Lee DATE: 7/7/2013 1:08:35 PM Eastern Daylight Time  
Duplicate of Incident 12712. 12712 has more general description of the issue.

|                                                 |
|-------------------------------------------------|
| Issue ID: 11618                                 |
| Subject: Steel bars along the length of culvert |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 6/5/2012 1:37:20 PM  |
| Modified By: hlee              | 10/9/2012 6:38:48 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |

4/19/2016 3:24:11 PM

HRS AASHTO

3219

**Complete Issue Information**

|               |           |      |             |
|---------------|-----------|------|-------------|
|               | Suspended |      | Enhancement |
| Duray, Jim    | New       | High | Unknown     |
| Ihnat, Joseph | Assigned  |      |             |
| Li, Xinmei    | Resolved  |      | Bug         |
|               | Assigned  |      |             |
|               | Resolved  |      |             |
|               | Assigned  |      |             |
|               | Resolved  |      |             |
|               | Verified  |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | PSShearGui vs<br>RCTeeShearGui.docx |             |
|      | PS Stirrup Wizard.docx              |             |
|      | StirrupWizardDataEntry.bmp          |             |
|      | 361002_Test1.xml                    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 6/5/2012 9:40:32 AM Eastern Daylight Time

Longitudinal steel bars are not shown on any of the screens of Culvert module. How can we input and store steel bars along the length of the culvert?

FROM: Herman Lee DATE: 6/6/2012 7:08:33 AM Eastern Daylight Time

I checked the comments we received for the mockups. Description of longitudinal steel bars in the culvert model was not discussed or requested.

4/19/2016 3:24:11 PM

HRS AASHTO

3220



**Complete Issue Information**

I changed the Category to Enhancement for further discussion.

FROM: Herman Lee DATE: 10/9/2012 2:36:38 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 11624                                                                          |
| Subject: Start Distance within PS-Shear Reinforcement GUI does not automatically updated |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: vinayagamoorthy, vinacs | 6/6/2012 2:34:22 PM  |
| Modified By: vvinayagamoorthy         | 10/4/2012 1:20:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 6/6/2012 10:40:40 AM Eastern Daylight Time  
Typically, user make mistake in counting the number of spaces or spacing during data entry. They may want to go back and modify/correc the mistake. I am a reporting a case user is trying modify a value that is already reported. When a user modify either number of spaces or spacing in a row, the start distance reported in the subsequent rows should be automatically reestablished, provided that the user allowed the software auto populate the cell.

This behavior is allowed within RC-Shear Reinforcement GUI.

FROM: Joseph Ihnat DATE: 6/11/2012 10:25:13 AM Eastern Daylight Time  
May, this window originally had this capability, but it was commented out in Jan 2009 for VI 3855

4/19/2016 3:24:12 PM

HRS AASHTO

3221

## Complete Issue Information

(Stirrup Wizard enhancement). Do you remember why?

FROM: Xinmei Li DATE: 6/19/2012 10:23:57 PM Eastern Daylight Time

I don't remember why those code was commented out. I tried to uncomment it and everything works fine for me. So I just uncomment it now.

FROM: vinacs vinayagamoorthy DATE: 7/18/2012 9:34:00 AM Eastern Daylight Time

When I tested this with Beta 2, it works for many cases, however, it did not work for one bridge, where the shear layout is generated using the wizard. We utilized the symmetry by even scenario to generate the layout. The first start distance after the symmetrical point remain the same for some reason.

Attached is the bridge example. Super: Span 1 MDL1 of 1 (Data Entry), Girder G5.

Similar shear reinforcement pattern is entered for G1 and G2 manually. (you could use to regenerate using wizard). For these girders, changing a value (# of stirrups or spacing) automatically adjusts the end distance.

I believe this error is due to tolerance. I have tried a few cases, where addition of distance exactly matches the girder length. In this example, I am off by 0.00001 inches.

FROM: Xinmei Li DATE: 8/30/2012 11:12:02 AM Eastern Daylight Time

I tested with the attached bridge, Super: Span 1 MDL1 of 1 (Data Entry), Girder G5 in Beta4. I entered shear reinforcement for G5 by using stirrup wizard, see attached file for data entry. The first start distance after the symmetrical point is 53.291533 which looks fine to me. I tried to change a couple spacing and number of spaces, the end distance is adjusted fine.

Comparing G5 to G1/G2, G5 is generated by using even number of spaces, G1/G2 is using odd number of spaces. Other than that everything looks the same.

FROM: vinacs vinayagamoorthy DATE: 9/6/2012 3:14:52 PM Eastern Daylight Time

For some reason, I still have problem with this one. I am able to duplicate this. Attached word document PS Wizard.doc has the screen shots that shows the problem.

I am resubmitting to check this one more around. See whether you could duplicate the problem

Please note that the current stirrup GUI is far better than that is available within 6.3. Therefore, in case we cannot find the source of the error, I am willing to accept this improved GUI.

FROM: Xinmei Li DATE: 9/6/2012 4:05:05 PM Eastern Daylight Time

I'm able to reproduce the bug reported in the attached document. The problem is the row number was not set correctly when recalculating the distance after data entry was updated. This bug is resolved when new dll is available.

FROM: Joseph Ihnat DATE: 9/26/2012 3:20:56 PM Eastern Daylight Time

Verified in Beta 5/Acceptance Build.

FROM: Krisha Kennelly DATE: 10/1/2012 11:10:25 AM Eastern Daylight Time

Found during investigation for11901.

BID9, open the PS Shear Reiforcement Range window.

Hit Apply.

4/19/2016 3:24:12 PM

HRS AASHTO

3222

**Complete Issue Information**

Get this message:

"End Distance is 228' which longer than the precast beam. Precast beam length is 110'."

Hit ok then stirrups in a different span show up.

Can't get this window to close only showing the stirrups in span 1.

FROM: Krisha Kennelly DATE: 10/1/2012 11:11:59 AM Eastern Daylight Time  
Joe made the fix and Herman and I verified it in release.

FROM: vinacs vinayagamoorthy DATE: 10/4/2012 9:20:18 AM Eastern Daylight Time  
This incident is working as it should and therefore, I consider this as fixed.

|                                               |
|-----------------------------------------------|
| Issue ID: 11626                               |
| Subject: Library Vehicles Wheel Contact Width |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 6/7/2012 11:53:49 AM |
| Modified By: kkennelly         | 6/14/2012 5:16:59 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |
| Lee, Herman      | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | scan.pdf            |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Complete Issue Information**

**Description**

FROM: Herman Lee DATE: 6/7/2012 7:55:05 AM Eastern Daylight Time  
Submitted on behalf of Dan Staton, Bureau of Land Management (dstaton@blm.gov).

Bridgeware e-mail:

=====  
I'm reviewing the Standard AASHTO Type 3S2 truck that is defined in the library. I have not seen the Wheel Contact Widths that are listed before. Widths of 11.1804" and 13.9195" are defined. Similar strange widths are entered for the Type 3 and Type 3-3 trucks. What is the basis for these wheel contact widths? Can you provide me the AASHTO LRFD or MBE reference?

Thanks,

Dan Staton  
Civil Engineer  
Architecture and Engineering Branch  
National Operations Center  
Bureau of Land Management  
=====

Krishna, AASHTO LRFD C3.6.1.2.5 has a equation to calculate tire width. Is there any other equation or reference we used for the contact widths in the library vehicles?

FROM: Herman Lee DATE: 6/11/2012 7:35:45 AM Eastern Daylight Time  
Bridgeware e-mail from David Wolfe, Moffatt & Nichol (DWolfe@moffattnichol.com):

=====  
Bridgeware – On your support site Issue ID 11626, I believe the source for tire width given in the VIRTIS library is based on the contact area given in older versions of ASSHTO Standard Specifications (Section 3.30 found in AASHTO Std. 16th Ed. 1996 for example).

15.5 kip axle for Type 3S2 = 7,750 # wheel = 77.5 sq. in. contact = 5.5678 in. long x 13.9194 in. wide (=sqrt(2.5x77.5 sq. in.)) for 1:2.5 aspect ratio.

Respectfully - DW

=====  
FROM: Krishna Kennelly DATE: 6/14/2012 1:14:42 PM Eastern Daylight Time  
AASHTO Std Spec article 3.30 was used to compute the contact widths.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11642<br>Subject: Welded wire reinforcement in Library |
|------------------------------------------------------------------|

|                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Duray, Jim<br>Submitted By: Waheed, Amjad 6/13/2012 4:17:41 PM |
|-------------------------------------------------------------------------------------------------------------------|

**Complete Issue Information**

|                       |                      |
|-----------------------|----------------------|
| Modified By: hlee     | 5/16/2014 7:55:18 PM |
| Priority: High        |                      |
| Category: Enhancement |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Ihnat, Joseph    |          |          |          |
| Kennelly, Krisha |          |          |          |
| Ihnat, Joseph    |          |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | 00058 - TestBridge(ALS-1).xml |             |
|      | Test Bridge (ALS-1)_Diaphragm |             |
|      | Error.docx                    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 6/13/2012 12:22:24 PM Eastern Daylight Time  
 Many concrete culvert manufacturers use welded wires as reinforcement. I think it will be beneficial for the users if welded wire reinforcement details are built in standard library. The details are given in ACI 318.

FROM: Herman Lee DATE: 10/9/2012 2:39:58 PM Eastern Daylight Time  
 Changed Folder from Beta Testing to Support Center.

FROM: Herman Lee DATE: 6/7/2013 10:38:34 AM Eastern Daylight Time  
 Related to Incident 11555.

FROM: Herman Lee DATE: 5/16/2014 3:54:31 PM Eastern Daylight Time

4/19/2016 3:24:12 PM

HRS AASHTO

3225

**Complete Issue Information**

WWR implemented for 6.6 release.

|                                    |
|------------------------------------|
| Issue ID: 11697                    |
| Subject: Diaphragm Placement Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Litchfield, Phil | 7/6/2012 8:41:08 PM  |
| Modified By: kkennelly         | 9/12/2012 2:03:44 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 7/6/2012 4:44:25 PM Eastern Daylight Time  
From consultant (Staggemeyer):

Not all of the diaphragms are showing up in the schematic when using the diaphragm wizard ("Structure Framing Plan Details" window - Diaphragms tab). When using the wizard, if I choose the skewed plan with staggered diaphragms perpendicular to the girders (the one in the lower right) and check "Enter groups of equal spacing" and "Right girder" and set the diaphragm spacing to 1 @ 25ft, 1 @ 25ft, 1 @ 25ft, the first set of diaphragms do not show up on the schematic. If I set the spacings to 3 @ 25ft then all of the diaphragms show up. I have attached a word document with screenshots that will hopefully describe the issue better.

FROM: Joseph Ihnat DATE: 7/16/2012 1:16:49 PM Eastern Daylight Time

4/19/2016 3:24:12 PM

HRS AASHTO

3226

**Complete Issue Information**

Changed Folder to Support Center.

FROM: Joseph Ihnat DATE: 9/11/2012 11:33:39 AM Eastern Daylight Time  
Krisha, please take a look at this. I'm not exactly sure where the problem lies.

FROM: Krisha Kennelly DATE: 9/12/2012 9:38:35 AM Eastern Daylight Time  
I think the problem is in the wizard (CreateCase3GrpsDiaphragms()) not the schematic.

|                                               |
|-----------------------------------------------|
| Issue ID: 11698                               |
| Subject: Compute Live Load Distribution Crash |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Li, Xinmei    |                     |
| Submitted By: Litchfield, Phil | 7/9/2012 2:30:34 PM |
| Modified By: sghosh            | 9/4/2012 2:03:19 PM |
| Priority: High                 |                     |
| Category: Bug                  |                     |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

4/19/2016 3:24:13 PM

HRS AASHTO

3227

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | Deck_Profile_screen_shot_ap.jpg |             |
|      | 2901420.xml                     |             |
|      | Deck_Profile_screen_shot_aw.jpg |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 7/9/2012 10:35:56 AM Eastern Daylight Time  
From consultant (Staggemeyer):

In the Live Load Distribution window, when I select "Compute from Typical Section", I get a "Virtis Application has stopped working" pop up window. This has happened on two different models, both are attached.

FROM: Todd Thompson DATE: 7/9/2012 3:09:07 PM Eastern Daylight Time  
LF vs LRFR

Any specific Girder causing the problem?  
I imported 0162133 into sample DB and for Girder G2 - both LF and LRFR compute LLDF's just fine and without any errors.

FROM: Xinmei Li DATE: 7/11/2012 11:08:16 AM Eastern Daylight Time  
I am able to reproduce it with attached bridge 0160378, Member 10-9th W Int.

FROM: Xinmei Li DATE: 7/11/2012 2:14:12 PM Eastern Daylight Time  
Resolved for next 64 beta build

FROM: Joseph Ihnat DATE: 7/20/2012 12:09:17 PM Eastern Daylight Time  
Changed folder to Support Center. Verified fixed in 6.4 (Beta Build 3).

FROM: Joseph Ihnat DATE: 8/29/2012 10:49:33 AM Eastern Daylight Time  
Verified in Beta 4/Acceptance Build.

FROM: Subhadeep Ghosh DATE: 9/4/2012 9:58:53 AM Eastern Daylight Time  
Verification Confirmed for beta 4

|                                          |
|------------------------------------------|
| Issue ID: 11702                          |
| Subject: Deck Profile Screenshot mystery |

4/19/2016 3:24:13 PM

HRS AASHTO

3228



### Complete Issue Information

|                  |                        |                      |  |
|------------------|------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center |                      |  |
| Primary Contact: | Ihnat, Joseph          |                      |  |
| Submitted By:    | Waheed, Amjad          | 7/10/2012 6:58:23 PM |  |
| Modified By:     | sthogaru               | 8/29/2012 3:12:01 PM |  |
| Priority:        | High                   |                      |  |
| Category:        | Bug                    |                      |  |

### History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Unknown     |
| Kennelly, Krisha | Information Needed |          |             |
| Duray, Jim       | Suspended          |          | Enhancement |
|                  | Duplicate          |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 7/10/2012 3:05:00 PM Eastern Daylight Time  
Deck Profile Windows for Prestressed Concrete show up different on two different machines both using Virtis Opis 6.3.1. Both machines run on Windows 7, 64 bit. One of our engineer (AP) is using a CADD machine, while I (AW) use a regular laptop.  
Attached screenshots from the same bridge data file are attached. My laptop (AW) shows many more columns. What are we doing wrong?

FROM: Joseph Ihnat DATE: 7/11/2012 7:41:21 AM Eastern Daylight Time  
Please export the bridge and attach xml file to this incident.

FROM: Amjad Waheed DATE: 7/11/2012 9:02:52 AM Eastern Daylight Time  
Added bridge data export file 2901420.xml, as requested.

4/19/2016 3:24:13 PM

HRS AASHTO

3229

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 7/11/2012 10:44:49 AM Eastern Daylight Time  
Does the (AP) computer have any older versions of Virtis still installed?  
Try deleting the registry key "HKEY\_CURRENT\_USER\Software\AASHTOWare  
Virtis\Opis\virtis\Settings\UiDeckConcreteDlg\_Grid5" then reopen the window.

FROM: Amjad Waheed DATE: 7/11/2012 2:54:10 PM Eastern Daylight Time  
We tried above solution (deleting registry entry) but no luck. We still cannot see all the columns.

FROM: Joseph Ihnat DATE: 7/12/2012 1:32:28 PM Eastern Daylight Time  
My mistake. The correct registry key is "HKEY\_CURRENT\_USER\Software\AASHTOWare  
Virtis\Opis\Virtis\Opis\OpisSub\Settings\UiDeckConcreteDlg\_Grid\*"

FROM: Joseph Ihnat DATE: 7/12/2012 2:29:58 PM Eastern Daylight Time  
After further review, I found a way to reproduce this in the current code: Open PCITrainingBridge1 and  
create a timber mbr alt. Open the timber mbr alt's Deck Profile window, close it, then open the PS mbr  
alt's Deck Profile window.  
Fixed for version 6.4

FROM: Srujana Thogaru DATE: 8/29/2012 11:02:41 AM Eastern Daylight Time  
Fixed verified with 6.4 Beta 4

|                                                   |
|---------------------------------------------------|
| Issue ID: 11713                                   |
| Subject: PS Deck Beam Distribution Factor Control |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Kemna, Aaron     | 7/13/2012 3:37:43 PM  |
| Modified By: hlee              | 7/16/2014 11:22:55 AM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:24:13 PM

HRS AASHTO

3230

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 7/13/2012 11:51:09 AM Eastern Daylight Time  
Incident 10279 was addressed, but P/S Deck Beams are very similar. For adjacent construction w/o a composite deck where the beams are not sufficiently connected to act as a unit, the distribution factor equations are different. Appears that Virtis always assumes a sufficient connection between beams.

FROM: Krisha Kennelly DATE: 7/13/2012 12:33:56 PM Eastern Daylight Time  
What type of beam shape are you referring to? Adjacent box beams?

FROM: Aaron Kemna DATE: 7/13/2012 1:24:10 PM Eastern Daylight Time  
Adjacent Box Beams. Type G cross-section in AASHTO.

FROM: Krisha Kennelly DATE: 7/13/2012 3:08:49 PM Eastern Daylight Time  
Enhancement request to provide ability for user to specify if adjacent boxes should be considered type f or type g by using the sufficiently connected checkbox.

FROM: Herman Lee DATE: 10/9/2012 2:40:57 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center.

FROM: Herman Lee DATE: 7/16/2014 7:19:18 AM Eastern Daylight Time  
Duplicate of Incident 9734.

|                                     |
|-------------------------------------|
| Issue ID: 11719                     |
| Subject: Culvert - Bi-axial flexure |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Thompson, Todd   | 7/16/2012 5:42:38 PM  |
| Modified By: hlee              | 3/25/2013 12:50:03 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

4/19/2016 3:24:13 PM

HRS AASHTO

3231

## Complete Issue Information

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
|                  | Information Needed |          |          |
| Zhang, Bin       | Assigned           |          | Bug      |
| Ghosh, Subhadeep | Resolved           |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                                      | Description |
|------|--------------------------------------------------------------------------|-------------|
|      | TB-003(Cont)July182012.xml                                               |             |
|      | Development GUI.docx                                                     |             |
|      | 54 0526L.xml                                                             |             |
|      | DevelopmentbarOverride.docx                                              |             |
|      | FW Partial area for when the section falls within development region.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/16/2012 1:44:38 PM Eastern Daylight Time

During design, we normally ignore designing/checking bi-axial flexure since it is "more conservative" to do so.

Is there a way to turn off the bi-axial flexure, like in the Control Options?

Including it for load rating is probably fine all the time, but might be nice to have a control option for LF also.

4/19/2016 3:24:14 PM

HRS AASHTO

3232

**Complete Issue Information**

FROM: Jim Duray DATE: 7/17/2012 10:58:38 AM Eastern Daylight Time  
I'm investigating this now. Hopefully you recall that culvert (for the most part) is the WisDOT culvert program so I don't know why biaxial was used. The WisDOT program uses the AASHTO spec-check module. So it is using a WisDOT modified version of the Opis biaxial column routine. There is no uniaxial routine.

FROM: Jim Duray DATE: 7/19/2012 8:54:56 AM Eastern Daylight Time  
I coded a uniaxial routine based on the biaxial routine that does not iterate to find the angle of the neutral axis (since we know it's orientation because there is moment about only one axis). It is producing the same results but is slightly faster since it doesn't have to iterate to find the angle of the NA.

FROM: Todd Thompson DATE: 7/19/2012 3:10:00 PM Eastern Daylight Time  
I guess what I should have said - can we do the walls and other members as only bending/shear and ignore any axial effects?

FROM: Jim Duray DATE: 7/23/2012 10:28:22 AM Eastern Daylight Time  
That would be an enhancement.

FROM: Todd Thompson DATE: 3/21/2013 8:18:38 AM Eastern Daylight Time  
Please revise the status so it reflects an Enhancement to make the enhancement list.  
Thanks,  
Todd

FROM: Herman Lee DATE: 3/25/2013 8:47:22 AM Eastern Daylight Time  
Changed Category to Enhancement.

Issue ID: 11732  
Subject: Override option for Development length within Point of Interest is not working properly.

Folder: /Virtis/Support Center  
Primary Contact: Ghosh, Subhadeep  
Submitted By: vinayagamoorthy, vinacs 7/18/2012 8:44:51 PM  
Modified By: vvinayagamoorthy 12/17/2012 2:34:28 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 7/18/2012 4:56:16 PM Eastern Daylight Time  
The AASHTO software is not considering a bar that is made "fully developed" by using the overriding feature availabel within point of interest.

I believe the source of the problem comes from the development length calc routine. This routine (attached in the word file) concludes this bar is data entry error and ignored the bar entirely. As a result, this bar was not available for rating at all. This should not happen.

This bar though is not long enough to fully develop, but can handle partial loading. Please check this and correct.

Structure: Span 1-3; Girder G2; Analysis point Span2 1.25ft from support.

FROM: Herman Lee DATE: 7/19/2012 2:59:13 PM Eastern Daylight Time  
Vinacs, could you attach the bridge file to this incident? Thanks.

FROM: vinacs vinayagamoorthy DATE: 7/23/2012 2:30:24 PM Eastern Daylight Time  
Herman. I have added the required files for you.

FROM: Herman Lee DATE: 8/31/2012 1:24:17 PM Eastern Daylight Time  
Attached e-mail dicussion related to this issue.

FROM: Subhadeep Ghosh DATE: 10/5/2012 12:10:59 PM Eastern Daylight Time  
Put in checks to export bars based on POI override at start and at end development length. Fix going into 6.5.

FROM: Subhadeep Ghosh DATE: 11/27/2012 9:35:31 AM Eastern Standard Time  
Checked in the codes for 6.4.1 Beta 2. Fix going into 6.4.1 patch.

FROM: Matt Kolis DATE: 12/6/2012 2:34:31 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: vinacs vinayagamoorthy DATE: 12/12/2012 1:04:57 PM Eastern Standard Time  
Original problem got fixed, however, I noticed another issue. Please see the attached document for more information.

FROM: Subhadeep Ghosh DATE: 12/12/2012 2:37:28 PM Eastern Standard Time  
The check boxes for any POI for any set of bars are taken into consideration ONLY if the "Development" tab "Override Schedule" is checked. So if the bar set is deemed NOT fully developed and the "Override Schedule" is not checked, then the bar sets are NOT considered automatically as

4/19/2016 3:24:14 PM

HRS AASHTO

3234

**Complete Issue Information**

developed. This is irrespective of whether an individual set of bar is checked or unchecked in POI. This can be verified from the Tensile Capacity of the bar for the POI under consideration for Set 1 and Set 2 as Fully and NOT Fully developed (POI window remaining unchanged). The check boxes for a bar set in POI window appears by default, only if the bar set in that region is marked as "Fully Development" in the reinforcement definition under "Girder Profile" at the instance of its creation.

FROM: vinacs vinayagamoorthy DATE: 12/17/2012 9:34:28 AM Eastern Standard Time  
Yes, I agree with your statement. Therefore, I am going to consider this issue resolved

|                                      |
|--------------------------------------|
| Issue ID: 11769                      |
| Subject: Culvert General Preferences |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 7/27/2012 7:25:36 PM |
| Modified By: dteal             | 6/26/2013 2:17:33 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
|                 | Assigned           |          |             |
| Lee, Herman     | Resolved           |          |             |
|                 | Verified           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          | Enhancement |
|                 | Resolved           |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:14 PM

HRS AASHTO

3235

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 7/27/2012 3:25:57 PM Eastern Daylight Time  
Am I correct that we do not have any items in the General Preferences for culvert?

FROM: Herman Lee DATE: 8/6/2012 10:29:43 AM Eastern Daylight Time  
Yes.

FROM: Herman Lee DATE: 8/6/2012 10:39:39 AM Eastern Daylight Time  
The items available in General Preferences are based on what available in 6.3.

FROM: Matt Kolis DATE: 8/20/2012 1:39:44 PM Eastern Daylight Time  
No change.

FROM: Dean Teal DATE: 9/5/2012 1:16:15 PM Eastern Daylight Time  
Should there be?  
Should Culvert be excluded?  
Do we need a bid item on every new feature/enhancement estimate so we can keep the General Preferences feature up to date?

FROM: Herman Lee DATE: 9/5/2012 4:08:18 PM Eastern Daylight Time  
Some culvert inputs (e.g. control options) should make available in General Preferences.

Each estimate has line items for Report Tool, NSG, Help, API, Test Scripts and 508 Compliance. I think we need to add a line item for General Preferences in all future estimates.

Dean, how would you like to move forward with this issue? Thanks.

FROM: Herman Lee DATE: 9/28/2012 11:39:37 AM Eastern Daylight Time  
The Task Force decided to implement preference items for 6.4 new features in 6.4.1 (6.4 Service Pack 1).

FROM: Herman Lee DATE: 10/25/2012 9:35:38 AM Eastern Daylight Time  
Implemented General Preferences for 6.4 new features in 6.4 Service Pack (6.4.1).

Issue ID: 11775

Subject: Would like ability to run a spec check from a previous 3D bridge analysis

Folder: /Virtis/Support Center

4/19/2016 3:24:14 PM

HRS AASHTO

3236



**Complete Issue Information**

|                               |                      |
|-------------------------------|----------------------|
| Primary Contact: Lee, Herman  |                      |
| Submitted By: Crudele, Brenda | 8/1/2012 12:50:10 PM |
| Modified By: hlee             | 8/1/2012 5:32:28 PM  |
| Priority: High                |                      |
| Category: Enhancement         |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brenda Crudele DATE: 8/1/2012 8:57:47 AM Eastern Daylight Time

This is an enhancement request for 3D analysis. Currently if you run a 3D analysis on one member alternate the program analyzes the whole bridge and then you get spec check results for that one girder. If now you want to do a spec check on another girder you have to completely rerun the whole analysis again. This can take a long time if you have a large bridge. It can also take a long time to completely run the whole bridge.

Request would be to add the ability to reuse a previous 3D analysis and run a spec check for another girder based on a previous analysis.

## Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11794                                           |
| Subject: Virtis 6.4 Release Date and Shipment of Software |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Laughlin, Christopher | 8/8/2012 12:23:26 PM |
| Modified By: hlee                   | 8/9/2012 2:21:31 PM  |
| Priority: High                      |                      |
| Category: Support                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Christopher Laughlin DATE: 8/8/2012 8:25:25 AM Eastern Daylight Time  
Could you please confirm the scheduled release date and software shipment date for Virtis 6.4 ? Thank you !

FROM: Herman Lee DATE: 8/9/2012 10:16:09 AM Eastern Daylight Time  
The scheduled release date for 6.4 is end of August.

## Complete Issue Information

Issue ID: 11795  
Subject: Virtis 6.4

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Laughlin, Christopher      8/8/2012 1:30:45 PM  
Modified By: hlee      8/9/2012 2:24:47 PM  
Priority: High  
Category: Support

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:24:15 PM

HRS AASHTO

3239

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 8/8/2012 9:34:18 AM Eastern Daylight Time

Follow up question related to issue ID 11794: We are currently running Version 6.2 in production, to get to Version 6.4 when released, is it ok to go straight to 6.4 from 6.2 using provided 6.4 scripts and skip 6.3 install ? or is it required to install 6.3 first, then go to 6.4 ?

FROM: Herman Lee DATE: 8/9/2012 10:16:12 AM Eastern Daylight Time

The Migration Wizard comes with the 6.4 release will support direct 6.2 to 6.4 migration path.

|                                        |
|----------------------------------------|
| Issue ID: 11800                        |
| Subject: Bridge Explorer Sorting Error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Teal, Dean       | 8/8/2012 6:33:46 PM  |
| Modified By: dteal             | 9/28/2012 1:33:34 PM |
| Priority: High                 |                      |

4/19/2016 3:24:15 PM

HRS AASHTO

3240

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Trees, Geoffrey | Assigned  |          |          |
|                 | Duplicate |          |          |
|                 |           |          | Support  |
|                 |           |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Library_import_error_2012-08-09.jpg |             |
|      | Virtis_Library-fixed.xml            |             |
|      | Virtis_Library.xml                  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 8/8/2012 2:35:10 PM Eastern Daylight Time  
I added 8 structures to by importing them (attached in a zip file)  
These structures have numeric names for the bridge ID  
When I sort the Bridge ID in the root directory of the bridge explorer they sort just fine (ascending/desending)  
I created a new directory to put them in  
I dragged them into that directory  
The sort order is now all messed up and I cannot sort them assending/desending like I can in the root

FROM: Dean Teal DATE: 8/9/2012 7:45:09 AM Eastern Daylight Time  
FYI - Notes worth mentioning  
The structures I attached in my zip file came from my 6.3.1 oracle data base  
When copying them in to 6.4 I first imported, then I highlighted the group and copied them into a new directory I created  
As another test, I created a new directory, then I copied them in one at a time. The sort order both ascending/descending stayed correct until I copied in structure ID 001-037, from that point on they were screwed up. I then deleted them all and started over again, one at a time skipping 001-037 and

4/19/2016 3:24:15 PM

HRS AASHTO

3241

**Complete Issue Information**

copying 001-046, no change.

FROM: Joseph Ihnat DATE: 8/13/2012 12:45:07 PM Eastern Daylight Time  
Changed folder to Support Center. I imported them into 6.3.1 and see the same behavior.

FROM: Dean Teal DATE: 8/16/2012 10:43:57 AM Eastern Daylight Time  
Can you think of any work around that will sort on my Bridge ID?  
This has been really crippling our efforts in working with our new bridge overload/routing capabilities.

FROM: Joseph Ihnat DATE: 9/12/2012 11:18:19 AM Eastern Daylight Time  
I don't know if this a suitable workaround for you, but i noticed that if I added another bridge to the list (e.g. TrainingBridge1) then it sorted OK.  
This appears to be an issue with the grid software that we use. I've opened a support incident with the vendor.

FROM: Joseph Ihnat DATE: 9/18/2012 2:08:37 PM Eastern Daylight Time  
Fixed for version 6.4

FROM: Krisha Kennelly DATE: 9/26/2012 2:38:48 PM Eastern Daylight Time  
Verified for the acceptance build. I imported each of the 8 attached bridges into the 'all bridges' folder. then I created a new folder with the 'list' type. then I right clicked to copy all of the bridges from the Bridge Explorer and pasted them to the new folder I had created. then for this new folder, I double clicked on the 'bridge id" column to get them to sort. they sorted correctly numerically within the new folder.

FROM: Dean Teal DATE: 9/28/2012 9:33:34 AM Eastern Daylight Time  
Accepted in 6.4 Beta 5

|                               |
|-------------------------------|
| Issue ID: 11807               |
| Subject: Library Import Error |

|                                  |                     |
|----------------------------------|---------------------|
| Folder: /Virtis/Support Center   |                     |
| Primary Contact: Trees, Geoffrey |                     |
| Submitted By: Waheed, Amjad      | 8/9/2012 2:14:50 PM |
| Modified By: gtrees              | 9/7/2012 8:41:37 PM |
| Priority: High                   |                     |
| Category: Bug                    |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:15 PM

HRS AASHTO

3242

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/9/2012 10:28:29 AM Eastern Daylight Time

Hi,

We have started getting a very strange error. I open the library explorer, export everything to a XML file; close the library explorer; go back to library explorer; try to import the same XML file and I get an error.

I have attached XML file and error screen shot both.

FROM: Todd Thompson DATE: 8/9/2012 11:23:41 AM Eastern Daylight Time

Amjad - check VI 11528 - I had same problem. It's a problem from 6.3/6.3.1

FROM: Geoffrey Trees DATE: 8/9/2012 3:02:49 PM Eastern Daylight Time

Thanks Todd. I was thinking the same thing but I am going to investigate this to make sure it is not a different issue.

FROM: Geoffrey Trees DATE: 8/10/2012 3:11:39 PM Eastern Daylight Time

I confirmed that this is a duplicate of issue 11528 as Todd mentioned above. I have attached a fixed version of your file. This issue affects exports from 6.3 and 6.3.1. I have fixed this export issue in 6.4 but exports from 6.3 and 6.3.1 will still be affected.

FROM: Amjad Waheed DATE: 8/13/2012 8:01:19 PM Eastern Daylight Time

Geoffrey,

Does it mean that this issue will remain un-fixed for 6.3.0 & 6.3.1 users? It will be a problem as several of our consultants who have just acquired 6.3.0/6.3.1 can not use the Virtis Opis program as we cannot pass on Ohio library to them.

Is there a work around? Can some one tell if it is possible to safely import certain library items if not the complete library?

FROM: Amjad Waheed DATE: 8/13/2012 8:21:19 PM Eastern Daylight Time

I realized later that there is a Virtis\_library-fixed.XML file. I imported it into 6.4 Beta and it worked. I hope it will work in the V6.3.0 also. Thanks for the help.

FROM: Amjad Waheed DATE: 9/7/2012 3:32:12 PM Eastern Daylight Time

Has this issue be fixed in 6.4.0?

FROM: Geoffrey Trees DATE: 9/7/2012 4:38:32 PM Eastern Daylight Time

Amjad, this issue has been fixed for 6.4 but is not fixed in 6.3. You are right, people who have 6.3 will not be able to import their library into 6.4 when exporting everything. The work around for this is to export everything with the exception of the LRFD Substructure items. Please ask that they just don't export those items and the import/export will work fine from 6.3 into 6.4.

---

4/19/2016 3:24:16 PM

HRS AASHTO

3243

**Complete Issue Information**

Issue ID: 11812  
Subject: Virtis 6.4 database support

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Laughlin, Christopher 8/9/2012 6:25:16 PM  
Modified By: hlee 8/9/2012 6:59:00 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 8/9/2012 2:29:26 PM Eastern Daylight Time  
As far as the database goes, is there an Oracle version requirement for Version 6.4 ? Is 10 OK or is 11 required ?

FROM: Herman Lee DATE: 8/9/2012 2:49:07 PM Eastern Daylight Time  
Coming 6.4 supports both Oracle 10.2g and 11.2g.



## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 11818                   |
| Subject: Editing Multimedia Links |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Lee, Herman    |                       |
| Submitted By: Murgoitio, Shanon | 8/9/2012 9:04:22 PM   |
| Modified By: hlee               | 8/10/2012 12:00:37 PM |
| Priority: High                  |                       |
| Category: Support               |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Load Rater Shanon Murgoitio DATE: 8/9/2012 5:16:26 PM Eastern Daylight Time  
This is just a question on multimedia links for Virtis v6.3.1. Somehow all I have for options under version name are beta options.

4/19/2016 3:24:16 PM

HRS AASHTO

3245

**Complete Issue Information**

ITD is moving the location of the files that have multimedia links in Virtis. I was just going change all the fileloc in the dbo.multimedia table to the correct location, but I thought I would check to see if fileloc is in any other table. I don't want to break something. I thought I would ask someone at Baker if they knew so I don't have to open all the tables and look through them.

Thanks for your time.  
Shanon Murgoitio  
208-334-8547

FROM: Herman Lee DATE: 8/10/2012 7:16:47 AM Eastern Daylight Time  
In the options table, the MULTISERVER optionval stores the location of the Multimedia Server Folder (e.g. "C:\"). Changing the Multimedia Server Folder input in the Configuration Browser's System Defaults window will change the MULTISERVER optionval.

In the multimedia table, the fileloc location is base off of the Multimedia Server Folder (e.g. "[MULTISERVER]Region1\"). The resulting path to the file is "C:\Region1\". Currently, the only way to change fileloc through the user interface is to relink the file.

Please resubmit if you need additional information.

|                                               |
|-----------------------------------------------|
| Issue ID: 11833                               |
| Subject: Question: Multimedia Links in Virtis |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Lee, Herman    |                       |
| Submitted By: Murgoitio, Shanon | 8/13/2012 11:40:53 AM |
| Modified By: hlee               | 8/13/2012 11:54:02 AM |
| Priority: High                  |                       |
| Category: Support               |                       |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          | Support  |

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 8/13/2012 7:41:13 AM Eastern Daylight Time  
From Shanon Murgoitio, Idaho Transportation Department:  
The IT department at ITD is moving the location of all the files we have multimedia links to in Virtis . I was going to have our SQL guy change the fileloc in the dbo.multimedia table to the new location, but wanted to make sure fileloc is not in any other table in Virtis. I don't know the tables that well and don't want to go through and open all of them to check. Do you happen to know if fileloc is in any other table besides the dbo.multimedia one?

FROM: Herman Lee DATE: 8/13/2012 7:50:38 AM Eastern Daylight Time  
Duplicate of Incident 11818.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 11838<br>Subject: Units for soil parameters in Drilled Shaft |
|------------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Ruby, Jeff    | 8/13/2012 6:17:34 PM |
| Modified By: jruby          | 5/9/2013 3:06:03 PM  |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 8/13/2012 2:35:02 PM Eastern Daylight Time  
When you hover the cursor is in a box, there are no units as a tool tip. When working with these (not used to) units, it would be nice to see a confirmation that 2755222.044 kg/m3 is about 27000 KPa/m or that 172 kcf is about 100 pci.

FROM: Jim Duray DATE: 8/14/2012 10:17:09 AM Eastern Daylight Time  
The hover works on my PC.

FROM: Jeff Ruby DATE: 8/14/2012 4:31:41 PM Eastern Daylight Time  
Step 1) click soil tab on Foundation Type Drilled Shaft.  
Step 2) in the soil profile window, click on a layer or add one if it doesn't exist.  
Setp 3) hover over the box for k or c or Saturated Density. If you acidently click on something, click somewhere else so you can hover.

Report what units show up in the hover. I get nothing.

FROM: Jim Duray DATE: 8/23/2012 7:52:59 AM Eastern Daylight Time  
So are you seeing an empty hover tooltip or is there no response to hovering?  
I don't think any of the grids provide hover capability. I checked several others under member alt and none of them provide hover capability. I'm changing this to an enhancement request.

**Complete Issue Information**

FROM: Herman Lee DATE: 10/9/2012 4:17:08 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center.

FROM: Jeff Ruby DATE: 5/9/2013 11:06:03 AM Eastern Daylight Time  
See VI 12501

As discussed at the Beta Tag meeting, incorporate additional hover capability for "data grids".

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 11870                                                      |
| Subject: Vehicle graphics in Library Explorer do not show axle loads |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Waheed, Amjad    | 8/20/2012 6:06:32 PM |
| Modified By: hlee              | 8/20/2012 8:15:18 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 8/20/2012 2:08:10 PM Eastern Daylight Time  
IN Library Explorer, vehicle graphics do not show axle loads. Graphics only show axle numbers and distances.

FROM: Herman Lee DATE: 8/20/2012 4:07:02 PM Eastern Daylight Time  
The Axle view of the vehicle should have the wheel loads on it.  
To switch to the Axle view, select the axle in the toolbar in the schematic window.

## Complete Issue Information

Issue ID: 11871

Subject: Agency defined vehicles would not delete in Library Explorer

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Waheed, Amjad

8/20/2012 6:08:37 PM

Modified By: hlee

8/23/2012 1:00:49 PM

Priority: High

Category: Support

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |
|                    | Accepted           |          |          |
|                    | Closed             |          |          |

4/19/2016 3:24:17 PM

HRS AASHTO

3250

### Complete Issue Information

|                   |          |      |         |
|-------------------|----------|------|---------|
|                   | Resolved |      | Support |
| Lee, Herman       | New      | High | Unknown |
| Kennelly, Krishna | Assigned |      |         |
|                   | Resolved |      | Support |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | PSBEAM1 LRFD Dist Factor.TXT   |             |
|      | All-Shawnee_Bridge_section.jpg |             |
|      | All-Shawnee_Baker.xml          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/20/2012 2:14:06 PM Eastern Daylight Time

We are trying to organize our vehicle library and the temporary vehicles created by our office could not be deleted. The library is attached and the reference vehicles are 2F1(modified), 3F1(modified), 4F1(modified) and 5F1(modified).

FROM: Amjad Waheed DATE: 8/20/2012 2:23:14 PM Eastern Daylight Time

Error:

Error deleting record from database record set.

02:22:24 PM - Line 298 in source file DmLibVehicle.cpp.

State:23000,Native:2292,Origin:[Oracle][ODBC][Ora] State:23000,Native:2292,Origin:[Oracle][ODBC][Ora]

ORA-02292: integrity constraint (BRIDGEWARE.R\_2112) violated - child record found

ORA-02292: integrity constraint (BRIDGEWARE.R\_2112) violated - child record found

FROM: Mehrdad Ordoobadi DATE: 8/22/2012 3:33:32 PM Eastern Daylight Time

No documents are attached to this incident. Please export the vehicles and attach to this incident.

FROM: Mehrdad Ordoobadi DATE: 8/22/2012 3:45:10 PM Eastern Daylight Time

The error indicates that the vehicle that is being deleted was used in an analysis event template.

In order to be able to delete the vehicle. Please open all of the analysis event templates that you have in the Virtis/Opis application and remove any references to the vehicles 2F1(modified), 3F1(modified), 4F1(modified) and 5F1(modified) and save them.

4/19/2016 3:24:17 PM

HRS AASHTO

3251

**Complete Issue Information**

Then you will be able to delete the vehicles.

FROM: Mehrdad Ordoobadi DATE: 8/22/2012 4:35:13 PM Eastern Daylight Time  
Accepted by Amjad Waheed. on 8/22/2012

From: Waheed, Amjad [mailto:Amjad.Waheed@dot.state.oh.us]  
Sent: Wednesday, August 22, 2012 4:32 PM  
To: Ordoobadi, Mehrdad  
Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority has been resolved.

Mehrdad,

It worked. Thank you.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 11873                                                               |
| Subject: Incorrect calculations of LL DF for External box beam under Sidewalk |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Waheed, Amjad       | 8/20/2012 8:48:33 PM |
| Modified By: kkennelly            | 9/7/2012 11:53:24 PM |
| Priority: High                    |                      |
| Category: Support                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 8/20/2012 4:58:12 PM Eastern Daylight Time  
Attached bridge is a prestressed concrete side by side composite box beams. It has a sidewalk on the left side of the deck. Complete G1, G2 and part of G3 is under the sidewalk. G1 should not be carrying

4/19/2016 3:24:17 PM

**HRS AASHTO**

3252



**Complete Issue Information**

live load just like any exterior beam when it is under the sidewalk.

When LRFD Moment Distribution factors are calculated for G1 using "Compute from Typical Section, program calculated the LL DFs for G1 and populated the windows for Moment, Shear and Deflection. When calculations are reviewed, lever rule calculations show that the truck wheels do not contribute LL to G1.

FROM: Krisha Kennelly DATE: 8/22/2012 9:22:18 AM Eastern Daylight Time  
The lever rule does produce zero distribution factors for G1 but when the AASHTO equations are evaluated they do produce distribution factors.

The user can override the computed values with zero's if they feel Virits is too conservative.

FROM: Amjad Waheed DATE: 9/7/2012 3:30:56 PM Eastern Daylight Time  
The issue is the program incorrectly rates the bridge very low based on the rating of the beam under the sidewalk which is naturally supporting lots of dead load and Virtis incorrectly distributes live load to that beam too. The logic in the program needs to be corrected.

FROM: Krisha Kennelly DATE: 9/7/2012 7:47:18 PM Eastern Daylight Time  
I think we need to run this by the TAG for direction. These distribution factors are also used for design and I don't think designers would want their exterior beams designed for zero live load.

Issue ID: 11878  
Subject: Slab rebar exported in non-composite regions for prestressed members

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 8/22/2012 7:31:21 PM  
Modified By: sghosh 9/27/2012 11:38:23 AM  
Priority: High  
Category: Bug

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad |          |          |          |

4/19/2016 3:24:17 PM

HRS AASHTO

3253

### Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
| Kennelly, Krisha |                    |      |         |
|                  | Resolved           |      |         |
| Lee, Herman      | New                | High | Unknown |
| Kennelly, Krisha | Assigned           |      |         |
|                  | Information Needed |      | Bug     |
|                  | Duplicate          |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00038 - 2775.xml    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/22/2012 3:31:48 PM Eastern Daylight Time  
Found this while testing fix for 11191.

BID 9, G2. Member alt has POI's at 110', 111', 111.7'. These POI's have the Override Shear Schedule checked but no shear reinforcement entered. The AASHTO engines consider these points to be noncomposite and no slab dimensions are exported but the deck reinforcement is exported. Rebar referenced from the top of slab is incorrectly exported to be in the beam instead of the deck.

FROM: Krisha Kennelly DATE: 8/24/2012 3:49:19 PM Eastern Daylight Time  
Fixed for 6.4 beta 4 build.

FROM: Krisha Kennelly DATE: 9/6/2012 1:53:11 PM Eastern Daylight Time  
Backed off the original fix of not including the rebar in noncomposite regions. It is a common practice to not extend the shear reinforcement into the deck in the pier region but user still wants composite action in that region. (the AASHTO engines determined composite regions for PS based on shear stirrups extending into deck or horizontal shear reinforcement ranges defined.)

Fix has been changed to check the if the region immediately adjacent (within 1') to the simple span bearing is composite. If it is, then the region between simple span bearings at a pier is considered composite. The deck rebar and effective slab is then correctly exported.

If the point being analyzed is not within the continuous pier region and the section is not defined as composite by shear stirrups or horizontal shear ranges, then neither the deck or rebar is exported.

FROM: Krisha Kennelly DATE: 9/6/2012 2:04:48 PM Eastern Daylight Time

4/19/2016 3:24:17 PM

HRS AASHTO

3254

## Complete Issue Information

FROM: Krisha Kennelly DATE: 9/7/2012 12:43:09 PM Eastern Daylight Time

FROM: Subhadeep Ghosh DATE: 9/27/2012 7:37:45 AM Eastern Daylight Time  
Verified for 6.4 Beta 5

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11879                                       |
| Subject: Incorrect DF and losses for Box Beam Bridges |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Vargas, Luis        | 8/23/2012 12:30:34 PM |
| Modified By: hlee                 | 4/1/2013 2:59:06 PM   |
| Priority: High                    |                       |
| Category: Bug                     |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Luis Vargas DATE: 8/23/2012 8:36:56 AM Eastern Daylight Time  
Attached is the file for which we are having the following issues.

1.The program is not able to compute distribution factors properly with box beam bridges (cross-section f or g in AASHTO Table 4.6.2.2.1-1). Errors I saw in the computation output were the use of the lever rule which is not applicable for these sections and when the beam inertia is below the value noted in the AASHTO tables the shear distribution factor was not being set to the moment distribution factor as instructed in AASHTO section 4.6.2.2.3a. Also, I noticed in the calculations that the computation for the St. Venant's torsional inertia was not correct.

4/19/2016 3:24:18 PM

HRS AASHTO

3255

**Complete Issue Information**

2.The program is not computing losses with the AASHTO approximate loss method when selected. In the program output only elastic losses are accounted for when this option is selected. There appears to be no way to manually calculate the losses and input them by hand for LRFR analysis. Can this type of feature be added?

FROM: Krisha Kennelly DATE: 8/23/2012 9:56:48 AM Eastern Daylight Time  
Split out #2 to issue 11881 since it is not related to #1.

FROM: Krisha Kennelly DATE: 8/23/2012 10:22:25 AM Eastern Daylight Time  
a. It is a bug that section 4.6.2.2.3a is not being considered. If that section is considered then the lever rule wouldn't be used. (Note - We always show the lever rule computations even if they don't get used.)

b. St. Venant's torsional inertia is computed using equation C4.6.2.2.1-2 (as documented in the Method of Solution manual). Please provide hand calculations for your value and identify what beam you are analyzing.

FROM: Herman Lee DATE: 8/31/2012 1:43:07 PM Eastern Daylight Time  
Incident 11889 also reported that 4.6.2.2.3a is not being considered.

FROM: Herman Lee DATE: 8/31/2012 2:07:51 PM Eastern Daylight Time  
Incident 10643 also reported that 4.6.2.2.3a is not being considered.

FROM: Herman Lee DATE: 10/9/2012 4:48:12 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/9/12.

FROM: Herman Lee DATE: 1/2/2013 8:53:25 AM Eastern Standard Time  
Information Needed E-mail sent on 1/2/13.

FROM: Herman Lee DATE: 4/1/2013 10:55:23 AM Eastern Daylight Time  
a. Duplicate of Incident 10643.

b. No response to Information Needed E-mail as of 4/1/2013.

Issue ID: 11881  
Subject: Incorrect losses for adjacent box beams

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Vargas, Luis 8/23/2012 2:17:00 PM  
Modified By: kkennelly 8/23/2012 2:22:01 PM  
Priority: High

## Complete Issue Information

Category: Support

## History

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Lee, Herman        | New           | High     | Bug      |
| Kennelly, Krisha   | Assigned      |          |          |
| Bhanushali, Girish | Investigation |          |          |
|                    | Resolved      |          |          |
|                    | Verified      |          |          |
|                    | Resubmit      |          |          |
|                    | Resolved      |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI 11884.docx       |             |
|      | VI 11666.xml        |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Krisha Kennelly DATE: 8/23/2012 10:17:31 AM Eastern Daylight Time  
Split out from issue 11879:

The program is not computing losses with the AASHTO approximate loss method when selected. In the program output only elastic losses are accounted for when this option is selected. There appears to be no way to manually calculate the losses and input them by hand for LRFR analysis. Can this type of feature be added?

FROM: Krisha Kennelly DATE: 8/23/2012 10:20:05 AM Eastern Daylight Time  
The ability to enter lump sum losses for LRFR will be available in Version 6.4.1 which is scheduled to be released later this fall.

Please provide some more details about the incorrect losses being computed so we can investigate.

4/19/2016 3:24:18 PM

HRS AASHTO

3257

**Complete Issue Information**

Issue ID: 11884  
Subject: End Distance of Stress Limit Ranges not included in list of section change points.

Folder: /Virtis/Support Center  
Primary Contact: Bhanushali, Girish  
Submitted By: Mlynarski, Mark 8/24/2012 2:17:38 PM  
Modified By: hlee 6/2/2013 2:14:45 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 8/24/2012 10:20:39 AM Eastern Daylight Time  
End Distance of Stress Limit Ranges not included in list of section change points. Example bridge attached.

FROM: Girish Bhanushali DATE: 2/25/2013 9:33:12 AM Eastern Standard Time  
This issue has been fixed for 6.5 release. Fix is tested with the attached bridge. Analysis was successful and points for stress limit range were reported in spec check.

FROM: Melanie Berry DATE: 4/19/2013 9:53:22 AM Eastern Daylight Time  
The End Distance of Stress Limit Ranges are not listed in the section change points in the spec check. See attached screen shots.

FROM: Girish Bhanushali DATE: 5/31/2013 1:23:44 PM Eastern Daylight Time

4/19/2016 3:24:18 PM

HRS AASHTO

3258

**Complete Issue Information**

Stress Limit Ranges follow "Beam Model" (as documented in Help)  
Hence, 0 start distance of stress limit range starts at the left end of the beam (as documented in help).

For End Supports:  
Speck location 0' starts at the left (first span) / right (last span) bearing. .... (X)

Stress limit point nodes take in to account the overhang portion of the beam.

First range is 0' - 83.28'.

Left beam projection (overhang) is = 25.0866" = 2.09'

Point for first stress limit range 81.19' (= 83.28' - 2.09') is present in the speck check (capture that is attached).

For intermediate support (support 2):  
Speck check location 0' starts from CL of pier. .... (Y)

Distance from center line of pier to bearing = 4.181'  
Left beam projection (overhang) = 1.4834'

Distance from CL of pier to left face of the beam = 2.7'

First Stress limit range end entered for span 2 = 0' - 18.71' ----- (A)

Location of (A) from CL of pier = 18.71' + 2.7' = 21.41' exists in speck check results.

No code change was necessary for resolution of resubmit .

Ideally, (X) and (Y) above and other such rules/details should be in user help if not already exist.

FROM: Girish Bhanushali DATE: 5/31/2013 2:07:41 PM Eastern Daylight Time

Issue ID: 11889  
Subject: LRFR/LRFD LLDF issue for the shear-----article 4.6.2.2.3a

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Zhang, Bin 8/27/2012 7:11:23 PM  
Modified By: sghosh 4/24/2013 8:32:09 PM  
Priority: High  
Category: Bug

**History**

4/19/2016 3:24:18 PM

HRS AASHTO

3259

**Complete Issue Information**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Unknown  |
| Thogaru, Srujana | New      | High     | Unknown  |
|                  | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | MP106.4VO64SO.xml                    |             |
|      | PSBeamCrossSectionPropertie<br>s.png |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 8/27/2012 3:12:52 PM Eastern Daylight Time  
 The Virtis program used the lever rule to calculate the live load distribution factor for shear for interior beams when the I (moment of inertia) check failed. Based on the LRFD Section 4.6.2.2.3a, third paragraph stated that "For concrete box beams used in multibeam decks, if the values of I or J do not comply with the limitations in Table 1, the distribution factor for shear may be taken as that for moment".

The bridge model was attached in the document, please use mem alt of G2 to reproduce this issue.

I submitted this issue on behalf of Hanh Nguyen from MassDOT, part of the email was listed below.

\*\*\*\*\*  
 \*\*\*\*\*

I have noted that the program used the lever rule to calculate the live load distribution factor for shear for interior beams. Based on the LRFD Section 4.6.2.2.3a, third paragraph stated that "For concrete box beams used in multibeam decks, if the values of I or J do not comply with the limitations in Table 1, the distribution factor for shear may be taken as that for moment". See attached for details.

Hanh Nguyen  
 Bridge Design Section  
 MassDOT Highway Division  
 P: 617-973-8086  
 Hanh.nguyen@state.ma.us

\*\*\*\*\*



**Complete Issue Information**

\*\*\*\*\*

FROM: Herman Lee DATE: 8/31/2012 1:54:11 PM Eastern Daylight Time  
Duplicate of Incident 11879.

FROM: Krisha Kennelly DATE: 4/15/2013 10:34:38 AM Eastern Daylight Time  
Since 11879 contains other issues, this issue will be the one for using the moment DF when I/J are outside the range.

FROM: Krisha Kennelly DATE: 4/15/2013 10:50:14 AM Eastern Daylight Time  
Fixed for Version 6.5.0.

Alpha tester should also verify issues 11879, 10643 produce correct results since those issues are duplicates of this issue.

FROM: Krisha Kennelly DATE: 4/15/2013 3:05:16 PM Eastern Daylight Time  
Note shear in ext beams for structure type F in the LRFD spec: if I and/or J for the adj int beam is outside the range and the moment DF is used for shear for the adj int beam, this case is not addressed by Tables Table 4.6.2.2.3a-1 or Table 4.6.2.2.3b-1. So the ext beam shear DF will equal the lever rule as per Art. 4.6.2.2.3b.

FROM: Subhadeep Ghosh DATE: 4/24/2013 3:30:50 PM Eastern Daylight Time  
Verified for 6.5 beta 1

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 11898                                                                        |
| Subject: Add an error message when the haunch is wider than the effective flange width |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Zhang, Bin          | 8/31/2012 2:10:41 PM |
| Modified By: mmlynarski           | 12/4/2012 2:53:31 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:19 PM

HRS AASHTO

3261

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 8/31/2012 10:12:56 AM Eastern Daylight Time  
An error message will appear when the haunch is wider than the effective flange, saying "Error populating the cross section data! Analysis aborted!"  
You can use the attached bridge to reproduce this issue and also for testing. Please use "span 2" -> mem alt of "G2-5(AS-BUILT)", LRFR, HL93 for reproducing and testing.

The validation check is in "PSBeamCrossSectionProperties.cs", a snapshot was attached in the document. It's proposed to add a specific error message to inform the user the details, so the user knows to modify the data for the haunch or the effective flange width.

FROM: Srujana Thogaru DATE: 9/13/2012 11:20:41 AM Eastern Daylight Time  
Error message "Haunch width greater than slab width cannot be processed..." has been added to PSBeamCrossSectionProperties.cs. Fixed for 6.5 release.

FROM: Srujana Thogaru DATE: 11/26/2012 8:55:11 AM Eastern Standard Time  
Above fix will be included in the 6.4 Service Pack (6.4.1) release.

FROM: Matt Kolis DATE: 11/30/2012 2:15:14 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 11904                                         |
| Subject: Haunch load issue for partially composite deck |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center        |                     |
| Primary Contact: Kennelly, Krishna    |                     |
| Submitted By: vinayagamoorthy, vinacs | 9/4/2012 7:31:49 PM |

**Complete Issue Information**

|                               |                      |
|-------------------------------|----------------------|
| Modified By: vvinayagamoorthy | 10/4/2012 1:37:55 PM |
| Priority: Critical            |                      |
| Category: Bug                 |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
| Trees, Geoffrey  |          |          |          |
| Thogaru, Srujana | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 11908_Resubmit.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 9/4/2012 3:32:26 PM Eastern Daylight Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received e-mail:

=====

Herman

This is an interesting bug.

We have a three span bridge, where we have a drop in span in the Span 2. The drop in span (between hinges in span 2) is composite. Rest of the girders are non composite. We noticed a bug in the way the haunch weight for exterior girder is calculated when we model the girder in two ways. Attached are the models.

(This is based on the results found for the Left Exterior Girder G1=G-3(AB) girder model.)

4/19/2016 3:24:19 PM

HRS AASHTO

3263

## Complete Issue Information

(1) In one model, we did not enter the effective flange width for the non composite portion

(Embedded image moved to file: pic23981.jpg)

The software established the uniform dead load for "haunch" as -0.111 kip/ft (Embedded image moved to file: pic28885.jpg)

(2) in the second model, we entered beffective for the non composite region was entered as ZERO.  
(See below)

(Embedded image moved to file: pic19822.jpg)

The software established the uniform load for the "haunch" as -0.281 kip/ft (attached is the screen shot of the results) (Embedded image moved to file: pic32101.jpg)

Note that The weight of the haunch is about 0.281 kip/ft and therefore, entering the non composite region as zero is necessary?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 08/31/2012  
06:32 AM -----

Amy  
Liu/D03/Caltrans/  
CAGov  
To  
Murugesu  
08/29/2012 06:27 PM  
Vinayagamoorthy/HQ/Caltrans/CAGov  
cc  
Dave Ward/HQ/Caltrans/CAGov@DOT,  
Charles  
Ineichen/HQ/Caltrans/CAGov@DOT  
Subject  
Virtis, Deck Profile with Partially  
Composite Deck(Document link:  
Murugesu Vinayagamoorthy)

Hi, Vinacs!

As we discussed, I had different results from Virtis depends on whether I entered Beff=0 for Non-Composite portion of the deck or I leave it completely out.

4/19/2016 3:24:19 PM

HRS AASHTO

3264

**Complete Issue Information**

I am attaching the files containing the different inputs and results.  
Thanks!  
(See attached file: 30P0001NoZero.xml) (See attached file: 30P0001.xml)

(See attached file: DeckProfileInputs&Results.pdf)

-----  
Amy Liu, PE  
Caltrans, Division of Maintenance  
Office of Structural Design & Analysis, MS9-1/9i  
1801 30th Street, FM II - 3/12D  
Sacramento, CA 95816  
=====

FROM: Krisha Kennelly DATE: 9/6/2012 1:00:22 PM Eastern Daylight Time  
Fixed for version 6.4 the build after beta 4.

For the haunch load, if there is no deck entered on the Concrete Deck Profile window, the program will try to get the concrete density from the concrete assigned to the deck in the Structure Typical Section window. Code fixed for girders, floorbeams and stringers.

FROM: Herman Lee DATE: 9/26/2012 3:49:45 PM Eastern Daylight Time  
Verified that haunch load in both models is 0.281 kip/ft.

FROM: vinacs vinayagamoorthy DATE: 10/4/2012 9:37:55 AM Eastern Daylight Time  
This bug is fixed and therefor I accept the fix

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 11908<br>Subject: Report Tool shouldn't include NBI Construction Type and NBI Material Type |
|-------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Thogaru, Srujana<br>Submitted By: Lee, Herman 9/5/2012 6:34:54 PM<br>Modified By: sthogaru 4/25/2013 1:09:10 PM<br>Priority: High<br>Category: Bug |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:19 PM

**HRS AASHTO**

3265

**Complete Issue Information**

**Documents**

| Name | Resource Identifier                                                                 | Description |
|------|-------------------------------------------------------------------------------------|-------------|
|      | WeirdIssuesWithComputeLane<br>PositionDueToAppurtenanceNo<br>tCompletelyOnDeck.docx |             |
|      | 2AppurtenancesOverhanging_<br>ProblemWithLanePosition.xml                           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/5/2012 2:35:16 PM Eastern Daylight Time  
Submitted on behalf of Dan Staton, Bureau of Land Management.

Part of the received Bridgeware e-mail:

=====

2. Under Superstructure Definition, there are two items called "NBI Construction Type" and "NBI Material Type". Right now they are set to slab and concrete, respectively. Where can I change this within Virtis to Girder and Steel?

=====

"NBI Construction Type" and "NBI Material Type" are not exposed to the user interface. Report Tool shouldn't include these two items.

FROM: Srujana Thogaru DATE: 1/25/2013 4:04:26 PM Eastern Standard Time

"NBI Construction Type" and "NBI Material Type" are removed from report tool.  
Fixed for 6.5 release. For internal testing fixed for 6.5.1 alpha build 1.

FROM: Melanie Berry DATE: 4/16/2013 1:15:32 PM Eastern Daylight Time  
The NBI Construction Type and NBI Material Type still show up in the report.

FROM: Srujana Thogaru DATE: 4/23/2013 1:49:48 PM Eastern Daylight Time  
Geoff please implement the script I have forwarded to you, to fix the above problem.

FROM: Geoffrey Trees DATE: 4/24/2013 3:39:57 PM Eastern Daylight Time  
I ran the script against the db but I am not sure if this should remain open or not. Reassigning back to Srujana.

FROM: Srujana Thogaru DATE: 4/25/2013 9:07:52 AM Eastern Daylight Time  
I have tested the fix by getting latest DB in development versions. Fixed in 6.5 Beta 1

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 11914                                                                       |
| Subject: Incorrect computed lane positions for typical section with multiple barriers |

**Complete Issue Information**

|                                                           |
|-----------------------------------------------------------|
| Folder: /Virtis/Support Center                            |
| Primary Contact: Ghosh, Subhadeep                         |
| Submitted By: vinayagamoorthy, vinacs 9/7/2012 7:13:50 PM |
| Modified By: vvinayagamoorthy 12/12/2012 5:14:54 PM       |
| Priority: High                                            |
| Category: Bug                                             |

**History**

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
| Thogaru, Srujana | Assigned  |          |          |
|                  | Resolved  |          |          |
|                  | Duplicate |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | 13699.xml                  |             |
|      | RC T-Beam RATING ISSUE.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 9/7/2012 3:14:00 PM Eastern Daylight Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received e-mail:

=====  
Herman

One of my engineer reported that Compute button available within Typical Section does not properly establishes the "Lane Positions" whenever we have multiple barriers placed.

Could you please look into this issue and see whether it could resolved.

FYI: Please note that Many of the California Barrier shapes are NOT available within Virtis. I used to

4/19/2016 3:24:19 PM

HRS AASHTO

3267

**Complete Issue Information**

place "Generic" Rectangular block, however, our engineers would like to show a shape that resembles actual barrier. As a result, we are using multiple barriers to show the correct shape of barriers.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 09/07/2012  
06:50 AM -----

Mike  
McCracken/D04/Cal  
trans/CAGov  
To  
Murugesu  
06/15/2012 10:38 AM  
OT  
Vinayagamoorthy/HQ/Caltrans/CAGov@D  
cc

Subject  
Fw: staff meeting - this Monday 9am  
FM1 room 102 A&B.

Vinacs,

Here's an apparent technical issue with VIRTIS:

The "compute..." button for lane position within Structure Typical Section appears to encounter some problems if the model has more than one appurtenance, and more than one appurtenance overhangs the edge of deck.

Here are some Virtis spanshots that illustrate some of the weird things that happen:

(See attached file:  
WeirdIssuesWithComputeLanePositionDueToAppurtenanceNotCompletelyOnDeck.docx)

Here's the xml file that exhibits the issue, from which I discovered the issue:

(See attached file: 2AppurtenancesOverhanging\_ProblemWithLanePosition.xml)

The model is symmetrical, yet the compute problem appears to occur asymmetrically, which could help indicate the source of the coding error.

Mike McCracken, P.E.  
Caltrans, Division of Maintenance  
Office of Structural Design & Analysis  
Mail Station 9-1/9i  
1820 Alhambra Blvd  
Sacramento, CA 95816

=====

FROM: Subhadeep Ghosh DATE: 9/18/2012 11:55:17 AM Eastern Daylight Time  
Added a check to ensure proper computation of "Lane Position" for "Structure Typical Section" under

4/19/2016 3:24:19 PM

**HRS AASHTO**

3268



**Complete Issue Information**

all the orientation of Appurtenances. Verified for different circumstances of one appurtenances abutting on the other. Fix going into 6.5 release.

FROM: Subhadeep Ghosh DATE: 11/27/2012 9:36:42 AM Eastern Standard Time  
The fix has been shifted to 6.4.1 Beta 2. Fix going into 6.4.1 patch.

FROM: Matt Kolis DATE: 11/30/2012 10:40:29 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: vinacs vinayagamoorthy DATE: 12/12/2012 12:14:54 PM Eastern Standard Time  
It is working.

|                                  |
|----------------------------------|
| Issue ID: 11918                  |
| Subject: RC T-Beam Runtime Error |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Pichura, Mike       | 9/11/2012 12:33:07 PM |
| Modified By: hlee                 | 9/17/2012 8:17:39 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Mike Pichura DATE: 9/11/2012 8:38:24 AM Eastern Daylight Time  
This is an issue our VA Beach office ran into. They have a workaround which is to change decimal places slightly, but thought you guys should be aware of it.

See the attached PDF for a detailed description.

**Complete Issue Information**

FROM: Srujana Thogaru DATE: 9/17/2012 3:07:45 PM Eastern Daylight Time  
Above mentioned error was fixed in 6.4 release

Issue ID: 11919  
Subject: Problems deleting bridges from Virtis/Opis Oracle database

Folder: /Virtis/Support Center  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Ordoobadi, Mehrdad 9/11/2012 1:53:53 PM  
Modified By: gtrees 9/26/2012 8:19:02 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Mlynarski, Mark    | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Resolved |          | Bug      |

4/19/2016 3:24:20 PM

HRS AASHTO

3270

**Complete Issue Information**

|          |
|----------|
| Verified |
|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Mehrdad Ordoobadi DATE: 9/11/2012 9:54:44 AM Eastern Daylight Time  
 The following email was received through the bridgeware@mbakercorp.com email account.  
 This problem was reported by Daniel Adams from Utah DOT "UDOT" on September 4 2012.

-----  
 From: Daniel Adams [mailto:danieladams@utah.gov]  
 Sent: Tuesday, September 04, 2012 5:03 PM  
 To: Bridgeware,  
 Cc: Arlan Freeman; Zachary Boyle  
 Subject: Problems with Virtis

Hello,  
 We are having difficulty emptying the Deleted Bridges area in our database. I am using Version 6.3.0.  
 We get the following error message:

Unable to save Bridge data!  
 01:33:49 PM - Line 886 in source file UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 19).  
 01:33:49 PM - Line 489 in source file DmBridgeCache.cpp.

Unable edit and update recordset.  
 01:33:49 PM - Line 664 in source file DmOverflow.cpp.

The update or delete operation did not affect any rows.

Would you give us your opinion as to what we should do?  
 Many thanks,  
 Dan

Daniel R. "Dan" Adams, CBI, CPM  
 Bridge Database Manager  
 UDOT Structures Division

**Complete Issue Information**

4501 South 2700 West  
Salt Lake City, Ut. 84119  
801-965-4039 Office  
801-664-4568 Cell  
danieladams@utah.gov

---

FROM: Mehrdad Ordoobadi DATE: 9/11/2012 9:57:00 AM Eastern Daylight Time  
We requested a copy of UDOT's Oracle database and we were able to reproduce the problem.

When a bridge is deleted or the values in the bridge description page are changed and the bridge is saved the Virtis/Opis gives an error:  
Unable to save Bridge data!  
01:33:49 PM - Line 886 in source file UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 19).  
01:33:49 PM - Line 489 in source file DmBridgeCache.cpp.

Unable edit and update recordset.  
01:33:49 PM - Line 664 in source file DmOverflow.cpp.

The update or delete operation did not affect any rows.

I have tracked this down to the values that are stored in the latitude and longitude fields in the overflow table. When the CRecordset reads the values for the two fields which have Number(8,2) and Number(9,2) data types, the values that are read into C++ are slightly different for example 45.85 may be read as 45.849999999999 when the record is being updated or deleted through the recordset the original record is not found and the save or delete operation fails. We have seen this before but this happens for 73 bridges that Utah has. I remember that MDOT had a similar problem two years ago or so. We ended up suggesting to them to set the values in the latitude and longitude fields to null before deleting a bridge.

The solution that I have found is to use a float data type and DDX functions in the recordset, use IDeFloat in the CDoOverflow class and correct the rest of the source code for these changes. I have verified that this works and I was able to remove all of the bridges that they had trouble removing from the database.  
Note that we have seen these sorts of issues only when using an Oracle database.

The fix for this issue is checked into version 6.4 source code.

FROM: Geoffrey Trees DATE: 9/26/2012 4:18:22 PM Eastern Daylight Time  
This appears to be resolved. I cannot reproduce the problem in 64B5. I am marking this as Verified.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 11921<br>Subject: Cover plate thickness changes when applied |
|------------------------------------------------------------------------|

|                                                                  |
|------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Ihnat, Joseph |
|------------------------------------------------------------------|

4/19/2016 3:24:20 PM

**HRS AASHTO**

3272

**Complete Issue Information**

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Waheed, Amjad | 9/11/2012 3:26:57 PM |
| Modified By: kkennelly      | 9/26/2012 6:38:37 PM |
| Priority: High              |                      |
| Category: Bug               |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0570256.xml         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 9/11/2012 11:29:07 AM Eastern Daylight Time

Split off from 11907:

When top or bottom cover plate thickness is entered and "Applied" the plate width get saved in thickness box. (See jpg attached to 11907).

FROM: Joseph Ihnat DATE: 9/14/2012 3:29:42 PM Eastern Daylight Time

Fixed for version 6.4

FROM: Krisha Kennelly DATE: 9/26/2012 2:32:21 PM Eastern Daylight Time

verified for the acceptance build. Checked both the 'Apply' button and the 'copy to top/bottom cover plates' button.

**Complete Issue Information**

|                              |
|------------------------------|
| Issue ID: 11925              |
| Subject: Control of Cracking |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Litchfield, Phil    | 9/13/2012 9:21:47 PM |
| Modified By: sghosh               | 4/25/2013 1:09:06 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 9/13/2012 5:29:17 PM Eastern Daylight Time  
How is virtis computing the spacing for 5.7.3.4 Control of Cracking by Distribution of Reinforcement in the LRFD spec check? In this model the rebar are at 7" spacings, and virtis has a computed bar spacing of -0.0 in.

FROM: Krisha Kennelly DATE: 9/14/2012 9:53:41 AM Eastern Daylight Time  
This problem exists in 6.3.1 so the folder has been changed to Support Center.

FROM: Krisha Kennelly DATE: 4/16/2013 1:00:35 PM Eastern Daylight Time  
Fixed for version 6.5.0.

**Complete Issue Information**

(Note for the attached bridge, center-center bar spacings are either 11" or 8", not 7". This article uses center-center spacing.)

I also added a warning note which is displayed in this article for cases where the user has entered side cover, bar spacing and number of bars such that bars are located on top of each other and the spacing is computed as zero. You have to modify the data in the attached bridge to produce this case and warning note. (developer note: warning note is created in DoGirderMbrAlt)

FROM: Steve Salata DATE: 4/23/2013 9:36:13 AM Eastern Daylight Time  
Computed bar spacings are now > 0.0 in.

FROM: Subhadeep Ghosh DATE: 4/25/2013 8:37:54 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11926                                       |
| Subject: Circular web depth profile based on parabola |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Goodrich, Brian     | 9/13/2012 9:19:02 PM |
| Modified By: bgoodrich            | 9/14/2012 4:13:55 PM |
| Priority: High                    |                      |
| Category: Support                 |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:21 PM

HRS AASHTO

3275

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brian Goodrich DATE: 9/13/2012 3:19:06 PM Mountain Daylight Time  
We recently implemented the export of circular web profile codes for BRASS. However, the web depths sent to BRASS are based on a parabola. See G2 member alt in the attached bridge.

The commands are generated as:

```
COMMENT Span 1  
SPAN-GENERAL-LENGTH 1, 1932.0000  
SPAN-GENERAL-SEGMENT 1, 69.0000, E-, 440.0004, 60.5234  
SPAN-GENERAL-SEGMENT 1, 60.5234, E-, 1492.0008, 49.0891  
SPAN-GENERAL-SEGMENT 1, 49.0891, E-, 1932.0000, 48.0000
```

BRASS gives the following error message:

```
-----  
Error No.: 1203  
Type   : Input Error  
Location : prop_gen.for (property_generate)  
  
A web depth on span 1 was computed based on parabolic or elliptical equations,  
however, it is not equal to the web depth input by the user at this location.  
This error occurs at the junction of two "continuous" parabolic or elliptical segments.  
Distance = 440.000 (in,mm)  
Web depths (in,mm): Computed = 55.658474 Input = 60.523399  
  
----- End of Contents of BRASS Error File -----
```

The computed value above is based on an ellipse, while the input value is based on a parabola.

FROM: Brian Goodrich DATE: 9/13/2012 3:49:09 PM Mountain Daylight Time  
The error occurs only when BRASS LRFD is run.

FROM: Krisha Kennelly DATE: 9/14/2012 11:06:42 AM Eastern Daylight Time  
Please see the attached file for the circular equations used to compute the web depth.

FROM: Brian Goodrich DATE: 9/14/2012 10:10:47 AM Mountain Daylight Time  
Now I see that Virtis is using a circular arc while BRASS is using a general ellipse equation. These are simply two different shapes. Thanks for the clarification.

|                 |
|-----------------|
| Issue ID: 11928 |
|-----------------|



**Complete Issue Information**

Subject: tolerance issue for the stiffener

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Hasan, Mac 9/14/2012 5:46:22 PM  
Modified By: gtrees 12/18/2012 7:36:02 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Unknown  |
|                  | Assigned |          |          |
|                  | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | 11935 ratings with modified rebar.png  |             |
|      | 11935 error in g0103 cross section.png |             |
|      | 01767 - ZH-03-BD.xml                   |             |
|      | RC capacity.png                        |             |
|      | 11935 rebar change.png                 |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Bin Zhang DATE: 9/14/2012 1:46:47 PM Eastern Daylight Time  
I submitted this issue on behalf of John W. Gregory from CO DOT. Part if the email was listed below.  
\*\*\*\*\*1.

The tolerance in the system defaults has historically been set to .25 inch by CDOT. I have found that when using the AASHTO LFD/LFR engine on a steel girder section with .25 inch thick transverse stiffeners. The analysis engine sets this dimension equal to 0 and will error out and not

4/19/2016 3:24:21 PM

HRS AASHTO

3277

**Complete Issue Information**

perform the analysis. If I set the tolerance to 1/8" the file will rate but we hesitate to change the tolerance because it may affect other files in our database. I thought the tolerance was just for aligning/smoothing gaps, I am not sure why the tolerance would overrule a structural section dimension.

John W. Gregory, PE  
Colorado Department of Transportation  
Staff Bridge Branch  
Region 1 East and Region 5 East Design and Construction Support  
303-512-4012

\*\*\*\*\*

Please use BID1 bridge to reproduce this issue. I am able to reproduce this issue in both VO641 and VO64Beta4.

FROM: Herman Lee DATE: 12/8/2012 4:37:38 PM Eastern Standard Time  
Fixed a defect in checking cross section dimension in the AASHTO Engine.

Resolved for 6.4 Service Pack (6.4.1).

FROM: Geoffrey Trees DATE: 12/18/2012 2:18:10 PM Eastern Standard Time  
Verified.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 11935                                                                 |
| Subject: error in computing the RC girder capacity with parabolic cross section |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Zhang, Bin          | 9/25/2012 1:32:57 PM  |
| Modified By: bzhang               | 10/12/2012 7:56:42 PM |
| Priority: High                    |                       |
| Category: Support                 |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 9/25/2012 9:33:21 AM Eastern Daylight Time  
John W. Gregory from CO DOT asked why the different rating factors between Brass and AASHTO LFR engine. I looked into it and found Virtis may have an error in computing the capacity. Please use Girder1-> member alternative G01-Old-INT to reproduce this issue. Please check the negative moment capacity at the critical location(span 1, 16 ft). Please read the attached figure for details (RC capacity).

FROM: Krisha Kennelly DATE: 10/12/2012 11:00:23 AM Eastern Daylight Time  
When the AASHTO engine exports the data from Virtis, it assumes the rebar is parallel to the portion of the girder (ie, Top of girder or Bottom of girder) that the rebar is measured from. Since the rebar is defined as being measured from the top of the girder, the vertical location of the bars near the bottom are assumed to vary linearly over the length of the cross section ranges. if you want the bar to follow the parabolic curve of the bottom of beam, the rebars should be referenced from the bottom of the girder. See attached '11935 rebar change.png' for an example of how the rebar should be input. I revised the rebar to referenced from the bottom of the girder and I get ratings similar to BRASS in 6.2. See attached '11935 ratings with modified rebar.png'.

I also noticed that Section G0103 of your input has rebar outside of the cross section depth. See attached '11935 error in g0103 cross section.png'.

FROM: Bin Zhang DATE: 10/12/2012 11:11:05 AM Eastern Daylight Time  
The investigation result was forwarded to CO DOT on 10/12/2012.

|                             |
|-----------------------------|
| Issue ID: 11950             |
| Subject: Virtis 6.4 Release |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Laughlin, Christopher | 10/3/2012 1:12:10 PM |
| Modified By: hlee                   | 10/3/2012 1:29:56 PM |
| Priority: High                      |                      |

**Complete Issue Information**

Category: Support

**History**

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Lee, Herman        | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          |          |
|                    | Not Reproducible |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Virtis Crash.png    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 10/3/2012 9:13:03 AM Eastern Daylight Time  
Any updates on when Version 6.4 will be shipped ? Thanks

FROM: Herman Lee DATE: 10/3/2012 9:28:42 AM Eastern Daylight Time  
6.4 should be out within a couple of weeks.

**Complete Issue Information**

|                                   |
|-----------------------------------|
| Issue ID: 11961                   |
| Subject: Virtis 6.4 Release crash |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ghosh, Subhadeep      | 10/9/2012 5:14:49 PM |
| Modified By: mordoobadi             | 5/1/2013 1:20:53 PM  |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Subhadeep Ghosh DATE: 10/9/2012 1:17:18 PM Eastern Daylight Time

Virtis 6.4 Release version crashed when the "Cancel" button was hit on the "Analysis Progress" window while the stage 1 spec. check was going on. This happened in 1 out of 10 attempts. Point of crash was captured in the screenshot attached.

Analysis run for TrainingBridge1, HS 20 Rating Template.

FROM: Herman Lee DATE: 10/9/2012 1:38:04 PM Eastern Daylight Time  
Mehrdad, please see whether you are able to narrow down the area of code causing the crash.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 3:30:07 PM Eastern Daylight Time  
I am not able to reproduce the crash and debug it.

4/19/2016 3:24:22 PM

HRS AASHTO

3281

## Complete Issue Information

Issue ID: 11964

Subject: Failed to reset RC Change Point Generation settings for RC slab

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

Submitted By: Zhang, Bin

10/10/2012 6:43:08 PM

Modified By: kkennelly

4/24/2013 3:10:30 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Unknown  |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:24:22 PM

HRS AASHTO

3282

## Complete Issue Information

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | 11964 rebar workaround.png |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bin Zhang DATE: 10/10/2012 2:44:04 PM Eastern Daylight Time

I submitted this issue on behalf of Jessica Terry from CO DOT.

Please use mem alt of Cbc Top Slab to reproduce this issue, AASHTO LFD engine, HS20 vehicle. I am able to reproduce this issue in VO63 and VO64 too.

FROM: Krisha Kennelly DATE: 10/12/2012 9:49:51 AM Eastern Daylight Time

The program is having a problem with the Type 3 bars not containing dimensions for all portions of the bar.

A workaround is to input very small values (like 1") for the bar dimensions that really should be zero. See the attached '11964 rebar workaround.png' for revisions to the 'V2\_LeftLow' bar. Similar changes should be made to the 'V2\_RightLow' bar.

After making these changes, after you do an analysis you will get errors that the V4 and V2\_RightLow bar are outside the beam. I think you have incorrectly input the vertical location of these bars.

See the help for the Girder Profile: Reinforcement window for sketches that show that the vertical distance to the bar is defined at the start of the bar.

Since V4 is inverted, the vertical distance of 1.4375" at the start of the bar places the C dimension of the bar below the beam. V2\_RightLow is similarly placed too close to the bottom of the beam and the E dimension is below the beam.

We will continue looking into the problem for resolution.

FROM: Bin Zhang DATE: 10/12/2012 3:29:27 PM Eastern Daylight Time

The workaround was forwarded to CO DOT on 10/12/2012.

FROM: Bin Zhang DATE: 1/10/2013 11:24:36 AM Eastern Standard Time

Dongzhan (Jenny) Zhou, PE from Baker IN office has experienced the same issue, this workaround was forwarded to Jenny on 1/10/2013.

FROM: Krisha Kennelly DATE: 4/15/2013 9:02:06 AM Eastern Daylight Time

Fixed for version 6.5.0

FROM: Steve Salata DATE: 4/23/2013 1:23:56 PM Eastern Daylight Time

Verified that analysis will finish when D, E, A2 (V2\_LeftLow) and A, B, A1 (V2\_RightLow) are set to zero.

4/19/2016 3:24:22 PM

HRS AASHTO

3283

**Complete Issue Information**

There still is a problem locating the bar within the beam when a bar has bar dimensions that are zero. In the attached job, Bar V2\_LeftLow and V2\_RightLow are exactly the same bar. However, bar V2\_RightLow will generate this System Error:

Bar V2\_RightLow is located 0.54 ft below the bottom of the beam at distance XX.XX ft

But V2\_LeftLow does not generate the same error. Workaround is to detail both bars as V2\_LeftLow bars.

FROM: Krisha Kennelly DATE: 4/24/2013 11:02:51 AM Eastern Daylight Time  
They aren't the same bar. As I noted on 10/12, the user has input the bars such that V2\_RightLow is outside the beam.

As noted in the Help, the vertical distance to the bar is defined at the start of the bar. V2\_LeftLow has an A dimension defined. This A length is located 1.4375" above the bottom of beam. So the C length ends up correctly in the beam. V2\_RightLow does not have an A length defined. So when the user says that bar is located 1.4375" above the bottom of beam they are positioning the C length 1.4375" above the bottom of beam. This results in the E length being below the beam. The user should mark V2\_RightLow as 'Inverted' so the E length will be inside the beam.

Issue ID: 11965  
Subject: Opis toolbar is missing General Preferences button

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Ihnat, Joseph 10/11/2012 5:41:17 PM  
Modified By: mkolis 12/6/2012 3:18:18 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | U-Beam Strand Layout.png |             |
|      | OddStrandLocation.png    |             |
|      | UBeamBug.xml             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 10/11/2012 1:42:18 PM Eastern Daylight Time  
It's only available in BWS under Bridge menu item.

FROM: Joseph Ihnat DATE: 10/12/2012 8:27:52 AM Eastern Daylight Time  
Fixed for 6.4.1

FROM: Matt Kolis DATE: 10/31/2012 10:24:46 AM Eastern Daylight Time  
Verified

FROM: Matt Kolis DATE: 12/6/2012 10:18:18 AM Eastern Standard Time  
Verified in 6.4.1 Beta 2.

Issue ID: 11967

Subject: Crash and other weird behavior when editing U Beam Strands

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Pickings, Richard 10/12/2012 7:50:43 PM

Modified By: hlee 10/15/2012 1:05:27 PM

Priority: High

Category: Unknown

4/19/2016 3:24:23 PM

HRS AASHTO

3285

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | rc_tee_cantilever.xml     |             |
|      | 11968FullyDevelopment.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Pickings DATE: 10/12/2012 4:08:00 PM Eastern Daylight Time

In Virtis/Opis:

- 1 Load the attached export file.
- 2 Open the Strand Layout Dialog for G1 (only one SS def)
- 3 Note that the strand locations for row 4 look odd (bug 1) see attached image
- 4 don't close strand layout dialog
- 5 Open the strand layout tab for the TxDOT U40 beam shape dialog.
- 6 Change the vertical location of row 4 to 8.2 in. - click apply, then Yes.

Program will crash (bug 2)

Question: For my translator, I need exact X,Y coordinates for strand grid locations in order to map strands from PGSuper. These are not available from the API? (I'm pretty sure no). What is the algorithm to layout the strand locations? It appears that the outer column of strands follows the slope of the U beam web?

FROM: Herman Lee DATE: 10/12/2012 4:12:32 PM Eastern Daylight Time

Both X and Y coordinates are based on the strand grid input in the beam shape. Below layout algorithm is copied from the Virtis/Opis Help's Strand Layout topic.

=====  
U Beam Strand Positioning Method

4/19/2016 3:24:23 PM

HRS AASHTO

3286

**Complete Issue Information**

The first row (measured from the bottom of the cross section) grid positions are centered about the centerline of the cross section. The first row is assumed to be in the bottom flange. The available grid positions are spaced horizontally based on the input spacing. The first row establishes the boundary for all rows below the top flanges. The first and last spacing of grid positions in other rows located in the bottom flange are based on the input spacing of the first row, the vertical distance to the first row, and the outside wall slope. Grid positions located in rows located in the top flanges are centered about the boundary established by the first row.

=====

Richard, please attach the bridge XML file to this incident.

FROM: Richard Pickings DATE: 10/12/2012 5:01:38 PM Eastern Daylight Time  
I thought it uploaded, but I guess it didn't. Now it is.

Sorry, I'm kind of thick. Is there a picture anywhere that goes with the following explanation?

"The first row establishes the boundary for all rows below the top flanges. The first and last spacing of grid positions in other rows located in the bottom flange are based on the input spacing of the first row, the vertical distance to the first row, and the outside wall slope."

FROM: Herman Lee DATE: 10/15/2012 7:34:24 AM Eastern Daylight Time  
Please see attached "U-Beam Strand Layout.png" file for an illustration of the layout.

|                                            |
|--------------------------------------------|
| Issue ID: 11968                            |
| Subject: Cantilever Span Zero Shear Rating |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Zhang, Bin    |                        |
| Submitted By: Jackson, Amanda  | 10/12/2012 9:16:32 PM  |
| Modified By: ajackson          | 11/29/2012 10:24:32 PM |
| Priority: High                 |                        |
| Category: Support              |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 10/12/2012 5:20:47 PM Eastern Daylight Time  
I get a 0 rating for shear on this reinforced concrete tee beam bridge when I cantilever spans 1 and 4 (supports 1 and 5 are free). Not sure what is going on.

FROM: Amanda Jackson DATE: 10/12/2012 5:21:10 PM Eastern Daylight Time  
AASHTO engine.

FROM: Bin Zhang DATE: 10/15/2012 5:02:45 PM Eastern Daylight Time  
There is no reinforcement defined at the 2 ends of the RC Tee beam. That's the reason why a 0 rating for shear was presented.

Fully Development checkboxes for Set 1 and Set 8 could be checked to make sure there is effective reinforcement at the 2 ends of the beam. Please read the figure "11968FullyDevelopment.png" in the document for details.

|                                       |
|---------------------------------------|
| Issue ID: 11970                       |
| Subject: Shear connector ranges issue |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Bhanushali, Girish |                       |
| Submitted By: Lee, Herman           | 10/15/2012 2:49:13 PM |
| Modified By: mmlynarski             | 4/24/2013 2:37:07 PM  |
| Priority: High                      |                       |

4/19/2016 3:24:23 PM

HRS AASHTO

3288

**Complete Issue Information**

Category: Bug

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Trees, Geoffrey | Assigned           |          | Support  |
|                 | Information Needed |          |          |
|                 | Resolved           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 10/15/2012 10:49:43 AM Eastern Daylight Time  
Submitted on behalf of Joshua Colella, Michael Baker Corporation.

Received e-mail:

=====

Hello Herman,

I am receiving a system error when I attempt to analyze girder 1 in span 3 of the attached model. I have attached a copy of the text from the analysis progress. As can be seen there, the error states:

Finding maximum stresses in the unbraced lengths....  
 Finished finding maximum stresses in the unbraced lengths....  
 - STAGE 1  
 - Location - 0.0000 (ft)  
 - Location - 6.6802 (ft)  
 - Location - 8.5677 (ft)  
 - Location - 13.3604 (ft)  
 - Location - 17.2344 (ft)  
 - Location - 20.0406 (ft)  
 - Location - 26.4011 (ft)  
 - Location - 26.7208 (ft)

4/19/2016 3:24:23 PM

HRS AASHTO

3289

**Complete Issue Information**

- Location - 33.4011 (ft)

System Error - Contact Technical Support: Missing data in article: "6.10.8.2.1 - General" - stage 1, round 2

- Location - 40.0813 (ft)
- Location - 40.4011 (ft)
- Location - 46.7615 (ft)
- Location - 49.5678 (ft)
- Location - 53.4417 (ft)
- Location - 58.2345 (ft)
- Location - 60.1219 (ft)
- Location - 66.8021 (ft)

Fatal error occurred while processing specification checks.  
Error - Error performing LRFR specification checking!

Error - Analysis failed!

I was wondering if there was something I need to change in the model, or a way around the error?

Thanks in advance,  
Josh

Joshua Colella, PE | Structural Engineer | Michael Baker Corporation |  
=====

**Developer Note:**

Looks like Virtis has problem matching up analysis points. Changing the shear connector ranges to just one "Composite" range for the whole span will allow the rating to complete.

FROM: Girish Bhanushali DATE: 2/8/2013 1:49:58 PM Eastern Standard Time

Issue has been fixed to be verified in next release (6.5).

Rating Analysis and design review were successful without any errors. No changes were made to user posted bridge.

Test runs are attached.

FROM: Melanie Berry DATE: 4/18/2013 4:23:28 PM Eastern Daylight Time

Verified that the girder runs with no errors.

|                         |
|-------------------------|
| Issue ID: 11973         |
| Subject: Database Query |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Litchfield, Phil   | 10/15/2012 7:35:25 PM |
| Modified By: gtrees              | 10/16/2012 2:42:46 PM |
| Priority: High                   |                       |
| Category: Support                |                       |

4/19/2016 3:24:24 PM

**HRS AASHTO**

3290

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Unknown  |
|                  | Resolved |          |          |
|                  | Verified |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | @ 0.0ft after the fix.pdf     |             |
|      | 02051 - 39139051000C010.xml   |             |
|      | wall inside bar.png           |             |
|      | wall inside bar schematic.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/15/2012 3:52:45 PM Eastern Daylight Time

I'm trying to find out how many models contain information within the Deterioration Profile. Is there a script that can be run to get that number?

FROM: Geoffrey Trees DATE: 10/16/2012 9:43:00 AM Eastern Daylight Time

Phil, I am looking into producing a script for you right now. Are you interested in getting the bridge id or are you interested in any specific type of bridge? Or are you just interested in a single number for all

4/19/2016 3:24:24 PM

HRS AASHTO

3291

**Complete Issue Information**

bridges?

FROM: Phil Litchfield DATE: 10/16/2012 10:22:23 AM Eastern Daylight Time  
I'm interested in getting the total number of structures that have any deterioration modeled in them.

FROM: Geoffrey Trees DATE: 10/16/2012 10:33:15 AM Eastern Daylight Time

Here are two scripts for you to run against your database. The first will give you the count as you requested. As a side-effect of creating this script I also was able to easily make a list of bridge ids as well. Please let me know if these don't give you the results you need.

This script will give you the count of structures:

```
SELECT COUNT (*) AS struct_count FROM
(SELECT bridge_id FROM abw_stl_beam_loss_range
UNION
SELECT bridge_id FROM abw_mbralt_stlbn_loss_range) bridge_list
```

This script will give you the list of bridge\_ids:

```
SELECT bridge_id FROM abw_stl_beam_loss_range
UNION
SELECT bridge_id FROM abw_mbralt_stlbn_loss_range
```

|                                             |
|---------------------------------------------|
| Issue ID: 11976                             |
| Subject: C Bar not applied for Bottom slab. |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Wagner, Brad        | 10/16/2012 3:36:50 PM |
| Modified By: mkolis               | 12/6/2012 4:15:53 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:24 PM

HRS AASHTO

3292



## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Srujana Thogaru DATE: 10/16/2012 11:39:01 AM Eastern Daylight Time

From: Yalda, Daniel (MDOT) [mailto:YaldaD@michigan.gov]  
Sent: Tuesday, October 16, 2012 9:03 AM  
To: Bridgeware,  
Subject: Virtis 6.4 beta for culvert

Hi,

I was trying to use C bar type in other wall/ slab locations (not only as corner bar) but it seems the way that the virtis is dealing with those type of bar is incorrect at least the schematics. Please see the attachment. The other thing is how the virtis calculating the reinforcement area and capacity of the section ( $Tensile\ Capacity = A_s * F_y$ ) for the bottom slab at 0.00 ft or 2ft point? When I am at mid-span of the bottom slab 10ft I get the correct tensile capacity. Thanks

Dan  
Daniel Yalda , P.E.  
Load Rating Engineer  
Design Division  
(517) 322-5682

FROM: Srujana Thogaru DATE: 10/18/2012 3:22:37 PM Eastern Daylight Time

1. Changing "AS L or R/IW" bars in the attached Xml file from straight to Cbars , program should be deleting the bars under Wall tab because wall tab only accepts straight bars. Program is not doing that, instead it is considered as straight bar when creating schematic. This is bug.

2. In Cbars bottom horizontal bar is not being retrieved in bottom slab, which is a bug.

Both the above errors have been fixed for 6.4.1 release.

FROM: Srujana Thogaru DATE: 10/19/2012 9:57:20 AM Eastern Daylight Time

Above details were informed to Daniel Yalda through email on 10/19/2012

FROM: Bin Zhang DATE: 10/22/2012 10:11:02 AM Eastern Daylight Time

I verified both of two issues using VO640 release version with the DLL updates today.

FROM: Herman Lee DATE: 10/22/2012 3:08:40 PM Eastern Daylight Time

6.4.0 patch DLLs sent to Brad Wagner (Michigan DOT) on 10/22.

FROM: Brad Wagner DATE: 10/23/2012 11:37:53 AM Eastern Daylight Time

The patch is fixing and retrieving the Cbars correctly BUT appears that the Cbars being placed on

4/19/2016 3:24:24 PM

HRS AASHTO

3293

**Complete Issue Information**

wrong side of the bottom slab and thus the lower rating factors at bottom slab. FYI see the attachment pdf file named @ 0.0ft after fix.pd.

FROM: Srujana Thogaru DATE: 10/23/2012 1:17:54 PM Eastern Daylight Time  
Problem with CBars Placed on wrong side of the bottom slab has been fixed. New dlls will be sent soon.

FROM: Bin Zhang DATE: 10/23/2012 1:11:29 PM Eastern Daylight Time  
Verified for the new DLL. For C bar "As L or R/OW", the slab clear cover is 1.5 inch for both top and bottom slabs (1.5in + 9.75ft + 1.5in = 12in + 8ft + 12in). In spec checker 8.16.3, the dist. from the bottom means the distance from the inner side of the slab to the bar, which is 12in - 1.5 in - 0.875/2 (radius of the bar) = 10.06 in.

FROM: Herman Lee DATE: 10/23/2012 5:14:08 PM Eastern Daylight Time  
Updated 6.4.0 patch DLLs sent to Brad Wagner (Michigan DOT) on 10/23.

FROM: Matt Kolis DATE: 10/31/2012 10:31:47 AM Eastern Daylight Time  
Verified C-bar schematic and LFR article 8.16.3 for correct rebar placement.

FROM: Matt Kolis DATE: 12/6/2012 11:15:53 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 11977                                                                            |
| Subject: Migration Wizard encountered an unexpected error during migration from 6.3 to 6.4 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Trees, Geoffrey      |                       |
| Submitted By: Gilbertson, Christopher | 10/16/2012 6:52:31 PM |
| Modified By: hlee                     | 10/31/2012 7:59:56 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
| Trees, Geoffrey    | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |

## Complete Issue Information

Support

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | DataSavedToDatabase.png          |             |
|      | BuiltUpStrngrBug(0606002)631.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Christopher Gilbertson DATE: 10/16/2012 3:02:56 PM Eastern Daylight Time

While running the migration wizard (6.3 to 6.4), the wizard encountered an unexpected error and had to close.

The sample database migrated correctly but while migrating the the production database this error occurred. We restored the database and then tried the migration again but had the same problem.

We've got a database backup and the log file, but are unable to get the database migrated successfully.

FROM: Mehrdad Ordoobadi DATE: 10/17/2012 1:30:06 PM Eastern Daylight Time

Geoff, Please investigate this 6.4 issue. The problem seems to be in the Migrate63To64 step.

FROM: Geoffrey Trees DATE: 10/18/2012 9:15:11 AM Eastern Daylight Time

Christopher, I setup a virtual machine running windows xp 32-bit, with 32-bit Virtis 6.4 installed. I restored your database and I had a successful migration. Can you please tell me which version of Windows, SQL Server and Virtis (32 or 64 bit) you are using so I can test your exact setup? Thanks.

FROM: Geoffrey Trees DATE: 10/18/2012 2:12:09 PM Eastern Daylight Time

On Behalf of Mary Crane:

From: Mary Crane [mailto:mcrane@mtu.edu]

Sent: Thursday, October 18, 2012 12:42 PM

To: Trees, Geoffrey

Subject: Fwd: FW: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority requires additional information.

Hello-

4/19/2016 3:24:24 PM

HRS AASHTO

3295

**Complete Issue Information**

I'm responding with additional information on Chris Gilbertson's behalf - IncidentCustom 11977

This error occurred on a machine with:  
Windows 7 Professional with 64-bit operating system  
SQL Server 2008 10.0.2531  
Virtis 64-bit

As a work-around, would it work for you to just send us a backup of the database you were able to migrate successfully?

Thanks,  
Mary Crane

-----  
FROM: Geoffrey Trees DATE: 10/18/2012 2:12:09 PM Eastern Daylight Time  
Mary,

I ran your database under the same conditions as you have below. I noticed that if you don't run as administrator that it won't be able to connect to the database properly. Can you try again but right-click the migration utility and click "Run as Administrator". Please let me know if this works either way so we can inform other users if they have this issue.

FROM: Geoffrey Trees DATE: 10/26/2012 3:53:45 PM Eastern Daylight Time  
Christopher or Mary, any luck with this?

FROM: Geoffrey Trees DATE: 10/31/2012 9:24:41 AM Eastern Daylight Time  
We migrated one database which was successfully restored by the client. The second database was from an unsupported version of SQL Server. This issue is resolved.

|                                              |
|----------------------------------------------|
| Issue ID: 11979                              |
| Subject: Steel builtup member import problem |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ilnat, Joseph |                       |
| Submitted By: Skow, Wayne      | 10/17/2012 1:53:56 PM |
| Modified By: mkolis            | 12/6/2012 4:19:45 PM  |
| Priority: Critical             |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown  |

4/19/2016 3:24:24 PM

**HRS AASHTO**

3296

### Complete Issue Information

|               |          |      |         |
|---------------|----------|------|---------|
| Ihnat, Joseph |          |      |         |
| Lee, Herman   | New      | High | Unknown |
|               | Assigned |      |         |
| Ihnat, Joseph |          |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BoxStrandIssue.png  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Wayne Skow DATE: 10/17/2012 9:55:31 AM Eastern Daylight Time  
This is a problem originally identified in issue 11974.

When this model is imported into v6.3.1, the RPG member's 4" leg is horizontal in the cross-section dialog and the cross-section properties are consistent with that in LFR article 10.48.4.1.Mr. However, when it is imported into v6.4, the cross-section shows the 6" leg horizontal, but the cross-section properties in 10.48.4.1.Mr still show as if the 4" leg is horizontal.

FROM: Mehrdad Ordoobadi DATE: 10/17/2012 12:49:48 PM Eastern Daylight Time  
I imported the XML file that was attached to your email/incident and saved it in 6.4.1 application. I checked the saved values in the database and I see that the horizontal leg for top and bottom angles are both 4" long. See attached screenshot of the database contents. Note that the values are in millimeters.

I think that the User interface is not selecting the correct value in the Horizontal Legs drop down lists. Even if I change the top and bottom Horizontal Legs drop down lists to 4 inches then save the bridge and close and reopen the Cross Sections window OI still see the 6" Horizontal legs are selected.

Joe, Could you please ask someone to look into this issue.

FROM: Joseph Ihnat DATE: 10/25/2012 10:14:05 AM Eastern Daylight Time  
I think the window will save the data correctly, but when the window is reopened it is initializing incorrectly. Appears to be caused by the fix for 10832 in 6.4.0.

FROM: Joseph Ihnat DATE: 10/25/2012 10:36:11 AM Eastern Daylight Time  
Fixed in 6.4.1

FROM: Matt Kolis DATE: 11/1/2012 9:32:25 AM Eastern Daylight Time

4/19/2016 3:24:25 PM

HRS AASHTO

3297

**Complete Issue Information**

Verified in 6.4.1 the cross section and 10.48.4.1.Mr both show 4" leg horizontal.

FROM: Phil Litchfield DATE: 11/20/2012 6:35:47 PM Eastern Standard Time  
Fixed in 6.4.1 Beta 1.

FROM: Matt Kolis DATE: 12/6/2012 11:19:45 AM Eastern Standard Time  
Verified in 6.4.1 Beta 2.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 11980                                     |
| Subject: Odd behavior in layout of Box Beam strands |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Ihnat, Joseph  |                       |
| Submitted By: Pickings, Richard | 10/18/2012 1:04:18 AM |
| Modified By: hlee               | 10/18/2012 4:30:34 PM |
| Priority: High                  |                       |
| Category: Unknown               |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Richard Pickings DATE: 10/17/2012 9:09:32 PM Eastern Daylight Time  
Look at the attached image showing locations of strands in a SIII-48 box beam shape. The locations do not seem to match what the documentation says they should. My interpretation is that they should match the lower figure.

To recreate: Create a new precast box beam shape and copy the SIII-48 data from the library. Then create a member alternate in order to view the strand locations

FROM: Herman Lee DATE: 10/18/2012 10:42:01 AM Eastern Daylight Time  
For SIII-48, the strand grid has 23 strands with 2" spacing. With 2" cover on each side, it should

4/19/2016 3:24:25 PM

HRS AASHTO

3298

**Complete Issue Information**

exactly match up the 48" box width.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 11983                                                   |
| Subject: Virtis crash after closing analysis charts print preview |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Ihnat, Joseph |                        |
| Submitted By: Ihnat, Joseph    | 10/22/2012 12:38:37 PM |
| Modified By: mkolis            | 12/4/2012 8:05:43 PM   |
| Priority: High                 |                        |
| Category: Bug                  |                        |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 05230027_RCBC.xml         |             |
|      | C bars or Corner bars.pdf |             |
|      | corner_resteel_RCBC.PNG   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 10/22/2012 8:39:41 AM Eastern Daylight Time

To reproduce, open TrainingBridge1, analyze the G1 member alt, open the charts (Results Graph) window.

Select the chart view by clicking in the top pane, then open File/Print Preview.

Close the Print Preview window by clicking the "X" close button. Then try to close the bridge workspace, program will crash.

Works OK if you use the "Close" button instead of the "X" close button.

FROM: Joseph Ihnat DATE: 11/27/2012 10:07:06 AM Eastern Standard Time

Fixed for 6.4.1

FROM: Matt Kolis DATE: 12/4/2012 3:05:43 PM Eastern Standard Time

Verified in 6.4.1 Beta 2.

Issue ID: 11987

Subject: C bars and corner bars - can't get them in Exterior Walls

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: Thompson, Todd

10/24/2012 8:10:18 PM

Modified By: sthogaru

10/26/2012 2:16:04 PM

Priority: High

4/19/2016 3:24:25 PM

HRS AASHTO

3300



## Complete Issue Information

Category: Support

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ihnat, Joseph      | Assigned |          |          |
| Trees, Geoffrey    |          |          | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                                                                                                                    | Description |
|------|----------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 082-2030_Info from Reinf.<br>Window Deleted When Copying<br>to a New Culvert Definition<br>(ALS)(10.22.12).docx<br>04824 - 0822030.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 10/24/2012 4:17:15 PM Eastern Daylight Time

Not sure if this is an education issue - but I have C bars and Corner bars that go in the Exterior walls. The C bar goes in exterior side of exterior walls and the corner bars goes in the corners of the Exterior walls and Top/Bottom Slabs.

I have the bars defined and it allows me to place them - but I then get a warning/error message that Location Left and Wall 1 definition not allowed.

My C bar and Corner bars are the only bars that even show up in my resteel selection drop down window.

See attached screen shot and bridge XML

4/19/2016 3:24:25 PM

HRS AASHTO

3301

## Complete Issue Information

I guess the work around is to define the bars as straight and make them fully developed on the ends?

FROM: Srujana Thogaru DATE: 10/25/2012 8:39:50 AM Eastern Daylight Time  
For C bars or Corner bars Left, Top left and Bottom Left would mean bar facing left (Horizontal bar projecting left direction) and Right, Top Right and Bottom Right mean bar facing Right(Horizontal bar projecting right direction). Left, Top left and Bottom Left are not allowed in Left exterior wall. Right, Top Right and Bottom Right are not allowed in right exterior wall. Please enter bars as shown in the attachment for correct procedure.

FROM: Todd Thompson DATE: 10/26/2012 10:14:17 AM Eastern Daylight Time  
Thanks - had things twisted around - Education issue.  
Please close

|                                  |
|----------------------------------|
| Issue ID: 11988                  |
| Subject: Copy Culvert Definition |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Ordoobadi, Mehrdad |                        |
| Submitted By: Litchfield, Phil      | 10/24/2012 10:22:08 PM |
| Modified By: mkolis                 | 12/6/2012 4:45:27 PM   |
| Priority: High                      |                        |
| Category: Bug                       |                        |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/24/2012 6:28:56 PM Eastern Daylight Time  
From consultant (Staggemeyer):

When you copy a culvert definition, the new copy has missing information. The Bar Mark, Start

4/19/2016 3:24:26 PM

HRS AASHTO

3302

**Complete Issue Information**

Distance and Straight Length do not show up in the reinforcement window. Screenshot and model attached.

FROM: Geoffrey Trees DATE: 11/1/2012 4:30:29 PM Eastern Daylight Time  
Developer note: I fixed a few order issues regarding the copy order but there is still an issue in culvdef\_rcbox\_seg\_reinprof.

FROM: Mehrdad Ordoobadi DATE: 11/2/2012 11:03:19 AM Eastern Daylight Time  
Fixed the problem in 6.4.1.

FROM: Phil Litchfield DATE: 11/21/2012 10:34:43 AM Eastern Standard Time  
Working in 6.4.1 Beta 1.

FROM: Mehrdad Ordoobadi DATE: 11/21/2012 10:56:18 AM Eastern Standard Time  
Accepted by Phil Litchfield.

FROM: Matt Kolis DATE: 12/6/2012 11:45:27 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

Issue ID: 11992  
Subject: Copy Culvert - fails to work

Folder: /Virtis/Support Center  
Primary Contact: Trees, Geoffrey  
Submitted By: Thompson, Todd 10/26/2012 7:37:44 PM  
Modified By: hlee 11/2/2012 11:15:55 AM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          | Bug      |

4/19/2016 3:24:26 PM

HRS AASHTO

3303

## Complete Issue Information

|           |
|-----------|
| Duplicate |
|-----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 874544_vehicles.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 10/26/2012 3:40:59 PM Eastern Daylight Time

I remember we had some similar issues during earlier Beta versions and this has appeared to show up again.

I have a culvert that I load rated with good results.

I have another culvert - that is similar, so I attempted on the bridge explorer to COPY and then PASTE - but I get an error when I do this.

Error occurred while saving the bridge data!

02:36:44 PM - Line 4879 in source file UiDescDtopGridView.cpp.

Saving New and Modified objects failed while processing CDmCulvdefRcboxSegReinprof (SaveOrder object 473).

02:36:44 PM - Line 492 in source file DmBridgeCache.cpp.

Error updating database record set.

02:36:44 PM - Line 985 in source file DmCulvdefRcboxSegReinprof.cpp.

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The INSERT statement conflicted with the FOREIGN KEY constraint "R\_5186". The conflict occurred in database "Virtis64s", table "dbo.abw\_culvert\_bar\_mark\_def". The statement has been terminated.

I am using the Sample DB along with the attached XML bridge/culvert definition that I was trying to copy.

FROM: Geoffrey Trees DATE: 11/1/2012 4:26:30 PM Eastern Daylight Time

This is a duplicate of 11988. I fixed a few issues regarding this but there is still one left. I am going to leave this open until the other is resolved and then mark this as a duplicate.

|                 |
|-----------------|
| Issue ID: 11993 |
|-----------------|

4/19/2016 3:24:26 PM

HRS AASHTO

3304

### Complete Issue Information

|                                                                                 |                       |
|---------------------------------------------------------------------------------|-----------------------|
| Subject: Virtis crashes with more than one varying axle spacing for wheel loads |                       |
| Folder: /Virtis/Support Center                                                  |                       |
| Primary Contact: Lee, Herman                                                    |                       |
| Submitted By: Ghosh, Subhadeep                                                  | 10/26/2012 8:58:52 PM |
| Modified By: mmlynarski                                                         | 4/24/2013 2:37:58 PM  |
| Priority: High                                                                  |                       |
| Category: Bug                                                                   |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Subhadeep Ghosh DATE: 10/26/2012 4:59:19 PM Eastern Daylight Time  
Virtis 6.4 crashes if user defined wheel loads having more than one variable axle spacings are used i.e. for only one axle spacing the maximum and the minimum can be different and the rest has to be the same.

Smample user defined wheel loads with more than one variable axle spacing are attached as obtained from the user.

FROM: Herman Lee DATE: 12/5/2012 1:53:28 PM Eastern Standard Time  
Fixed crash when vehicle has more than one axle with varying spacing.

Resolved for the 6.5 release.

FROM: Melanie Berry DATE: 4/18/2013 4:27:18 PM Eastern Daylight Time  
Verified that the program does not crash with more than one axle with varying spacing.

4/19/2016 3:24:26 PM

HRS AASHTO

3305

## Complete Issue Information

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 11995                                                    |
| Subject: Culvert Reports - Member Moments, Shears and Axial Forces |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Thompson, Todd   | 10/29/2012 1:30:59 PM |
| Modified By: hlee              | 10/29/2012 1:35:57 PM |
| Priority: High                 |                       |
| Category: Enhancement          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 10/29/2012 9:34:14 AM Eastern Daylight Time

I would like to make sure we have this in the enhancement hopper and under consideration for the Reports TAG.

We need to be able to summarize in a report -

Various culvert members (each top slab, bottom slab, exterior wall, interior walls) and their respective

4/19/2016 3:24:26 PM

HRS AASHTO

3306

### Complete Issue Information

Moments, Shears and Axial loads -

Ideally also being able to get graphs for each member.

While this data is somewhat available in the detailed output - in takes considerable effort and diligence to dig and find. And then one can create their own Excel spreadsheets and then graphs - it sure would be much nicer if the application would pull that data and put it into tables and graphs for the user.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 12007                                                         |
| Subject: Use NCHRP 647 LL Distribution option missing in copied culvert |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Hasan, Mac         | 10/31/2012 6:23:17 PM |
| Modified By: mkolis              | 12/6/2012 7:45:16 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Trees, Geoffrey | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

4/19/2016 3:24:27 PM

HRS AASHTO

3307

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | BridgeWare Association.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 10/31/2012 2:23:41 PM Eastern Daylight Time  
Submitted on behalf of An Tran, CO DOT.

Part of the Bridgeware e-mail received on 10/31/2012:

=====

4. steps to reproduce the issue of water load:

Copy "Culvert Def 1" (water unit load = 62.4 pcf, water height = 0), Paste to CULVERT DEFINITIONS and rename it as "Culvert 100ft Water 1248 pcf", Under "Culvert 100ft Water 1248 pcf", open Culvert Loads, change water unit load to = 1248 pcf, Under "Culvert 100ft Water 1248 pcf", CULVERT ALTERNATIVES, CULVERT SEGMENTS, open RC Box Culvert Loads, change water height to = 100 ft.

Run the same analysis for "Culvert 100ft Water 1248 pcf" as for "Culvert Def 1" (no water) and compare the results.

=====

Reply e-mail:

=====

When making a copy of the culvert definition, the "Use NCHRP 647 LL Distribution" control option didn't get copied over. If you select to use this option in the copied culvert definition, the ratings will be the same as the one without water. Since water load is not included in the load rating equation, same ratings are expected.

=====

FROM: Geoffrey Trees DATE: 11/2/2012 10:14:37 AM Eastern Daylight Time  
Resolved for 6.4.1. This applied to all copied control options. If a culvert def was copied and the bridge was closed, the copy was OK. However, if there was a copy made and then the def window was opened and closed by pressing OK, the proper values were being over written with the defaults. I added code to handle this case and now everything looks good.

FROM: Matt Kolis DATE: 12/6/2012 2:45:16 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

|                                                |
|------------------------------------------------|
| Issue ID: 12010                                |
| Subject: Virtis 6.4 and BridgeWare Association |



**Complete Issue Information**

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Laughlin, Christopher | 11/1/2012 4:21:29 PM |
| Modified By: jihnat                 | 12/6/2012 3:42:38 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Trees, Geoffrey | Assigned | High     | Unknown  |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 11/1/2012 12:23:42 PM Eastern Daylight Time  
Question on BridgeWare Association when creating new bridge. Please reference PDF attachment.

FROM: Christopher Laughlin DATE: 11/2/2012 1:50:46 PM Eastern Daylight Time  
Is 6.4 compatible with Pontis 4.5 ? According to the Virtis Help, it sounds like if any version of Pontis is installed on the same server/workstation when you install Virtis, the ability to link to Pontis bridges during new bridge creation should be in place. Can you confirm ? If this is the case, are there any other steps we can take to resolve ? (i.e. look for a specific registry entry, etc.)

FROM: Mehrdad Ordoobadi DATE: 11/5/2012 11:52:21 AM Eastern Standard Time  
I think the behavior changed when Pontis Link and Multimedia import/export enhancement in 6.3 was implemented.

FROM: Mehrdad Ordoobadi DATE: 11/8/2012 12:11:33 PM Eastern Standard Time

4/19/2016 3:24:27 PM

HRS AASHTO

3309

**Complete Issue Information**

Fixed in 6.4 SP1.

FROM: Mehrdad Ordoobadi DATE: 11/8/2012 1:03:58 PM Eastern Standard Time

This bug has just been fixed in version 6.4 SP1 that is still being developed. The Service Pack is going to be released in a few months.

In the meanwhile you could use this workaround when creating a new bridge that you would like to link with Pontis:

- 1 – Create the bridge without linking with Pontis.
- 2 – Save and Close the bridge.
- 3 – Open the bridge. Open Bridge Description window. Click on BridgeWare Association window and link to a Pontis bridge.

FROM: Joseph Ihnat DATE: 12/6/2012 10:40:32 AM Eastern Standard Time

Verified in 6.4.1 Beta 2. The BridgeWare Association window appears when a new bridge is created.

|                                                |
|------------------------------------------------|
| Issue ID: 12021                                |
| Subject: Script error on migrated 6.4 database |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Trees, Geoffrey    | 11/5/2012 2:29:05 PM  |
| Modified By: gtrees              | 11/26/2012 9:25:40 PM |
| Priority: High                   |                       |
| Category: Support                |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Geoffrey Trees DATE: 11/5/2012 9:30:32 AM Eastern Standard Time

4/19/2016 3:24:27 PM

HRS AASHTO

3310

## Complete Issue Information

E-Mail Support:  
-----

From: Magnuson, Bob [mailto:BMAGNUSON@indot.IN.gov]  
Sent: Monday, October 29, 2012 1:07 PM  
To: Bridgeware,  
Subject: RE: Bridge Rating ASD LFD to AASHTO

Hi Mehrdad,

A test database was migrated from 6.3 to 6.4. I then tried to run the scripts and got the errors.

Thanks,  
Bob

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Monday, October 29, 2012 12:54 PM  
To: Magnuson, Bob; Bridgeware,  
Subject: RE: Bridge Rating ASD LFD to AASHTO

Hi Bob,

What version of Virtis/Opis application are you using. The error suggests that you are probably using Virtis/Opis 6.2 or older. The scripts are developed for version 6.3 or later and cannot be applied to older versions.

Regards,  
Mehrdad Ordoobadi

From: Magnuson, Bob [mailto:BMAGNUSON@indot.IN.gov]  
Sent: Monday, October 29, 2012 11:44 AM  
To: Bridgeware,  
Subject: Bridge Rating ASD LFD to AASHTO

Hi,

I encountered errors when trying to run the switch to AASHTO engines and are in the attached files. Any suggestions on how to correct them would be greatly appreciated.

Thanks,  
Bob

-----  
FROM: Geoffrey Trees DATE: 11/26/2012 4:23:36 PM Eastern Standard Time  
Here is a continuation of the support via e-mail:

From: Trees, Geoffrey [mailto:GTrees@mbakercorp.com]  
Sent: Friday, November 16, 2012 2:11 PM  
To: Magnuson, Bob

4/19/2016 3:24:27 PM

HRS AASHTO

3311

**Complete Issue Information**

Subject: RE: Virtis Std to AASHTO

Sorry Bob, I thought that was what you are using. Attached are the oracle scripts.

Geoff

From: Magnuson, Bob [mailto:BMAGNUSON@indot.IN.gov]  
Sent: Friday, November 16, 2012 1:48 PM  
To: Trees, Geoffrey  
Subject: RE: Virtis Std to AASHTO

Hi Geoffrey,

Could you please provide Oracle scripts? These look like they're SQL Server.

Thanks,  
Bob

From: Trees, Geoffrey [mailto:GTrees@mbakercorp.com]  
Sent: Friday, November 16, 2012 1:37 PM  
To: Magnuson, Bob  
Subject: RE: Virtis Std to AASHTO

Bob,

There was a change that caused these scripts not to work. I have corrected the issue and attached updated scripts. Please let me know if you have any further issue. Sorry for the inconvenience.

Thanks,  
Geoffrey Trees

From: Magnuson, Bob [mailto:BMAGNUSON@indot.IN.gov]  
Sent: Friday, November 16, 2012 10:22 AM  
To: Bridgewater,  
Subject: Virtis Std to AASHTO

Hi Mehrdad,

The ASD-Switch-Virtis-Std-to-AASHTO and LFD-Switch-Virtis-Std-to-AASHTO scripts have an error with version 6.4 because the migration from 6.3 to 6.4 changes the abw\_struct\_def table. Do the scripts need to be changed or does the migration need to be changed? Will the application run properly if the scripts are applied to 6.3 and then the database is migrated to 6.4?

Thanks,  
Bob

-----  
This issue is now resolved.

4/19/2016 3:24:28 PM

HRS AASHTO

3312

**Complete Issue Information**

|                                                    |
|----------------------------------------------------|
| Issue ID: 12022                                    |
| Subject: Won't calculate LRFR distribution factors |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: McMunn, Creightyn   | 11/5/2012 4:06:51 PM  |
| Modified By: cmcmunn              | 12/13/2012 7:27:56 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    |          |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | MigrateOracle_620_to_630.<br>SQL |             |
|      | ScreenShot.jpg                   |             |
|      | Insert.txt                       |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Creightyn McMunn DATE: 11/5/2012 11:09:18 AM Eastern Standard Time  
In the attached files, the program will calculate the LRFR LLDF's for all members in version 6.3. There is an error when trying to calculate the LRFR LLDF's in version 6.4.

FROM: Krisha Kennelly DATE: 11/9/2012 8:59:52 AM Eastern Standard Time  
This is the same as issue 12035.

4/19/2016 3:24:28 PM

HRS AASHTO

3313

**Complete Issue Information**

6.4.1 beta 1 is going out today so I will look into fixing this for 6.4.1 beta 2.

FROM: Krisha Kennelly DATE: 11/12/2012 1:01:22 PM Eastern Standard Time  
Fixed for 6.4.1 beta 2.

FROM: Krisha Kennelly DATE: 11/12/2012 1:02:12 PM Eastern Standard Time  
This problem only existed for skewed ps beams.

FROM: Matt Kolis DATE: 12/4/2012 4:20:02 PM Eastern Standard Time  
Verified in 6.4.1 Beta 2.

FROM: Creightyn McMunn DATE: 12/13/2012 2:27:55 PM Eastern Standard Time  
I verified that the program correctly calculates the LRFR LLDF's for the attached file. V6.4.1 Beta 2.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12028                                                           |
| Subject: Problem with updating an Oracle database using Technical Note 21 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Withers, Richard      | 11/6/2012 4:13:50 PM |
| Modified By: hlee                   | 12/4/2012 7:57:28 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Richard Withers DATE: 11/6/2012 11:21:57 AM Eastern Standard Time  
When attempting to update our Oracle database using the attached script included in Technical Note

**Complete Issue Information**

21, we get an error. A screen shot of the error and the insert are attached.

Thanks,  
Richard

FROM: Richard Withers DATE: 11/19/2012 10:01:26 AM Eastern Standard Time  
Has anyone looked into this issue? MDOT is trying to update to 6.4 and this issue is holding up the entire process.

Thanks,  
Richard

FROM: Mehrdad Ordoobadi DATE: 11/20/2012 9:22:39 AM Eastern Standard Time  
Please review the technical note 21 documentation (Part of it displayed below)

**Resolution**

1. This resolution can only be applied when the Virtis/Opis database is at version 6.2.0 or earlier and HAS NOT BEEN migrated to version 6.3.0.
2. Download the TN0021 package from the Virtis/Opis Technical Support website (<http://aashto.bakerprojects.com/virtis/>) and extract the contents of the package into the folder where Virtis/Opis 6.3.0 is installed. The full path to that folder is typically one of the following:
  - o C:\Program Files (x86)\AASHTOWARE\VirtisOpis63\
  - o C:\Program Files\AASHTOWARE\VirtisOpis63\
3. Start Migration Wizard to migrate your database to Version 6.3.0.

The script was intended for a database this is at version 6.2. Also the script is supposed to be ran from within the Virtis/Opis Migration Wizard.

Please recover your database from the backup.

If the version of the database that you are upgrading from is 6.2 or older you can just use the Virtis/Opis 6.4 Migration Wizard to upgrade your database. The Technical Note 21 fix will be applied. If your database is at version 6.3 then please just perform the Migration using the Migration Wizard. The Technical Note 21 fix will not be applied. If you previously migrated your database to version 6.3 without applying the Technical Note 21 fix then we could look into how to implement the corrections included in Technical Note 21 on your 6.4 database.

|                                  |
|----------------------------------|
| Issue ID: 12031                  |
| Subject: unable to verify schema |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Vaisa, Chris          | 11/6/2012 10:56:25 PM |
| Modified By: hlee                   | 11/11/2012 7:25:06 PM |
| Priority: High                      |                       |
| Category: Support                   |                       |

**History**

4/19/2016 3:24:28 PM

HRS AASHTO

3315

**Complete Issue Information**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Lee, Herman     | New                | High     | Unknown  |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
| Trees, Geoffrey | Assigned           |          |          |
|                 |                    |          | Bug      |
| Lee, Herman     | Resolved           |          |          |
|                 | Verified           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | CulvWontRunLRFR(0602051)<br>64.xml |             |
|      | 060-2051 Error Screen 1.jpg        |             |
|      | 060-2051 Error Screen 2.jpg        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Chris Vaisa DATE: 11/6/2012 6:03:17 PM Eastern Standard Time  
 built new VO 6.4 test database with schema (BRIDGEWARE) who is also the owner of the tables. Able to log into the application with the user BRIDGEWARE but not with any other user created in the application which is also visible in the database as a user. Getting the error when logging in 'unable to verify schema. Please contact database administrator. Not sure what went wrong.

4/19/2016 3:24:28 PM

HRS AASHTO

3316



## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 11/9/2012 9:08:44 AM Eastern Standard Time

Please refer to the Virtis/Opis Help for instructions on adding new users to your database (section titled "Adding Users to the Virtis/Opis Database" in Virtis-Opis Help).

### Summary:

1. Add the user to Virtis/Opis system.
2. Add the user to the database, and set user table permissions.

|                                      |
|--------------------------------------|
| Issue ID: 12032                      |
| Subject: LRFR Culvert Analysis Error |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Litchfield, Phil | 11/7/2012 10:06:52 PM |
| Modified By: plitchfield       | 1/18/2013 8:55:47 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Phil Litchfield DATE: 11/7/2012 5:11:50 PM Eastern Standard Time

The culvert model gives an error when it is running in our network database (See attached screenshots.). But if I import it into a local database it will running slowly but without error.

FROM: Herman Lee DATE: 12/5/2012 3:42:23 PM Eastern Standard Time

Phil, do you still have this problem? Thanks.

FROM: Herman Lee DATE: 12/6/2012 8:23:17 AM Eastern Standard Time

Phil's reply:

4/19/2016 3:24:29 PM

HRS AASHTO

3317

**Complete Issue Information**

=====  
Phil,

Is the problem reproducible with any culvert models running in your network database or reproducible only with the culvert model attached in Incident 12032?

Thanks,  
Herman

From: Litchfield, Phillip R  
Sent: Wednesday, December 05, 2012 4:35 PM  
To: Lee, Herman  
Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority requires additional information.

Yes, we are still having this problem.

Thanks,

Phillip Litchfield, P.E.

Illinois Department of Transportation  
Bureau of Bridges & Structures

=====

FROM: Herman Lee DATE: 12/7/2012 11:30:18 AM Eastern Standard Time  
Phil's reply:

=====

Yes, the problem is reproducible on another model also.

Thanks,

Phil

=====

FROM: Phil Litchfield DATE: 12/27/2012 3:28:19 PM Eastern Standard Time  
Error still occurring in 6.4.1. Any ideas?

FROM: Herman Lee DATE: 12/27/2012 7:05:23 PM Eastern Standard Time  
We don't have any ideas for the cause of the problem. Did you get the same error messages as those attached for the other model the problem is reproducible? Are you using Oracle or SQL Server for the network database?

FROM: Phil Litchfield DATE: 12/28/2012 3:11:57 PM Eastern Standard Time  
Yes, I'm getting the same message with a newly entered model also. We are using SQL Server network databases.

FROM: Herman Lee DATE: 12/29/2012 6:54:11 AM Eastern Standard Time  
Thanks for the additional information. We will try to reproduce the problem using a SQL Server network database.

Geoff, could you setup a Virtis 6.4 SQL Server network database in the Lab's Windows 7 machine?

4/19/2016 3:24:29 PM

**HRS AASHTO**

3318

### Complete Issue Information

Please reassign this incident back to me after you are done. Thanks.

FROM: Phil Litchfield DATE: 1/7/2013 5:28:47 PM Eastern Standard Time  
We can get it to run in LRF design review on the network without an error. And see the rating factors in the summary output but still having problems with LRFR.

FROM: Herman Lee DATE: 1/17/2013 9:49:43 AM Eastern Standard Time  
The problem was caused by agency defined LRF and LRFR library factors in migrated database.

This issue has been fixed. After verifying the fix, we will provide an updated 6.4.1 DLL for fixing this issue.

FROM: Bin Zhang DATE: 1/17/2013 1:33:26 PM Eastern Standard Time  
Verified for version 6.4.1 with the DLL updates.

FROM: Phil Litchfield DATE: 1/18/2013 3:55:47 PM Eastern Standard Time  
New DLL update resolved this issue.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 12033                                        |
| Subject: Can Not View General Preferences in XP 32 bit |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Trees, Geoffrey |                        |
| Submitted By: Teal, Dean         | 11/8/2012 4:48:28 PM   |
| Modified By: dteal               | 12/11/2012 12:36:21 PM |
| Priority: High                   |                        |
| Category: Bug                    |                        |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          |          |
|                 | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:24:29 PM

HRS AASHTO

3319

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 11/8/2012 11:49:57 AM Eastern Standard Time

In the General Preferences, Preference Setting

I had opened a Saved Template

I selected View and got the message below

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

---

System error: -2146697211. Error processing resource  
'file:///C:/ProgramData/AASHTOWARE/VirtisOpis64/Xsl Files/GeneralPrefe...

In my File Associations I have XML associated with IE properly

I am using XP 32 bit

It appears to be working on Windows 7 64 bit.

FROM: Joseph Ihnat DATE: 11/8/2012 2:20:29 PM Eastern Standard Time

"C:\ProgramData" is hard-coded in CGeneralPreferencesXmlGen::WriteXML(). Should be calling CSysSecurity::GetSharedAppDataFolder() instead.

FROM: Geoffrey Trees DATE: 11/9/2012 9:31:29 AM Eastern Standard Time

Fixed for 6.4.1

FROM: Matt Kolis DATE: 12/6/2012 3:20:16 PM Eastern Standard Time

Verified in Virtis 6.4.1 Beta 2.

FROM: Dean Teal DATE: 12/11/2012 7:36:21 AM Eastern Standard Time

Accepted 6.4.1 beta 2

Issue ID: 12034

Subject: General Preferences – Modify and Save Template Issues

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Teal, Dean

11/8/2012 4:50:00 PM

Modified By: dteal

11/15/2012 4:06:31 PM

Priority: High

Category: Unknown

4/19/2016 3:24:29 PM

HRS AASHTO

3320

## Complete Issue Information

---

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Bug      |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Duplicate          |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | dist fact error.jpg |             |
|      | 10692.xml           |             |
|      | 12035 question.png  |             |
|      | Test.zip            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/8/2012 11:51:09 AM Eastern Standard Time

In my 32 bit XP system

I created and saved a template in General Preferences

I exited the feature and then returned to it and verified it saved my selections

I opened the saved template again, added an item to it, hit save template, answered Yes to overwrite existing.

Exited the feature and reopened General Preferences, Opened the saved template and the new item I added was not their.

This works on my 64 bit W7 pc I used for testing and is connected to our test database.

This does not work on my XP 32 bit production pc

4/19/2016 3:24:29 PM

HRS AASHTO

3321

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 11/8/2012 2:53:50 PM Eastern Standard Time  
I'm not able to reproduce this. Any other information you could provide?

FROM: Dean Teal DATE: 11/8/2012 3:35:46 PM Eastern Standard Time  
Nothing more to add  
I can modify and save a general preference in Windows 7 64 bit and I can NOT with XP

FROM: Joseph Ihnat DATE: 11/9/2012 7:34:04 AM Eastern Standard Time  
What kind of database?

FROM: Dean Teal DATE: 11/14/2012 7:41:30 AM Eastern Standard Time  
Oracle

FROM: Dean Teal DATE: 11/14/2012 8:15:25 AM Eastern Standard Time  
Oracle 11g

FROM: Joseph Ihnat DATE: 11/15/2012 7:48:33 AM Eastern Standard Time  
I'm not able to reproduce this with Oracle.

FROM: Dean Teal DATE: 11/15/2012 11:06:31 AM Eastern Standard Time  
I will test this further when I get back from the TF meeting in Boston

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12035                                     |
| Subject: LRFD Distribution Factor Calculation fails |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Silvis, Bryan       | 11/8/2012 8:32:29 PM  |
| Modified By: bsilvis              | 12/21/2012 3:31:13 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 11/8/2012 3:32:43 PM Eastern Standard Time  
Submitted on behalf of Sita Ram Pandey via email:

Would you kindly please take a look at the attached xml file. I am getting following error during LRFD LLDF computation.  
Thanks

Sita Ram Pandey, P.E.  
Senior Structural Engineer

Celebrating 20 years of Engineering Excellence  
919 Middle Street  
Middletown, CT 06457  
Phone: 860-635-7740 Ext. 111  
Fax: 860-635-7312  
www.aiengineers.com

FROM: Krisha Kennelly DATE: 11/8/2012 3:48:23 PM Eastern Standard Time  
reponse sent via email Thu 11/8/2012 3:48 PM:

Hi Sita,

We have identified your error as a bug and logged it as Issue 12035 on the Technical Support website.

A workaround for you is to enter the skew values as zero, use the distribution factor compute button, review the computed distribution factors and adjust them for the skew correction factor, enter these adjusted distribution factors into Virtis, change the skew values back to their correct values and save your bridge.

Regards,  
Krisha Kennelly, PE

FROM: Herman Lee DATE: 11/11/2012 6:31:35 PM Eastern Standard Time  
Duplicate of Incident 12022.

FROM: Krisha Kennelly DATE: 11/12/2012 1:01:47 PM Eastern Standard Time  
Resolved for 6.4.1 beta 2.

FROM: Bryan Silvis DATE: 12/7/2012 2:42:48 PM Eastern Standard Time

4/19/2016 3:24:30 PM

HRS AASHTO

3323

## Complete Issue Information

Input by Bryan Silvis, VDOT, on behalf of Shiwei Luo of Parsons Brinkerhoff (Test.zip file is attached in the documents):

We tested the issue 12022 on Virtis 6.4.1 Beta 2 with structures #00602 and #06235. There is one mistake in LRFD LLDF calculations for exterior beam. Based on AASHTO LRFD 6th Edition, "de" in Table 4.6.2.2d-1 shall be the horizontal distance from the centerline of the exterior web of exterior beam at deck level to the interior edge of curb or traffic barrier. However, the horizontal distance from the edge of the slab to the interior edge of curb or traffic barrier has been used as "de" in Virtis 6.4.1 Beta 2.

Attached is the test results showing the comparison between Virtis 6.3.1 and Virtis 6.4.1 for LRFD LLDF Calculations.

List of files:

- 1) Folder "Virtis 6.3.1" includes the calculations run by Virtis 6.3.1:
  - a. LRFD LLDF for structure #00602 G1 (exterior) and G2 (interior), de value is in Page 3.
  - b. LRFD LLDF for structure #06235 G1 (exterior), G2 (interior), and G15 (exterior), de value is in Page 3.
- 2) Folder "Virtis 6.4.1" includes the calculations run by Virtis 6.4.1:
  - a. LRFD LLDF for structure #00602 G1 (exterior) and G2 (interior), de value is in Page 4.
  - b. LRFD LLDF for structure #06235 G1 (exterior), G2 (interior), and G15 (exterior), de value is in Page 4.
- 3) Schematic view of structure #00602 typical section
- 4) Schematic view of structure #06235 typical section
- 5) Screenshots of AASHTO LRFD 6th Edition Section 4.6.2.2
- 6) Original XML files of #00602 and #06235 (Virtis 6.0)

FROM: Herman Lee DATE: 12/7/2012 3:54:14 PM Eastern Standard Time  
Resubmitted for Bryan Silvis.

FROM: Krisha Kennelly DATE: 12/10/2012 2:29:48 PM Eastern Standard Time  
Just so I understand what you want, please pick one of the 2 options presented in the attached '12035 question.pdf' to compute de. Thanks.

FROM: Bryan Silvis DATE: 12/12/2012 9:21:26 AM Eastern Standard Time  
For the purposes of LL DF's, Option 2 (center of the voided slab to interior edge of curb/barrier).

FROM: Krisha Kennelly DATE: 12/12/2012 1:35:51 PM Eastern Standard Time  
Ok, thanks. That is what I will implement.

FROM: Krisha Kennelly DATE: 12/17/2012 9:03:33 AM Eastern Standard Time  
Fixed for 6.4.1.

Exterior beams for 00602 now produce de = -0.17 ft which matches 6.3.1.  
G1 for 06235 now produces de = 0.33 ft, G15 produces de = -9.17 ft which match 6.3.1.

FROM: Subhadeep Ghosh DATE: 12/18/2012 1:23:40 PM Eastern Standard Time  
Verified for 6.4.1 Beta 3.

FROM: Bryan Silvis DATE: 12/21/2012 10:31:13 AM Eastern Standard Time

4/19/2016 3:24:30 PM

HRS AASHTO

3324



**Complete Issue Information**

Looks good.

|                                                 |
|-------------------------------------------------|
| Issue ID: 12036                                 |
| Subject: 6.3 to 6.4 Database conversion problem |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Ruby, Jeff            | 11/9/2012 2:25:24 PM  |
| Modified By: hlee                   | 12/20/2012 8:53:46 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |
|                    | Accepted           |          |          |
|                    | Closed             |          |          |
|                    |                    |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 6.4_release_ScreenShot_001.jpg |             |
|      | 6.4_release_ScreenShot_002.jpg |             |
|      | 04455 - 081-073.xml            |             |

**Tasks**

4/19/2016 3:24:30 PM

HRS AASHTO

3325

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 11/9/2012 9:31:45 AM Eastern Standard Time  
KDOT noticed 3 bridges didn't convert very well from 6.3 to 6.4. I can import the bridge and save it, but then I can't open it again. I attached the error and one of the bridges that caused this hiccup.

FROM: Jeff Ruby DATE: 11/9/2012 9:43:48 AM Eastern Standard Time  
I can't delete the bridge either. Screenshot\_002 shows that error.

FROM: Mehrdad Ordoobadi DATE: 11/21/2012 1:34:43 PM Eastern Standard Time  
The error "General error: Unable to write to file buffer" is issued by the ODBC driver when reading from the database. The error indicates that there is not enough hard disk space available to write to a temporary file.

Please make sure that you have free disk space available.  
Please let us know what you find out.

FROM: Jeff Ruby DATE: 11/26/2012 9:33:03 AM Eastern Standard Time  
Can't be a disk space problem. It has to be a disk "cache" problem with a database setting maybe? All I know is that it fails for MS SQLexpress and Oracle.

I can watch it create the "tmp" file in the subdirectory until it crashes.

FROM: Jeff Ruby DATE: 12/19/2012 1:58:55 PM Eastern Standard Time  
Still broke in 6.4.1 Beta 3

FROM: Jeff Ruby DATE: 12/19/2012 2:00:50 PM Eastern Standard Time  
Have you tried importing the bridge, saving it, and then trying to open it again?

FROM: Mehrdad Ordoobadi DATE: 12/19/2012 2:19:08 PM Eastern Standard Time  
I am able to reproduce this issue in 6.5 Debug code except for the fact that I get a crash instead of an error message.  
I have tracked this down to retrieving records from abw\_anal\_pt\_component that has 1056 records for the attached bridge.

Here are my observations:

- \* When the table is being read a file is created by the ODBC software called something like CTTFC76.tmp in the user's temp directory that has a size of zero in the beginning (CTTxxx.TMP).
- \* Then the records are read from the database and the size of the file grows.
- \* While reading the 409th record the temp file size reaches 2 GB and the program crashes.
- \* For each record the size of the TMP file increases by a little bit more than 5 MB.

FROM: Jeff Ruby DATE: 12/20/2012 12:33:14 PM Eastern Standard Time  
Thanks for finding this bug!  
Accepted in 6.4.1 Beta 3 with the new dll's sent 12/20/2012.

FROM: Mehrdad Ordoobadi DATE: 12/20/2012 1:01:18 PM Eastern Standard Time  
Fixed for Virtis/Opis 6.4 SP1 Final Release.

4/19/2016 3:24:30 PM

HRS AASHTO

3326

**Complete Issue Information**

|                                              |
|----------------------------------------------|
| Issue ID: 12038                              |
| Subject: Precast Culverts - Horizontal Joint |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Lee, Herman   |                        |
| Submitted By: Thompson, Todd   | 11/9/2012 8:36:50 PM   |
| Modified By: hlee              | 11/11/2012 10:36:35 PM |
| Priority: High                 |                        |
| Category: Unknown              |                        |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |
|                  | Assigned |          |          |
| Trees, Geoffrey  |          |          |          |
| Ihnat, Joseph    | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A4979.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 11/9/2012 3:38:18 PM Eastern Standard Time

4/19/2016 3:24:30 PM

HRS AASHTO

3327

### Complete Issue Information

I noticed when I'm working with a Precast Concrete Culvert that the schematic wants a horizontal joint and even though I leave that field blank - the schematic shows a horizontal joint at 0.

I think for a precast culvert - the horizontal joint should be greyed out and not shown on the schematic. And of course not considered anywhere in the analysis.

|                             |
|-----------------------------|
| Issue ID: 12040             |
| Subject: Culvert POI Issues |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Kemna, Aaron     | 11/13/2012 3:16:13 PM |
| Modified By: akemna            | 6/21/2013 7:55:07 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 11/13/2012 10:29:31 AM Eastern Standard Time

The POIs displayed in the spec check do not match the POIs requested. I attached a sample xml. In

4/19/2016 3:24:31 PM

HRS AASHTO

3328

**Complete Issue Information**

addition, when copying a POI and changing the location, the location display does not update after closing the window. You have to close the file and open back up to see the correct location request. Also, the override options do not copy over.

FROM: Srujana Thogaru DATE: 11/16/2012 12:58:54 PM Eastern Standard Time  
Above mentioned issue was tested with the attached bridge and found that the Point of interest at 13ft for top slab 1 and at 0ft for bottom slab 1 are missing during the analysis. An additional 0.60ft for Top slab 1 was considered during analysis. This is a bug.

FROM: Srujana Thogaru DATE: 2/1/2013 2:47:32 PM Eastern Standard Time

Error for Missing POI is fixed. Additional analysis locations are for shear analysis which is not a bug. Also default 0.0 ft for " Distance from left edge of cell or bottom of wall" in POI window has been updated., which was empty before the fixed, is also cause for the bug - missing POI during analysis. There was also a bug in updating the label in POI tree when the distance in POI window changed.

All the above errors are fixed for 6.5 release. For Internal testing fixed for 6.5 Alpha build 1.

FROM: Bin Zhang DATE: 4/24/2013 5:31:53 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

FROM: Aaron Kemna DATE: 5/15/2013 2:57:10 PM Eastern Daylight Time  
I am still getting the POI tree not to update when I copy over a POI and change the distance.

FROM: Srujana Thogaru DATE: 5/21/2013 9:24:43 AM Eastern Daylight Time  
When we copy and Paste POI and change the distance in POI, tree is not updated with the changed distance. Geoff, can you please look into it.

FROM: Geoffrey Trees DATE: 5/29/2013 9:19:47 AM Eastern Daylight Time  
Joe, I think this is an issue in the GUI. The value of the copied POI is being saved to the domain but is not being reflected in the GUI. If you copy a POI, change the value, save the bridge then reopen the bridge, you will see the correct value. For some reason the GUI isn't updating the label for copied POIs but regular POIs are OK.

FROM: Joseph Ihnat DATE: 5/29/2013 11:20:42 AM Eastern Daylight Time  
Fixed for version 6.5.0 (Beta 3).

FROM: Aaron Kemna DATE: 6/21/2013 3:55:07 PM Eastern Daylight Time  
Looks Good for Beta 3. Accepted

Issue ID: 12042  
Subject: Errata changes to the LRFD 6th edition

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Kennelly, Krisha 11/13/2012 6:05:21 PM  
Modified By: sthogaru 5/17/2013 2:21:18 PM

4/19/2016 3:24:31 PM

HRS AASHTO

3329

## Complete Issue Information

Priority: High  
Category: Bug

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          | Bug      |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Skow, Wayne      | Resolved           |          |          |
|                  | Verified           |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | VI_12049_interaction_diagram.pdf  |             |
|      | VI 12049.docx                     |             |
|      | 00028 - StandardIBD-12-2W.xml     |             |
|      | VI_12049_interaction_diagram.xlsx |             |
|      | IBD-12-2W.pdf                     |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Krishna Kennelly DATE: 11/13/2012 1:05:50 PM Eastern Standard Time  
the following 2 changes are required as part of the Errata which are attached.

1. Article 5.7.3.4 Revise 'de' to 'dl' in the check for maximum spacing of the long. skin rebar as per the change listed for LRFD Spec page 5-46 in the attached document. I'm pretty sure it is only a text labeling change but please verify if that is correct.

4/19/2016 3:24:31 PM

HRS AASHTO

3330

**Complete Issue Information**

2. Article 5.8.4 Revise Eq. 5.8.4.2-2 as per the change listed for LRFD Spec page 5-84 in the attached document. I'm pretty sure it is only a text labeling change but please verify if that is correct.

Changes are to be made for 6.5 in the 6th edition of the spec. If articles are currently derived from the 5th edition, copy that version to the 6th edition folder and make the changes in the 6th edition.

FROM: Srujana Thogaru DATE: 12/17/2012 1:16:55 PM Eastern Standard Time  
Above mentioned changes are implement in 6th edition articles by copying articles from 5th edition. No computational changes implemented.

FROM: Subhadeep Ghosh DATE: 5/7/2013 1:37:18 PM Eastern Daylight Time  
Tested with BID 20. The 6th edition still shows "de" in the output for Article 5.7.3.4 (a). Attached is the article screenshot.

FROM: Srujana Thogaru DATE: 5/17/2013 8:56:15 AM Eastern Daylight Time  
Above mentioned error fixed for Beta 2

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 12049                                                                      |
| Subject: Incorrect Area of steel in Culvert analysis results in a zero rating factor |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Withers, Richard | 11/14/2012 9:18:32 PM |
| Modified By: gtrees            | 12/4/2012 9:48:01 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Withers DATE: 11/14/2012 4:30:21 PM Eastern Standard Time  
When running an analysis of a double 12' x 12' culvert, there are the following issues:

1. Bars C are the Bent Bar type. The program locates the bar as a straight bar at the specified clear distance. It does not account for the bend in the bar.
2. The program adds an extra #6 bar spaced at 13.5" ( $A_s = 0.39\text{in}^2/\text{ft}$ ) in the top of the slab over the interior wall and in the bottom of the slab under the interior wall.
3. The  $A_s$  per foot is 1/2 what it should be in the walls.

All of this was found using the Specification Checker function.

I have checked and rechecked my input. I am almost positive it is correct. However, there are so many errors I may be doing something wrong. Please look at the attached culvert export and plans and determine if I am in error or the program is.

Thanks,  
Richard Withers

FROM: Srujana Thogaru DATE: 11/16/2012 11:25:28 AM Eastern Standard Time  
CG and end distances of Bent bars (Bar C) computation have errors. This issue is expected to be fixed for 6.4.1.  
Workaround for this issue is to define straight bars at the required locations.

FROM: Richard Withers DATE: 11/19/2012 9:59:53 AM Eastern Standard Time  
Have you had a chance to look into the issue with the area of steel in the walls?

Richard

FROM: Srujana Thogaru DATE: 11/21/2012 1:26:02 PM Eastern Standard Time  
Can you please send me the location and area of steel you are getting for walls.

FROM: Srujana Thogaru DATE: 11/28/2012 9:17:36 AM Eastern Standard Time  
Information provided through email. Email attached to the incident.

FROM: Srujana Thogaru DATE: 11/29/2012 1:00:53 PM Eastern Standard Time  
Wayne can you please check the P-M Interaction Diagram curve is producing the correct results.

FROM: Wayne Skow DATE: 11/30/2012 7:05:29 AM Eastern Standard Time  
I investigated the 6' location of ext. wall 1. It looks like the diagram is correct. I checked the rating results and they also look correct. Attached is a pdf file showing the interaction diagram and one of the rating points plotted on the diagram. The spreadsheet containing the data is also attached if one is interested in a closer look. It appears the wall is underreinforced on the inside for the loads applied.

4/19/2016 3:24:31 PM

HRS AASHTO

3332



**Complete Issue Information**

FROM: Srujana Thogaru DATE: 12/3/2012 10:09:12 AM Eastern Standard Time  
Computation errors in CG and end distances of Bent bars (Bar C) have been fixed for 6.4.1. Beta 2

FROM: Geoffrey Trees DATE: 12/4/2012 4:42:20 PM Eastern Standard Time  
Checked CG and end distances of Bent bars. Verified 6.4.1 Beta 2.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 12050                                                                  |
| Subject: API function for P/S LRFR "Consider legal load tensile concrete stress" |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Goodrich, Brian    | 11/14/2012 9:29:39 PM |
| Modified By: gtrees              | 11/27/2012 9:22:01 PM |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          | Bug      |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brian Goodrich DATE: 11/14/2012 2:30:10 PM Mountain Standard Time  
On the Control Options tab of the Member Alternative Description window for a P/S member alt, one of the LRFR options reads: "Consider legal load tensile concrete stress." However, the API function for obtaining this value is named "GetLrfrConsiderLegalLoadTensileSteelStressInd." I think the function should be named "GetLrfrConsiderLegalLoadTensileConcreteStressInd" instead.

**Complete Issue Information**

FROM: Geoffrey Trees DATE: 11/27/2012 4:18:38 PM Eastern Standard Time  
Brian, we agree. That has been like that since 2008 or 2009. We decided as opposed to changing the name, which would break any code already using that function, that we would add an additional function with the correct name and deprecate the old one in a few versions. Thanks for bringing this to our attention. The fix will be available in 6.4.1.

Issue ID: 12051  
Subject: BWS Report for Steel Girders

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Pichura, Mike 11/15/2012 1:31:15 PM  
Modified By: bzhang 4/25/2013 1:52:20 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Fps&LongTermLossQuestion.docx |             |
|      | 0F_457.xml                    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mike Pichura DATE: 11/15/2012 8:33:24 AM Eastern Standard Time  
Virtis crashes when trying to generate the BWS report for steel girders.

FROM: Srujana Thogaru DATE: 11/16/2012 11:06:52 AM Eastern Standard Time  
Mike I am unable to reproduce above mentioned error with the example bridges in database. Can you please attach the bridge xml file which is causing the error.

FROM: Srujana Thogaru DATE: 11/16/2012 11:16:51 AM Eastern Standard Time  
Bridge xml file received from Mike through mail. File attached to the incident.

FROM: Srujana Thogaru DATE: 11/16/2012 3:27:20 PM Eastern Standard Time  
Error is caused due to "spec selection" under - Girderline Structure Def - Member Alt - Steel Rolled Beam - Xsect.  
Work around is to clear the attributes under "spec selection" for the above mentioned section and then generate the report.

FROM: Srujana Thogaru DATE: 12/13/2012 9:28:30 AM Eastern Standard Time  
Similar problem exists in PS Bridges also. Attached the bridgexml file (26224.xml) from email sent by : Kolis, Matthew on Thursday, December 13, 2012.  
Work around is to clear the attributes under "spec selection" for the GiderSystem Structure Def - Member Alt Prestressed Concrete I Beam - Schd and then generate the report.

FROM: Srujana Thogaru DATE: 1/25/2013 11:25:34 AM Eastern Standard Time  
Fixed for 6.5 release. For internal testing fixed for 6.5 alpha build 1

FROM: Bin Zhang DATE: 4/25/2013 9:46:13 AM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                       |
|---------------------------------------|
| Issue ID: 12052                       |
| Subject: Virtis computation of losses |

4/19/2016 3:24:32 PM

HRS AASHTO

3335

**Complete Issue Information**

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center                   |
| Primary Contact: Thogaru, Srujana                |
| Submitted By: Parker, Cody 11/15/2012 2:19:30 PM |
| Modified By: gtrees 12/4/2012 9:41:37 PM         |
| Priority: High                                   |
| Category: Bug                                    |

**History**

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Kennelly, Krisha   | Assigned |          | Bug      |
|                    |          | Critical |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VDOTSpecLIBsV64.xml |             |
|      | 09304.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 11/15/2012 9:20:18 AM Eastern Standard Time  
 From: Cody Parker [mailto:cparker@HNTB.com]  
 Sent: Thursday, November 08, 2012 9:45 AM  
 To: Bridgeware,  
 Cc: Mitch Balle  
 Subject: Virtis computation of losses

Hello,

4/19/2016 3:24:32 PM

HRS AASHTO

3336

**Complete Issue Information**

Can you please take a look at the question in the word document.

Thanks,

Cody Parker, PE  
Bridge Engineer

HNTB Corporation  
257 East 200 South, Suite 1000  
Salt Lake City, Utah 84111

FROM: Srujana Thogaru DATE: 11/15/2012 9:26:42 AM Eastern Standard Time  
After investigating the attached documents from email it is found that Virtis is not taking into consideration "included deck" dimension for Tee and I beams as composite section. Hence the loss analysis for such sections is performed as "refined method" instead of "AASHTO Approximate".

FROM: Srujana Thogaru DATE: 11/16/2012 3:57:12 PM Eastern Standard Time  
Above mentioned issue was fixed for 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/4/2012 4:26:28 PM Eastern Standard Time  
Verified

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 12053                                                                      |
| Subject: POI shear override schedule issue when there are 2 POI at the same location |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Zhang, Bin            | 11/15/2012 7:19:30 PM |
| Modified By: ssalata                | 4/22/2013 9:09:03 PM  |
| Priority: Critical                  |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 11/15/2012 2:19:43 PM Eastern Standard Time

I submitted this issue on behalf of Phil Austin from Parsons Brinckerhoff. Part of the communication email was listed below.

\*\*\*\*\*  
\*\*\*\*\*

2) Again, with pre-stressed voided box beams, we have some models that will run, originally created using Virtis 6.2. Curiously, the first time we try to rate an individual member, we get low rating for BP90 and BP-115. Without making any changes, if we run the same member again, we get different, higher ratings. An example bridges attached, 09304.xml. For example, if you import 09304.xml, expand IR012011-o and rate G2 for BP-90 and BP-115 , you get 13kips and 16kips respectively. Without changing anything, if you run that same member again, you get 25kips and 32kips.

Hope you can assist or provide suggestions for the above.

Regards

Phil Austin  
Lead Engineer

Parsons Brinckerhoff  
465 Spring Park Place  
Herndon, VA 20170  
Phone: 703-742-5836  
Mobile: 404-403-9814

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 11/15/2012 2:56:04 PM Eastern Standard Time

Please use petmit vehicle BP90 and BP115 to reproduce this issue. Both the bridge model and the vehicles were attached in the document.

I took a look at G2. There are 2 POI at the same location 49.75 ft, Left and Right. The Left one has an override schedule for shear capacity and the other one does NOT. Virtis may use Left or Right POI each time I run it. So I get different RF for each analysis. For example, this time I run Virtis, it used the 49.75Right, next time it would use 49.75Left. Also, this system defect applies to both interior and exterior girders. It also applies to both permit and design rating. I am able to reproduce this issue in Version631 and Version 641 development environment.

I sent a workaround to the user:

"I have a workaround for you. You can define a POI at a location that is very close to the POI location other than use exactly the same number. For example, you can use 49.751 ft for your POI location, and delete one POI at 49.75ft. Just make sure you don't have duplicate POI at the same location."

4/19/2016 3:24:33 PM

HRS AASHTO

3338

## Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 4/16/2013 16:12:37 PM Eastern Daylight Time  
Changed domain code to sort the analysis points both by distance and by LEFT/RIGHT.

FROM: Krisha Kennelly DATE: 4/17/2013 11:20:12 AM Eastern Daylight Time  
Warning message added to the export to let user know the AASHTO engines only consider 1 POI at a location. Message appears in the Analysis log produced by the analysis.

FROM: Steve Salata DATE: 4/22/2013 3:00:18 PM Eastern Daylight Time  
Verified analysis warning message(s) and that G2 ratings unchanged between runs.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12054                                     |
| Subject: Missing haunch DL for non-composite girder |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: vinayagamoorthy, vinacs | 11/16/2012 2:31:01 PM |
| Modified By: vvinayagamoorthy         | 12/17/2012 4:37:19 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | Assigned | High     | Unknown  |
| Kennelly, Krisha | Resolved |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 00136 - 460073DWW.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:24:33 PM

HRS AASHTO

3339

**Complete Issue Information**

**Description**

FROM: Herman Lee DATE: 11/16/2012 9:31:26 AM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====  
We are finding that haunch dimensions entered into the Haunch Profile GUI are not being translated into Non-composite (Stage 1) dead load in the new 6.4.0 version, Can you please look into this?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
=====

FROM: Herman Lee DATE: 12/5/2012 2:18:50 PM Eastern Standard Time  
Developer Note:  
This issue is caused by the implementation for 11904. DoGirderMbrAlt.cpp Line 29435.

FROM: Krisha Kennelly DATE: 12/6/2012 9:13:40 AM Eastern Standard Time  
fixed for 6.4.1 beta 2.

G1 and G2 have haunch DL 0.048 kip/ft.

Also verified models in Issue 11904 still have a haunch DL 0.281 kip/ft after this fix.

FROM: Matt Kolis DATE: 12/6/2012 11:11:39 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

Issue ID: 12056  
Subject: user defined beta and theta for LRFR shear computation

Folder: /Virtis/Support Center  
Primary Contact: Skow, Wayne  
Submitted By: Zhang, Bin 11/16/2012 7:45:29 PM  
Modified By: gtrees 12/5/2012 6:09:48 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Mlynarski, Mark | Assigned |          | Bug      |
| Skow, Wayne     | Resolved |          |          |



**Complete Issue Information**

|          |
|----------|
| Verified |
|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 12057.png           |             |
|      | 10 0045.xml         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 11/16/2012 2:49:29 PM Eastern Standard Time  
 I submitted this issue on behalf of Jacob Reneson from Jacobs. The communication email was listed below.

\*\*\*\*\*  
 \*\*\*\*\*

From: Reneson, Jacob [mailto:Jacob.Reneson@jacobs.com]  
 Sent: Friday, November 16, 2012 1:37 PM  
 To: Bridgewater,  
 Cc: Peterson, Bruce  
 Subject: user defined beta and theta for LRFR shear computation

Greetings,

I am entering user defined beta and theta for computing shear resistance for PS concrete I beams under points of interest under member alternatives. When I look at the spec check at the particular point of interest where I manually entered a beta and theta, the shear capacity comp is not referencing my user defined values. It is still computing a beta and theta for shear capacity comps for LRFR. Can I define a beta and theta for LRFR shear ratings????

Jacob Reneson, P.E./ S.E.  
 Structural Engineer

One Corporate Center  
 7300 Metro Boulevard, Suite 400  
 Minneapolis, Minnesota 55439 U.S.A.  
 Direct 1.952.345.4124  
 Fax 1.952.835.7376  
 jacob.reneson@jacobs.com

\*\*\*\*\*

**Complete Issue Information**

\*\*\*\*\*

FROM: Bin Zhang DATE: 11/16/2012 2:51:57 PM Eastern Standard Time  
Please use BID7 PCITrainingBridge4 to reproduce this issue. I also tried BID4, a PS box girder, this issue exists too.

FROM: Mark Mlynarski DATE: 12/3/2012 1:20:12 PM Eastern Standard Time  
Modified article 5.8.3.4 for 4th Edition, 4th Edition-2008I and 5th Edition to allow the user input Beta, Theat and Sx values.  
Other editions are derived from these three editions.

Need to run the regress test for this for P/S and RC sections.

FROM: Herman Lee DATE: 12/3/2012 1:49:45 PM Eastern Standard Time  
Fixed for 6.4.1 Beta 2. Resolved for 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/5/2012 1:09:29 PM Eastern Standard Time  
Verified by Wayne via regression testing.

|                                                   |
|---------------------------------------------------|
| Issue ID: 12057                                   |
| Subject: Error performing finite element analysis |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center        |                        |
| Primary Contact: Zhang, Bin           |                        |
| Submitted By: vinayagamoorthy, vinacs | 11/18/2012 12:11:30 AM |
| Modified By: vvinayagamoorthy         | 12/17/2012 8:44:40 PM  |
| Priority: High                        |                        |
| Category: Bug                         |                        |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | Assigned  | High     | Bug      |
| Zhang, Bin      | Duplicate |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:33 PM

HRS AASHTO

3342

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 11/17/2012 7:11:59 PM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====  
This bridge was originally created using 6.2. We analyzed this bridge using BRASS at that time.

This model is converted to handle 6.4.0 version.

We wanted to re-rate this bridge using AASHTO engine. Unfortunately, AASHTO engine failed (using 6.4.0 version)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====  
FROM: Bin Zhang DATE: 11/29/2012 11:04:33 AM Eastern Standard Time  
I am able to reprduce this issue in Version6.4.0 (Stiffness diagonal below toleranse. Row & column = 380. Value = 0). However, this issue has been fixed in the Version 6.4.1 development version (6.4.1.2001) with the latest code on 11/28/2012.

The rating summary was attached in the document. (12057.png)

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 12059                                                    |
| Subject: Normal shutdown of product - but prompt next time I start |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Thompson, Todd   | 11/19/2012 6:23:42 PM |
| Modified By: hlee              | 6/24/2013 5:29:50 PM  |
| Priority: High                 |                       |
| Category: Unknown              |                       |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LLDF ERROR.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 11/19/2012 1:26:25 PM Eastern Standard Time

I've had this happen several times now.

I create or work on a culvert structure. Save my work. Close the application. NO problems, or errors or issues.

Next time I launch VirtisOpis and try to open my culvert, I am prompted to open from last backup or from DB.

I will attempt to isolate it down to more than working on a culvert, but it's happend probably 1/2 dozen times while testing Beta 1. I don't recall this happening with 6.4.0

FROM: Herman Lee DATE: 11/28/2012 9:54:28 AM Eastern Standard Time

I'm not able to reproduce the problem. Are you using Beta 1 in Citrix? Is Beta 1 installed locally in C:\Program Files and Analysis Output Folder set to "C:\Work"? Thanks.

FROM: Todd Thompson DATE: 11/28/2012 11:57:05 AM Eastern Standard Time

Not using Citrix

Yes - installed to c:\Program Files

Yes - c:\Work

Windows 7 - 32 bit version

It happened a lot the first day I had Beta 1 installed and now I have not seen it happen this week.

FROM: Todd Thompson DATE: 12/11/2012 4:20:52 PM Eastern Standard Time

4/19/2016 3:24:34 PM

HRS AASHTO

3344

## Complete Issue Information

Installed Beta 2 of 6.4.1  
Created a new culvert - analyzed it (LRFR and LFR)  
Saved all my work  
Exited from Virtis Opis

Open Virtis Opis  
and tried to open new culvert - prompted to restore backup or open from data source...

So - for some reason this problem is popping up again. (See attached screen shot)

FROM: Herman Lee DATE: 12/12/2012 8:26:39 AM Eastern Standard Time  
I'm able to reproduce the problem but not all the time.  
Virtis/Opis backups the Bridge Workspace every 15 mins to a bak file. I suspect there's a problem in locating the bak file for removal during normal exiting the application.  
I changed the Folder from Beta Testing to Support Center.

FROM: Todd Thompson DATE: 12/12/2012 3:22:14 PM Eastern Standard Time  
Possible issue

I created a new culvert today, saved it, exported it, closed it and was sitting at the Bridge explorer.  
Reported VI 12100  
Opened up this new culvert and was prompted again.

I suspect that since this only happens with culverts and never with bridges - the application is sometimes failing to remove that bak file correctly and since culverts are new in 6.4 - it probably is still under warranty and not a support issue.

Hopefully we can track this down and get fixed in 6.4.1

FROM: Joseph Ihnat DATE: 12/18/2012 7:45:32 AM Eastern Standard Time  
Found a possible cause of the problem (not related to culvert). Fixed in 6.4.1 (beta 3).

FROM: Subhadeep Ghosh DATE: 12/18/2012 1:50:40 PM Eastern Standard Time  
Verified for 6.4.1 Beta 3

FROM: Todd Thompson DATE: 12/19/2012 1:39:27 PM Eastern Standard Time  
Nope - this is still occasionally happening with Beta 3.

I had imported a bridge from 6.3.0 DB  
Analyzed  
Exited (successfully) from Virtis Opis 6.4.1 Beta 3

When I started up Virtis Opis the next time and went to open that structure - I was prompted again.

So evidently there is more to this issue than the item that was fixed.

FROM: Joseph Ihnat DATE: 12/19/2012 3:19:14 PM Eastern Standard Time  
Can you try disabling your antivirus software and see if the problem still occurs?  
What is your backup interval set to? (View, Preferences, Bridge Workspace tab)  
Is checkin/checkout enabled?

4/19/2016 3:24:34 PM

HRS AASHTO

3345

### Complete Issue Information

FROM: Todd Thompson DATE: 12/19/2012 3:26:01 PM Eastern Standard Time  
Disabling Virus Software would be IMPOSSIBLE...  
Backup Interval is set for 5 minutes  
I'm using the SQL Server Sample DB as installed with the product.

Previously - it was only happening after entering a new culvert.  
Today with Beta 3 - it happened after I imported a bridge.

It does seem to only happen once on any given structure and it seems to happen after the initial import or structure creation.

I've learned to ALWAYS choose Data Source - I never lose any data if I know I exited normally. I learned too many times in previous versions of choosing backup source and then losing all my work.

I don't recall ever seeing this until 6.4.1

|                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 12060                                                                                                          |
| Subject: LRFD LLDF is not established properly when slab thickness falls outside of recommended range for Splayed girder |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: vinayagamoorthy, vinacs | 11/19/2012 6:57:58 PM |
| Modified By: vvinayagamoorthy         | 12/12/2012 4:05:37 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 11/19/2012 2:04:49 PM Eastern Standard Time

4/19/2016 3:24:34 PM

HRS AASHTO

3346

**Complete Issue Information**

I have a splayed girder bridge where the "structural" deck thickness is set to 3.75 inches. In this case, the multi lane LLDF is established as zero by the Virtis software.

Bridge model: Spalyed Girder Span 1-3 (MDL 1 of 1), Girder 2

FROM: Krisha Kennelly DATE: 11/28/2012 1:44:08 PM Eastern Standard Time  
Fixed for 6.4.1 beta 2

FROM: Geoffrey Trees DATE: 12/5/2012 10:04:13 AM Eastern Standard Time  
Verified

FROM: vinacs vinayagamoorthy DATE: 12/12/2012 11:05:37 AM Eastern Standard Time  
OK

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12061                                     |
| Subject: Error message when viewing summary results |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Thompson, Todd   | 11/19/2012 9:06:38 PM |
| Modified By: hlee              | 12/17/2012 9:09:01 PM |
| Priority: High                 |                       |
| Category: Unknown              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:24:34 PM

HRS AASHTO

3347

**Complete Issue Information**

|                    |                  |      |         |
|--------------------|------------------|------|---------|
| Lee, Herman        | Assigned         |      |         |
|                    | Not Reproducible |      |         |
| Lee, Herman        | New              | High | Unknown |
| Ordoobadi, Mehrdad | Assigned         |      |         |
|                    | Resolved         |      |         |
|                    |                  |      | Bug     |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 11/19/2012 4:07:31 PM Eastern Standard Time

I was doing a culvert LF analysis

HS 20 Truck

Alt Mil

3 SD Trucks

and when I view the rating summary results - I get an error message.  
See attached screen shot.

FROM: Todd Thompson DATE: 11/20/2012 11:31:56 AM Eastern Standard Time

I was looking at Spec Check Results today and I got the same/similar error message. I'll attach this screen shot to this incident as I don't think it's a separate issue.

screen shot is called - Another\_SpecCheck\_Error.png

FROM: Herman Lee DATE: 11/28/2012 9:08:11 AM Eastern Standard Time

Todd, I'm not able to reproduce the problem. I set the Analysis Output Folder to "C:\Work" and tested the Rating Results Summary and Spec Check Detail using the attached bridge and vehicles. Also tried performing culvert LF analysis multiple times.

Are you able to reproduce the problem every time you open the Rating Results Summary and Spec Check Detail?

Is there any special setup for the "C:\Work" folder?

When this happen again, could you check whether the file "C:\Work\AASHTOWARE\VirtisOpis64\11091022\3-8x6\SideBox\triplebox\AASHTO\_Culvert\_LFD\Data\CulvertSpecCheckResults.SpecCheckResults" is there?

4/19/2016 3:24:34 PM

HRS AASHTO

3348



**Complete Issue Information**

FROM: Todd Thompson DATE: 11/28/2012 11:59:51 AM Eastern Standard Time  
It was happening during the first day and when I was having the issues with VI 12059

I have not had any problems this week, yet.

Not Citrix  
Installed in c:\program files  
using c:\work

Nothing special with c:\work other than our IT folks allow us to read\write\create in this area, where we can't in other directories\folders.

FROM: Todd Thompson DATE: 12/13/2012 2:25:28 PM Eastern Standard Time  
Beta 2 -  
Still get this happening at times  
Again - only happens with Culvert structures.  
Attached a screenshot that I was only viewing the rating summary results - got the error message.

|                                        |
|----------------------------------------|
| Issue ID: 12066                        |
| Subject: BrDR will Lock Up, Every time |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 11/21/2012 4:28:02 PM |
| Modified By: hlee                   | 1/10/2013 2:23:53 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Dean Teal DATE: 11/21/2012 11:28:36 AM Eastern Standard Time  
6.4.0 on Oracle 11g

My Bridge Explorer focus was on (anything below "All Bridges")

I clicked on (put focus on) "All Bridges"

Note – No bridges in the right pane have been highlighted, only the "All Bridges" in the left pane

From the tool bar, select Bridge, Check out Authorizations, By Bridge

(if you select by User all is well)

At this point you have locked up the program and will have to bail using the red X in the upper right and then restart BrDR.

FROM: Mehrdad Ordoobadi DATE: 12/3/2012 11:06:23 AM Eastern Standard Time

Dean. I think this is taking a long time because you have a lot of bridges in your database. Because it goes through all bridges' authorizations for all users and it takes a long time.

We are going to look into this issue to improve its performance.

FROM: Mehrdad Ordoobadi DATE: 1/8/2013 9:01:57 AM Eastern Standard Time

Improved the performance of the Check out authorizationby bridge window by utilizing a map data structure to store the data that can be retrieved quickly.

Also now showing correct icon for bridge checkout status (Checked out, Protected, Being Exchanged, By user or onother user, ...)

Note that if there are several thousand bridges in the database the window will take some time to open (for example fot 5000 bridges it may take 15 to 30 seconds to open).

Issue ID: 12072  
Subject: NCHRP 647 Control Option

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Thompson, Todd 11/28/2012 6:17:04 PM  
Modified By: hlee 12/5/2012 6:52:17 PM  
Priority: High  
Category: Support

**History**

4/19/2016 3:24:35 PM

HRS AASHTO

3350

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lee, Herman     | New       | High     | Maintenance |
|                 | Suspended |          |             |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 11/28/2012 1:18:44 PM Eastern Standard Time  
Could somebody double check that this control option is working correctly.

I had it unchecked and it looks like it used 647 to modify the DF

I checked it and it used straight AASHTO LRFD DF

FROM: Todd Thompson DATE: 11/28/2012 2:53:30 PM Eastern Standard Time

I think maybe it is correct, but it would be nice if the output stated:

- (1) Which Live Load controlled and was used
- (2) Stated whether NCHRP 647 was used (or not used)

The only way I can see to know - is to calculate by hand the NCRHP 647 method and see if one of those numbers shows up in the output somewhere.

FROM: Todd Thompson DATE: 11/28/2012 4:29:42 PM Eastern Standard Time

After much review - I think the Control Options works.

But I don't think the live load moments are always correct.

I created a spreadsheet to evaluate the areas, pressures, widths and those all look good and as expected.

With 647 LLDF - there is no discrete change at 2 ft like with LRFD code having two different equations at this break point.

So I was not expecting Virtis to have a discrete change in LL Moments when I used the 647 DF method.

But there is a very distinct change in live load moments at 2 ft.

Since the output is not clear on what is used - I'm not sure what is going on.

4/19/2016 3:24:35 PM

HRS AASHTO

3351

## Complete Issue Information

For my triple barrel 8 ft x 6 ft box - I created a spread sheet with varying fill depths from 0 to 7 ft.  
All of my widths in spreadsheet match Virtis Culvert  
All of my pressures match my spreadsheet  
But the live load moments are definitely wrong around the 2 ft fill depth and less.

It might be similar to the issue that the LF Analysis appears to be wrong at the 2 ft and less depth of fill.

I'll attach my spread sheet and my culvert I used for testing.

FROM: Srujana Thogaru DATE: 12/4/2012 9:16:59 AM Eastern Standard Time  
I have gone through the attached spread sheet calculation and found that for depth of fills under 2ft LLDF used in the spread sheet are computed by Thru Fill method but which should be actually using LLDF computed by Eqv Strip Width which are shown below Thru Fill method in the detailed output.

To avoid this confusion virtis has updated to display only its respective method of computation output depending on the depth of fill. This has been fixed for 6.4.1 Beta 2.

FROM: Todd Thompson DATE: 12/4/2012 10:41:29 AM Eastern Standard Time  
Did I misunderstand the NCHRP 647 method?  
When I read the document - I thought there was only one method to use - regardless of fill depth?  
If that is correct - then Virtis is doing it wrong.

if I mis-read the document - and there is a break point and two different equations are used - then Virtis is correct.

Can you confirm that the NCHRP 647 intended there to be the break point at 2 ft of fill and let me know where that section is in the document - maybe scan and place a copy of that page.

FROM: Srujana Thogaru DATE: 12/4/2012 1:59:36 PM Eastern Standard Time  
Current virtis code for NCHRP 647 LLDF computation is based depth of fill. For depth of fills 2 ft and greater Dist rate of 1.15 and Dist. Width =  $\text{Dist.Width}(E) + 0.06 * \text{InsideSpanWidth}$  is applied. But for depth of fill less than 2ft only Dist.rate of 1.15 is only applied.  
In NCHRP 647 report at page 26 "Comparison with past practice" says "For depths less than 2 feet of fill, there is no change in the load calculation".

As current virtis LRFD/LRFR analysis of culvert is inherited from WisDot further investigation need be done to determine correct method of LLDF computation.  
Current virtis code for NCHRP 647 LLDF computation is based depth of fill. For depth of fill 2 ft and greater Dist.rate of 1.15 and Dist. Width =  $\text{Dist.Width}(E) + 0.06 * \text{InsideSpanWidth}$  is applied. But for depth of fill less than 2ft only Dist.rate of 1.15 is only applied.  
In NCHRP 647 report at page 26 "Comparison with past practice" says "For depths less than 2 feet of fill, there is no change in the load calculation" and "At depths greater than 2 feet, the proposed calculation method is reduced slightly from the current LRFD"

As current virtis LRFD/LRFR analysis of culvert is inherited from WisDot further investigation need be done to determine correct method of LLDF computation.

FROM: Todd Thompson DATE: 12/5/2012 8:18:28 AM Eastern Standard Time

4/19/2016 3:24:35 PM

HRS AASHTO

3352

### Complete Issue Information

Based upon reviewing Appendix C of NCHRP 647 - I think what Srujana explained does follow the report.

I had mis-interpreted what I had read the first time.

Thanks - I think we can close this incident.

FROM: Todd Thompson DATE: 12/5/2012 8:25:37 AM Eastern Standard Time  
<http://www.trb.org/Main/Blurbs/163515.aspx>

FROM: Herman Lee DATE: 12/5/2012 1:50:52 PM Eastern Standard Time  
Thanks for the update.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 12073                                                   |
| Subject: In 5.8.3.4.2 Epsilon is not allowed to be less than zero |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Mlynarski, Mark  | 11/28/2012 6:45:17 PM |
| Modified By: hlee              | 3/27/2015 6:32:31 PM  |
| Priority: High                 |                       |
| Category: Maintenance          |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mark Mlynarski DATE: 11/28/2012 1:45:53 PM Eastern Standard Time

The following was logged by a user and will be addressed as Maintenance.

We currently set Epsilon to zero as the user mentions, which follows the specification, but there is an 'or' option when Epsilon is less than zero that is not currently implemented.

4/19/2016 3:24:35 PM

HRS AASHTO

3353

**Complete Issue Information**

From: Reneson, Jacob [mailto:Jacob.Reneson@jacobs.com]  
Sent: Friday, November 16, 2012 8:48 AM  
To: Bridgeware,  
Cc: Peterson, Bruce  
Subject: negative epsilon conservatively taken as 0 in Virtis for general procedure shear design

Greetings,

I am wondering if there is a way to have Virtis take epsilon (net longitudinal tensile steel strain) as negative when computing shear resistance of prestressed sections using the General Procedure of AASHTO 5.8.3.4.2. It appears that Virtis is taking epsilon conservatively as zero when negative as allowed per 5.8.3.4.2. However, the beams were not designed this way and hence do not work when run in Virtis.

I know I could manually input all the tenth points with user defined betas and thetas under points of interest but I am trying to save this work since there is about 4 spans and 15 beams per span.

Thanks

Jacob Reneson, P.E./ S.E.  
Structural Engineer

One Corporate Center  
7300 Metro Boulevard, Suite 400  
Minneapolis, Minnesota 55439 U.S.A.  
Direct 1.952.345.4124  
Fax 1.952.835.7376  
jacob.reneson@jacobs.com

FROM: Ethan Uong DATE: 9/23/2014 9:14:38 AM Eastern Daylight Time  
Articles 5.8.3.4 now accept negative epsilon values.

FROM: Herman Lee DATE: 3/27/2015 2:31:59 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.

Issue ID: 12074  
Subject: Text Appeared Upside Down

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 11/29/2012 2:39:23 PM  
Modified By: dteal 6/26/2013 2:14:32 PM  
Priority: High  
Category: Support

4/19/2016 3:24:35 PM

HRS AASHTO

3354

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 11/29/2012 9:40:46 AM Eastern Standard Time  
In the Schematics Profile View, upper left area the 3" dimension is upside down  
Bridge Attached  
Screen Shot Attached

FROM: Joseph Ihnat DATE: 12/26/2012 3:31:15 PM Eastern Standard Time  
The first Horizontal Shear Reinforcement range is entered incorrectly.  
Instead of Start=0.25 ft and Spacing=0.0 in, it should be Start=0.0 ft and Spacing=3.0 in.  
Please see the Help topic "Ranges Example".

**Complete Issue Information**

|                     |
|---------------------|
| Issue ID: 12079     |
| Subject: Tandem Tab |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Lee, Herman   |                        |
| Submitted By: Litchfield, Phil | 11/29/2012 10:23:46 PM |
| Modified By: hlee              | 11/30/2012 8:07:16 PM  |
| Priority: High                 |                        |
| Category: Support              |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 11/29/2012 5:30:01 PM Eastern Standard Time  
I tried to define a tandem using the tandem tab and then use it for a rating. But could not get virtis to produce a rating for the defined tandem. But if I define the same tandem as a two axle vehicle it will rate. How does the tandem tab work?

FROM: Herman Lee DATE: 11/30/2012 12:48:57 PM Eastern Standard Time  
Phil, this was discussed with the Beta TAG. Please see Incident 10697 (Tandem vehicle rating does not appear) for more information.

FROM: Phil Litchfield DATE: 11/30/2012 2:51:25 PM Eastern Standard Time  
Thanks, Herman. What is the intended use of the tandem tab?

FROM: Herman Lee DATE: 11/30/2012 2:52:10 PM Eastern Standard Time  
For LRFD design review or LRFR analysis, the tandem will be combined with the lane load for analysis.



## Complete Issue Information

Issue ID: 12080

Subject: User defined shear area is doubled in spec articles

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: Mlynarski, Mark

11/30/2012 4:26:08 PM

Modified By: gtrees

12/4/2012 10:06:14 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Verified |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI-12080-           |             |

4/19/2016 3:24:36 PM

HRS AASHTO

3357

## Complete Issue Information

UserDefinedShear.docx

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Mark Mlynarski DATE: 11/30/2012 11:26:43 AM Eastern Standard Time

When entering the user defined Vertical Shear Reinf on the 'Shear' tab of the 'Point of Interest' window, Virtis automatically calculates the area of Shear by multiplying by the number of legs as per the help (see attached document). When the value gets passed to the shear specification articles, however, it appears to multiply it again by the number of legs (see attached document). For shear areas coming from the POI window, Virtis should not multiply the Area value again by the number of legs.

When two legs are input on the Shear Reinforcement Definition window, the number of legs is multiply by the area of the bar and the correct value is passed to the shear articles (see attached document).

FROM: Herman Lee DATE: 11/30/2012 12:42:15 PM Eastern Standard Time

Srujana, if this is confirmed to be a bug, please see whether you are able to fix it for 6.4.1. Thanks.

FROM: Srujana Thogaru DATE: 12/3/2012 10:01:00 AM Eastern Standard Time

Above mentioned error has been fixed for 6.4.1 Beta 2

FROM: Srujana Thogaru DATE: 12/4/2012 9:09:49 AM Eastern Standard Time

Similar error exists with RC bridge POI. Fixed for 6.4.1 Beta 2

FROM: Geoffrey Trees DATE: 12/4/2012 5:06:10 PM Eastern Standard Time

Verified

Issue ID: 12081

Subject: Additional information for 3rd-party development

Folder: /Virtis/Support Center

Primary Contact: Trees, Geoffrey

Submitted By: Goodrich, Brian

11/30/2012 7:12:38 PM

Modified By: kgyovai

7/10/2013 12:11:24 PM

Priority: High

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |

4/19/2016 3:24:36 PM

HRS AASHTO

3358

**Complete Issue Information**

|                  |          |      |         |
|------------------|----------|------|---------|
| Trees, Geoffrey  | Resolved |      |         |
| Kennelly, Krisha | New      | High | Unknown |
| Trees, Geoffrey  | Assigned |      | Bug     |
|                  | Resolved |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 11/30/2012 2:13:03 PM Eastern Standard Time  
Submitted on behalf of Brian Goodrich, BridgeTech.

Provide General Preference Summary and Help HTM Summary in API Guide. Attached are for the 6.4.0 release.

FROM: Herman Lee DATE: 5/17/2013 8:35:31 AM Eastern Daylight Time  
Geoff, please add General Preference Summary and Help HTM Summary to the 6.5 API Guide.  
Thanks.

FROM: Geoffrey Trees DATE: 5/28/2013 10:22:51 AM Eastern Daylight Time  
Items were added to API guide.

FROM: Kane Gyovai DATE: 7/10/2013 8:08:18 AM Eastern Daylight Time  
Verified for V6.5 Beta4/acceptance build.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 12082                                                                                  |
| Subject: Engine Related Help hyperlink in Beam Details: Web End Block topic jumps to wrong topic |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:24:37 PM

HRS AASHTO

3359

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Goodrich, Brian    | 11/30/2012 8:56:23 PM |
| Modified By: mkolis              | 12/4/2012 9:21:16 PM  |
| Priority: High                   |                       |
| Category: Bug                    |                       |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          | Support  |
|                    | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | DeleteTruckError.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 11/30/2012 1:56:28 PM Mountain Standard Time  
In the "Beam Details: Web End Block" topic of VirtisOpis.chm, the "Engine Related Help" hyperlink jumps to the "Beam Details: Span Details" topic.

Viewing the source of the topic shows the link goes to HIDD\_SPAN\_DETAIL.htm.

FROM: Geoffrey Trees DATE: 12/3/2012 3:25:14 PM Eastern Standard Time  
Fixed for 6.4.1 Beta 2

FROM: Matt Kolis DATE: 12/4/2012 4:21:16 PM Eastern Standard Time  
Verified in 6.4.1 Beta 2.

4/19/2016 3:24:37 PM

HRS AASHTO

3360

## Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 12083             |
| Subject: Delete Truck Error |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center      |                        |
| Primary Contact: Ordoobadi, Mehrdad |                        |
| Submitted By: Litchfield, Phil      | 11/30/2012 10:38:07 PM |
| Modified By: mordoobadi             | 12/14/2012 6:03:45 PM  |
| Priority: High                      |                        |
| Category: Support                   |                        |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 11/30/2012 5:44:09 PM Eastern Standard Time

When I'm trying to delete a truck out of the library, I get the attached error. It only happens to certain trucks in the library. I believe this has to do with analysis results being saved using this specific truck. How can I delete this truck?

FROM: Mehrdad Ordoobadi DATE: 12/3/2012 11:03:09 AM Eastern Standard Time

Could you please send us the Debug Description of the error?

FROM: Phil Litchfield DATE: 12/4/2012 10:25:13 AM Eastern Standard Time

4/19/2016 3:24:37 PM

HRS AASHTO

3361

## Complete Issue Information

Error deleting record from database record set.

09:23:35 AM - Line 298 in source file DmLibVehicle.cpp.

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The DELETE statement conflicted with the REFERENCE constraint "R\_1552". The conflict occurred in database "RATINGS", table "dbo.abw\_results\_ll\_action", column 'll\_vehicle\_id'. The statement has been terminated.

The DELETE statement conflicted with the REFERENCE constraint "R\_1552". The conflict occurred in database "RATINGS", table "dbo.abw\_results\_ll\_action", column 'll\_vehicle\_id'. The statement has been terminated.

FROM: Mehrdad Ordoobadi DATE: 12/4/2012 11:06:37 AM Eastern Standard Time

The detailed debug description of the error indicates (as you suspected) that there are analysis results saved for the truck that you are trying to delete.

In order to delete the truck you should first remove the analysis results that are saved to the database that reference the truck. Then you should be able to delete the truck.

FROM: Phil Litchfield DATE: 12/4/2012 6:09:58 PM Eastern Standard Time

How do you locate and delete analysis results for a specific truck?

FROM: Mehrdad Ordoobadi DATE: 12/14/2012 10:39:21 AM Eastern Standard Time

This cannot be done from inside Virtis/Opis.

You can ask someone who has access to your database to run a query like shown below to get a list of bridges that have analysis events and the vehicles that they reference.

```
SELECT DISTINCT ALV.name vehicle_name, ASMAE.bridge_id BID, AE.event_timestamp,
AE.event_id
FROM abw_spng_mbr_alt_events ASMAE
INNER JOIN abw_event_vehicle AEV ON ASMAE.event_id = AEV.event_id
INNER JOIN abw_event AE ON AEV.event_id = AE.event_id
INNER JOIN abw_lib_vehicle ALV ON AEV.vehicle_id = ALV.vehicle_id
WHERE ALV.library_type NOT IN (22901, 22903)
ORDER BY ALV.name, ASMAE.bridge_id
```

This will return a table like shown below:

| vehicle_name | BID | event_timestamp         | event_id |
|--------------|-----|-------------------------|----------|
| HS 20-44-2   | 1   | 2012-12-14 17:13:53.000 | 3482     |
| HS 20-44-2   | 10  | 2012-12-14 17:15:09.000 | 3483     |
| HS 20-44-2   | 10  | 2012-12-14 18:00:58.000 | 3485     |

You can go through the list looking for the truck name that you want to delete and find out which bridges (in the BID column) are referencing that vehicle.

Then you can select those bridges in the bridge explorer and then select Bridge/Manage Analysis Events in the menu and delete those analysis events with matching timestamps (Time Stamp matches event\_timestamp in the results from the SQL query).

4/19/2016 3:24:37 PM

HRS AASHTO

3362

**Complete Issue Information**

Issue ID: 12084  
Subject: Issue with Spec Check Viewer when analyzing culvert alternative with multiple segments

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Thogaru, Srujana 12/3/2012 3:07:10 PM  
Modified By: gtrees 12/5/2012 6:15:59 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact                 | Status   | Priority | Category |
|---------------------------------|----------|----------|----------|
| Duray, Jim                      | New      | High     | Unknown  |
| Lee, Herman<br>Thogaru, Srujana | Assigned |          | Bug      |
|                                 | Resolved |          |          |
|                                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 6.4.1_beta1_ScreenShot_004.jpg |             |
|      | 6.4.1_beta1_ScreenShot_005.jpg |             |
|      | 04787 - 019-101.xml            |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Herman Lee DATE: 12/3/2012 10:07:24 AM Eastern Standard Time  
Rating Summary doesn't have this problem.

To reproduce the problem in the Spec Check Viewer:

1. Rate the culvert alternative with HS20 LFR analysis.
2. Open the Spec Check Viewer for the first and last segments in the culvert alternative.
3. The Spec Check results should be different for the the two segments.

FROM: Joseph Ihnat DATE: 12/3/2012 12:32:15 PM Eastern Standard Time  
Fixed for 6.4.1 (Beta 2)

FROM: Geoffrey Trees DATE: 12/5/2012 1:15:56 PM Eastern Standard Time  
Verified

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12087                                                           |
| Subject: Article 5.5.3.2 Spec Check Broken for Version Before 6th edition |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Ruby, Jeff          | 12/4/2012 4:02:00 PM |
| Modified By: jruby                | 5/30/2013 8:21:59 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Jeff Ruby DATE: 12/4/2012 11:12:33 AM Eastern Standard Time

4/19/2016 3:24:37 PM

HRS AASHTO

3364



### Complete Issue Information

For reference see VI 8394

For prestressed beams, Article 5.5.3.2 is checked even when it should be ignored. Screenshot 4 shows the error when 5th edition or ealier specs are used. Screenshot 5 show the correct outcome. (N/A).

Please fix all ealier versions to exhibit the correct behavior.

The screenshots are for location Span 2 - 11.30 ft on G2 and Member Alt Interior Girder - K6.

FROM: Krisha Kennelly DATE: 12/6/2012 10:02:46 AM Eastern Standard Time  
Srujana - 5.5.3.2 should only be added to the spec article list if m\_IDesignSpecVersion >= AASHTO\_LRFD\_6EDITION.

FROM: Srujana Thogaru DATE: 1/24/2013 11:05:57 AM Eastern Standard Time  
Fixed for 6.5 release.

FROM: Steve Salata DATE: 4/25/2013 1:44:06 PM Eastern Daylight Time  
Cionfirmed that the results of the 5.5.3.2 spec check are listed only when AASHTO LRFD 6th edition is selected.

FROM: Jeff Ruby DATE: 5/30/2013 4:21:58 PM Eastern Daylight Time  
Accepted Version 6.5.0 Beta 2

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 12088                                                                    |
| Subject: Unable to delete bridges with latitude and longitude stored as DDDMMSS.ss |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Wagner, Brad          | 12/4/2012 6:25:50 PM  |
| Modified By: mordoobadi             | 12/19/2012 9:30:04 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

### History

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | New    | High     | Unknown  |

4/19/2016 3:24:38 PM

HRS AASHTO

3365

### Complete Issue Information

|                  |          |      |     |         |
|------------------|----------|------|-----|---------|
|                  | Assigned |      |     |         |
| Duray, Jim       | New      | High | Bug | Unknown |
| Thogaru, Srujana | Assigned |      | Bug |         |
|                  | Resolved |      |     |         |
|                  | Verified |      |     |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | development length corner.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

Michigan DOT reported a problem deleting bridges in their database. After investigation the issue it was determined that the problem is happening for bridges that have large values stored in longitude and/or latitude field. Pontis application expects latitude and longitude values as DDDMMSS.ss where DD is the degree part, MM is the Minutes part, and SS.ss is the seconds part of the value for latitude and longitude.

FROM: Mehrdad Ordoobadi DATE: 12/4/2012 1:35:06 PM Eastern Standard Time

Cause:

When the Virtis application reads a value like 123456.78 from the latitude or longitude (numeric(8,2)) field database into the C++ code, it reads it into a float C++ data type as 123456.00 because a float has only six significant digits.

Previously there was another problem with reading and writing to latitude and longitude columns that Utah DOT reported that was caused by too much accuracy for the double precision value that is bound to the latitude or longitude. To fix that problem the data type for the bound fields were changed from double precision to float.

Resolution:

In order to fix this issue the values should be read from the database into Text C++ fields.

When the values for these fields are read from the database they are read as text then converted to double precision numbers that Virtis/Opis uses.

When the values for these fields are saved to the database the double precision numbers should be

4/19/2016 3:24:38 PM

HRS AASHTO

3366

**Complete Issue Information**

converted to text representation of the number before saving to the database.

FROM: Geoffrey Trees DATE: 12/6/2012 3:28:31 PM Eastern Standard Time  
Verified fixed for 6.4.1.

FROM: Brad Wagner DATE: 12/19/2012 3:31:59 PM Eastern Standard Time  
accepted Beta 3

|                                        |
|----------------------------------------|
| Issue ID: 12089                        |
| Subject: Corner Bar Development Length |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Wagner, Brad        | 12/4/2012 9:05:59 PM  |
| Modified By: bwagner              | 12/19/2012 7:57:05 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brad Wagner DATE: 12/4/2012 4:14:04 PM Eastern Standard Time

In the attached model I've added some corner bars. In the spec check for flexure in the top slab at point 12.00 in slab 2 I've noticed the following:

The corner is a number 5 at 9", As = .413 in<sup>2</sup>

- Corner bar no development checked - Spec Check shows As = 0.34
- ...with fully developed horiz checked - Spec Check shows As = 0.34
- ...with fully developed horiz and vertical checked - Spec check shows As = 0.41.

4/19/2016 3:24:38 PM

HRS AASHTO

3367

**Complete Issue Information**

Since this is adjacent to the corner of the wall, shouldnt 0.41 be used regardless of the development toggles?

Note - I did not check the effects of clicking the development toggles on the other (free) ends of the corner bars.

FROM: Srujana Thogaru DATE: 12/18/2012 11:27:36 AM Eastern Standard Time  
Above issue is fixed for 6.4.1 Beta 3

FROM: Herman Lee DATE: 12/18/2012 12:43:36 PM Eastern Standard Time  
Verified As for the analysis points around the corner bar and verified the two Fully Developed checkboxes are read correctly.

FROM: Brad Wagner DATE: 12/19/2012 2:57:05 PM Eastern Standard Time  
Accepted in Beta 3

|                                                          |
|----------------------------------------------------------|
| Issue ID: 12093                                          |
| Subject: Structure Framing Plan Details - Diaphragms Tab |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lee, Herman     |                      |
| Submitted By: Bhanushali, Girish | 12/7/2012 8:35:23 PM |
| Modified By: hlee                | 5/12/2013 7:30:10 PM |
| Priority: High                   |                      |
| Category: Enhancement            |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:38 PM

HRS AASHTO

3368

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Girish Bhanushali DATE: 12/7/2012 3:36:13 PM Eastern Standard Time

Copy Bay To... Button and associated pop up open even when there are no diaphragms for source Bay

Under this scenario - Button should be disabled and so that bay selection dialog can't be opened.

This issue also applies to StringerGroupDefinition - Diaphragms Tab

FROM: Herman Lee DATE: 12/7/2012 3:59:56 PM Eastern Standard Time  
UI behavior change request.

FROM: Herman Lee DATE: 5/12/2013 3:29:35 PM Eastern Daylight Time  
Discarded by TAG May 2013.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 12094                                              |
| Subject: Structure Framing Plan Details - Diaphragms Tab (2) |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Lee, Herman     |                      |
| Submitted By: Bhanushali, Girish | 12/7/2012 8:41:37 PM |
| Modified By: hlee                | 5/12/2013 7:31:10 PM |
| Priority: High                   |                      |

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Shear Capacity Constructability.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Girish Bhanushali DATE: 12/7/2012 3:41:45 PM Eastern Standard Time

Copy Bay To... Button and associated pop up open even when there are no Bays to copy to (only one bay in the structure).

Under this scenario - Button should be disabled and so that bay selection dialog can't be opened.

I haven't checked yet if this issue applies to StringerGroupDefinition - Diaphragms Tab. Fixer will have to investigate to see if this window also needs to be fixed.

FROM: Herman Lee DATE: 12/7/2012 4:00:45 PM Eastern Standard Time

UI behavior change request.

FROM: Herman Lee DATE: 5/12/2013 3:30:22 PM Eastern Daylight Time

Discarded by TAG May 2013.

4/19/2016 3:24:39 PM

HRS AASHTO

3370

**Complete Issue Information**

Issue ID: 12099  
Subject: Web Shear Capacity Constructability Requirement Applied Wrong

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 12/12/2012 7:07:06 PM  
Modified By: dteal 6/26/2013 2:07:35 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 12/12/2012 2:08:44 PM Eastern Standard Time  
In the attached structure, when doing a design review with the AASHTO Engine I will get a Spec Failure (6.10.3.3 Constructability Shear)

Web Shear Capacity Constructability Requirement:  
6.10.3.3 Constructability – Shear

The stiffened shear capacity is shown as inadequate (at locations where the final factored shear exceeds the shear-buckling capacity) during construction stages prior to making the deck composite.

The AASHTO Engine is incorrectly calculating the appropriate factored loads for use in Eq. 6.10.3.3-1. The shear-buckling resistance exceeds the factored components (essentially DC1)

The requirements of section 6.10.3.3 shall only be applied during the construction stages (prior to the hardening of the deck and composite action). The AASHTO Engine is incorrectly applying live loads

4/19/2016 3:24:39 PM

HRS AASHTO

3371

**Complete Issue Information**

applied to the non-composite section should be included in the factored loads. (when the tension-field resistance is disallowed per the commentary)

FROM: Krisha Kennelly DATE: 4/25/2013 11:53:41 AM Eastern Daylight Time  
Fixed for version 6.5.0. 6.10.3.3 is now only called in stage 1.

FROM: Subhadeep Ghosh DATE: 5/9/2013 1:12:09 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

FROM: Dean Teal DATE: 6/26/2013 10:07:34 AM Eastern Daylight Time  
Accepted in 6.5.0 beta 3

Issue ID: 12101  
Subject: Unable to set shear connector information

Folder: /Virtis/Support Center  
Primary Contact: Bhanushali, Girish  
Submitted By: Ruby, Jeff 12/12/2012 9:56:09 PM  
Modified By: jruby 5/7/2013 6:47:42 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Duray, Jim         | New           | High     | Unknown  |
| Kennelly, Krisha   | Assigned      |          |          |
| Bhanushali, Girish | Investigation |          |          |
|                    | Resolved      |          |          |
|                    | Verified      |          | Bug      |



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 12/12/2012 5:04:19 PM Eastern Standard Time

Shear stud problem. I entered the studs in by hand. When you import the bridge, open the "Deck Profile" for G2-1720, go to the "shear connectors" tab and hit apply. You will get the first "weird" error. I say, "yes fix it" to make V/O happy. But the screenshot shows the error I get when I try to run it.

FROM: Jim Duray DATE: 12/13/2012 10:40:30 AM Eastern Standard Time

If this is new to 6.4.1 (i.e. not in 6.4.0) we should fix now. If it also in 6.4 it can wait for the 6.5 release.

FROM: Jeff Ruby DATE: 12/13/2012 2:02:28 PM Eastern Standard Time

Actually, take a look at VI 10340. It says it was implemented in 6.4.0. This issue is related. Since 10340 was never "accepted" for 6.4.0, I don't know where this would "fit" in the big scheme of things. But I think it should be addressed soon.

FROM: Girish Bhanushali DATE: 2/7/2013 9:54:56 AM Eastern Standard Time

Good Morning Jeff,

Thank you very much for posting this issue.

We have resolved the issue (VI#12101) and fix has been added for testing in next version (6.5).

Errors that you encountered are resolved and design review successfully completes.

Our testing was done using the bridge that you have provided.

Based on our experience during the development of the fix, I would like to point out that while testing this you may need to use x64 bit build since the bridge is very long and you may encounter errors during the design review indicating insufficient memory while writing the spec checking results.

Kindly note that issue 10430 has been forked in to VI#11792, VI#11930.

- VI# 10430 has been resolved by implementing the enhancement in 6.4 release.
- VI# 11792 has been resolved and fix is added for testing in next release (6.5).
- VI# 11930 is planned to be resolved for next release (6.5).

Please let us know should you have any other questions or concerns.

Regards

4/19/2016 3:24:39 PM

HRS AASHTO

3373

**Complete Issue Information**

FROM: Steve Salata DATE: 4/24/2013 3:39:08 PM Eastern Daylight Time  
Imported bridge, hit Apply on the Shear Connectors tab of G2-1720. Ran through G2-1720 analysis successfully (32-bit version of program crashed).

FROM: Jeff Ruby DATE: 5/7/2013 2:47:41 PM Eastern Daylight Time  
Accepted 6.5.0 Beta 1

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 12103                                                          |
| Subject: Missing longitudinal stiffener in rolled beam profile schematic |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Lee, Herman      | 12/13/2012 5:25:11 PM |
| Modified By: bzhang            | 12/18/2012 7:38:47 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Resolved | High     | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 12/13/2012 12:25:30 PM Eastern Standard Time  
Submitted on behalf of Nam Nguyen (Nam.Nguyen@atkinsglobal.com), Atkins.

Bridgeware e-mail:

=====

Mr. Lee,

4/19/2016 3:24:40 PM

HRS AASHTO

3374

**Complete Issue Information**

When I entered the information for "Longitudinal Stiffener Ranges" for rolled beam, do you know why it doesn't show the stiffener location at the beam Schematic? Thanks

=====

Resolved for 6.4.1 release.

FROM: Bin Zhang DATE: 12/18/2012 2:20:53 PM Eastern Standard Time  
Verified for 6.4.1 Beta3.

|                                    |
|------------------------------------|
| Issue ID: 12107                    |
| Subject: Parabolic web depth error |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Zhang, Bin     |                       |
| Submitted By: McMunn, Creightyn | 12/18/2012 5:32:59 PM |
| Modified By: sghosh             | 4/24/2013 10:16:32 PM |
| Priority: High                  |                       |
| Category: Bug                   |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:40 PM

HRS AASHTO

3375

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10175.xml           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Creightyn McMunn DATE: 12/18/2012 1:11:04 PM Eastern Standard Time  
We are receiving the attached error when running any of the girders in "Span 1 thru Span 6 (Girder 2 thru Girder 6)" of the attached email. We cannot figure out where the issue may be and it appears as though the sections are correct.

FROM: Bin Zhang DATE: 1/21/2013 9:33:00 AM Eastern Standard Time  
AASHTOWare verify that user has entered continuous adjacent parabolas in the Cross Section Ranges window. AASHTOWare compute the web depth at each range point entered by the user and compare the computed web depth to the user input depth.

For example, the table below showed the web depth differences between the user input numbers and the computed numbers.

| User Input Number (inch) | Computed Number Based on Parabolic Curve (inch) |
|--------------------------|-------------------------------------------------|
| 56.8750                  | 57.1433                                         |
| 46.7500                  | 47.03454                                        |
| 52.5625                  | 52.517                                          |

A tolerance was added when comparing the computed web depth to the user input depth. The system default tolerance was applied to serve as the tolerance here.

This fix will be available for version 6.5. The user will be able to use the system default tolerance to control this web depth verification.

FROM: Subhadeep Ghosh DATE: 4/24/2013 5:49:38 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 12109                                                          |
| Subject: Problem analyzing floorbeam after changing floorbeam definition |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Pichura, Mike    | 12/18/2012 8:55:31 PM |
| Modified By: sghosh            | 4/24/2013 10:16:49 PM |

4/19/2016 3:24:41 PM

**HRS AASHTO**

3376

## Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
| Goodrich, Brian  | Assigned           |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BRASS Import.xml    |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 12/18/2012 3:56:16 PM Eastern Standard Time  
Submitted on behalf of Mike Pichura, Michael Baker Jr., Inc.

To reproduce the problem:

1. Use Floorbeam0 in the attached bridge.
2. Analyze FB0. Completed OK.
3. Open the FB0 floorbeam member alternative.
4. Change the definition from FB2 to FB.
5. Analyze FB0. Completed OK.
6. Change the definition back to FB2.
7. Analyze FB0. Cannot be completed.

Workaround is to save the bridge and reopen the Bridge Workspace.

FROM: Herman Lee DATE: 4/5/2013 9:55:12 PM Eastern Daylight Time  
Fixed a problem in switching beam def type.

Resolved for 6.5 release.

4/19/2016 3:24:41 PM

HRS AASHTO

3377

**Complete Issue Information**

FROM: Subhadeep Ghosh DATE: 4/24/2013 6:15:43 PM Eastern Daylight Time  
Verified for 6.5 beta 1

|                                             |
|---------------------------------------------|
| Issue ID: 12110                             |
| Subject: Control Options Not using User POI |

|                                  |                        |
|----------------------------------|------------------------|
| Folder: /Virtis/Support Center   |                        |
| Primary Contact: Goodrich, Brian |                        |
| Submitted By: Teal, Dean         | 12/19/2012 12:52:57 PM |
| Modified By: kkennelly           | 12/19/2012 7:26:02 PM  |
| Priority: High                   |                        |
| Category: Unknown                |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 12/19/2012 7:54:21 AM Eastern Standard Time  
I have a brass file that was imported into 6.4  
(For my info BID 7191)

In the control options I set LFD to Generate at user defined points only  
See first superstructure definition  
Will get zero rating factors

In the second superstructure definition I don't have any POI boxes checked in the control options  
I will get rating factors based on 10th points

I think this has something to do with imported file has an override schedule checked. In this case it is for Transverse Stiffeners.

4/19/2016 3:24:41 PM

HRS AASHTO

3378

## Complete Issue Information

I have the same issues in RC

In the control options I set LFD to Generate at user defined points only  
See third superstructure definition  
Will get zero rating factors

In the fourth superstructure definition I don't have any POI boxes checked in the control options  
I will get rating factors based on 10th points

I think this has something to do with imported file has an override schedule checked. In this case it is for Vertical Shear Reinforcement.

FROM: Krisha Kennelly DATE: 12/19/2012 9:25:37 AM Eastern Standard Time  
After you import, are you testing the BRASS LFD engine or the AASHTO LFD engine?

FROM: Dean Teal DATE: 12/19/2012 11:09:13 AM Eastern Standard Time  
After I import I am testing with the BRASS LFD engine.

FYI - if you try the AASHTO LFD engine it will simply fail to run (analysis failed)

FROM: Krisha Kennelly DATE: 12/19/2012 1:46:23 PM Eastern Standard Time  
I'm splitting this into 2 issues. New Issue 12114 is for AASHTO LFD engine not running.

This issue remains for what Dean originally entered for the BRASS LFD engine.

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 12114                                                                        |
| Subject: AASHTO LFD engine doesn't run if section based steel beam doesn't have a deck |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Teal, Dean          | 12/19/2012 7:20:31 PM |
| Modified By: hhu                  | 4/18/2014 12:57:20 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 |          |          | Bug      |

4/19/2016 3:24:41 PM

HRS AASHTO

3379

### Complete Issue Information

|                  |          |  |      |         |
|------------------|----------|--|------|---------|
| Kennelly, Krisha |          |  |      |         |
| Lee, Herman      | New      |  | High | Unknown |
| Skow, Wayne      | Assigned |  |      | Bug     |
|                  | Resolved |  |      |         |
|                  | Resubmit |  |      |         |
|                  | Resolved |  |      |         |
|                  | Verified |  |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 12/19/2012 2:20:57 PM Eastern Standard Time  
Split out from issue 12110. See that issue for the bridge.

FYI - if you try the AASHTO LFD engine it will simply fail to run (analysis failed)

FROM: Krisha Kennelly DATE: 12/19/2012 2:21:43 PM Eastern Standard Time  
First member alt in the bridge attached to 12110.

User does not have any concrete slab data defined. Export complains because the concrete material is not defined. But it doesn't have to be defined since no thickness or width is entered.

FROM: Herman Lee DATE: 7/19/2013 2:01:29 PM Eastern Daylight Time  
Modified the data checking to allow the analysis to continue for steel girder with no cross section based slab data. Fixed for 6.5.1 release.

Developer Note:  
With the fix, the analysis continue until CSCSuperSteelGirderElement::SetBraceMoments.

FROM: Krisha Kennelly DATE: 4/3/2014 2:07:38 PM Eastern Daylight Time  
Fixed for version 6.6 alpha 4+.

The problem is many of the POI's in the member alt have the checkbox checked to override the

4/19/2016 3:24:41 PM

HRS AASHTO

3380



**Complete Issue Information**

diaphragm data but have entered zero as the distances to the adjacent diaphragms. Zero is not a valid entry. Even if the point is at a diaphragm itself, the distances to the adjacent diaphragms have to be entered since the section capacity is dependent on the brace pt moments (Cb values, etc.).

Changed code to issue a warning the Analysis Progress dialog for points of interest that have blank or zero distance to diaphragms when the override diaphragm box is checked. The override diaphragm data will not be used in the spec check if the distances are zero or blank. Also added code to the validation to warn user when this condition exists.

FROM: Hanjin Hu DATE: 4/18/2014 8:57:01 AM Eastern Daylight Time  
Backchecked for V6.6.0 Beta Build 1.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 12115                                                               |
| Subject: Showing shear connectors existing throughout the length in 6.6.1.2.2 |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Ghosh, Subhadeep | 12/20/2012 2:31:41 PM |
| Modified By: hlee              | 5/11/2013 2:03:29 PM  |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Subhadeep Ghosh DATE: 12/20/2012 9:43:18 AM Eastern Standard Time  
The Article 6.6.1.2.2 shows shear connectors existing throughout the length based on the success of Article 6.10.1.7 ONLY. Now, the error arises when shear connectors does not exist throughout the length but the Article 6.10.1.7 passes leading to the statement in Article 6.6.1.2.2 that "Article 6.6.1.2.1: Shear connectors exist throughout length and Art. 6.10.1.7 is satisfied" which is wrong. This can be

4/19/2016 3:24:41 PM

HRS AASHTO

3381

**Complete Issue Information**

verified with TrainingBridge1 or TrainingBridge2. This is a release bug.

FROM: Herman Lee DATE: 12/20/2012 10:04:36 AM Eastern Standard Time  
Please fix this issue in 6.5. Thanks.

FROM: Wayne Skow DATE: 1/10/2013 11:02:21 AM Eastern Standard Time  
Fixed a bug in SCSuperSteelGirderElement::HasShearConnectorsOverEntireLength() where it would return true at times when it should have been false.

Test this by applying shear connectors over an entire span, then over a partial span and check article 6.6.1.2.2. (LRFD or LRFR).

FROM: Subhadeep Ghosh DATE: 4/24/2013 6:43:42 PM Eastern Daylight Time  
Checking in 6.5 Beta 1  
Tested this with TrainingBridge1 and TrainingBridge2. For TrainingBridge1, the shear connector range was reduced to 75' from 161' but the message appeared in the article 6.6.1.2.2.  
For TrainingBridge2, the message appeared at a location in span 1 when the shear connectors were removed from some the location in span 2.  
Hence resubmitting.

FROM: Wayne Skow DATE: 4/30/2013 10:20:53 AM Eastern Daylight Time  
The original fix got overwritten somehow. Fix has been reapplied.

FROM: Subhadeep Ghosh DATE: 5/10/2013 2:31:03 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 12117                                          |
| Subject: Problem with OPIS - LRFD - Shear for Strength I |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Thogaru, Srujana   |                       |
| Submitted By: Woldemichael, Berhanu | 12/21/2012 3:21:09 PM |
| Modified By: sghosh                 | 4/25/2013 1:47:56 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          |          |

4/19/2016 3:24:42 PM

HRS AASHTO

3382

**Complete Issue Information**

|                                                                                                     |                             |      |         |
|-----------------------------------------------------------------------------------------------------|-----------------------------|------|---------|
|                                                                                                     |                             |      | Bug     |
| Lee, Herman                                                                                         | Verified<br>New<br>Assigned | High | Unknown |
| Skow, Wayne<br>Ordoobadi, Mehrdad<br>Zhang, Bin<br>Ordoobadi, Mehrdad                               |                             |      | Bug     |
| Skow, Wayne<br>Lee, Herman<br>Trees, Geoffrey<br>Lee, Herman<br>Trees, Geoffrey<br>Ghosh, Subhadeep | Resolved<br>Verified        |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Shear Phi Error.jpg     |             |
|      | LRFD Table 12.5.5-1.png |             |
|      | 0602051.xml             |             |
|      | 0602051-modified.xml    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:24:42 PM

HRS AASHTO

3383

**Complete Issue Information**

FROM: Berhanu Woldemichael DATE: 12/21/2012 10:25:29 AM Eastern Standard Time  
There is an error in the shear for the Strength I condition (see the attached caption). This problem was reported earlier. Please, resolve this problem before releasing the program for further use.

FROM: Herman Lee DATE: 12/21/2012 1:53:23 PM Eastern Standard Time  
Based on the screen capture attached, there are two VuMax in the Results Graph. The check mark for the Stage 3 Strength I checkbox is grey. So, one VuMax is coming from Stage 1 Strength I Max and the other is coming from Stage 3 Strength I Max. The Results Graph captions need to be improved so the user can tell where they are coming from.

FROM: Srujana Thogaru DATE: 2/4/2013 10:05:59 AM Eastern Standard Time  
Shear Graph label has been improved by shown the corresponding stage number. Fixed for 6.5 release. For internal testing fixed for 6.5 alpha 1.

FROM: Subhadeep Ghosh DATE: 4/25/2013 9:10:18 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                     |
|-------------------------------------|
| Issue ID: 12119                     |
| Subject: LRFD Culvert Phi for Shear |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Ghosh, Subhadeep |                       |
| Submitted By: Litchfield, Phil    | 12/27/2012 7:49:36 PM |
| Modified By: tthompson            | 7/19/2013 1:55:33 PM  |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:24:42 PM

HRS AASHTO

3384

**Complete Issue Information**

FROM: Phil Litchfield DATE: 12/27/2012 2:59:15 PM Eastern Standard Time  
In the Spec Check Detail for Nominal Shear Resistance the phi value is 0.9. According to Table 12.5.5-1, phi for a RC cast-in-place box should be 0.85.

FROM: Wayne Skow DATE: 1/8/2013 8:28:46 AM Eastern Standard Time  
The phi factor for box culvert shear needs to be changed in the database. Reassigned to Mehrdad.

FROM: Herman Lee DATE: 1/10/2013 9:29:09 AM Eastern Standard Time  
Developer Notes:

=====  
New rows are needed for culvert resistance factor (see attached "LRFD Table 12.5.5-1.png" file).

Ben - Please find out the culvert phi factors in all the library LRFR and LRFD factors.  
Mehrdad - Add to db and make available to domain, database migration and version conversion.  
Herman - Switch to use the new rows in the analysis.

FROM: Bin Zhang DATE: 1/14/2013 10:24:06 AM Eastern Standard Time  
I checked the culvert phi factors for 1998 AASHTO LRFD Specific, 2004 AASHTO LRFD Specific, 2007 AASHTO LRFD Specific, 2007 (2009 interim) AASHTO LRFD Specific, 2010 AASHTO LRFD Specific, 2012 AASHTO LRFD Specific, they did not change since 1998.  
Please use the factors below for all the library LRFR and LRFD factors.

|                                                        |      |
|--------------------------------------------------------|------|
| Case-in-place reinforcement concrete culvert : Flexure | 0.90 |
| Case-in-place reinforcement concrete culvert : Shear   | 0.85 |
| Precast reinforcement concrete culvert : Flexure       | 1.00 |
| Precast reinforcement concrete culvert : Shear         | 0.90 |
| Three-sided reinforcement concrete culvert : Flexure   | 0.95 |
| Three-sided reinforcement concrete culvert : Shear     | 0.90 |

FROM: Phil Litchfield DATE: 1/17/2013 11:56:52 AM Eastern Standard Time  
Should this be considered a critical bug as it affects the rating results? Can a patch be issued to correct this?

FROM: Herman Lee DATE: 2/7/2013 2:08:08 PM Eastern Standard Time  
E-mail to Phil:

=====  
Phil,

I reviewed Incident 12119. Since the LRFR factors can be overridden, I suggest issuing a Technical Note so users are aware of this problem. To correct this issue using a patch to current version, it will also require Database Migration and Bridge XML file version conversion update.

Please let me know what you think.

Thanks,  
Herman  
=====

FROM: Phil Litchfield DATE: 2/8/2013 10:29:29 AM Eastern Standard Time  
After modifying the factors, in the spec, I can't get them to be used in the analysis. I attached the model

4/19/2016 3:24:42 PM

**HRS AASHTO**

3385

**Complete Issue Information**

file (0602051-modified.xml).

FROM: Herman Lee DATE: 2/11/2013 9:21:31 AM Eastern Standard Time  
Wayne, please investigate Phil's 2/8/2013 comment. Thanks.

FROM: Wayne Skow DATE: 2/15/2013 2:27:43 PM Eastern Standard Time  
The user specified values are not being passed into box culvert. Something is wrong with the UI setup.

FROM: Herman Lee DATE: 3/11/2013 1:39:03 PM Eastern Daylight Time  
Fixed a defect in overriding Phi factors during culvert analysis. Resolved for 6.5 release.

Geoff, please make the db changes (1/10/2013 Developer Notes) and assign the incident back to me.

FROM: Geoffrey Trees DATE: 3/26/2013 6:06:22 PM Eastern Daylight Time  
database, db,de,dm,do code is all updated. GUI and Copy from Library need done next.

FROM: Herman Lee DATE: 4/7/2013 2:31:51 PM Eastern Daylight Time  
Updated the AASHTO Culvert Engine to use the new culvert flexure and shear Phi factors.

Geoff, please update th UI, Copy from Library, Library factors copy/paste, Bridge factors copy/paste and Help.  
Assign to Subhadeep for the Report Tool after you are done. Thanks.

FROM: Geoffrey Trees DATE: 4/8/2013 9:56:40 AM Eastern Daylight Time  
GUI completed.

FROM: Subhadeep Ghosh DATE: 4/9/2013 4:55:15 PM Eastern Daylight Time  
Database changes were added for the report tool. Fix going into 6.5 release.

FROM: Steve Salata DATE: 4/26/2013 9:14:08 AM Eastern Daylight Time  
Default 0.85 value used in 5.8.3.3 Culvert Nominal Shear Resistance spec check - okay. User specified phi factors used in culvert analysis - okay.

FROM: Todd Thompson DATE: 7/19/2013 9:55:33 AM Eastern Daylight Time  
Did check in 6.5.0 Beta 4 - appears to follow AASHTO Spec correctly.

Issue ID: 12123  
Subject: Failed Culvert Example in Oracle

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Teal, Dean 1/2/2013 3:12:26 PM  
Modified By: hlee 1/18/2013 1:06:57 PM  
Priority: High

4/19/2016 3:24:42 PM

HRS AASHTO

3386

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Ihnat, Joseph   | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Problem with SP1.pdf |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 1/2/2013 10:13:51 AM Eastern Standard Time

Using the provided culvert example

Using the provided LRFR Legal Load Rating analysis setting template.

In the standalone database it will analyze

In our oracle database it will crash (I had exported and imported into our oracle production database)

- Unable to perform analysis
- Analysis Failed

Screen shot attached

FROM: Dean Teal DATE: 1/14/2013 11:46:24 AM Eastern Standard Time

Any culverts I create cannot be load rated LRFR in Oracle

To get a LRFR analysis I have to export and then import into the stand alone SQL database.

We need a work around here soon!!

FROM: Amanda Jackson DATE: 1/15/2013 6:07:09 PM Eastern Standard Time

I seem to be having the same problem with our Oracle database. I don't have a standalone to try it on.

FROM: Herman Lee DATE: 1/17/2013 9:49:10 AM Eastern Standard Time

This is a duplicate of Incident 12032. This issue has been fixed. After verifying the fix, we will provide an updated 6.4.1 DLL for fixing this issue.

4/19/2016 3:24:42 PM

HRS AASHTO

3387

**Complete Issue Information**

FROM: Bin Zhang DATE: 1/17/2013 1:33:09 PM Eastern Standard Time  
Verified for version 6.4.1 with the DLL updates.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 12126                                               |
| Subject: Virtis 6.4 Service Pack 1 - Problem with installtion |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center      |                     |
| Primary Contact: Ihnat, Joseph      |                     |
| Submitted By: Laughlin, Christopher | 1/7/2013 2:33:48 PM |
| Modified By: jihnat                 | 4/1/2013 7:56:39 PM |
| Priority: High                      |                     |
| Category: Unknown                   |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Christopher Laughlin DATE: 1/7/2013 9:43:44 AM Eastern Standard Time  
See attached PDF which explains the problem with screen shots of error messages from our technical staff. Please advise me and the below on what might be the problem. Thank you !

Dale.Barnett@dot.state.fl.us  
Florida Dept. Of Transportation Server Support  
(850) 410-5894

Ken.Madden@dot.state.fl.us  
FDOT OIS/BSSO Application Support  
Office (850) 410-5522  
Mobile (850) 212-5563

4/19/2016 3:24:43 PM

HRS AASHTO

3388



**Complete Issue Information**

FROM: Joseph Ihnat DATE: 1/7/2013 10:14:40 AM Eastern Standard Time  
Please attach your document.

FROM: Joseph Ihnat DATE: 1/7/2013 10:50:03 AM Eastern Standard Time  
Which version of Windows are you running?

FROM: Herman Lee DATE: 4/1/2013 10:59:11 AM Eastern Daylight Time  
Information Needed E-mail sent on 4/1/13.

FROM: Christopher Laughlin DATE: 4/1/2013 11:18:31 AM Eastern Daylight Time  
Acknowledge receipt of email dated 4-1-13. Will check with our DBA Technician who reported the problem to see if the incident can be closed.

FROM: Christopher Laughlin DATE: 4/1/2013 3:12:34 PM Eastern Daylight Time  
Technician confirmed - OK to close and mark as resolved. SP1 has been successfully installed in one of our test environments.

FROM: Joseph Ihnat DATE: 4/1/2013 3:55:48 PM Eastern Daylight Time  
Closed.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 12127                                        |
| Subject: Need ability to "un assign" a weld definition |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Kennelly, Krisha | 1/7/2013 6:09:18 PM  |
| Modified By: sghosh            | 4/25/2013 1:47:22 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Complete Issue Information**

**Documents**

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | TEST.xml                                       |             |
|      | FW_ Virtis 3D FEM analysis,<br>shear issue.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 1/7/2013 1:09:35 PM Eastern Standard Time  
In the Steel Plate Girder Profile window, a weld definition can be assigned. But if you decide you want to remove the assignment of that weld definition you can't. You can't "un select" it in the window and you can't delete the weld def because it is being used somewhere.

This will likely become a problem for users once Issue 10691 is added to version 6.5.

- Windows:
- Plate girder Girder Profile, all tabs.
  - Rolled beam Girder Profile, Cover Plate tabs.
  - Plate Girder Cross Section Dimensions, Cover Plate tabs.
  - Rolled beam and Builtup Steel Cross Sections Cover Plate tabs
  - Transverse and Bearing Stiffener Definitions

FROM: Joseph Ihnat DATE: 1/8/2013 3:37:59 PM Eastern Standard Time  
Done.

FROM: Subhadeep Ghosh DATE: 4/25/2013 9:45:40 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                         |
|-----------------------------------------|
| Issue ID: 12129                         |
| Subject: Shear issue in 3D FEM analysis |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Pichura, Mike    | 1/7/2013 7:47:35 PM  |
| Modified By: sghosh            | 4/25/2013 2:46:06 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## Complete Issue Information

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Assigned  | High     | Unknown     |
| Lee, Herman      | Suspended | High     | Enhancement |
|                  | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 1/7/2013 2:48:09 PM Eastern Standard Time  
Submitted on behalf of Mike Pichura, Michael Baker.

See attached for the received e-mail. Same issue with the DL shear action at 0 ft in the Analysis Results window.

FROM: Wayne Skow DATE: 1/23/2013 2:40:33 PM Eastern Standard Time  
Found a sign change bug in AbanLmLiveLoader module.

Fixed in v6.5.dev.

FROM: Subhadeep Ghosh DATE: 4/25/2013 10:45:50 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

**Complete Issue Information**

Issue ID: 12131  
 Subject: Determine bar profile based on its physical location in a cross section

Folder: /Virtis/Support Center  
 Primary Contact: Lee, Herman  
 Submitted By: Hasan, Mac 1/10/2013 2:56:17 PM  
 Modified By: hlee 7/7/2013 5:07:07 PM  
 Priority: High  
 Category: Enhancement

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                                                                        | Description |
|------|--------------------------------------------------------------------------------------------|-------------|
|      | Fw_ Virtis 6.4.1_Recalculating Modulus of Elasticity (Ec & Eci) and Modulus of Rupture.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/10/2013 9:56:49 AM Eastern Standard Time  
 Submitted on behalf of John Gregory, Colorado DOT.

Part of the Bridgeware e-mail received on 1/3/2013:

=====  
 Second, can a routine be added such that the flexural steel in a parabolic concrete tee girder could be defined/analyzed either as a distance from the top or the bottom? We can go in a change them manually but Brass could do either definition so we have numerous parabolic tee girder bridges defined

4/19/2016 3:24:43 PM

HRS AASHTO

3392

**Complete Issue Information**

this way. To change them will take a great deal of time which we don't have and we need these ASAP for permit route processing.

=====

The help for VirtisOpis states that bars referenced from the top of the beam are considered parallel to the top of the beam and bars referenced from the bottom of the beam are considered parallel to the bottom of the beam. The export to the AASHTO engines follows this definition.

For cross-section based beams, the BRASS export assumes that bars that are physically within the bottom half of the beam are considered parallel to the bottom of the beam.

Revising the export to the AASHTO engines to follow the BRASS export method is considered an enhancement.

FROM: Herman Lee DATE: 7/7/2013 1:04:56 PM Eastern Daylight Time  
A standalone utility will be provided to Colorado DOT to correct this problem in their database.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 12133                                                          |
| Subject: Enter key issue in recalculating Ec, Eci and modulus of rupture |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: vinayagamoorthy, vinacs | 1/11/2013 2:42:12 PM |
| Modified By: vvinayagamoorthy         | 6/20/2013 1:52:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:24:44 PM

HRS AASHTO

3393

**Complete Issue Information**

FROM: Herman Lee DATE: 1/11/2013 9:42:40 AM Eastern Standard Time  
Please see attached e-mail.

To reproduce:

1. Use TrainingBridge1, open the "4500 psi Concrete" concrete material.
2. Change f'c to 5.0. Hit the Enter key.
3. Concrete Material window closed. Select Yes in the pop up dialog to recalculate.
4. Reopen the Concrete Material window. Values are not recalculated.

FROM: Joseph Ihnat DATE: 1/21/2013 9:35:03 AM Eastern Standard Time  
Fixed for version 6.5.0

FROM: Subhadeep Ghosh DATE: 4/25/2013 4:17:12 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

FROM: vinacs vinayagamoorthy DATE: 6/20/2013 9:52:01 AM Eastern Daylight Time  
Works fine with V5, Beta 3

|                                              |
|----------------------------------------------|
| Issue ID: 12135                              |
| Subject: Bridge Alternative Wizard - Culvert |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 1/14/2013 4:47:20 PM |
| Modified By: hlee              | 1/20/2013 4:51:11 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:24:44 PM

HRS AASHTO

3394

**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Lee, Herman     | New       | High | Unknown     |
|                 | Suspended |      | Enhancement |
| Trees, Geoffrey | Assigned  | High | Bug         |
|                 | Resolved  |      |             |
|                 | Verified  |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B-52-233.pdf        |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 1/14/2013 11:48:44 AM Eastern Standard Time  
Should we have created a Bridge Alternative Wizard for culverts like we did for superstructures?

FROM: Herman Lee DATE: 1/14/2013 12:17:31 PM Eastern Standard Time  
Yes.

FROM: Dean Teal DATE: 1/14/2013 12:31:10 PM Eastern Standard Time  
Can we add this to the Maintenance List?

FROM: Herman Lee DATE: 1/20/2013 11:50:27 AM Eastern Standard Time  
Changed Category to Maintenance.

|                                                    |
|----------------------------------------------------|
| Issue ID: 12137                                    |
| Subject: Incorrect slab cover in Culvert Example 1 |

4/19/2016 3:24:44 PM

HRS AASHTO

3395

**Complete Issue Information**

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Teal, Dean         | 1/14/2013 8:20:04 PM |
| Modified By: dteal               | 6/26/2013 2:05:11 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 1/14/2013 3:20:21 PM Eastern Standard Time  
Submitted on behalf of Dean Teal, KDOT.

Part of the response e-mail on 1/14/13:

```

=====
The B411 bars in the center wall have zero clearance for slab cover – is that correct?
<<HL>> No, it is a mistake. We will correct the Example 1 in the sample databases in the next release.
=====

```

Geoff, I have attached the plans in this incident.

FROM: Geoffrey Trees DATE: 1/25/2013 10:54:26 AM Eastern Standard Time  
Fixed for 6.5

4/19/2016 3:24:44 PM

HRS AASHTO

3396



**Complete Issue Information**

FROM: Subhadeep Ghosh DATE: 4/25/2013 4:19:31 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

FROM: Dean Teal DATE: 6/26/2013 10:05:11 AM Eastern Daylight Time  
Accepted in 6.5.0 beta 3

|                                       |
|---------------------------------------|
| Issue ID: 12138                       |
| Subject: Culvert Corner Bar Help File |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Teal, Dean          | 1/14/2013 9:22:14 PM |
| Modified By: dteal                | 6/26/2013 2:06:19 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 1/14/2013 4:23:16 PM Eastern Standard Time  
The corner bar needs to have text added to the help that let's the user know that the Location Left and Right is referring to the direction of the horizontal portion of the bar.  
Very confusing with no explanation the way it is right now

FROM: Srujana Thogaru DATE: 1/25/2013 4:00:19 PM Eastern Standard Time

4/19/2016 3:24:44 PM

HRS AASHTO

3397

**Complete Issue Information**

Help has been updated with the following statement.

"Left and right under location is referring to the direction of the horizontal portion of the bar. Placement of the bar at left or right corner of a wall can be adjusted using wall clear cover".

Fixed for 6.5 release. For internal testing fixed for 6.5.1 alpha build 1.

FROM: Subhadeep Ghosh DATE: 4/25/2013 4:31:45 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

FROM: Dean Teal DATE: 6/26/2013 10:06:19 AM Eastern Daylight Time  
Accepted in 6.5.0 beta 3

|                                    |
|------------------------------------|
| Issue ID: 12139                    |
| Subject: 641 - Culvert Schematic - |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Thompson, Todd   | 1/16/2013 4:34:32 PM  |
| Modified By: tthompson         | 6/20/2013 12:19:54 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |

4/19/2016 3:24:45 PM

HRS AASHTO

3398

### Complete Issue Information

|                  |          |      |         |  |
|------------------|----------|------|---------|--|
|                  | Verified |      |         |  |
| Lee, Herman      | New      | High | Unknown |  |
| Zhang, Bin       | Assigned |      |         |  |
| Thogaru, Srujana |          |      | Bug     |  |
| Ghosh, Subhadeep |          |      |         |  |
|                  | Resolved |      |         |  |
|                  | Resubmit |      |         |  |
|                  | Assigned |      |         |  |
|                  | Resolved |      |         |  |
|                  | Verified |      |         |  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 28809a.xml          |             |
|      | screen_shots.docx   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/16/2013 11:36:37 AM Eastern Standard Time  
Seems that the schematic for culverts in Version 6.4.1 is a bit off from what it was in prior versions.

See attached screen shot.

FROM: Joseph Ihnat DATE: 1/18/2013 7:29:27 AM Eastern Standard Time  
There were no changes to culvert schematic in 6.4.1. This culvert has the same problem in 6.4.0.  
Fixed for version 6.5.0.

FROM: Bin Zhang DATE: 4/25/2013 9:52:45 AM Eastern Daylight Time  
Verified for version 6.5 beta 1.

FROM: Todd Thompson DATE: 5/31/2013 8:45:39 AM Eastern Daylight Time

4/19/2016 3:24:45 PM

HRS AASHTO

3399

## Complete Issue Information

Resubmit

Checked in Beta 2 for 6.5.0 on 5/31/2013

Still some issues on some culverts

Will attach a couple more screenshots and culvert XML's for your testing use.

FROM: Todd Thompson DATE: 5/31/2013 9:00:49 AM Eastern Daylight Time

To follow up - I believe I used 100% in all the views and when I print the schematic (for the bridge record) - the printed version is similar to the screen view.

One can zoom out to like 400% and the schematic issue goes away, normally but would require dozens of pieces of paper to print and tape together.

Hopefully we can get this to work at 100% which works well for both viewing and printing.

FROM: Joseph Ihnat DATE: 6/3/2013 7:32:21 AM Eastern Daylight Time

Fixed for version 6.5.0 (Beta 3).

FROM: Todd Thompson DATE: 6/20/2013 8:19:54 AM Eastern Daylight Time

Tested in Beta 3 these three same box culverts. Looks good.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 12140                                                 |
| Subject: Computed voided slab section properties not being used |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Ghosh, Subhadeep |                      |
| Submitted By: Silvis, Bryan       | 1/16/2013 7:03:19 PM |
| Modified By: kgyovai              | 12/5/2013 8:20:49 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

4/19/2016 3:24:45 PM

HRS AASHTO

3400

**Complete Issue Information**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bryan Silvis DATE: 1/16/2013 2:10:38 PM Eastern Standard Time  
I looked this over with Bruce and believe this is a bug. I attached his attachments in the Documents tab.

Bryan

---

From: Shepard, Bruce (VDOT)  
Sent: Wednesday, January 16, 2013 12:29 PM  
To: Silvis, Bryan J., P.E. (VDOT)  
Subject: Virtis Section Properties

The section properties computed on the Beam Shapes tab are shown in the 1st screen shot. The section properties computed during the analysis are pasted below the screen shot.

Since Virtis is computing these, why don't they match? (area, moment of inertia, section modulus, Vol/Surface ratio)

The xml file is for a beam with a composite concrete deck, however the section properties I'm asking about are the beam-only only properties (note that the pasted info is for the Basic PS Beam)

<< File: 28809a.xml >> << File: screen\_shots.docx >>

Bruce Shepard, PE  
Structural Engineer Section Manager  
VDOT - Structure & Bridge Division  
804-786-3016  
bruce.shepard@vdot.virginia.gov

FROM: Herman Lee DATE: 1/16/2013 3:51:43 PM Eastern Standard Time  
As specified in the PS Box Beam window's Properties tab, "Note: Analysis engine computes section properties based on the dimensions given in the 'Dimensions' tab."

The section properties computation routine (coordinate based) used by the AASHTO Engine is internal in the engine. The routine used by the Compute button in the PS Box Beam window's Properties tab resides in the user interface. That's why the properties don't match.

Ben, please confirm the Volume/Surface ratio reported in both places. The following assumption copied from the Help is used in the Compute button.

=====  
Compute button

Computes the beam shape section properties based on the information provided on the Dimensions tab. For beam shapes containing internal voids, this button will compute the Volume/Surface ratio

4/19/2016 3:24:45 PM

**HRS AASHTO**

3401

**Complete Issue Information**

based on using 50% of the interior perimeter of the void to calculate the surface area as per the AASHTO LRFD specifications. Enter your own value for the Volume/Surface ratio if you do not wish to use 50% of the interior perimeter to calculate the surface area.

=====

FROM: Bryan Silvis DATE: 7/30/2013 8:03:46 AM Eastern Daylight Time  
I am assuming that getting the section properties computation used by the AASHTO Engine to match those calculations residing in the User interface would be an "enhancement." I am also assuming that having the AASHTO Engine use entered values from the User interface would also be an enhancement.

Please confirm/mark this incident accordingly so I know whether changes are being made or I need to push as an enhancement.

Thanks - Bryan

FROM: Herman Lee DATE: 8/2/2013 11:39:05 AM Eastern Daylight Time  
Getting the section properties computation used by the AASHTO Engine to match those calculations residing in the user interface is an enhancement already planned for the 6.5.1 release.

Having the AASHTO Engine use entered values from the user interface would be an enhancement request.

FROM: Bin Zhang DATE: 8/8/2013 10:35:10 AM Eastern Daylight Time  
The Volume/Surface ratio computed on the Beam Shapes tab is correct, it matches my hand calculation. My hand calculation was listed below.

\*\*\*\*\*  
\*\*\*\*\*

| Gross Area | Void Area1       | Void Area2  | IndentArea1 | IndentArea2 | Net Area |
|------------|------------------|-------------|-------------|-------------|----------|
|            | NetVolume (in^3) |             |             |             |          |
| 1008       | 113.0973336      | 78.539815   |             | 3           | 1.125    |
|            | 695.0155178      | 8340.186214 |             |             |          |

| OuterPerimeter Surface (in^2) | L_Void1    | L_Void2   | Total Exposed |
|-------------------------------|------------|-----------|---------------|
| 139.75                        | 37.6991112 | 31.415926 | 2317.88489    |

Volume/Surface ratio = 8340.186214 / 2317.88489 = 3.6

\*\*\*\*\*  
\*\*\*\*\*

Function "public virtual bool ComputePerimeter(ref double dPerim)" in the AbanGeometry could not

4/19/2016 3:24:45 PM

HRS AASHTO

3402

**Complete Issue Information**

FROM: Herman Lee DATE: 8/12/2013 9:19:10 AM Eastern Daylight Time  
Ben, is the UI Volume/Surface ratio computed based on the assumption listed in the Help? Please also confirm the Volume/Surface ratio reported in the spec check.

Bryan, we will mark this incident accordingly after we have confirmed the reported Volume/Surface ratio.

FROM: Bin Zhang DATE: 8/13/2013 5:32:11 PM Eastern Daylight Time  
Herman, the UI Volume/Surface ratio is computed based on the assumption listed in the Help. The Volume/Surface ratio reported in the spec check does not match my hand calculation. I looked into the spec check. Function "public virtual bool ComputePerimeter(ref double dPerim)" in the AbanGeometry could not handle the polygon with internal voids. We need an enhancement to calculate the perimeter of a polygon with interior voids.

FROM: Herman Lee DATE: 8/21/2013 9:37:03 AM Eastern Daylight Time  
Subhadeep, please fix the ComputePerimeter function in AbanGeometry.

FROM: Subhadeep Ghosh DATE: 9/3/2013 2:48:12 PM Eastern Daylight Time  
Fixed for 6.5.1.

FROM: Subhadeep Ghosh DATE: 9/6/2013 10:03:06 AM Eastern Daylight Time  
Please note that the section property computations are handled by a single set of functions, common to both the AASHTO engine and the GUI. This has been fxd for 6.5.1.

FROM: Subhadeep Ghosh DATE: 12/5/2013 3:15:55 PM Eastern Standard Time  
dll updated for 6.5.1 beta 1.

FROM: Kane Gyovai DATE: 12/5/2013 3:20:32 PM Eastern Standard Time  
Verified for 6.5.1 beta 1.

Issue ID: 12143  
Subject: LRFD Culvert - Cracked Moment differing spec reference

Folder: /Virtis/Support Center  
Primary Contact: Skow, Wayne  
Submitted By: Litchfield, Phil 1/17/2013 11:44:39 PM  
Modified By: b Zhang 4/25/2013 2:22:50 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:24:45 PM

HRS AASHTO

3403

**Complete Issue Information**

|             |           |      |         |
|-------------|-----------|------|---------|
| Lee, Herman | New       | High | Unknown |
| Skow, Wayne | Assigned  |      | Bug     |
| Lee, Herman | New       | High | Unknown |
|             | Closed    |      |         |
|             | Duplicate |      | Support |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 1/17/2013 6:46:20 PM Eastern Standard Time  
 When running a LRFR culvert analysis, with MBE 2nd 2011i & LRFD 6th Ed. being selected as the default. As shown in the screenshot, LRFD 5th Ed - 2010, with 2010 interims are referenced in the Cracked Moment of Inertia window instead of the selected spec.

FROM: Wayne Skow DATE: 1/22/2013 12:15:02 PM Eastern Standard Time  
 The heading had not been changed in the 6th edition version of article  
 ALRFD\_6E\_Cracked\_Moment\_Of\_Inertia\_BoxCulvert.

Fixed in v6.5.dev.

FROM: Bin Zhang DATE: 4/25/2013 9:58:01 AM Eastern Daylight Time  
 Verified for version 6.5 beta 1.

|                           |
|---------------------------|
| Issue ID: 12144           |
| Subject: Activation Codes |



### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Duron, David     | 1/17/2013 11:41:37 PM |
| Modified By: hlee              | 1/18/2013 12:50:40 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 1/18/2013 7:31:33 AM Eastern Standard Time  
Duplicate of 12145

## Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12145                                     |
| Subject: Need Activation Codes for new installation |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Ihnat, Joseph |                       |
| Submitted By: Duron, David     | 1/17/2013 11:47:28 PM |
| Modified By: hlee              | 1/18/2013 12:50:02 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Duron DATE: 1/17/2013 6:49:31 PM Eastern Standard Time  
User Code 1: 273854572  
User code 2: 7056913

FROM: Joseph Ihnat DATE: 1/18/2013 7:28:47 AM Eastern Standard Time  
Registration keys emailed from [bridgeware@mbakercorp.com](mailto:bridgeware@mbakercorp.com)

4/19/2016 3:24:46 PM

HRS AASHTO

3406

## Complete Issue Information

Issue ID: 12146

Subject: Error in getting the beam span information for the splayed girder system with a skew

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: vinayagamoorthy, vinacs 1/18/2013 3:35:30 PM

Modified By: hlee 7/16/2013 6:20:45 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | New              | High     | Unknown  |
|                 | Assigned         |          |          |
|                 | Not Reproducible |          |          |

### Contacts

4/19/2016 3:24:46 PM

HRS AASHTO

3407

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 00085 - 41095059.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 1/18/2013 10:35:50 AM Eastern Standard Time  
 I submitted this incident on behalf of Vinacs M Vinayagamoorthy from CalTran. The email information was listed below.

\*\*\*\*\*  
 \*\*\*\*\*Fr

om: Murugesu Vinayagamoorthy [mailto:murugesu.vinayagamoorthy@dot.ca.gov]  
 Sent: Wednesday, January 16, 2013 4:23 PM  
 To: Lee, Herman  
 Subject: Fw: Br.#54C0063

Herman

For some reason, we could not analyze the Girder 9 (G9).

Did we accidently enter something and data got corrupted?

Could you please look into this?

Vinacs M Vinayagamoorthy  
 Senior Bridge Engineer  
 916-227-2676

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 01/16/2013 01:21 PM -----  
 Jay Ponnampalam/HQ/Caltrans/CAGov  
 01/16/2013 11:37 AM  
 To  
 Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov@DOT

cc

Subject  
 Br.#54C0063

4/19/2016 3:24:46 PM

HRS AASHTO

3408

**Complete Issue Information**

Hi Vinacs,  
 Please see attached file for the above bridge .xml file, for your review.  
 (See attached file: 00090 - 54C0063JP.xml)

Thanks  
 Jay Ponnampalam  
 Bridge Rating Engineer  
 Caltrans, Division of Maintenance, MS 9-1/2i  
 Office of Structural Design & Analysis  
 (916)227-2677

\*\*\*\*\*  
 \*\*\*\*\*

FROM: Bin Zhang DATE: 1/18/2013 10:44:54 AM Eastern Standard Time  
 Please use AASHTO LFR, Mem Alt of G9 to reproduce this issue.I attached the bridge model, the system error message and the assert info for debug in the documents.  
 I am able to run G9 successfully if I remove the skew which is 1.5 degrees.

FROM: Herman Lee DATE: 7/16/2013 12:07:55 PM Eastern Daylight Time  
 For G9, the member length stored internally in the bridge file is less accurate than expected. I'm not able to locate the cause of this problem.

The workaround for this problem is to set both support skews to 0. Hit Apply or OK. And set them back to 1.5 Degrees. This will reset the internal member length.

Issue ID: 12147  
 Subject: LF Rating - getting error message - but rating looks ok

Folder: /Virtis/Support Center  
 Primary Contact: Zhang, Bin  
 Submitted By: Thompson, Todd 1/18/2013 4:46:08 PM  
 Modified By: b Zhang 7/22/2013 1:55:10 PM  
 Priority: High  
 Category: Support

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Support  |

**Contacts**

4/19/2016 3:24:46 PM

HRS AASHTO

3409

### Complete Issue Information

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

### Documents

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

### Tasks

|      |               |         |
|------|---------------|---------|
| Name | Current State | Summary |
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/18/2013 11:50:55 AM Eastern Standard Time

I noticed for this 10 steel girder bridge - at the completion of what appears to be a successful LF rating - we get this error message.

ror getting flange plate from steel flange plate ranges to left of 100.43844093 m!

Current tolerance for m is 0.00030480.

09:12:27 AM - Line 946 in source file DoSteelAssemblyRangeSet.cpp.

The error message appears to be Metric. yet everything about this bridge looks like it was defined with english units. I looked at each Load Rating report log and there is no error messages in any of the 10 girders but this error message pops up at the very end.

Not sure what is triggering this error message. I noticed this happens in 6.4.1 (SQL Server) and I went back to 6.3.1 (Sybase). So it's been around for awhile. I don't remember which version we coded this up in, but we didn't get the error message during the initial load rating.

I'll attach the bridge xml from 6.4.1

FROM: Bin Zhang DATE: 7/22/2013 9:43:53 AM Eastern Daylight Time

I am able to reproduce this error message for version 6.4.1.

The length of the girder G7 is 329.49493 feet (58.87637 + 105.819868 + 105.8618 + 58.93686 = 329.49493), while the user input length is 329.522444 feet. This is the reason for the error message.

I revised the length for the "Girder Profile", "Deck Profile", "Haunch Profile" and the "Lateral Support" to be 329.49493 feet. Then this error message is gone.

Issue ID: 12148

Subject: Request for new tutorials

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Thompson, Todd

1/18/2013 5:21:00 PM

Modified By: hlee

1/20/2013 5:19:49 PM

4/19/2016 3:24:47 PM

HRS AASHTO

3410

## Complete Issue Information

Priority: High  
Category: Support

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Resolved |          | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 1/18/2013 12:22:05 PM Eastern Standard Time  
Would like to get the new culvert, drilled shaft and any other new tutorials from version 6.4/6.4.1 published to the download section of support center.  
Thanks,

FROM: Herman Lee DATE: 1/18/2013 12:31:02 PM Eastern Standard Time  
The only tutorials we have for the 6.4 new features are those used in the User Group meeting. Those training materials are available in the download section.

VIRTIS/OPIS User Group 2012  
Training Materials (self-extracting exe file, 9.7 MB)

FROM: Todd Thompson DATE: 1/18/2013 1:11:49 PM Eastern Standard Time  
Ok - I was requesting they get added to the tutorial section so we have everything together in one place for the examples and tutorials. Thanks

FROM: Herman Lee DATE: 1/20/2013 12:10:08 PM Eastern Standard Time  
We have to first update those user group training materials to use the release version of 6.4.

4/19/2016 3:24:47 PM

HRS AASHTO

3411

**Complete Issue Information**

|                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 12151                                                                                                                         |
| Subject: Inappropriate description regarding the 3D concrete girder model in the "AASHTO LRFD Superstructure Method Of Solution Manual" |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Zhang, Bin    |                      |
| Submitted By: Huang, George    | 1/22/2013 2:46:04 PM |
| Modified By: ghuang            | 4/25/2014 9:21:26 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 1/22/2013 9:46:53 AM Eastern Standard Time  
 I submitted this incident on behalf of George Huang from CalTran.  
 There is an inappropriate description regarding the 3D concrete girder model in the "AASHTO LRFD Superstructure Method Of Solution Manual". The comments / questions from CalTran was listed below:  
 \*\*\*\*\*  
 \*\*\*\*\*  
 3) For reinforced cross sections, the cross-section is modeled as a beam element using the web and the tributary area of the flanges to represent the girders. Shell elements are used to represent the deck (beam flanges), and rigid links to connect the beam elements to the deck elements (see Figure 7).  
 It seems the stiffness of deck area (tributary area) has been double counted, once in the beam element and once in the shell element.  
 How does Virtis calculate the live load demand, M and V? Since the force from girder (beam element)

4/19/2016 3:24:47 PM

HRS AASHTO

3412



**Complete Issue Information**

and deck (shell element) need to be combined.

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 1/22/2013 9:52:09 AM Eastern Standard Time

I modified the description regarding the 3D concrete girder. The revised description was listed below :  
For reinforced concrete cross sections, the cross-section is modeled as a beam element to represent the girder. Shell elements are used to represent the deck, and rigid links are applied to connect the beam elements to the deck elements (see Figure 7).

This fix will be available for AASHTOWare Br version 6.5.

FROM: George Huang DATE: 1/30/2013 5:08:31 PM Eastern Standard Time

There may still be some problem in the modeling even with the modified description. There are shear forces between the web and deck. Using the rigid link with very small moment inertia (I), the shear force may not be transferred.

FROM: George Huang DATE: 5/6/2013 1:48:57 PM Eastern Daylight Time

For the modified description, will it be more clear to use "girder stem or girder web" instead of "girder" only, since girder includes both the stem (web) section and (effective) deck section? So the sentence will be "For reinforced concrete cross sections, the cross-section is modeled as a beam element to represent the girder stem (or girder web), ..."

FROM: Bin Zhang DATE: 6/20/2013 9:42:21 AM Eastern Daylight Time

I revised the "AASHTO LRFD LRFR Superstructure Method Of Solution Manual" per George's advice on 5/6/2013.  
We will update the description regarding the rigid link later.

FROM: Bin Zhang DATE: 4/10/2014 1:04:26 PM Eastern Daylight Time

I updated the LRFD solution manual about the connections between the top flange and the concrete deck.

For the straight girder 3D FEM analysis in version 6.6.0, we are still using vertically rigid link;  
For the curved girder 3D FEM analysis in version 6.6.0, we are using the master-slave constrain. For non-composite cross section, the vertical constrain will be applied; for composite cross section, the full constrain will be applied. Please read the attached figure for the Master / Slave Specification.  
We will use master-slave constrain for both straight girders and curved girders in version 6.7.0.

FROM: Hanjin Hu DATE: 4/18/2014 8:57:42 AM Eastern Daylight Time

Backchecked for V6.6.0 Beta Build 1.

FROM: George Huang DATE: 4/25/2014 5:21:26 PM Eastern Daylight Time

Thanks for the updating.

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 12152<br>Subject: LRFD stresses at brace points not computed if brace point coincides with max moment point for shear connectors |
|--------------------------------------------------------------------------------------------------------------------------------------------|

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:24:47 PM

HRS AASHTO

3413

**Complete Issue Information**

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kennelly, Krisha    | 1/22/2013 3:30:28 PM |
| Modified By: mmlynarski           | 4/25/2013 5:28:50 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 1/22/2013 10:31:04 AM Eastern Standard Time  
 see mbr alt in attached file. Run HL93 Design Review. At 54' in span 2, poi overrides diaphragm location with diaphragm at 52' and at 54'. Mid point of unbraced length is 53'. this is also the point where the LL moment is max so BrD thinks the the 53' point should just be considered for the shear connector articles. The stress article is not considered there and in 6.10.8.2.3 Cb at 54' the mid stress is incorrectly listed as zero.

FROM: Krisha Kennelly DATE: 1/22/2013 10:57:51 AM Eastern Standard Time

FROM: Krisha Kennelly DATE: 2/15/2013 2:25:00 PM Eastern Standard Time  
 Fixed for version 6.5.0

FROM: Mark Mlynarski DATE: 4/25/2013 1:28:27 PM Eastern Daylight Time  
 Verified in 6.5 (beta 1)

4/19/2016 3:24:47 PM

HRS AASHTO

3414

**Complete Issue Information**

Issue ID: 12153  
 Subject: The stiffness of the tributary area has been double counted for the concrete girder in the 3D FEM analysis

Folder: /Virtis/Support Center  
 Primary Contact: Lee, Herman  
 Submitted By: Huang, George 1/22/2013 8:28:37 PM  
 Modified By: ghuang 5/6/2013 5:51:40 PM  
 Priority: High  
 Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 1/22/2013 3:29:05 PM Eastern Standard Time

I submitted this incident on behalf of George Huang from CalTran.  
 The stiffness of the tributary area has been double counted for the concrete girder in the 3D FEM analysis. The comments / questions from CalTran was listed below:  
 \*\*\*\*\*

3) For reinforced cross sections, the cross-section is modeled as a beam element using the web and the tributary area of the flanges to represent the girders. Shell elements are used to represent the deck

4/19/2016 3:24:47 PM

HRS AASHTO

3415

**Complete Issue Information**

(beam flanges), and rigid links to connect the beam elements to the deck elements (see Figure 7) ("AASHTO LRFD/FRFR Superstructure Method of Solution Manual", Page 21 of 48).

It seems the stiffness of deck area (tributary area) has been double counted, once in the beam element and once in the shell element.

How does Virtis calculate the live load demand, M and V? Since the force from girder (beam element) and deck (shell element) need to be combined.

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 1/22/2013 3:35:27 PM Eastern Standard Time

I am able to confirm this incident using the BID11 bridge. Both Line Girder and 3D FEM analysis calculated the same beam cross section properties, such as area and MOI. The beam cross section property should not consider the contribution of the tributary area in the 3D FEM analysis.

FROM: Herman Lee DATE: 3/27/2013 2:17:23 PM Eastern Daylight Time

Fixed 3D FEM and Distribution Factor - Line Gider analyses not to include top flange in 3D model beam element properties for RC Tee and I beams. The top flange is included as shell elements.

Resolved for 6.5 release.

FROM: Bin Zhang DATE: 4/25/2013 5:03:20 PM Eastern Daylight Time

Verified for version 6.5 beta 1 using the BID11 bridge.

FROM: George Huang DATE: 5/6/2013 1:51:40 PM Eastern Daylight Time

Please let me know if anything I need to do for this VI. Thanks.

Issue ID: 12154  
Subject: Culvert Slab Exposure Factor

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Litchfield, Phil 1/24/2013 5:17:40 PM  
Modified By: hlee 2/25/2013 3:35:57 PM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Support  |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description                        |
|------|---------------------------------|------------------------------------|
|      | 0063029-Virtis Shear Output.pdf | Culv Vn error - Mu=0 (0063029).xml |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 1/24/2013 12:26:05 PM Eastern Standard Time

If the slab exposure factor is left blank in the culvert alternative description window, a factor of 1.00 is used. But when you specify a different factor, 1.00 will still be used in the spec check.

FROM: Herman Lee DATE: 2/25/2013 9:56:31 AM Eastern Standard Time

The entered slab exposure factor will only be applied to the top slab when there is no fill.

Having the wall exposure factor and perhaps also the interior surface exposure factor available for user input would be a good enhancement.

Issue ID: 12156

Subject: 8.16.6.7 Special Provision for Slabs of Box Culverts

Folder: /Virtis/Support Center

Primary Contact: Skow, Wayne

Submitted By: Litchfield, Phil

1/28/2013 7:41:57 PM

4/19/2016 3:24:48 PM

HRS AASHTO

3417

**Complete Issue Information**

|                     |                      |
|---------------------|----------------------|
| Modified By: bzhang | 4/25/2013 9:55:15 PM |
| Priority: High      |                      |
| Category: Bug       |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 1/28/2013 2:50:22 PM Eastern Standard Time  
When checking 8.16.6.7, Mu = 0 is always used instead of the actual Mu.

FROM: Wayne Skow DATE: 2/15/2013 1:36:44 PM Eastern Standard Time  
Mu values weren't reaching the article. Fixed in v6.5.

FROM: Bin Zhang DATE: 4/25/2013 5:12:42 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

Please note that the user can not release the moment at both top and bottom of walls in the "End Conditions" window due to stability reason.

4/19/2016 3:24:48 PM

HRS AASHTO

3418

## Complete Issue Information

|                                           |
|-------------------------------------------|
| Issue ID: 12158                           |
| Subject: Culvert Warning Message in Error |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Teal, Dean       | 1/30/2013 2:33:19 PM  |
| Modified By: b Zhang           | 11/14/2013 7:53:08 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 1/30/2013 9:36:07 AM Eastern Standard Time

When the Validating button is pushed  
You have marked Completely Defined and Culvert only  
Validate throws a warning that no superstructure definitions are defined.  
I don't think it should display this warning for a culvert

FROM: Herman Lee DATE: 7/16/2013 9:50:40 AM Eastern Daylight Time

Changed the validation to the following:  
Warning: Bridge is marked as Completely Defined but no superstructure definitions and culvert definitions defined.

Resolved for 6.5.1 release.

4/19/2016 3:24:48 PM

HRS AASHTO

3419

**Complete Issue Information**

FROM: Bin Zhang DATE: 11/14/2013 2:48:50 PM Eastern Standard Time  
Verified for 6.5.1 Alpha2.

Issue ID: 12159  
Subject: Culvert Rebar Wizard and Corner Bars

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Teal, Dean 1/30/2013 2:36:24 PM  
Modified By: dteal 7/23/2013 3:43:58 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          | Bug      |

4/19/2016 3:24:49 PM

HRS AASHTO

3420



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 1-30-2013 9-42-10 AM.jpg |             |
|      | 1-30-2013 9-41-26 AM.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 1/30/2013 9:39:18 AM Eastern Standard Time

When using the rebar wizard for culverts with fillets (fixed corners)

When you enter the anything for the corner bar in the lower part of the screen, when you move to the next field the data you entered in this corner bar stuff disappears.

I can not enter corner bar data in the wizard, have to go back up and enter the bar name and go into the rebar tab and locate the bars.

FROM: Srujana Thogaru DATE: 2/4/2013 10:13:13 AM Eastern Standard Time

Can you please attach the bridge xml file causing the above issue.

FROM: Dean Teal DATE: 2/4/2013 1:33:00 PM Eastern Standard Time

I attached the bridge - I don't know what good that will do, I have already added the corner bars by adding the bars in the bar mark definitions window.

I was using the wizard when this happened - on every one I did that had corner bars.

FROM: Dean Teal DATE: 2/4/2013 2:05:17 PM Eastern Standard Time

It appears to be related to whether or not Moment Released at top and bottom of walls selection.

If these boxes are checked (pinned box) then you can put the corner bar in - but you don't need it then.

If these boxes are left blank (fixed box) then you can't enter the corner bar in the wizard - this is when you need it.

FROM: Srujana Thogaru DATE: 6/4/2013 9:02:53 AM Eastern Daylight Time

I am unable to reproduce the problem using the culvert sample bridge in the DB(entering new bar data for corner bar and c bar and saving for reinforcement wizard) .

I have tried all the options checking and unchecking the options in end conditions window.

I have asked for you sample bridge because if it is any different I can reproduce the problem and find the cause. Can you please attach your xml file which is cause the problem.

FROM: Dean Teal DATE: 6/7/2013 1:31:51 PM Eastern Daylight Time

Using my second structure of the attached culvert model

Go directly to culvert reinforcement and select the wizard

4/19/2016 3:24:49 PM

HRS AASHTO

3421

### Complete Issue Information

Enter all the data in wizard as I have shown in the screen shot  
( you can try to skip entering the data and just go the corner bar data entry)  
Then as a last item try to enter you corner bars as

1. S2 bar mark

As soon as you click on the bar size, your bar mark field is blanked out

FROM: Dean Teal DATE: 6/26/2013 10:13:19 AM Eastern Daylight Time

As a bug, I would have thought it would have been fixed in 6.5.0

When will this be addressed?

FROM: Srujana Thogaru DATE: 6/27/2013 1:01:43 PM Eastern Daylight Time

Able to reproduce the problem in 6.4.1 build unable to reproduce in 6.5. Some other fix might have  
have fixed this problem. Fixed in 6.5 Beta 3.

FROM: Dean Teal DATE: 7/23/2013 11:43:58 AM Eastern Daylight Time

Accepted in 6.5 beta 4

|                                                  |
|--------------------------------------------------|
| Issue ID: 12160                                  |
| Subject: Girder System SuperStructure Definition |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Bhanushali, Girish | 1/30/2013 3:23:05 PM |
| Modified By: bzhang              | 4/25/2013 9:57:24 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krisha   | New      | High     | Unknown  |
|                    |          | Low      |          |
| Ihnat, Joseph      | Assigned |          |          |
| Ordoobadi, Mehrdad |          |          |          |
| Trees, Geoffrey    | Resolved |          |          |
|                    |          | High     | Bug      |
|                    | Verified |          |          |

### Contacts

4/19/2016 3:24:49 PM

HRS AASHTO

3422

### Complete Issue Information

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

### Documents

|      |                     |             |
|------|---------------------|-------------|
| Name | Resource Identifier | Description |
|------|---------------------|-------------|

### Tasks

|      |               |         |
|------|---------------|---------|
| Name | Current State | Summary |
|------|---------------|---------|

### Description

FROM: Girish Bhanushali DATE: 1/30/2013 10:24:02 AM Eastern Standard Time  
Asserts while opening Simple Span Structure Def in Training Bridge1.  
I had latest 6.5 dev code.  
see attached.

FROM: Girish Bhanushali DATE: 1/30/2013 10:28:55 AM Eastern Standard Time  
Modified the above description.

FROM: Joseph Ihnat DATE: 1/30/2013 1:13:11 PM Eastern Standard Time  
In the database, for the superstructure defs in our sample bridges, the Superstructure Alignment and Direction need to be set to a default value.  
For the bridge alts, Bridge Alignment, Direction and Start Bearing need to be set.

FROM: Geoffrey Trees DATE: 1/31/2013 3:11:43 PM Eastern Standard Time  
Resolved

FROM: Bin Zhang DATE: 4/25/2013 5:55:45 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 12161                                                         |
| Subject: Analysis Progress Dialogue Box does not come up the first time |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Ihnat, Joseph   |                      |
| Submitted By: Bhanushali, Girish | 1/30/2013 6:26:44 PM |
| Modified By: bzhang              | 4/25/2013 9:59:03 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | New    | High     | Unknown  |

4/19/2016 3:24:49 PM

HRS AASHTO

3423

**Complete Issue Information**

|             |          |      |         |
|-------------|----------|------|---------|
| Lee, Herman | Assigned |      |         |
|             | New      | High | Unknown |
| Skow, Wayne | Assigned |      |         |
|             | Resolved |      | Bug     |
|             | Verified |      |         |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description   |
|------|---------------------|---------------|
|      | 00046 - 076-046     | Extension.xml |
|      | 00045 - 076-045     | xml           |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Girish Bhanushali DATE: 1/30/2013 1:27:10 PM Eastern Standard Time

FROM: Joseph Ihnat DATE: 1/30/2013 2:49:47 PM Eastern Standard Time  
Probably always been this way. Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 1/31/2013 8:05:21 AM Eastern Standard Time  
Fixed for 6.5.0

FROM: Bin Zhang DATE: 4/25/2013 5:57:49 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                            |
|--------------------------------------------|
| Issue ID: 12162                            |
| Subject: Culvert Fails to Perform Analysis |

4/19/2016 3:24:50 PM

HRS AASHTO

3424

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Teal, Dean       | 1/30/2013 6:45:58 PM  |
| Modified By: bzhang            | 4/25/2013 10:01:41 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
| Thogaru, Srujana  | Assigned |          |          |
| Kennelly, Krishna | Resolved |          | Bug      |
|                   | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | PSI - No Dk Reinf (12-232)<br>641.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 1/30/2013 1:47:25 PM Eastern Standard Time

I entered this pinned box just like I have done all the others I entered.

When I attempt to load rate (LFD HS20 truck) the Analysis Progress window stops just after "Getting Component Results" and gives the error "All reactions are Zero" and analysis fails.

I can't see anything I have done different (I use a template to create culverts)

Can you find why this will not run?

I would understand zero capacity, but it simply will not run.

Culvert attached

FROM: Dean Teal DATE: 1/30/2013 4:41:35 PM Eastern Standard Time

I attached another very similar culvert created from the same template with the same end conditions and spring releases. This culvert runs just fine.

4/19/2016 3:24:50 PM

HRS AASHTO

3425

**Complete Issue Information**

FROM: Dean Teal DATE: 2/4/2013 1:26:53 PM Eastern Standard Time  
The second culvert I attached was 076-045  
Work just fine on my laptop (windows 7 64 bit)  
When I run it on omy desktop, XP, it fails with the erros I reported

FROM: Dean Teal DATE: 2/4/2013 1:44:51 PM Eastern Standard Time  
More testing on 076-045  
Did NOT run on XP using Oracle  
Did run using Windows 7 64 bit on SQL database (laptop)  
Did NOT run using Windows 7 64 bit on Oracle

FROM: Dean Teal DATE: 2/4/2013 2:47:06 PM Eastern Standard Time  
More testing ont he First structure I attached (076-046)  
Did NOT run on Windows 7 64 bit on SQL database (laptop)  
Did run on Windows 7 64 bit on Oracle  
Did run on XP using Oracle

FROM: Dean Teal DATE: 3/1/2013 7:37:20 AM Eastern Standard Time  
Any work arounds so I can move forward with getting my culverts into BrDR?

FROM: Wayne Skow DATE: 3/4/2013 2:40:17 PM Eastern Standard Time  
The problem is with the moment releases on the "End Conditions" dialog. Whenever you release both moments, the structure is unstable due to side sway. To prevent instability, select "Provide side sway support" whenever both moments are released.

When sideway instability is present, it's hit-and-miss whether the analysis errors off or not. It depends on the values in the stiffness matrix. That's why the one model runs but the other doesn't even though both have side sway instability.

FROM: Herman Lee DATE: 3/27/2013 11:29:59 AM Eastern Daylight Time  
Email from Wayne:

=====  
No change required to box culvert. Although, we should think about a warning message when the user releases both moments but does not select the side sway support checkbox  
=====

I added a warning check during the analysis when both moments are released but the side sway support is not selected.  
Resolved for 6.5 release.

FROM: Bin Zhang DATE: 4/25/2013 5:59:28 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12163<br>Subject: PS I-Beam Near Beam End |
|-----------------------------------------------------|

|                                                                      |
|----------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Kennelly, Krishna |
|----------------------------------------------------------------------|

4/19/2016 3:24:50 PM

**HRS AASHTO**

3426

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Litchfield, Phil | 1/30/2013 10:02:14 PM |
| Modified By: sghosh            | 5/9/2013 5:57:25 PM   |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Ihnat, Joseph      | New              | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned         |          | Bug      |
|                    | Not Reproducible |          | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | SubstructureExample01_Shear<br>StudProblem.xml |             |
|      | 1-31-2013 11-36-02 AM.jpg                      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 1/30/2013 5:23:48 PM Eastern Standard Time  
From Consultant (Souther):

In the subject model, a 2-span PS Bulb tee, Virtis is not using the reinforcement in the deck or the effective slab width in the spec check calculations near the end of the beam (Span 1 - 118.67). We don't remember this being a problem in 6.3.1.

FROM: Krisha Kennelly DATE: 5/2/2013 8:53:23 AM Eastern Daylight Time  
This issue is related to 11878.

6.4.0 and previous versions were always exporting the slab rebar but only exporting the slab if the section was composite as marked by the user on the Shear Reinforcement Ranges window by tne of the following 3 ways:

- a. Vertical bars extending into deck.

4/19/2016 3:24:50 PM

HRS AASHTO

3427

**Complete Issue Information**

- b. Horizontal shear bars entered.
- c. A composite horizontal region entered.

The location of the rebar was incorrect if the slab was not also exported.

6.4.1 was revised to only export the rebar if the section was marked as composite by one of the 3 preceding methods.

As part of 11878, for regions between the simple span bearings near the pier, if the section within 1' of the simple span bearing is composite, then the point in question is composite.

118.67' is not marked as being composite by one the 3 methods above so the slab and rebar is not exported.

Fix has been implemented for 6.5.0 to also consider any points within 1' of the simple beam bearing when checking if the beam is composite within 1' of the simple bearing.

Workaround – On the Shear Reinforcement Ranges: Horizontal tab, enter a range over the entire length of the precast beam and say it is Composite.

FROM: Krisha Kennelly DATE: 5/2/2013 9:07:37 AM Eastern Daylight Time

FROM: Subhadeep Ghosh DATE: 5/9/2013 1:57:09 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 12165                                                   |
| Subject: Copy Structure Definition Then unable to save the bridge |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Bhanushali, Girish    | 1/31/2013 4:30:30 PM |
| Modified By: hlee                   | 4/12/2013 6:30:37 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:24:50 PM

**HRS AASHTO**

3428



## Complete Issue Information

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | 01728 - 25125085000S013.xml           |             |
|      | Negative moment-shear.jpg             |             |
|      | Thicker haunch on fascia overhang.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Girish Bhanushali DATE: 1/31/2013 11:32:23 AM Eastern Standard Time  
See attached bridge from user.

I imported the bridge. Changed bridge\_id and nbi\_structure\_id to be unique. Saved the bridge. It worked.  
I copied structure definition then tried to save the bridge but it couldn't save.

see attached for error capture.

FROM: Joseph Ihnat DATE: 1/31/2013 12:42:53 PM Eastern Standard Time  
The bridge is from incident 12101. I tried this in both 6.4.1 release and 6.5.0 current build and get this error:

Unable to save Bridge data!  
12:40:51 PM - Line 899 in source file UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmSysAnalysisModuleClass (SaveOrder object 15).  
12:40:50 PM - Line 467 in source file d:\builds\1  
\\virtisopis\virtisopis65buildwin32debug\sources\source\data  
management\abmbbche\dmbridgecache.cpp.

Record found in database for data marked as new.  
12:40:50 PM - Line 648 in source file d:\builds\1  
\\virtisopis\virtisopis65buildwin32debug\sources\source\data  
management\abmbrdg\dmsysanalysismoduleclass.cpp.

The initial save worked OK. The error occurs on the save after copying the structure def.

FROM: Mehrdad Ordoobadi DATE: 4/11/2013 6:11:49 PM Eastern Daylight Time  
I am not able to reproduce this error.  
I imported the XML file and saved the bridge to the database. That was successful.  
Then I imported the same XML file into the same database. I changed the bridge ID and NBI structure ID. Clicked OK.  
Saved successfully.

4/19/2016 3:24:50 PM

HRS AASHTO

3429

**Complete Issue Information**

The save can fail if for the second import we do this:  
 Then I imported the same XML file into the same database. I changed the bridge ID and NBI structure ID. Click Cancel or X to close the window.  
 Saved failed.

|                                                 |
|-------------------------------------------------|
| Issue ID: 12167                                 |
| Subject: Incorrect negative haunch shear/moment |

|                                 |                     |
|---------------------------------|---------------------|
| Folder: /Virtis/Support Center  |                     |
| Primary Contact: Lee, Herman    |                     |
| Submitted By: McMunn, Creightyn | 2/1/2013 3:25:31 PM |
| Modified By: hlee               | 4/9/2014 7:08:36 PM |
| Priority: High                  |                     |
| Category: Unknown               |                     |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
|                  | Assigned |          |          |
| Thogaru, Srujana |          |          |          |
| Lee, Herman      |          |          | Bug      |
|                  |          |          | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Creightyn McMunn DATE: 2/1/2013 10:41:24 AM Eastern Standard Time  
 We have numerous bridges in our inventory with a thicker deck on the exterior side of a fascia beam than on the interior side. We model this in Virtis using a negative haunch (see attached .jpg for an

4/19/2016 3:24:51 PM

**HRS AASHTO**

3430

**Complete Issue Information**

example). Upon reviewing the dead load actions due to the haunch load for Beam J (Spans 3 & 4) in the attached file, it is apparent that the program is incorrectly calculating the force effects due to this additional weight.

FROM: Herman Lee DATE: 4/9/2014 3:04:13 PM Eastern Daylight Time  
For Beam J (Spans 3 & 4) haunch profile:

Z1 and Z2 = 3.0", the haunch is extended 3" from the edge of the top flange (interior side) with Y1 = 1.0". The Typical Section View for this side is correct.

Z3 and Z4 = 0.0", the haunch is flushed with the edge of the top flange (exterior side) with Y2 = -2.25". I think the Typical Section View for this side is incorrect.

For embedded flange, the haunch load is calculated based on the following dimensions:

- 1. Thickness = Average of Y1 and Y2 + Flange thickness
- 2. Width = Average of Z1 and Z2 + Average of Z3 and Z4 + Flange width

How should the negative Y2 dimension be considered? Seems to me that the negative Y2 should be measured downward from the top of the flange since positive Y2 is measured upward from the top of the flange.

Creightyn, how many bridges in your inventory are coded with negative haunch dimensions?

|                                                  |
|--------------------------------------------------|
| Issue ID: 12170                                  |
| Subject: Culvert Definition Description Text Box |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Ghosh, Subhadeep |                       |
| Submitted By: Litchfield, Phil    | 2/1/2013 7:54:12 PM   |
| Modified By: plitchfield          | 5/16/2013 10:15:16 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Verified |          | Bug      |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Hooked Bent Bar.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/1/2013 3:06:10 PM Eastern Standard Time  
The text does not wrap in the description text box on the culvert definition window.

FROM: Subhadeep Ghosh DATE: 2/7/2013 10:30:19 AM Eastern Standard Time  
Text wrap in the "Description" box has been activated. The vertical scroll bar has also been activated.

FROM: Subhadeep Ghosh DATE: 4/25/2013 5:32:07 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

FROM: Phil Litchfield DATE: 5/16/2013 6:15:16 PM Eastern Daylight Time  
Corrected in 6.5 Beta 1.

|                                       |
|---------------------------------------|
| Issue ID: 12172                       |
| Subject: Culvert - Bent bar with hook |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Litchfield, Phil | 2/1/2013 8:18:36 PM |
| Modified By: hlee              | 2/1/2013 8:29:53 PM |
| Priority: High                 |                     |
| Category: Enhancement          |                     |

4/19/2016 3:24:51 PM

HRS AASHTO

3432

## Complete Issue Information

---

### History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
| Thogaru, Srujana | Assigned  |          | Bug      |
|                  | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SD_RCslab.xml       |             |
|      | View Calcs.PNG      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/1/2013 3:27:38 PM Eastern Standard Time  
From Beisner:

There is no option to put a hook at the end of a bent bar in a culvert. But you do have the option in a slab. Can this be added to the bar definitions for culverts? Also, can a field be added to the bent bar definition to allow for multiple series of bends? Attached is the bar detail we were trying to model in a culvert.

## Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 12173                              |
| Subject: View LL Calcs - Crashes Virtis Opis |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Thompson, Todd      | 2/5/2013 2:37:37 PM   |
| Modified By: sthogaru             | 5/23/2013 12:51:36 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 2/5/2013 9:41:08 AM Eastern Standard Time  
Using SQL Server Sample DB  
Virtis Opis 6.4.1

I have an RC Slab bridge where I used Compute From Typical Section to compute the LRFD LL DF's. When ever I click on View Calcs - I get an error message that Virtis Opis has stopped.

I'll attach screen shot, along with an XML of the bridge.

FROM: Srujana Thogaru DATE: 2/7/2013 2:31:23 PM Eastern Standard Time  
Able to reproduce the bug, and will be fixed soon.  
Workaround is to access text file from the corresponding bridge folder.  
Path for the text file would be similar to "\\My Documents\AASHTOWARE\VirtisOpis64\RCSlab\IntSlab"

FROM: Srujana Thogaru DATE: 5/23/2013 8:47:06 AM Eastern Daylight Time  
Duplicate of 12410.12410 attached. Fixed in 6.5 Beta 1.

4/19/2016 3:24:51 PM

HRS AASHTO

3434

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 12175                   |
| Subject: 6.4 Database Discrepancy |

|                                  |                     |
|----------------------------------|---------------------|
| Folder: /Virtis/Support Center   |                     |
| Primary Contact: Trees, Geoffrey |                     |
| Submitted By: Ruby, Jeff         | 2/5/2013 7:52:43 PM |
| Modified By: jruby               | 5/7/2013 4:08:08 PM |
| Priority: High                   |                     |
| Category: Bug                    |                     |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Trees, Geoffrey    | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:24:52 PM

HRS AASHTO

3435

## Complete Issue Information

VirtisOpis6.  
4databaseDiscrepancy.xlsx  
RetrieveAllStoredUnitIds.sql

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Jeff Ruby DATE: 2/5/2013 2:59:47 PM Eastern Standard Time  
I was parusing the database with the attached sql script on the MSSQL version of the database and found what I think is a discrepancy in the dbo.abw\_sys\_data\_dictionary.

I think that the "us\_unit\_id" column for the "MAX\_OVR\_WEIGHTED\_IMP\_FACTOR" in table "ABW\_SUPER\_LL\_DIST\_SUB\_WDLA" should be "492" not "491".

Which means, the database is storing "percents", but the default us\_unit is "number"

Probably doesn't break much. But, might want to make sure.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 3:21:31 PM Eastern Daylight Time  
Geoff, could you look at the fields that Jeff has pointed out and correct them if necessary in Version 6.5.

FROM: Geoffrey Trees DATE: 4/29/2013 4:57:54 PM Eastern Daylight Time  
Jeff was right that it was the wrong number. Must have been like that for a long time but I corrected it in the database and updated the create, integrate and migrate scripts.  
Resolved...

FROM: Jeff Ruby DATE: 5/7/2013 12:05:51 PM Eastern Daylight Time  
I saved some numbers in a bridge in 6.4.1, exported it, then imported it in 6.5.0. The values appeared to be the same. See images.

FROM: Jeff Ruby DATE: 5/7/2013 12:08:01 PM Eastern Daylight Time  
accepted 6.5.0 Beta 1

Issue ID: 12176  
Subject: LRFD Distribution Factor - Simplified Values

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Litchfield, Phil 2/5/2013 9:31:13 PM  
Modified By: sthogaru 2/7/2013 7:15:42 PM  
Priority: High  
Category: Support

4/19/2016 3:24:52 PM

HRS AASHTO

3436



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/5/2013 4:38:25 PM Eastern Standard Time

When calculating the LRFD live load distribution factors, is there an option to use the constant values in Table 4.6.2.2.1-2 in the program?

FROM: Srujana Thogaru DATE: 2/7/2013 2:07:27 PM Eastern Standard Time

There is "NO" option to use the constant values in Table 4.6.2.2.1-2 in the program.

**Complete Issue Information**

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 12181                                                   |
| Subject: General Procedure Method for Shear Computation - Culvert |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Litchfield, Phil | 2/8/2013 9:54:21 PM  |
| Modified By: hlee              | 3/27/2015 6:58:00 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Mlynarski, Mark  | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Bug      |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | tr1_missing specs.xml                        |             |
|      | Training Bridge 1_moment redistribution.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 2/8/2013 4:55:39 PM Eastern Standard Time  
There currently is only options to compute shear for culverts using the simplified method or ignore.  
Can the general procedure for shear computation be added?

FROM: Herman Lee DATE: 3/27/2015 2:57:15 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.



**Complete Issue Information**

However, spec check 6A.4.2.1 Steel Flexure Stress for LRFR and 6.10.7.2.1, 6.10.8.1.1, 6.10.8.1.2, and 6.10.8.1.3 for LRFD, show that moment redistribution is not allowed. See attached documentation and exported Training Bridge 1.

FROM: Krisha Kennelly DATE: 6/11/2013 1:23:14 PM Eastern Daylight Time  
The program has worked this way since at least 6.3. Folder changed to support center.

FROM: Krisha Kennelly DATE: 6/12/2013 10:35:22 AM Eastern Daylight Time  
fixed for 6.5 beta 3.

|                                                      |
|------------------------------------------------------|
| Issue ID: 12188                                      |
| Subject: Voided Slab- Exterior Beam LL DF for Moment |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Silvis, Bryan       | 2/14/2013 4:33:50 PM  |
| Modified By: bsilvis              | 7/30/2013 11:53:37 AM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:24:53 PM

HRS AASHTO

3440

### Complete Issue Information

|                  |          |      |  |         |
|------------------|----------|------|--|---------|
| Kennelly, Krisha | Assigned |      |  |         |
|                  | Resolved |      |  | Bug     |
| Lee, Herman      | New      | High |  | Unknown |
|                  | Assigned |      |  |         |
| Skow, Wayne      |          |      |  |         |
| Zhang, Bin       |          |      |  | Bug     |
|                  |          |      |  | Unknown |
|                  |          |      |  | Bug     |
|                  | Resolved |      |  |         |
|                  | Verified |      |  |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Culvert wall error.jpg  |             |
|      | 0680509.xml             |             |
|      | VI12190FeModel.txt      |             |
|      | Culvert wall error2.jpg |             |
|      | VI12190FeModel.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bryan Silvis DATE: 2/14/2013 11:39:34 AM Eastern Standard Time

I looked over Bruce's issue and it looks like it mixes and matches which is not correct. The xml for the file is attached in the Documents tab. The following is the write-up he submitted:

Prestressed voided slabs, bridge is type g from AASHTO Table 4.6.2.2.2d-1

3' wide exterior beams

4' wide interior beams

Virtis incorrectly calculates the exterior beam LL DF for moment

According to AASHTO Table 4.6.2.2.2d-1, the exterior beam DF (g) is based on the interior beam DF

4/19/2016 3:24:53 PM

HRS AASHTO

3441

**Complete Issue Information**

(g-int).

Several variables are needed to calculate g-int. I, J and b are all used. In this calculation, Virtis uses I and J of the interior beam (that's correct), but it uses b of the exterior beam (that's not correct).

The result is that Virtis will use an un-conservative value.

This error only shows up when the bridge has different beam types.

Note: This is a different error than the one I've previously reported concerning the interior beam LL DF for moment. Because g-ext is directly related to g-int, that error also affects g-ext.

Bruce Shepard, PE  
Structural Engineer Section Manager  
VDOT - Structure & Bridge Division  
804-786-3016  
bruce.shepard@vdot.virginia.gov

FROM: Krisha Kennelly DATE: 2/22/2013 9:06:11 AM Eastern Standard Time  
Fixed for version 6.5.

FROM: Subhadeep Ghosh DATE: 4/25/2013 11:32:19 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                               |
|-------------------------------|
| Issue ID: 12190               |
| Subject: Culvert - Wall width |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Zhang, Bin    |                       |
| Submitted By: Litchfield, Phil | 2/14/2013 7:22:09 PM  |
| Modified By: gtrees            | 11/15/2013 7:38:00 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:24:53 PM

HRS AASHTO

3442

## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/14/2013 2:30:20 PM Eastern Standard Time  
From consultant(Chamberlain):

We have a culvert where the walls are thicker than the top slab. And we are getting an error, "All reactions are zero." But if we reduce the wall thickness to be less than the thickness of the top slab, it runs without an error. Attached is a screenshot of the error and the model.

FROM: Wayne Skow DATE: 3/14/2013 1:24:24 PM Eastern Daylight Time  
I traced the problem to the FeModel analysis. After analysis, the displacements and forces are coming out of the FeResults objects with NaN's. All the data going in, however, seems reasonable. I generated the .xml and .std files (attached) for the model. I tried a few variations of wall thickness. When the wall thickness is set to 9.5, the analysis works. When set to 12", the analysis works. So a wall thickness greater than the top slab does not always cause a problem. In this model, the top slab is 9.5" and the bottom is 10.5". A wall thickness of 10" (and values around 10) cause NaN's to be produced.

Hopefully, the problem can be reproduced via the .xml file in a solution environment that allows us to debug FeModel.

FROM: Bin Zhang DATE: 7/19/2013 10:51:26 AM Eastern Daylight Time  
In the End Conditions window, both the "Moment release at top of walls" and "Moment release at bottom of walls" have been checked. These 2 releases caused a stability issue for the culvert analysis. I will add a warning message when the user picks these 2 checkboxes together.

Phil, I have a workaround for you. Please check the "Provide side sway support" checkbox in the End Conditions window. This provides a roller at the upper left corner of the left most culvert cell to restrain side displacement. It will make the model statically stable.

FROM: Bin Zhang DATE: 8/16/2013 3:48:05 PM Eastern Daylight Time  
An error message was added saying "Release moment at both top and bottom of walls may cause a stability issue!" when the user checked both the top and bottom walls moment release and meanwhile uncheck side sway support.  
Fixed for version 6.5.1.

|                                         |
|-----------------------------------------|
| Issue ID: 12191                         |
| Subject: Culvert - Wall Exposure Factor |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Litchfield, Phil | 2/15/2013 8:11:12 PM |

4/19/2016 3:24:53 PM

HRS AASHTO

3443

### Complete Issue Information

|                     |                      |
|---------------------|----------------------|
| Modified By: sghosh | 4/25/2013 4:28:04 PM |
| Priority: High      |                      |
| Category: Bug       |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1F_628.xml          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/15/2013 3:13:58 PM Eastern Standard Time

You can enter a slab exposure factor for culverts. Is this factor also applied to the walls of the culvert?

FROM: Herman Lee DATE: 2/22/2013 10:15:37 AM Eastern Standard Time

No, the entered slab exposure factor will only be applied to the top slab when there is no fill.

While looking into how the slab exposure factor is used, fixed a bug in checking for whether a component is a top slab.

Resolved for 6.5 release.

FROM: Phil Litchfield DATE: 2/22/2013 6:39:10 PM Eastern Standard Time

Why is the slab exposure factor only applied when there is no fill? Also, why is there not an input for the exposure factor applied to the walls?

FROM: Herman Lee DATE: 2/22/2013 6:45:45 PM Eastern Standard Time

The AASHTO Culvert Engine is based on the WisDOT Box Culvert program. I found the following WisDOT policy regarding culvert exposure factor.

WisDOT Policy Item:

A class 1 exposure factor,  $e = 1.0$ , shall be used for all cases for cast-in-place box culverts except for the top steel in the top slab of a box culvert with zero fill, where a class 2 exposure factor,  $e = 0.75$ , shall be used.

4/19/2016 3:24:53 PM

HRS AASHTO

3444



**Complete Issue Information**

FROM: Herman Lee DATE: 2/25/2013 8:00:23 AM Eastern Standard Time  
Having the wall exposure factor and perhaps also the interior surface exposure factor available for user input would be a good enhancement.

FROM: Phil Litchfield DATE: 2/26/2013 6:24:49 PM Eastern Standard Time  
Herman,

Can you change this to an enhancement, to add a user input for the exposure factor for the walls. Also, to allow the slab exposure factor to be applied to culverts with fill.

Thanks,

Phil

FROM: Herman Lee DATE: 2/27/2013 7:39:04 AM Eastern Standard Time  
This incident will show up in the 6.5 Release Notes since there is a bug fix in this incident. To avoid confusion, I have submitted an enhancement request Incident 12213 (Culvert - Exposure Factor enhancement) on your behalf.

FROM: Subhadeep Ghosh DATE: 4/25/2013 11:45:15 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 12199                                                                                     |
| Subject: Issue with negative moment capacity for prestress beams simple for dead, continuous for LL |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Lee, Herman      | 2/19/2013 8:21:30 PM |
| Modified By: hlee              | 2/19/2013 8:34:20 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:24:54 PM

HRS AASHTO

3445

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 2/19/2013 3:21:53 PM Eastern Standard Time  
Submitted on behalf of Jacob Reneson (Jacob.Reneson@jacobs.com), Jacobs Engineering.

Part of the received Bridgeware email:

=====  
2) I do not agree with how the negative moment capacity is being calculated away from the pier when you get into the beam (i.e., critical rating of 0.832 for strength 1 flexure at 0.974\*span1 for member g1). As you get into the beam, the prestress force transfers into the beam and becomes significant. Thus, depending on the location of the center of gravity of strands towards the end of beam, you could have a significant prestress force towards the bottom of beam that would reduce the negative moment capacity. It would be analogous to putting prestress strands in the top of beam at midspan and the positive moment capacity being reduced if mild steel were in the bottom.  
=====

|                                                    |
|----------------------------------------------------|
| Issue ID: 12200                                    |
| Subject: Support varying LRFD LL DF within a range |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 2/20/2013 1:20:48 PM |
| Modified By: hlee                     | 2/20/2013 1:30:21 PM |
| Priority: High                        |                      |

4/19/2016 3:24:54 PM

HRS AASHTO

3446

**Complete Issue Information**

|                       |
|-----------------------|
| Category: Enhancement |
|-----------------------|

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | New      | High     | Bug      |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 11884_gjb-Newcode.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Herman Lee DATE: 2/20/2013 8:21:12 AM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamorthy, Caltrans.

Please see the request email attached in this incident.

**Complete Issue Information**

|                                 |
|---------------------------------|
| Issue ID: 12204                 |
| Subject: U beam analysis failed |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Thogaru, Srujana    | 2/21/2013 8:24:14 PM |
| Modified By: sthgaru              | 5/1/2013 5:56:11 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 2/21/2013 3:24:33 PM Eastern Standard Time  
For the attached bridge xml file U beam analysis is failed.

FROM: Srujana Thogaru DATE: 2/25/2013 1:23:34 PM Eastern Standard Time  
U beam analysis fails due to incorrect deckorginpoint computations.  
Fixed for 6.5 release. For internal testing fixed for 6.5 Alpha build 2.

FROM: Bin Zhang DATE: 4/25/2013 6:02:13 PM Eastern Daylight Time  
I got an error message "Can not calculate distribution factors for varying beam shapes along the spans!" while doing the LFR analysis for the G1 U beam.

FROM: Srujana Thogaru DATE: 5/1/2013 1:27:11 PM Eastern Daylight Time  
Above mentioned U beam analysis is for LRFR and "Can not calculate distribution factors for varying beam shapes along the spans!" is not an error.

4/19/2016 3:24:54 PM

HRS AASHTO

3448

## Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 12208                      |
| Subject: Culvert - Spec Check Report |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Litchfield, Phil | 2/22/2013 8:30:58 PM |
| Modified By: ssalata           | 4/25/2013 8:27:03 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description                 |
|------|---------------------|-----------------------------|
|      |                     | Spec Check Report Crash.jpg |

4/19/2016 3:24:54 PM

HRS AASHTO

3449

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 2/22/2013 3:46:40 PM Eastern Standard Time  
 While trying to create a spec check article report for a culvert, the program crashes. I've tried several different models all crash. Screenshot attached.

FROM: Herman Lee DATE: 2/26/2013 8:36:51 AM Eastern Standard Time  
 Fixed crash when generating culvert spec check report. Resolved for 6.5 release.  
 The spec check articles are also available in the culvert text output.

FROM: Steve Salata DATE: 4/25/2013 3:58:23 PM Eastern Daylight Time  
 Ran spec check article report on Culvert Seg 1, Top Slab 1 (All Articles) of Culvert Example 1 - report generated without crash.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 12209                                           |
| Subject: database backup issue using the migration wizard |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Zhang, Bin         | 2/22/2013 10:26:20 PM |
| Modified By: bzhang              | 2/27/2013 3:56:58 PM  |
| Priority: High                   |                       |
| Category: Support                |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:24:55 PM

**HRS AASHTO**

3450

**Complete Issue Information**

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Trees, Geoffrey | Assigned  |      |             |
| Lee, Herman     | Suspended | High | Enhancement |
|                 | Resolved  |      |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 2/22/2013 5:27:15 PM Eastern Standard Time  
 I submitted this issue on behalf of Hsu, Hao-Chen from Weston&Sampson. The communication email was listed below.

\*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

From: Hsu, Hao-Chen [mailto:HsuH@wseinc.com]  
 Sent: Thursday, February 21, 2013 8:18 AM  
 To: Bridgeware,  
 Cc: Wurst, Don  
 Subject: RE: AASHTOWare Virtis\_Software Question

Good morning Ben,

Sorry for the late reply. I got few things needed to get them done yesterday. Still, right now I am not able to run the 6.3 database in Virtis 6.4 because of the backup copy of the database.

This morning I just uploaded the 6.3 database file and the log file via your ftp site. When you have a chance, please take a look and direct me what to do next.

Thank you

Hao-Chen

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
 Sent: Tuesday, February 19, 2013 1:02 PM  
 To: Hsu, Hao-Chen

4/19/2016 3:24:55 PM

**HRS AASHTO**

3451

**Complete Issue Information**

Subject: RE: AASHTOWare Virtis\_Software Question

Hao-Chen,

Could you please send your database file and log file to us via our ftp: <http://eftp.mbakercorp.com>? I will need that to reproduce your problem.

BTW, are you able to run the migrated 6.3 database in Virtis6.4 now?

Ben

From: Hsu, Hao-Chen [mailto:HsuH@wseinc.com]  
Sent: Tuesday, February 19, 2013 10:24 AM  
To: Bridgeware,  
Cc: Wurst, Don  
Subject: RE: AASHTOWare Virtis\_Software Question

Ben,

Can you tell me where I should save the backup copy of the database? I tried to save it on my desktop but got the message as below.

Thanks  
Hao-Chen

Hao-Chen Hsu, P.E.  
ENGINEER  
Weston&Sampson®  
273 Dividend Road  
Rocky Hill, Connecticut 06067  
[www.westonandsampson.com](http://www.westonandsampson.com)  
Office: 860-513-1473  
Fax: 860-513-1483

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Tuesday, February 19, 2013 10:01 AM  
To: Hsu, Hao-Chen  
Subject: RE: AASHTOWare Virtis\_Software Question

Hao-Chen,

Please change the default database from master to Vlrtis63s when you set up the ODBC. The figure below showed how to change the default database.

4/19/2016 3:24:55 PM

HRS AASHTO

3452



## Complete Issue Information

I attached the word version for the detailed instructions, please feel free to let me know if you still have the problem.

Thanks!

Ben

Ben Zhang Ph.D., E.I.T. | Civil Associate | Michael Baker Jr. Inc.  
100 Airside Drive | Moon Township, PA 15108 | Office: (412) 375-3008

From: Hsu, Hao-Chen [mailto:HsuH@wseinc.com]  
Sent: Tuesday, February 19, 2013 8:43 AM  
To: Bridgeware,  
Cc: Wurst, Don  
Subject: RE: AASHTOWare Virtis\_Software Question

Good morning Ben,

After following the instruction you sent to me, the database issue is still there (please see below). I did run the program "as administrator" so at this point Can you please direct me what to do next?

Thank you

Hao-Chen

Hao-Chen Hsu, P.E.  
ENGINEER  
Weston&Sampson®  
273 Dividend Road  
Rocky Hill, Connecticut 06067  
www.westonandsampson.com  
Office: 860-513-1473  
Fax: 860-513-1483

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, February 15, 2013 4:40 PM  
To: Hsu, Hao-Chen  
Subject: RE: AASHTOWare Virtis\_Software Question

Hao-Chen,

4/19/2016 3:24:55 PM

HRS AASHTO

3453

### Complete Issue Information

Your snapshot showed that the Database name is master. There may be something wrong with the ODBC settings. Please follow the step by step instructions to create the System Data Source. I have a WORD version of this instruction in the attachment too.

BTW, I don't have the AASHTO permission to create the temp user name and pw for the version 6.3. Please feel free to let me know if you still have the migration problem.

Ben

From: Hsu, Hao-Chen [mailto:HsuH@wseinc.com]  
Sent: Friday, February 15, 2013 3:31 PM  
To: Bridgeware,  
Cc: Wurst, Don  
Subject: RE: AASHTOWare Virtis\_Software Question

Ben,

I tried but got the message below. Can you do me a favor? Is it possible AASHTO can let me open the 6.3 for printing the input and output files for just one day"? You know that we did pay for the software.

Thanks a lot for your help

Hao-Chen Hsu, P.E.  
ENGINEER  
Weston&Sampson®  
273 Dividend Road  
Rocky Hill, Connecticut 06067  
www.westonandsampson.com  
Office: 860-513-1473  
Fax: 860-513-1483

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, February 15, 2013 2:39 PM  
To: Hsu, Hao-Chen  
Subject: RE: AASHTOWare Virtis\_Software Question

Hao-Chen,

4/19/2016 3:24:55 PM

HRS AASHTO

3454

### Complete Issue Information

1. Attach the old database to SQL server. Please skip this step if the old database is already in the SQL server.
2. Create the system DSN in ODBC. After this step, the 6.3 database will appear in the ODBC Date Source.
3. Migrate the old DB with migration tool.

Please "Run as administrator" when you run the migration tool. Please feel free to let me know if you still have question about this.

Ben

From: Hsu, Hao-Chen [mailto:HsuH@wseinc.com]  
Sent: Friday, February 15, 2013 2:04 PM  
To: Bridgeware,  
Subject: RE: AASHTOWare Virtis\_Software Question

I cannot find the 6.3 in the ODBC Date Soureces (please see below).

Our 6.3 is the 120-day evaluation license which expired already. I cannot open it now. However, we do have 6.4 so I tried to migrate the 6.3 database to 6.4 but just don't know how to get this done. Please help us on this. Thank you.

Hao-Chen Hsu, P.E.  
ENGINEER  
Weston&Sampson®  
273 Dividend Road  
Rocky Hill, Connecticut 06067  
www.westonandsampson.com  
Office: 860-513-1473  
Fax: 860-513-1483

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, February 15, 2013 1:49 PM  
To: Hsu, Hao-Chen  
Subject: RE: AASHTOWare Virtis\_Software Question

Hao-Chen,

The snapshot showed that the data source name is VIRTIS64\_SQLSERVER. Did you try to migrate a 6.4 database to 6.4 again? Also, please make a copy of the old database before migrating to the new

4/19/2016 3:24:55 PM

HRS AASHTO

3455

**Complete Issue Information**

version.

Thanks!

Ben Zhang

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 2/22/2013 5:30:46 PM Eastern Standard Time  
Please use the Virtis63 database to reproduce this issue.  
The workaround is that manually backup the database and then do the database migration using the migration tool. This workaround was send to the user on 2/22/2013.

FROM: Geoffrey Trees DATE: 2/27/2013 10:14:10 AM Eastern Standard Time  
I investigated this issue and I have not found anything wrong. I was able to migrate the database, as recieved, without any issue. I was also able to have the Migration Wizard make a backup of the database successfully. Since I am not able to reproduce the problem, I believe the issue is in permissions on the user machine and not an issue with the Wizard itself. One additional note is that when I inspected the database provided by the user, I noticed the connection GUID was NULL. This tells me that this database was never connected to by Virtis. Since the user informed us that there were needed bridges in this database, I am assuming we were sent the wrong database. All the bridges in this database were sample bridges.

FROM: Bin Zhang DATE: 2/27/2013 10:43:11 AM Eastern Standard Time  
I think it's a windows security issue. The user may not have the full permission to write on the hard drive or the folder where the database was backup.  
Please read the BackupErrorMessage and the PermissionForUsers in the document for details. Please ask the digital service department of your company to help you add the "write" permission for your user account.

Issue ID: 12213  
Subject: Culvert - Exposure Factor enhancement

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Litchfield, Phil 2/27/2013 12:59:24 PM  
Modified By: hlee 3/27/2015 6:58:08 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:24:55 PM

HRS AASHTO

3456

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Spec Check Detail for 6.10.9      |             |
|      | Spec Check Detail for 6.10.11.1.3 |             |
|      | Spec Check Detail for 6.10.1.1.1b |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 2/27/2013 8:00:05 AM Eastern Standard Time  
Submitted on behalf of Phil Litchfield, Illinois DOT.

Add a user input for the exposure factor for the walls. Also, to allow the slab exposure factor to be applied to culverts with fill.

The original request was entered in Incident 12191.

FROM: Herman Lee DATE: 3/27/2015 2:57:33 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.

Issue ID: 12214

Subject: Potential Error Found in OPIS 6.4 - Steel Spec Articles 6.10.1.1.1b and 6.10.11.1.3

4/19/2016 3:24:55 PM

HRS AASHTO

3457



**Complete Issue Information**

Darren McGinley, EIT  
Junior Civil Engineer  
C&C Consulting Engineers, LLC  
214 Lincoln Street  
Boston, MA 02134  
Direct: (617) 903-4604  
Office : (617) 254-6930

FROM: Srujana Thogaru DATE: 2/27/2013 9:56:21 AM Eastern Standard Time  
Tested the above mentioned issues with Training Bridge 3 in the sample database and found that the above mentioned problem exists.

FROM: Srujana Thogaru DATE: 2/27/2013 11:17:39 AM Eastern Standard Time  
Email of Darren McGinley: D.McGinley@cccellc.com

FROM: Wayne Skow DATE: 3/27/2013 10:43:25 AM Eastern Daylight Time

-- 6.10.1.1.1b and concrete stresses.

Good observation. This is a little difficult to understand. But the use of stage 3 section modulus for concrete stresses in stage 2 is on purpose. The rationale for it is found in the commentary for article 6.10.1.1.1d. There is a note in the spec check output for article 6.10.1.1.1b that alerts the user:

Note:

\*As per Article 6.10.1.1.1d, slab stress due to all permanent and transient loads is computed using the short term modular ratio, n

-- 6.10.11.1.3

Note that Vn in 6.10.11.1.3 is not the Vn at that POI, but the Vn from adjacent panels.

|                                             |
|---------------------------------------------|
| Issue ID: 12215                             |
| Subject: Question on Windows Authentication |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Thompson, Todd   | 2/27/2013 7:07:56 PM |
| Modified By: hlee              | 2/28/2013 1:53:53 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:24:56 PM

HRS AASHTO

3459

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 30128_Conspan vs Virtis.pdf |             |
|      | 30128.xml                   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 2/27/2013 2:10:15 PM Eastern Standard Time

(1) Does Virtis Opis support Windows Authentication for logging into the DB

(2) If not, are there any plans to pursue this?

As we migrate from Sybase to SQL Server - our DBA's are very reluctant to take the ancient practice of user id - password like what appears in Virtis Opis and really prefer Windows Authentication. The approach of user id and passwords is extremely rare for our SLQ Server DBA's.

FROM: Herman Lee DATE: 2/27/2013 2:46:57 PM Eastern Standard Time

Virtis/Opis does not support Windows Authentication for logging into the DB. Currently there is no plan to support Windows Authentication.

Please let us know if you would like to change this incident into an enhancement request. Thanks.

FROM: Todd Thompson DATE: 2/27/2013 3:05:28 PM Eastern Standard Time

Please make this an enhancement.

Issue ID: 12216

Subject: PS I Beam Shapes will not use entered Area to compute self-load

4/19/2016 3:24:56 PM

HRS AASHTO

3460



**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Silvis, Bryan    | 2/27/2013 6:56:19 PM |
| Modified By: hlee              | 5/13/2014 6:04:15 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Trees, Geoffrey | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | MissDOT_Virtis_Errors.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bryan Silvis DATE: 2/27/2013 2:27:51 PM Eastern Standard Time

The I beam section input will not accomodate VDOT bulb-T shapes (i.e. we have an additional flare in the bottom flange similar to the one you can input in the top flange currently). As a result, we have dimensions entered in the available fields that are close to, but do not match our actual shape. The values for the actual bulb-T properties are entered in the Properties tab including Area and Moment of Inertia.

However, this entered Area is not used in the dead load calculation for the beam (the self-load calculation is always based on the dimensions entered). If I was using the Compute button in the Properties tab, I would expect it to calculate the properties based on the dimensions entered. However, entered properties should be used by default for all calculations.

This is similar to Issue 12140 VDOT entered for voided slab sections. However, the properties entered there will not be used subsequently even when the self-compute button was used originally to compute the properties based on the dimensions entered.

4/19/2016 3:24:56 PM

HRS AASHTO

3461

**Complete Issue Information**

I have attached the PS file and a pdf comparing the AASHTOWare Bridge Rating and Conspan computed moments that were forwarded by the User.

FROM: Herman Lee DATE: 3/4/2013 7:13:49 AM Eastern Standard Time  
The PS I Beam window's Properties tab specified that "Note: Analysis engine computes section properties based on the dimensions given on the 'Dimensions' tab.". I'm changing this to an enhancement request for the capability of overriding the computed properties during analysis with user entered section properties in the UI.

FROM: Herman Lee DATE: 10/24/2013 8:38:59 AM Eastern Daylight Time  
Related to Incident 12556.

FROM: Herman Lee DATE: 10/30/2013 3:56:19 PM Eastern Daylight Time  
The beam capacity must be based on a computed neutral axis location. For that calculation cross section dimensions are needed and cannot use the user-entered properties. The user-entered properties can be used for the FE analysis and for the DL but not for the spec-checking.

FROM: Herman Lee DATE: 5/13/2014 1:59:55 PM Eastern Daylight Time  
Implemented the option to use the entered PS shape section properties for finite element models and self-load computation in the upcoming 6.6 release.

|                                               |
|-----------------------------------------------|
| Issue ID: 12218                               |
| Subject: Not able to create new library items |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Withers, Richard   | 3/4/2013 2:24:03 PM  |
| Modified By: gtrees              | 4/24/2013 7:43:42 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:24:56 PM

**HRS AASHTO**

3462

## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Geoffrey Trees DATE: 3/4/2013 9:25:41 AM Eastern Standard Time

Submitted on behalf of Richard Withers:

From: Withers, Richard [mailto:RWithers@mdot.ms.gov]  
Sent: Tuesday, February 26, 2013 4:28 PM  
To: Lee, Herman  
Subject: RE: Incident 12207: Duplicate of incidents 12032 and 12123 in Virtis 6.4.1

Herman,

I have attached a document detailing three errors we are getting with Virtis in the production system database that we don't get with the stand alone database. It should be noted that we were getting these errors with version 6.2 also. We skipped version 6.3 and upgraded directly to 6.4.1.

To give you a little background, Mississippi's database started out as a Pontis Sybase database. I believe Virtis was integrated with the Pontis database while it was still in Sybase. The database was then migrated from Sybase to Oracle by our IT people. It was suggested by someone at Baker (Mehrhad Ordoobadi I think) that we ship the Sybase database to you and let Baker migrate it to Oracle, but our people said they could handle it. I don't know if the migration from Sybase to Oracle has anything to do with our problems, but I thought it would be good information for you to have.

Thanks again for all of your help,

Richard

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Friday, February 22, 2013 2:48 PM  
To: Withers, Richard  
Subject: RE: Incident 12207: Duplicate of incidents 12032 and 12123 in Virtis 6.4.1

Richard,

Virtis/Opis support email address is Bridgeware@mbakercorp.com. You could also email or call me (412.269.7920) to discuss the issues you are having.

Herman

From: Withers, Richard [mailto:RWithers@mdot.ms.gov]  
Sent: Friday, February 22, 2013 3:37 PM  
To: Lee, Herman  
Subject: RE: Incident 12207: Duplicate of incidents 12032 and 12123 in Virtis 6.4.1

Herman,

4/19/2016 3:24:56 PM

HRS AASHTO

3463

## Complete Issue Information

Thank you for your quick response. We are having some other issues that occur in the system database but not in the stand alone database. Is there someone that I could discuss this with instead of going through the website?

Thanks again for your help,  
Richard

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Friday, February 22, 2013 2:30 PM  
To: Withers, Richard  
Subject: Incident 12207: Duplicate of incidents 12032 and 12123 in Virtis 6.4.1

Richard,

I'm preparing a package to be email to you later today for fixing the problem. The package will patch up 6.4.1 installation. I just want to give you a heads up so you won't be surprise when you receive that email.

Thanks,  
Herman

Herman Lee, P.E., PMP  
Michael Baker Jr., Inc.  
100 Airside Drive  
Moon Township, PA 15108  
Phone: 412-269-7920  
Fax: 412-375-3999

-----  
FROM: Geoffrey Trees DATE: 3/4/2013 9:25:41 AM Eastern Standard Time

We have found the cause of the problem for creating new library items and are working on generating an update DLL to fix the issue.

FROM: Geoffrey Trees DATE: 3/12/2013 1:31:17 PM Eastern Daylight Time  
Resolved.

FROM: Geoffrey Trees DATE: 4/24/2013 3:43:23 PM Eastern Daylight Time  
Verified by user.

Issue ID: 12222

Subject: Wearing surface consideration/improvement in virtis

4/19/2016 3:24:57 PM

HRS AASHTO

3464



**Complete Issue Information**

ADDITIONAL SELF LOAD input to allow assigning a load case, so that you could add an ADDITIONAL SELF LOAD for each load type, if desired.

Thanks  
Scott

From: Scott Cavanaugh  
Sent: Thursday, March 07, 2013 10:45 AM  
To: 'Bridgeware,'  
Cc: Ekin Senturk  
Subject: Wearing surface consideration/improvement in virtis

Herman / Ben,  
Many state DOTs and Authorities are currently using Virtis for LRFR. In many of their load rating manuals and policies, they note that any future or additional wearing surface shall not be applied to the As-Built case. This makes sense.

Also, in these models, agencies like to maintain BOTH the As-built model and the As-Inspected model (typically might consider section loss). For section loss, this is typically addressed by adding a separate MEMBER ALTERNATIVE under the same MEMBER, and assigning a name with "As-I" appended. Then, this As-I MEMBER ALTERNATIVE is set to (E)(C) so that virtis sees this member as the EXISTING and CURRENT member. Often times As-B = As-I, but in the event of additional wearing surface, these will not be the same due to increased dead load.

In Virtis, the way the member loads and wearing surface input are treated, there seems to be no good way to consider As-I additional wearing surface in a model. At the SUPERSTRUCTURE level, if the As-I wearing surface thickness is input under WEARING SURFACE, and the SUPERSTRUCTURE LOADS / DL DISTRIBUTION is set to either UNIFORMLY TO ALL GIRDERS or BY TRIBUTARY AREA Virtis will automatically distribute this wearing surface dead load (DW) to all members within one superstructure. Thus if wearing surface is changed at this location, a separate SUPERSTRUCTURE would need to be created and named with "...As-I". This could lead to larger than necessary virtis file sizes and seems to be the only way to address As-I wearing surface changes in a model while still maintaining both the As-B and As-I cases.

The option to modify the wearing surface by adding an additional MEMBER LOAD is also not viable since this input would apply to ALL MEMBER ALTERNATIVES within one MEMBER. Again, the only option is to create a second SUPERSTRUCTURE definition as mentioned above.

What would be useful is if Virtis could improve its ability to handle this case, which is not uncommon, by incorporating a wearing surface thickness input at the MEMBER ALTERNATIVE level. Would this be easy to do, and do you think it might be beneficial? Has this issue been raised before?

Thanks  
Scott E. Cavanaugh, P.E.  
Project Engineer / Team Leader  
HNTB Corporation  
State Route 3 Eastbound  
Turnpike Maintenance Yard  
East Rutherford, NJ 07073

=====

## Complete Issue Information

A couple more ideas:

- Move Member Loads inside the member alternative.
- Allow each member load to specify which member alternative to apply to.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12224                                                |
| Subject: System Error Occurs When Using the AASHTO LRFR Engine |

|                                 |                       |
|---------------------------------|-----------------------|
| Folder: /Virtis/Support Center  |                       |
| Primary Contact: Ihnat, Joseph  |                       |
| Submitted By: Murgoitio, Shanon | 3/8/2013 9:16:19 PM   |
| Modified By: jihnat             | 4/10/2013 12:05:43 PM |
| Priority: High                  |                       |
| Category: Bug                   |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Load Rater Shanon Murgoitio DATE: 3/8/2013 4:24:35 PM Eastern Standard Time  
This error is for v6.4.1, but the version name and build pull down menu only gives me beta choices. When running bridges with the AASHTO LRFR engine v6.4.1, a system error occurs. It appears everything is running fine by looking in the analysis progress window while the analysis is being done. As soon as it finishes the analysis, a system error appears which states, "GetIDsOfNames returned an error while searching for CheckMessageLoop (DISP\_E\_UNKNOWNNAME). 02:00:35 PM - Line 244 in source file FeedbackByDispatchItem.cpp." Then the results appear. Attached is a screen print of the error and the results displayed in addition to the xml file. This is happening on all our bridges run with the AASHTO LRFR engine (AASHTO LFR does not produce an error). It is not specific to one structure type and occurs on the sample database that loads with Virtis as well as on our production database that is on an SQL server. It is happening to all ITD users, but the error is not occurring for our consultants. The error was not occurring when we did our testing for 6.4.1beta2. This is likely only a problem for ITD, but I could use some help in figuring out where to start trouble shooting.

4/19/2016 3:24:57 PM

HRS AASHTO

3467

**Complete Issue Information**

Thank you for your help!  
Shanon Murgotio

FROM: Joseph Ihnat DATE: 3/11/2013 7:33:16 AM Eastern Daylight Time  
Nothing is attached. Please try again.

FROM: Joseph Ihnat DATE: 3/13/2013 10:37:55 AM Eastern Daylight Time  
The 64-bit AbxAashtoEngineUi.ocx was failing to register correctly in version 6.4.1.

|                           |
|---------------------------|
| Issue ID: 12229           |
| Subject: com object error |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Jackson, Amanda  | 3/12/2013 3:49:28 PM |
| Modified By: jihnat            | 3/13/2013 2:40:24 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:24:57 PM

HRS AASHTO

3468



### Complete Issue Information

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Virtis Opus Print Document.pdf |             |
|      | bridgecopuissue.jpg            |             |
|      | MissDOT_Virtis_Errors.pdf      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 3/12/2013 11:53:20 AM Eastern Daylight Time

Whenever I do an analysis that uses the AASHTO engine (bridge rating analysis, calculate LRFD distribution factors), I get an error message at the end of the analysis. The analysis seems to run fine, and the rating completes, I just get the error box whenever I do an analysis. Once I click "OK" on the error message, it goes away and the rating is complete. I thought maybe it had something to do with our installation of 6.4.1, but our IT people here have been unable to track down what is causing the error, especially since they can't see the AASHTOWARE code. I've attached a pdf file of the debug error. Let me know if you need more information.

FROM: Joseph Ihnat DATE: 3/12/2013 12:17:09 PM Eastern Daylight Time

Two DLLs may have failed to reregister after the SP1 install (AbaFeModel and AbaFeResults). This is usually due to a permissions issue. Please try registering the DLLs, then try an analysis again.

On Windows 7, you have to open an elevated Command Prompt window (Start, Programs, Accessories, right-click "Command Prompt", select "Run as administrator"). Then change directory to the folder where Virtis is installed and type "register.bat" at the command prompt.

On Windows XP you can usually just double-click the register.bat file from Windows Explorer.

Make sure all DLLs register with result "succeeded".

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 12231                                           |
| Subject: Copied bridges associated with Pontis data fails |

|                                  |                      |
|----------------------------------|----------------------|
| Folder: /Virtis/Support Center   |                      |
| Primary Contact: Trees, Geoffrey |                      |
| Submitted By: Withers, Richard   | 3/12/2013 5:34:01 PM |
| Modified By: gtrees              | 5/8/2013 6:09:43 PM  |
| Priority: High                   |                      |
| Category: Unknown                |                      |

4/19/2016 3:24:57 PM

HRS AASHTO

3469

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thapa, Mohan     | Assigned | High     | Bug      |
| Thogaru, Srujana |          |          |          |
| Skow, Wayne      | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C Bar.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Geoffrey Trees DATE: 3/12/2013 1:35:06 PM Eastern Daylight Time

On behalf of Richard Withers:

If you copy a bridge, then associate the copied bridge with its Pontis data and then try to edit any of the superstructure definition info, you get this error (image attached).

I don't recall having this issue before, but it could have been there since our normal procedure was to associate the Pontis data then immediately close the bridge and then reopen.

FROM: Geoffrey Trees DATE: 4/30/2013 2:57:24 PM Eastern Daylight Time

So far I have not been able to reproduce this issue. I will leave it open for now.

---

4/19/2016 3:24:58 PM

HRS AASHTO

3470

**Complete Issue Information**

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 12235                                                        |
| Subject: Area of reinforcement cut down at 0.0 - ft Location in a wall |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Parker, Cody     | 3/13/2013 1:39:19 PM |
| Modified By: wskow             | 1/20/2014 6:48:46 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Trees, Geoffrey | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Resolved           |          | Bug      |
|                 | Verified           |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description             |
|------|---------------------|-------------------------|
|      |                     | Culvert Template.xml    |
|      |                     | No Soil Properties.docx |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

4/19/2016 3:24:58 PM

HRS AASHTO

3471

**Complete Issue Information**

FROM: Srujana Thogaru DATE: 3/13/2013 9:41:13 AM Eastern Daylight Time  
Hello,

I'm rating a box culvert and using a #6 c shape spaced at 12 inches. It looks to me through the spec check that at the top of the wall virtis is cutting my reinforcement down to 0.28 in^2 per foot while at the bottom I have the regular amount of 0.44 in^2. I looked through the issues and didn't see this specifically. Is there a way around this? Should I just use straight bars and fix them at the ends?

Thanks,

Cody Parker, PE  
Bridge Engineer

HNTB Corporation  
257 East 200 South, Suite 1000  
Salt Lake City, Utah 84111

FROM: Srujana Thogaru DATE: 3/13/2013 9:44:11 AM Eastern Daylight Time  
I have tested the attached bridge with 6.5 development and 6.4.1 release and found that reinforcement for C- Bar at the start of wall (0.0ft) was cut down but at the end of beam (6.0 ft.) was Correct. I have also tested it using a straight bar. Both start and end of the beam reinforcement was cut down. There is no work around for this problem.

FROM: Srujana Thogaru DATE: 6/3/2013 9:37:03 AM Eastern Daylight Time

FROM: Wayne Skow DATE: 1/20/2014 1:44:35 PM Eastern Standard Time

The C-Bars were being processed as L corner bars resulting in wrong development length values at the start end. The wall cross section location at 0.0 was within the standard development length causing a reduction in effective area.

Fixed in v660.

Tester - run LFR and check Ext Wall 2 @ 0.0, article APPG.6.1. The area of rebar reported should be .22 and .22. (previously it was .14 and .14).

Issue ID: 12238  
Subject: Culvert Soil Properties Template

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 3/13/2013 3:52:15 PM  
Modified By: dteal 5/9/2013 6:09:40 PM

4/19/2016 3:24:58 PM

HRS AASHTO

3472

## Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | 129716 I-80<br>099-0057-Modified.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Dean Teal DATE: 3/13/2013 11:53:46 AM Eastern Daylight Time

I have a template file set up for fixed culverts (Culvert Template attached)

This file contains a material for Soil called Soil Properties

When I create a new culvert I will copy the template culvert definition to my new culvert

It drops the Soil Property and I have to manually enter the (copy from library) every time

FROM: Geoffrey Trees DATE: 3/27/2013 4:44:11 PM Eastern Daylight Time

Dean, I think we have two cases here.

- 1) When you copy your template, the soil material: Soil Property is missing.
- 2) When you have your template open and a new bridge open, when you try to copy (by drag and drop or copy and paste) a culvert definition from one to another, you get a crash.

For case 1 above, I am not able to reproduce the issue. When I copy your template, in the bridge explorer, the Soil Property soil is identical to the original copy.

For case 2 above, I am able to reproduce this issue, however, we don't support copying all the dependencies for a definitions from bridge to bridge. All of the materials, shapes, etc., must exist in the bridge you are copying into. This doesn't only apply to Culvert but you can see this with steel, prestress, rc, timber as well. For example, if you create a new bridge and attempt to copy the superstructure definition from training bridge 1 into the new empty bridge, it will have a similar error message. If you like, we can put this in an enhancement request to add this capability.

4/19/2016 3:24:58 PM

HRS AASHTO

3473

**Complete Issue Information**

Please let me know if I interpreted your problem correctly. Thanks.

FROM: Geoffrey Trees DATE: 3/28/2013 10:35:58 AM Eastern Daylight Time  
Dean, I am going to look into this further. We tested it on a release version and it works for TB1 like you said to Jim. However it doesn't work for TB1 in our development version. We are going to investigate this more.

FROM: Dean Teal DATE: 3/28/2013 10:54:59 AM Eastern Daylight Time  
See my attached word doc for screen shots

**Case #1**

I am not using the bridge explorer  
I am copying from the Bridge Workspace "Culvert RCB Template" to the Bridge Workspace "New Culvert"

**Case #2**

I have NEVER gotten a crash doing this (drag and drop)

You are wrong that all materials, shapes etc. must exist in the bridge you are copying too. This is something we did in version 1.0. The materials will be copied over regardless!!

I just did this to TrainingBridge1 (drag the Superstructure Def to a new "blank" bridge) and all the materials got copied over.

FROM: Geoffrey Trees DATE: 3/28/2013 1:04:21 PM Eastern Daylight Time  
Dean, you are right that the materials should be copied over. What we experienced on our development environment is being investigated. I have assigned this to Joe to look into further. Sorry about the mixup.

FROM: Joseph Ihnat DATE: 3/29/2013 9:32:19 AM Eastern Daylight Time  
Fixed for 6.5

FROM: Mark Mlynarski DATE: 4/26/2013 2:15:16 PM Eastern Daylight Time  
Verified in 6.5 beta 1

FROM: Dean Teal DATE: 5/9/2013 2:09:40 PM Eastern Daylight Time  
Verified and accepted in 6.5.0 beta 1

Issue ID: 12243  
Subject: BWS Report Generation: Crashes Virtis

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Thogaru, Srujana 3/14/2013 8:30:04 PM  
Modified By: sthogaru 6/26/2013 6:35:29 PM  
Priority: High  
Category: Support

4/19/2016 3:24:58 PM

**HRS AASHTO**

3474

**Complete Issue Information**

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Sybase in Help.png  |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 3/14/2013 4:31:14 PM Eastern Daylight Time

This issue is created based on the email sent by Kauzlarich, Joseph M (Joseph.Kauzlarich@mbakercorp.com) from Chicago, IL

=====  
Problem is caused due to Girder Spacing attributes under Girder System-structure Framing Plan Details. Work around is to delete girder space, save and then generate report.

Sample bridge causing the problem is attached with the incident.

FROM: Srujana Thogaru DATE: 6/26/2013 9:52:29 AM Eastern Daylight Time

Actual cause of the problem is that under super structure Span-18, in framing planning details window girder spacing orientation is entered in correctly. A warning issued when you open the window. If that error is corrected report tool works good. This is not a bug.

**Complete Issue Information**

|                             |
|-----------------------------|
| Issue ID: 12248             |
| Subject: Help needs updates |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Thompson, Todd     | 3/19/2013 1:10:58 PM  |
| Modified By: tthompson           | 5/31/2013 12:57:49 PM |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 3/19/2013 9:11:55 AM Eastern Daylight Time  
I noticed in 6.4 and 6.4.1 - the help for adding users still has Sybase information - this should have been cleansed from the help. Not sure if there are other references to Sybase elsewhere but something we should clean up.

FROM: Herman Lee DATE: 3/19/2013 9:15:10 AM Eastern Daylight Time  
Geoff, please remove Sybase information from the Help (see attached).

FROM: Geoffrey Trees DATE: 3/21/2013 10:35:44 AM Eastern Daylight Time  
Resolved

FROM: Bin Zhang DATE: 4/26/2013 9:27:35 AM Eastern Daylight Time  
Verified for version 6.5 beta 1.

FROM: Todd Thompson DATE: 5/31/2013 8:57:49 AM Eastern Daylight Time

4/19/2016 3:24:59 PM

HRS AASHTO

3476



**Complete Issue Information**

Checked in 6.5.0 Beta 2

Accepted

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| Issue ID: 12249                                                                                   |
| Subject: AASHTO Engine should also check for the Frame Structure Simplified Definition selection. |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 3/19/2013 5:41:33 PM |
| Modified By: bzhang            | 4/26/2013 1:38:03 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 00466 - 7D-18-BR_JT.xml |             |
|      | 130318Virtis63Error.pdf |             |

4/19/2016 3:24:59 PM

HRS AASHTO

3477

**Complete Issue Information**

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 3/19/2013 1:41:47 PM Eastern Daylight Time  
Submitted on behalf of Jessica Terry, Colorado DOT.

Bridgeware email:

=====

From: Terry - CDOT, Jessica [mailto:jessica.terry@state.co.us]  
 Sent: Tuesday, March 19, 2013 12:28 PM  
 To: Bridgeware,  
 Subject: Re: modeling moment transfer for slab

Thanks for the reply. So, even though I didn't have "Frame Structure Simplified Definition" checked, it somehow had them checked but caused it to crash because the actual selection of a "Frame Structure Simplified Definition" wasn't checked?  
 On Tue, Mar 19, 2013 at 8:36 AM, Bridgeware, <Bridgeware@mbakercorp.com> wrote:  
 Jessica,

To fix the error, open the Superstructure Definition window, click on the "Frame Structure Simplified Definition" checkbox and uncheck "Frame Connection" for all three supports in the Frame Connections grid.

Herman

From: Terry - CDOT, Jessica [mailto:jessica.terry@state.co.us]  
 Sent: Monday, March 18, 2013 5:09 PM

To: Bridgeware,  
 Subject: Re: modeling moment transfer for slab

Herman,

I've run a structure in Virtis 6.2 successfully, but I get the attached error when I import it to 6.3 to run. Do you have any suggestions?

Thanks,  
Jessica

=====

FROM: Herman Lee DATE: 3/19/2013 1:52:39 PM Eastern Daylight Time  
Resolved for 6.5 release.

FROM: Bin Zhang DATE: 4/26/2013 9:29:33 AM Eastern Daylight Time  
Verified for version 6.5 beta 1.

---

|                      |                   |      |
|----------------------|-------------------|------|
| 4/19/2016 3:24:59 PM | <b>HRS AASHTO</b> | 3478 |
|----------------------|-------------------|------|

### Complete Issue Information

Issue ID: 12251

Subject: BRASS Import using Sections Library

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Teal, Dean

3/19/2013 6:45:55 PM

Modified By: dteal

3/27/2013 12:30:57 PM

Priority: High

Category: Support

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Trees, Geoffrey    | Assigned           |          |          |
| Ordoobadi, Mehrdad |                    |          |          |
| Trees, Geoffrey    |                    |          |          |
|                    | Information Needed |          |          |
|                    | Closed - Inactive  |          |          |
|                    | Resolved           |          |          |
|                    | Not Reproducible   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | barataria truck 1.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 3/19/2013 2:51:56 PM Eastern Daylight Time

When importing a a BRASS file that has steel W sections I am getting import failures

1. Using windows 7 64 bit the import fails and blames the sections library. I included both the .dat

4/19/2016 3:24:59 PM

HRS AASHTO

3479

**Complete Issue Information**

brass file and the sections library

2. Using an old XP computer, the same .dat file is used, this time it imports but will not save.

So, windows 7 and XP are getting different failures

I imported a RC structure with windows 7, imported and saved just fine.

See attached files for screen shots

FROM: Herman Lee DATE: 3/19/2013 3:08:37 PM Eastern Daylight Time

The location of the BRASS section library file is defined in the BRASS Import Preferences dialog (see attached png file, select File| Preferences to open this dialog).

Are both Windows 7 and XP referencing the same location for the BRASS section library file?

FROM: Dean Teal DATE: 3/19/2013 3:35:52 PM Eastern Daylight Time

DUH!!! - Now I feel really stupid

That was it

Wish all fixes were so simple

Thank You

|                                                   |
|---------------------------------------------------|
| Issue ID: 12255                                   |
| Subject: trying to import vehicle locks up virtis |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Metcalf, William   | 3/20/2013 3:58:29 PM  |
| Modified By: hlee                | 5/26/2013 11:00:54 AM |
| Priority: High                   |                       |
| Category: Unknown                |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

4/19/2016 3:24:59 PM

HRS AASHTO

3480

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 3/20/2013 12:01:28 PM Eastern Daylight Time  
still using 6.3.1 when i try to import this truck file into database it just locksup and I have to force quit virtis. I have attached the xml file.

FROM: William Metcalf DATE: 3/20/2013 3:24:26 PM Eastern Daylight Time  
let me explain further we created a brand new oracle database and tried batch exporting and batch importing many of our structures. This worked fine, but when we trying to import trucks it would either give an error and crash or lockup. So we thought this was an import issue but right after I posted this I went back and tried to create a new truck in the new database, and Virtis locks up when I do that also. It locks up when I try to save it. So the problem is saving trucks in our new database.

FROM: Geoffrey Trees DATE: 3/28/2013 10:57:25 AM Eastern Daylight Time  
From E-Mail to William @ Mon 3/25/2013 2:04 PM:

Hello William,

I very quickly tried to do an import of the vehicle you sent us and it works OK on our end. I did notice, however, that the vehicle is essentially blank. It has a name and description but no axles or other properties are defined. For us to proceed, you will need to ask your database administrator to produce a full dump file of the Oracle database and have them send it to us so we can reproduce your setup. They can send us large files via our ftp website below. Please let me know if you need more information.

<http://eftp.mbakercorp.com/eftheadhoc/>

Thanks,  
Geoffrey Trees, E.I.T. | Civil Associate II | Michael Baker Jr., Inc.  
100 Airside Drive | Moon Township, PA 15108 | Office: (412) 375-3027

FROM: Geoffrey Trees DATE: 4/29/2013 3:26:34 PM Eastern Daylight Time  
William,

We had another user with this issue. He submitted his database to us and we were not able to reproduce it. He discovered on his own that while using 64-bit version of Virits if he didn't have the minimum required ram, that he had this issue. If you are also using the 64-bit version of Virtis, please ensure that you have the minimum required amount of ram.

Also, please let us know if you are still having this issue as I have not heard anything recently.

Thanks,  
Geoff

Issue ID: 12257

Subject: Problem running BRASS import

4/19/2016 3:25:00 PM

HRS AASHTO

3481

**Complete Issue Information**

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Teal, Dean       | 3/20/2013 5:07:35 PM |
| Modified By: dteal             | 4/29/2013 3:41:57 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          |          |
|                  | Resolved |          |          |
|                  |          |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 3/20/2013 1:07:37 PM Eastern Daylight Time  
Submitted on behalf of Dean Teal, Kansas DOT.

Received Bridgewater email from Brian Goodrich, BridgeTech.

=====

Importing BRASS.dat file to BrR (Virtis) 6.4.1

.data and .log files attached

When importing a rolled beam .dat file I get an error for STRAND-ST5 "OTH" for other strand types.

This is a rolled beam not a prestressed beam (no strands and no STRAND-ST5 command.

I don't understand how to fix this with the error message given?

Dean is getting the following message:

Import file: C:\Download\Virtis Temp\Steel\b002016.dat

4/19/2016 3:25:00 PM

**HRS AASHTO**

3482

**Complete Issue Information**

TITLE LFD SBMS WN16X40 B002(016)  
TITLE LOAD FACTOR DESIGN  
COMMENT ANDERSON CO.  
COMMENT SPANS 3 @ 31, GIRDER SPACING=1'-8"  
ANALYSIS 1, 0, 3

>>>>>  
> XSECT-STD 1, WN16X40  
>  
> The following messages apply to the above imported command:  
>  
> ERROR: OTH ERROR!  
>>>>>

Aborting import...

Here are the contents of the data file:

TITLE LFD SBMS WN16X40 B002(016)  
TITLE LOAD FACTOR DESIGN  
COMMENT ANDERSON CO.  
COMMENT SPANS 3 @ 31, GIRDER SPACING=1'-8"  
ANALYSIS 1, 0, 3  
XSECT-STD 1, WN16X40  
XSECT-A 1, 33  
COMMENT  
COMMENT span#, L, type 5  
SPAN-A 1, 31, 5  
SPAN-C 1, 31, 1  
FIXITY 1, 1, 0, 0, 1, 0  
COMMENT  
PROPERTIES-ST1 , , , ,  
PROPERTIES-ST2 , ,  
DEAD-LOAD 0, .1  
COMMENT S/5.5  
LIVE-LOAD 3, .3030, 100, 100  
COMMENT S/7  
TRUCK-WFR , , , , , .2381  
TRUCK-WFR .2381  
DESIGN 3, 1  
INVENTORY , , , , ,  
OPERATING , , , , ,  
POSTING , , , , ,  
SAFE-LOAD , , , , ,  
COMMENT pt, 2, , stiff sp., w, t, fy=33, 2.4, 1  
STEEL-1 105, 2, 0, 0, 0, 0, 33, , 1  
STEEL-2 0, 0  
STEEL-4 33, 1, 1, , , , , , 16  
END

**Complete Issue Information**

=====

Duplicate of Incident 12251 (BRASS Import using Sections Library).

|                                  |
|----------------------------------|
| Issue ID: 12273                  |
| Subject: Plastic Section Modulus |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Ghosh, Subhadeep |                      |
| Submitted By: Litchfield, Phil    | 3/25/2013 9:39:52 PM |
| Modified By: sghosh               | 4/2/2013 5:52:48 PM  |
| Priority: High                    |                      |
| Category: Support                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 3/25/2013 6:02:07 PM Eastern Daylight Time  
 Does virtis always calculate the plastic section modulus, Z, of a section? Or does it use the user input value in the library if given? Also, is the calculated Z value shown in the output somewhere? I can't seem to find it.

FROM: Subhadeep Ghosh DATE: 3/28/2013 10:50:36 AM Eastern Daylight Time  
 The analysis uses the plastic section modulus, Z, if provided for a Rolled steel section. It can be checked by running a LFD analysis (with allowing plastic analysis) and checking Article Plastic Moment (Mp) for Noncomposite Section after the analysis. If not provided (or not overridden by the user) the plastic section modulus is not computed separately.

FROM: Krisha Kennelly DATE: 4/2/2013 9:09:28 AM Eastern Daylight Time  
 Here is some more information. Issue 11388 was an enhancement for version 6.4.1 to allow the user input Z value to be used. The following rules are used to determine when to use the user input Z:

4/19/2016 3:25:00 PM

HRS AASHTO

3484



## Complete Issue Information

1. LRFD/LRFR spec articles will not be changed to use the user input Z. The LRFD Spec App D6.1 says to compute Z as the program is currently doing. This will match the BRASS LRFR engine implementation.

2. The LFD article to compute noncomposite plastic moment will be revised to compute  $M_p = F_y * user$  input Z and PNA at mid-height of the rolled section only if:

- a. No cover plates exist
- b. No rebar exists

If a and b aren't met, Z and PNA are computed as they are now.

3. The LFD article to compute composite plastic moment for negative moment will be revised to compute  $M_p = F_y * user$  input Z and PNA at mid-height of the rolled section only if:

- a. No cover plates exist
- b. No rebar exists

If a and b aren't met, Z and PNA are computed as they are now.

4. The LFD article to compute composite plastic moment for positive moment will not be modified since the slab has to be included in the PNA and  $M_p$  calculation.

Issue ID: 12278

Subject: Structure Def window - Member Alt Types

Folder: /Virtis/Support Center

Primary Contact: Zhang, Bin

Submitted By: Ihnat, Joseph

3/28/2013 12:34:00 PM

Modified By: gtrees

11/15/2013 7:39:29 PM

Priority: High

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:25:00 PM

HRS AASHTO

3485

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Br. 1411 & 6077.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 3/28/2013 8:34:31 AM Eastern Daylight Time  
On the Structure Def window, a member alt type checkbox should be disabled when a member alt of that type exists. This was the original behavior in the window (incident 2053) but somewhere along the way it got broken.

FROM: Herman Lee DATE: 3/28/2013 9:15:34 AM Eastern Daylight Time  
From the Help:

=====  
These types will automatically be selected when a corresponding member alternative type is created. These checkboxes cannot be unchecked if a corresponding member alternative type exists. For example, if a prestressed concrete member alternative currently exists, the P/S box will be checked and disabled. You can not uncheck the box while that prestressed concrete member alternative exists.  
=====

FROM: Bin Zhang DATE: 7/18/2013 2:02:24 PM Eastern Daylight Time  
This issue occurred since version 6.2.  
Fixed for Version 6.5.1 (SP1).

FROM: Geoffrey Trees DATE: 11/15/2013 2:38:03 PM Eastern Standard Time  
Verified

|                                             |
|---------------------------------------------|
| Issue ID: 12330                             |
| Subject: Spec Check Report Tool Not Working |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Lee, Herman   |                     |
| Submitted By: Grime, Katy      | 4/4/2013 3:01:58 PM |
| Modified By: hlee              | 4/4/2013 3:27:30 PM |
| Priority: High                 |                     |
| Category: Support              |                     |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 3F 53.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Katy Grime DATE: 4/4/2013 11:07:30 AM Eastern Daylight Time

Hello. After we have analyzed a bridge and opened the spec check, we select the particular point of interest and specification article that we wish to generate a report for. Once the desired specification reference is highlighted, we click on report tool, select "selected articles" and "bullet list". The report then opens up and it is a blank page with the bridge name on top. The same thing happens even if we try different specification articles, different points of interest, and changing the format to "verbose" from "bullet list". We have attached the xml file. Thank you.

FROM: Herman Lee DATE: 4/4/2013 11:21:00 AM Eastern Daylight Time

You should be able to generate the spec check report after removing the "&" character in the bridge name.

**Complete Issue Information**

Issue ID: 12337  
Subject: Zero LRFR rating factor for a PS beam in the 3D FEM analysis

Folder: /Virtis/Support Center  
Primary Contact: Zhang, Bin  
Submitted By: Zhang, Bin 4/9/2013 1:18:00 PM  
Modified By: hlee 4/10/2013 11:36:17 AM  
Priority: High  
Category: Support

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          | Maintenance |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description                |
|------|---------------------|----------------------------|
|      |                     | Culvert Bar Size Error.jpg |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 4/9/2013 9:18:26 AM Eastern Daylight Time  
I submitted this issue on behalf of Cody Parker from HNTB. The communication email was listed below. Please use mel alt of G1, LRFR, 3D FEM, HL93 vehicle to reproduce this issue. I am able to reproduce this issue for version 641 and 650Alpha2.

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

From: Cody Parker [mailto:cparker@HNTB.com]  
Sent: Monday, April 08, 2013 5:05 PM  
To: Bridgewater,

4/19/2016 3:25:01 PM

HRS AASHTO

3488

**Complete Issue Information**

Subject: RE: Virtis 3d FEM analysis

Herman,

It's giving me rating factors of zero for my LRFR load ratings with the 3D FEM. When I do the line girder analysis I get reasonable results. Sorry for not being more clear in my first email.

Thanks,

Cody

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Monday, April 08, 2013 2:54 PM  
To: Cody Parker  
Subject: RE: Virtis 3d FEM analysis

Cody,

I tried LFR and LRFR 3D FEM for the bridge. Both analyses completed ok. Please give us more detail on reproducing the error.

Thanks,  
Herman

From: Cody Parker [mailto:cparker@HNTB.com]  
Sent: Monday, April 08, 2013 11:56 AM  
To: Bridgeware,  
Subject: Virtis 3d FEM analysis

Hello,

Can you tell me why the following bridge gives me an error when I do the 3d FEM analysis. It works fine for the line girder analysis.

Thanks,

Cody Parker, PE  
Bridge Engineer

HNTB Corporation  
257 East 200 South, Suite 1000  
Salt Lake City, Utah 84111

Tel (801) 656-2138  
www.hntb.com

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 4/9/2013 9:23:19 AM Eastern Daylight Time  
Unexpected negative moment was observed at the support position of the PS beam. However, the

4/19/2016 3:25:01 PM

HRS AASHTO

3489

**Complete Issue Information**

negative moment capacity at this location is zero. So a zero rating factor was calculated at this support location. I have 2 possible solutions for this issue.

1. Release the moment at the simple support location for the 3D FEM analysis, make the moment zero. OR
2. Do not rate the moment at the simple support location in the 3D FEM analysis.

FROM: Bin Zhang DATE: 4/9/2013 10:04:48 AM Eastern Daylight Time  
The workaround was sent to the user on 4/9/2013 via bridgeware email.

FROM: Herman Lee DATE: 4/10/2013 7:30:39 AM Eastern Daylight Time  
The model doesn't have mild steel entered at the support locations.

|                               |
|-------------------------------|
| Issue ID: 12339               |
| Subject: Culvert - Rebar Size |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Litchfield, Phil | 4/9/2013 7:54:29 PM  |
| Modified By: hlee              | 3/27/2015 6:36:18 PM |
| Priority: High                 |                      |
| Category: Maintenance          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 4/9/2013 4:02:05 PM Eastern Daylight Time  
I recieved the attached error while trying to analysis a culvert. Why does the AASHTO Culvert Engine only support #4 to #10 rebar sizes, yet in the bar mark definitions you can define bars sizes #3 to #18 and 10(SI) to 57(SI).

4/19/2016 3:25:01 PM

HRS AASHTO

3490

**Complete Issue Information**

FROM: Herman Lee DATE: 4/10/2013 7:36:33 AM Eastern Daylight Time  
The WisDOT Box Culvert program that the AASHTO Culvert Engine based on only supports #4 to #10 rebar sizes. The existing culvert design iteration in the WisDOT Box Culvert program needs to be looked at when supporting additional rebar sizes.

FROM: Todd Thompson DATE: 6/20/2013 11:54:07 AM Eastern Daylight Time  
Can't remember what was added to the estimate - but we are including SI size bars?

FROM: Herman Lee DATE: 6/24/2013 12:39:06 PM Eastern Daylight Time  
Yes, the estimate includes SI size bars.

FROM: Herman Lee DATE: 3/27/2015 2:33:04 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 12344                                                                |
| Subject: Elastic Shortening loss set to 0.0 for transformed section properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Mlynarski, Mark      |                      |
| Submitted By: vinayagamoorthy, vinacs | 4/11/2013 1:36:45 PM |
| Modified By: hlee                     | 4/11/2013 1:55:30 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Mlynarski, Mark | Assigned |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mark Mlynarski DATE: 4/11/2013 9:37:28 AM Eastern Daylight Time  
see below and attached email sent from Caltrans

From: Murugesu Vinayagamoorthy [mailto:murugesu.vinayagamoorthy@dot.ca.gov]  
Sent: Tuesday, April 09, 2013 9:40 AM  
To: Lee, Herman  
Subject: Fw: Virtis: Zero Elastic Shortening Losses when using Transformed Section Properties

We noticed that the Virtis software routinely se the loss due to elastic shortening to zero, if the transformed section property option turned on.

We think that it is wrong, however, we would like to know the reason for Baker's code it that way. Your explanation might help us understand this issue better, if necessary, we could ask to modify the coding.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 04/09/2013 06:37 AM -----  
Mike McCracken/D04/Caltrans/CAGov  
04/08/2013 03:47 PM  
To  
Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov@DOT

cc

Subject  
Virtis: Zero Elastic Shortening Losses when using Transformed Section Properties

Vinacs,

Regarding your observation about Virtis' use of zero elastic shortening losses when using Transformed Section properties:

4/19/2016 3:25:01 PM

HRS AASHTO

3492



**Complete Issue Information**

Virtis sets fpES = 0 when you check the "Use transformed section properties" box. This appears to be an error by Virtis.

Perhaps the people who were programming the code for Virtis were looking at AASHTO BD LRFD Section C5.9.5.2.3a (see below), which says:  
"When calculating concrete stresses using transformed section properties, the effects of losses and gains due to elastic deformations are implicitly accounted for and Delta-fpES should not be included in the prestressing force applied to the transformed section at transfer".  
It's possible that they read this, and then went into their code and used some sort of "if-then" statement that set Delta-fpES = 0 for the entire program. However, they were only supposed to set Delta-fpES = 0 for cases where the beam is subjected to external forces (the prestressing forces are internal). The transformed section properties should never be used to calculate the stresses in the concrete as a result of the prestressing forces, therefore, clicking "use transformed section properties" should not ever affect the stresses in the concrete as a result of the prestressing forces.

Mike McCracken, P.E.  
Caltrans, Division of Maintenance  
Office of Structural Design & Analysis  
Mail Station 9-1/9i  
1820 Alhambra Blvd  
Sacramento, CA 95816  
(916) 227-8180

|                                          |
|------------------------------------------|
| Issue ID: 12352                          |
| Subject: Culvert: User-Defined Dead Load |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 4/15/2013 1:15:14 PM |
| Modified By: hlee              | 4/15/2013 1:18:38 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:25:01 PM

HRS AASHTO

3493

**Complete Issue Information**

|             |           |      |             |
|-------------|-----------|------|-------------|
| Lee, Herman | Suspended | High | Enhancement |
|-------------|-----------|------|-------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | LRFR concrete resistance factors.pdf   |             |
|      | LRFD Table 45.5.5-1 Resis. Factors.pdf |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 4/15/2013 9:15:41 AM Eastern Daylight Time  
Submitted on behalf of Murat Hamutcuoglu, HNTB.

Part of the received email on 4/8/2013:

=====

6. User-Defined Dead Load: as given in the interim example, The culvert top slab can be subjected to such dead load from non-structural components. The current Virtis do not provide analyst to assign such user-defined dead load.

=====

|                                     |
|-------------------------------------|
| Issue ID: 12358                     |
| Subject: Resistance factor for LRFR |

**Complete Issue Information**

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Wagner, Brad     | 4/16/2013 7:20:47 PM  |
| Modified By: hlee              | 4/16/2013 10:06:40 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | RE_ Virtis Effective Deck Width.pdf |             |
|      | deck segments.xml                   |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brad Wagner DATE: 4/16/2013 3:33:56 PM Eastern Daylight Time  
the flexure resistance factor for the reinforced concrete precast box structures should be 1.0 as shown in the attached table 12.5.5-1 (LRFD) not as 0.90 as virtis is applying it to the culvert as well.

FROM: Herman Lee DATE: 4/16/2013 5:59:50 PM Eastern Daylight Time  
This is a duplicate of Incident 12119. This issue has been fixed for the 6.5 release.

## Complete Issue Information

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 12373                                                                                     |
| Subject: Incorrect deck load computed for the deck profile in girder line superstructure definition |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Lee, Herman      | 4/22/2013 3:27:15 PM |
| Modified By: sghosh            | 4/25/2013 8:44:05 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 4/22/2013 11:27:33 AM Eastern Daylight Time  
Submitted on behalf of Joe Kauzlarich, Michael Baker Jr., Inc.

See attached email for the issue.

4/19/2016 3:25:02 PM

HRS AASHTO

3496

**Complete Issue Information**

FROM: Herman Lee DATE: 4/22/2013 2:30:49 PM Eastern Daylight Time  
Should only add two distributed loads when they are overlapped.

Resolved for 6.5 release.

FROM: Subhadeep Ghosh DATE: 4/25/2013 12:34:52 PM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                   |
|-----------------------------------|
| Issue ID: 12375                   |
| Subject: Fatigue Analysis Crashes |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Grime, Katy      | 4/23/2013 5:25:42 PM |
| Modified By: sghosh            | 5/9/2013 2:43:45 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

4/19/2016 3:25:02 PM

HRS AASHTO

3497

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Culvert.xml                |             |
|      | DesignReview_SpecCheck.PNG |             |
|      | CulvertSegment1.log        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Katy Grime DATE: 4/23/2013 1:30:22 PM Eastern Daylight Time

Hello, we are trying to run an LRFR fatigue truck over Beam 1. Everytime the analysis crashes and stops during the "Computing min LTB capacity in the unbraced lengths" stage 3 at the same location. When we run an HL-93 truck, the girder runs normally and we are able to get results. I have attached the log file and the xml file. Thank you.

FROM: Herman Lee DATE: 4/23/2013 1:31:00 PM Eastern Daylight Time

I'm able to reproduce the problem when only the LRFD Fatigue Truck is included the the Analysis Settings.

The workaround is to also include the HL93 vehicle in the Analysis Settings.

FROM: Wayne Skow DATE: 5/2/2013 8:52:24 AM Eastern Daylight Time

LRFD articles 6.10.11.3.1 and 6.10.11.3.3 were left with some null objects when the fatigue truck was the only truck. Fixed in v6.5.

FROM: Subhadeep Ghosh DATE: 5/9/2013 10:34:37 AM Eastern Daylight Time

Verified for 6.5 Beta 1.

Issue ID: 12382

Subject: LRFR Fails, LRFD Design Review Spec Check crashes - Culvert

Folder: /Virtis/Support Center

Primary Contact: Lee, Herman

Submitted By: Thompson, Todd 4/24/2013 5:45:41 PM

Modified By: hlee 4/24/2013 8:40:39 PM

4/19/2016 3:25:02 PM

HRS AASHTO

3498

## Complete Issue Information

Priority: High  
Category: Bug

## History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Mlynarski, Mark  | New       | High     | Unknown  |
| Lee, Herman      | Assigned  |          |          |
| Thogaru, Srujana | Duplicate |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                                                         | Description |
|------|-----------------------------------------------------------------------------|-------------|
|      | VI-12409-<br>CrashWhenViewingDFCalcs.<br>docx<br>00131 - RCSS-0917-RCSL.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 4/24/2013 1:52:05 PM Eastern Daylight Time  
Using 6.4.1 with SQL Server DB

I have a designer that designed a culvert (with another program) and wanted to do an LRFR rating with Bridge Rating/Design to evaluate his design.

When we do an LRFR HL-93 rating - the application fails to run. (See attached log file).  
When we do a Design Review HL-93 - the analysis runs, then when one checks on the Spec Check button - Virtis Opis crashes (See attached screen shot).  
But when we do a LFR HS-20 rating - works fine without any errors, crashes or otherwise no problems.

of course this is the first load rating done by our Bridge Design unit -

I tried to review the support center but didn't see anything similar to this.

FROM: Todd Thompson DATE: 4/24/2013 2:15:48 PM Eastern Daylight Time  
As followup - I can't seem to get any of my culverts to work in LRFR.

4/19/2016 3:25:03 PM

HRS AASHTO

3499

**Complete Issue Information**

I even took a culvert that worked in the sample DB during Beta testing and it works with LRFR just fine in that DB, but when I export and import it into my SD DB - the LRFR (and LRFD Design Review) fails to run.

Baker did convert and migrate our Sybase to SQL Sever DB and if I had to guess the source of the problem - it might be DB related?

FROM: Todd Thompson DATE: 4/24/2013 2:19:14 PM Eastern Daylight Time  
And one more bit that leads us to a DB problem.

I exported the problem culvert and imported it into the sample DB and I can do an LRFR rating without any problems.

But - Virtis Opis still crashes when I do a Design Review and click on the Spec Check button with the sample DB

FROM: Herman Lee DATE: 4/24/2013 4:12:43 PM Eastern Daylight Time  
The issues are duplicates of Incident 12032 (LRFR Culvert Analysis Error) and 12141 (Culvert LRFD Spec Check).

I emailed Todd the package for fixing Incident 12032 and 12141.

|                                           |
|-------------------------------------------|
| Issue ID: 12409                           |
| Subject: Crash when viewing slab DF calcs |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Mlynarski, Mark     | 4/29/2013 7:29:12 PM |
| Modified By: sthogaru             | 5/2/2013 3:47:13 PM  |
| Priority: High                    |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mark Mlynarski DATE: 4/29/2013 3:29:33 PM Eastern Daylight Time

Crash when viewing distribution factor calculations for an RC slab in 6.4.1.

- Using the attached example, go to the 'Live Load Distribution' window.
- Go to the 'LRFD' tab
- Click on the 'Compute from Typical Section' button
- Enter 28' for 'Overall slab width' and '2' for 'Number of lanes':
- Press 'Continue' button
- Analysis completes successfully
- Click on the 'View Calcs' button
- Virtis crashes.

(see attached)

FROM: Srujana Thogaru DATE: 5/2/2013 11:46:27 AM Eastern Daylight Time

Duplicate of 12410

Issue ID: 12410

Subject: RC Slab - Line Girder DF

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: Berry, Melanie

4/29/2013 8:09:25 PM

Modified By: mberry

5/29/2013 1:42:01 PM

Priority: High

4/19/2016 3:25:03 PM

HRS AASHTO

3501

**Complete Issue Information**

Category: Bug

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Resolved  |          | Support     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Melanie Berry DATE: 4/29/2013 4:10:07 PM Eastern Daylight Time  
 I ran the LRFD Dist Factors for both the Exterior and Interior Line Girder Slab Strips. The factors calculate but when you try to view the calcs, it tells you that the report does not exist. I was able to locate the file on my C: drive though. Attached are the screen shots and the .xml file.

FROM: Srujana Thogaru DATE: 5/2/2013 11:43:21 AM Eastern Daylight Time

This is release issue in 6.4.1. Fixed in 6.5 beta 1.  
 12409 is duplicate of this issue.

FROM: Subhadeep Ghosh DATE: 5/7/2013 2:02:03 PM Eastern Daylight Time  
 Verified for 6.5 beta 1.

FROM: Melanie Berry DATE: 5/29/2013 9:42:01 AM Eastern Daylight Time  
 Verified that you are now able to calculate the distribution factors for the Exterior and Interior Line Girder Slab Strips and also able to view the calcs after.

4/19/2016 3:25:03 PM

HRS AASHTO

3502

**Complete Issue Information**

Issue ID: 12433  
Subject: How to model precast, prestressed, rectangular beam with variable depth

Folder: /Virtis/Support Center  
Primary Contact: Lee, Herman  
Submitted By: Waheed, Amjad 5/3/2013 6:07:13 PM  
Modified By: hlee 5/9/2013 3:07:23 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Amjad Waheed DATE: 5/3/2013 2:12:30 PM Eastern Daylight Time  
We have a county bridge which has exterior girders as precast, prestressed, pre-tensioned concrete, variable depth. How can we model that in Virtis? Any example will help. All interior beams are precast, prestressed, pre-tensioned I girders of constant depth.

FROM: Herman Lee DATE: 5/3/2013 3:28:38 PM Eastern Daylight Time  
Currently variable depth P/S girder cannot be modeled in BrR. Please let me know if you want to switch this incident to an enhancement request. Thanks.

FROM: Amjad Waheed DATE: 5/7/2013 11:35:27 AM Eastern Daylight Time  
Please add to the enhancement request.

## Complete Issue Information

Issue ID: 12441  
Subject: BrD crashed using the report tool

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Crudele, Brenda 5/7/2013 3:29:51 PM  
Modified By: hhu 4/17/2014 1:16:48 PM  
Priority: High  
Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          |          |
| Ihnat, Joseph    |          |          |          |
|                  | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:25:04 PM

HRS AASHTO

3504

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brenda Crudele DATE: 5/7/2013 11:45:22 AM Eastern Daylight Time  
Program crashed when choosing LRFD Analysis Output in the report tool. This happened on two different bridges. One bridge attached. Screen shot attached.

FROM: Subhadeep Ghosh DATE: 5/7/2013 3:58:13 PM Eastern Daylight Time  
This is release bug which is existent in 6.4.1. We do not support Brass\_LRFD but when the user runs with Brass\_LRFD they are prompted to run to run with AASHTO LRFD. But in the report tool, when it looks for the AASHTO LRFD spec check report in the system, the path where the report is searched gets assigned as "Brass LRFD" instead of "AASHTO LRFD". This is because the user selected "Brass LRFD" in the GUI.  
(Developer's note: Look at "GetInputOutputFilePath" function in "UiAnalysisOutputReport").

FROM: Joseph Ihnat DATE: 5/22/2013 2:16:22 PM Eastern Daylight Time  
Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 4/8/2014 2:42:53 PM Eastern Daylight Time  
Workaround is to either install BRASS-LRFD or change analysis module to AASHTO LRFD in member alternative window.  
Fixed in version 6.6 (added code to report error instead of crash).

FROM: Hanjin Hu DATE: 4/17/2014 9:16:34 AM Eastern Daylight Time  
Backchecked for V6.6.0 Beta Build 1.

|                              |
|------------------------------|
| Issue ID: 12453              |
| Subject: Decimal Point Crash |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Wagner, Brad     | 5/7/2013 6:03:56 PM  |
| Modified By: bwagner           | 7/17/2013 2:37:03 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

4/19/2016 3:25:04 PM

HRS AASHTO

3505

### Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Lee, Herman      | New      | High     | Unknown  |
|                  | Assigned |          |          |
| Ghosh, Subhadeep | Resolved |          |          |
| Ihnat, Joseph    | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                         | Description |
|------|-------------------------------------------------------------|-------------|
|      | Longitudinal Stiffener entered using percent web depth.docx |             |
|      | 04 0014.xml                                                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 5/7/2013 2:08:25 PM Eastern Daylight Time

In training bridge 1, when I change the left edge distance at start to more than 3 decimal places, and it differs from the left edge at end Virtis crashes.

FROM: Joseph Ihnat DATE: 5/10/2013 7:59:05 AM Eastern Daylight Time

I'm able to reproduce this in 6.4.0. Changed folder to Support Center.

To reproduce: Open TrainingBridge1, Structure Typical Section window, enter 23.750002 for left start, <TAB>, <Enter>.

FROM: Joseph Ihnat DATE: 5/10/2013 12:58:02 PM Eastern Daylight Time

Works OK if you enter a slightly larger number, say, 23.750025

FROM: Brad Wagner DATE: 5/21/2013 12:38:14 PM Eastern Daylight Time

Is your comment on 5/10 considered a resolution? Or is this still pending? If storing a number that the program allows you to store causes a crash, I believe that something should be changed to prevent this

4/19/2016 3:25:04 PM

HRS AASHTO

3506

**Complete Issue Information**

from happening so that users don't lose unsaved work.

FROM: Herman Lee DATE: 5/21/2013 4:31:23 PM Eastern Daylight Time  
The comment on 5/10 is not a resolution.

FROM: Herman Lee DATE: 6/21/2013 7:55:33 AM Eastern Daylight Time  
Fixed the crash for the 6.5 release. The fix will be available in Beta 4/Acceptance Build for testing.

Please note that with 0.000002 difference in the left edge distance between start and end. BrR is not able to adjust the framing plan for the user.

FROM: Brad Wagner DATE: 7/17/2013 10:37:03 AM Eastern Daylight Time  
In the same model, I changed left edge at start to 23.75001. I get an error "unable to find girder bay". When I leave the structure typical section screen and come back, I get the warning "Girder display type is set to "Perpendicular.....". It seems to be treating the structure as curved. Same thing happens if I change the left edge at end only to 23.75001.

If start and end are the same, I have no issues. If start and end are different by more than 0.0001 or more, I have no issues.

This may seem like a trivial thing, but it corrupts the model.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 12454                                                         |
| Subject: Longitudinal Stiffener entered using percent webe depth option |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: vinayagamoorthy, vinacs | 5/7/2013 6:02:36 PM   |
| Modified By: vvinayagamoorthy         | 12/13/2013 8:51:19 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 5/7/2013 2:12:53 PM Eastern Daylight Time  
This issue was found when we were using 6.4.1.

Users are allowed to enter the longitudinal distances using % of web depth. Unfortunately, software displays it as straight, instead of following bottom flange when the bottom flange is on parabolic profile.

We would like to know how the specification check utilizes the proper distance.

Structure Definition: Span 2-4 (MDL 1 of 1)

FROM: Subhadeep Ghosh DATE: 6/7/2013 10:05:33 AM Eastern Daylight Time  
I ran a LRFD HL 93 design review to investigate your question:

For sections with longitudinal stiffener depth entered as % of web - (Bottom Flange) Article 6.10.1.9.2 was checked at the following locations:

Support Distance  
#  
from

|   | Support (ft) | Flex type (in) | Web Depth from bottom flange (in) | 20% of web depth ds (in) (6.10.1.9.2) |        |
|---|--------------|----------------|-----------------------------------|---------------------------------------|--------|
| 2 | 20           | Neg            | 127.375                           | 25.475                                | 25.476 |
| 2 | 50           | Neg            | 96.875                            | 19.375                                | 19.376 |
| 2 | 230          | Neg            | 96.875                            | 19.375                                | 19.376 |
| 2 | 250          | Neg            | 112.375                           | 22.475                                | 22.476 |
| 2 | 270          | Neg            | 147.25                            | 29.45                                 | 29.452 |
| 3 | 20           | Neg            | 127.375                           | 25.475                                | 25.476 |
| 3 | 30           | Neg            | 112.375                           | 22.475                                | 22.476 |

Column#5 and 6 above, does not match up in the span of the girder where the display is wrong. Hence, the specification check does use the proper distance.

But, since the schematic is wrong, I am entering this as a bug.

FROM: Joseph Ihnat DATE: 10/15/2013 12:55:06 PM Eastern Daylight Time  
The bottom profile of the attached bridge is defined as a series of segments with linear variation, not parabolic. The schematic works OK for parabolic profile.  
Fixed for 6.5.1.

Issue ID: 12467

Subject: Behavior of Shear Stirrup Wizard, after it generated the shear spacing



### Complete Issue Information

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center        |                     |
| Primary Contact: Zhang, Bin           |                     |
| Submitted By: vinayagamoorthy, vinacs | 5/7/2013 7:41:19 PM |
| Modified By: vvinayagamoorthy         | 7/2/2013 2:52:57 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Duray, Jim      | New              | High     | Unknown  |
| Ihnat, Joseph   | Assigned         |          | Bug      |
|                 | Not Reproducible |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 5/7/2013 3:46:17 PM Eastern Daylight Time

I used the wizard to create the shear stirrup spacing. When I fired up the wizard, it checks whether shear stirrups exists for the girder and warn me about it. It was great.

After I generated the shear stirrup spacing, i figured I did not enter the values within wizard properly. I adjusted the spacing and then click the wizard to regenerate the spacing for me.

It tried to add to the existing shear rebar spacing. It should either require user to "Overwrite" the existing shear spacing.

FROM: Bin Zhang DATE: 5/8/2013 1:52:30 PM Eastern Daylight Time

You are right, Vinacs. Each time you run the Stirrup Wizard, the existing stirrup reinforcement will be deleted. It will be a nice enhancement to have the option to add to the existing shear rebar spacing besides the "Overwrite" option.

4/19/2016 3:25:05 PM

HRS AASHTO

3509

### Complete Issue Information

I changed the category to Enhancement.

|                                            |
|--------------------------------------------|
| Issue ID: 12470                            |
| Subject: Cannot run analysis of any bridge |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Waheed, Amjad    | 5/7/2013 8:37:19 PM  |
| Modified By: jihnat            | 3/24/2014 4:27:05 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 5/7/2013 4:44:31 PM Eastern Daylight Time  
My program crashes each time I try to analyze any bridge. It installed without any error and displays everything else correctly. It is only analysis engine that does not crunch numbers. The analysis progress window displays, "not responding."

FROM: Joseph Ihnat DATE: 5/8/2013 8:36:00 AM Eastern Daylight Time

4/19/2016 3:25:05 PM

HRS AASHTO

3510

**Complete Issue Information**

Got this to work only after changing Analysis Output Folder from "My Documents" to "C:\Temp". "My Documents" seemed to be either restricted or missing. (May have been at a network location that was not accessible from Baker office.)

Investigate further why program hung instead of issuing an error message.

FROM: Joseph Ihnat DATE: 5/22/2013 2:19:56 PM Eastern Daylight Time  
Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 3/24/2014 12:26:07 PM Eastern Daylight Time  
I'm not able to reproduce this with the current code.

|                                                 |
|-------------------------------------------------|
| Issue ID: 12471                                 |
| Subject: User defined materials and beam shapes |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Wagner, Brad     | 5/7/2013 8:46:43 PM  |
| Modified By: bwagner           | 5/21/2013 4:40:08 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

4/19/2016 3:25:05 PM

HRS AASHTO

3511

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                              | Description |
|------|--------------------------------------------------|-------------|
|      | VI11562_GUI_Point_Lateral_Supports_650_Beta1.PNG |             |
|      | VI11562_GraphicBeam_650_Beta1.PNG                |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brad Wagner DATE: 5/7/2013 4:48:19 PM Eastern Daylight Time

I understand that the incident that this enhancement was based on only specifies materials and beam shapes, but I feel that it would be helpful to have this functionality for trucks, appurtenances and other library items. Can these be added?

FROM: Herman Lee DATE: 5/11/2013 10:22:42 AM Eastern Daylight Time

I changed this incident to an enhancement request.

FROM: Brad Wagner DATE: 5/21/2013 12:40:08 PM Eastern Daylight Time

How much effort is it to add a few additional fields? I think they would be very helpful, and they are in keeping with the intent of the incident, even though they were not clearly stated.

Issue ID: 12480

Subject: Testing VI 11562 enhancement - Graphic is missing Point Supports

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Thompson, Todd

5/8/2013 12:53:17 PM

4/19/2016 3:25:05 PM

HRS AASHTO

3512

### Complete Issue Information

|                       |                     |
|-----------------------|---------------------|
| Modified By: hlee     | 8/2/2013 5:50:20 PM |
| Priority: High        |                     |
| Category: Enhancement |                     |

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          |             |
|                  | Resolved  |          | Support     |
| Lee, Herman      | Assigned  |          |             |
|                  | Resolved  |          |             |
|                  | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | POI Issue.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 5/8/2013 8:59:09 AM Eastern Daylight Time

I was testing 6.5.0 Beta 1 and was evaluating the VI 11562 enhancement to allow top flange lateral support points.

I was able to add these individual points, ranges of points. But when I view the graphic of the beam - none of the point loads are displayed on the graphic.

In example - I added a range of points every 5 ft for 6 spaces. But the graphic does not display anything.

I was using Training Bridge 1 - Girder G2

I removed the uniform top flange lateral support and added the point supports.

FROM: Todd Thompson DATE: 5/8/2013 9:16:57 AM Eastern Daylight Time

4/19/2016 3:25:05 PM

HRS AASHTO

3513

**Complete Issue Information**

This is missing on the schematic for both girders and floor beams.

FROM: Todd Thompson DATE: 5/8/2013 10:00:41 AM Eastern Daylight Time  
Stringer schematic also does not reflect the point lateral points entered

FROM: Joseph Ihnat DATE: 5/13/2013 12:08:21 PM Eastern Daylight Time  
This wasn't in the initial scope/estimate. Changed to enhancement request.

FROM: Todd Thompson DATE: 5/13/2013 1:56:30 PM Eastern Daylight Time  
This is clearly a case that demonstrates the TAG should have seen the scope, mockups and given a chance to review.

I think we'll need to seriously consider adding this. We can't just display hit and miss lateral supports.

FROM: Todd Thompson DATE: 6/18/2013 4:05:34 PM Eastern Daylight Time  
Please add this for consideration for 6.5.1 - this was something that was really overlooked and the TAG was not given an opportunity to review this mockup or scope.

|                               |
|-------------------------------|
| Issue ID: 12491               |
| Subject: Point Capacity Issue |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Wagner, Brad     | 5/8/2013 5:44:40 PM  |
| Modified By: hlee              | 8/12/2013 2:56:02 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:25:06 PM

HRS AASHTO

3514

## Complete Issue Information

FROM: Brad Wagner DATE: 5/8/2013 1:54:24 PM Eastern Daylight Time

When testing the point capacity override enhancement, it was noted that when adding an override to a hinge, I must create a point of interest that corresponds to the point of interest automatically generated by Virtis for the hinge location. However due to differing number of units allowed in the span length field, the hinge location field, and the point of interest field, it is virtually impossible to have the point of interest override location be at the exact location as the hinge.

I think it would very beneficial to have the ability to automatically place the point of interest in the POI list either 1) if selected or 2) always for hinges.

I've attached a model that demonstrates the two POI's that are .02 feet apart from each other, one overridden, and the other not.

FROM: Krisha Kennelly DATE: 6/9/2013 10:04:26 AM Eastern Daylight Time

I used structure def 'Spans 1 and 2 Girderlines' and 'Typical Interior' girder in the attached bridge for my testing.

BrDR does not automatically create an analysis point at hinge locations.

I suspect you think that the analysis point at Span 2 6.88' (58.1850') is an automatically generated point for the hinge. But it is not. It is automatically generated because it is at the mid-point of the unbraced length.

The user is responsible for entering a Point of Interest at the hinge location if he wants that point to be rated.

For this example, I entered a POI at 58.18767'. that matches the hinge located at 6.88767' into span 2.

I then see in the spec check details the following locations into span 2 were evaluated: 6.85 (POI created by you), 6.88 (analysis point generated at middle of unbraced length), 6.89 (POI that I entered).

Note that these locations are dependent on the System Defaults:Tolerance found in the Configuration Browser. I'm using the default tolerance for feet which is 0.001. That means points that are within 0.001' of each other are 'merged' into 1 point. You might be using a different tolerance.

Please respond in this issue if you would still like a POI to be created for you at the hinge locations. I'm thinking that would best be handled by a button on the hinge window 'Create POI's at Hinges'. That would be an enhancement request subject to TAG/TF approval.

FROM: Brad Wagner DATE: 6/10/2013 11:21:32 AM Eastern Daylight Time

Thank you for your response. It is as you suspected.

I would like a POI to be created, but I think it would be better handled as a POI wizard similar to what is available for reinforced concrete bridges. This would give us the ability to override locations other than hinges such as shear at supports of prestressed concrete bridges.

If I recall correctly, I thought we discussed this at the Beta TAG meeting in May. Is the POI wizard already a planned enhancement?

FROM: Krisha Kennelly DATE: 6/11/2013 12:45:34 PM Eastern Daylight Time

4/19/2016 3:25:06 PM

HRS AASHTO

3515

**Complete Issue Information**

I wasn't involved in that discussion at the Beta TAG meeting. Herman - can you respond?

FROM: Herman Lee DATE: 6/14/2013 10:37:50 AM Eastern Daylight Time  
The "Make POI wizard available for all structure types" is one of the Most Important UI improvements identified by the TAG in May. The Task Force asked us to estimate all the Most Important UI improvements for discussion and planning in the November Task Force meeting.

FROM: Brad Wagner DATE: 7/17/2013 10:26:34 AM Eastern Daylight Time  
Accepted. Will wait on additional enhancement.

FROM: Herman Lee DATE: 8/12/2013 10:53:28 AM Eastern Daylight Time  
Changed this incident to an enhancement request.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 12501                                                   |
| Subject: Allow input of feet, inches and decimals in input fields |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Olsen, Jeff      | 5/9/2013 1:14:43 PM  |
| Modified By: hlee              | 5/13/2014 6:06:29 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



## Complete Issue Information

### Description

FROM: Jeff Olsen DATE: 5/9/2013 9:20:35 AM Eastern Daylight Time

It would be helpful to be able to input lengths as feet, inches, and fractions in input fields because many plans are shown that way. I would save input time by not having to convert to decimals.

FROM: Jeff Olsen DATE: 5/9/2013 11:07:42 AM Eastern Daylight Time

Related to VI 11838. This option should be available in all fields including grid entries. Once entered, the field could be shown in decimals, then when you hover over the field, it could show the inch/fraction equivalent.

FROM: Herman Lee DATE: 5/13/2014 2:04:26 PM Eastern Daylight Time

Implemented feet-and-inches input for length and dimension in the upcoming 6.6 release.

Issue ID: 12502

Subject: Virtis upgrade from 6.2 to 6.3

Folder: /Virtis/Support Center

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Klossner, Dale

5/9/2013 3:06:44 PM

Modified By: hlee

5/17/2013 8:34:16 PM

Priority: High

Category: Support

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |

4/19/2016 3:25:06 PM

HRS AASHTO

3517

### Complete Issue Information

|                  |                  |      |         |
|------------------|------------------|------|---------|
|                  | Resolved         |      |         |
| Ghosh, Subhadeep | Assigned         | High | Support |
|                  | Not Reproducible |      | Unknown |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | POI 45.16.txt               |             |
|      | POI 20.07.txt               |             |
|      | POI 27.59.txt               |             |
|      | POI 35.13.txt               |             |
|      | POI 22.58.txt               |             |
|      | B-16-050(4T6) - 5-2013.zip  |             |
|      | B-16-050 plan & framing.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dale Klossner DATE: 5/9/2013 11:14:12 AM Eastern Daylight Time  
I, Sanjay Sethi (sanjay.sethi@state.mn.us) and Dale K. are upgrading virtis from 6.2 to 6.3.

Symptom :

When I run "Migration Wizard"\MigrateOracle\_620\_to\_630.sql file using SQLPLUS as owner of VIRTIS database (Oracle 11g 11.2.03.0 64-BIT Server), it is stuck in the middle and asking for some sort of sequence no. like the following screenshot :

----- begin cut/paste

1 row created.

1 row created.

1 row created.

40866

40867

40868

40869

4/19/2016 3:25:06 PM

HRS AASHTO

3518

**Complete Issue Information**

40870  
40871  
40872  
40873  
40874  
40875

----- end cut/paste

Please advise

My Contact info : Sanjay S. (Ph. 651-366-4078 Email=sanjay.sethi@state.mn.us)

THank you in advance.

FROM: Mehrdad Ordoobadi DATE: 5/14/2013 9:38:46 AM Eastern Daylight Time  
Sanjay the migration is supposed to be ran by using Migration Wizard not by using SQL\*Plus.

Please refer to AASHTO BRIDGEWare Startup Guide.chm step 8 for more information

|                                                    |
|----------------------------------------------------|
| Issue ID: 12513                                    |
| Subject: Issue with partially supported top flange |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Ghosh, Subhadeep |                      |
| Submitted By: Lee, Herman         | 5/10/2013 8:29:40 PM |
| Modified By: sghosh               | 5/16/2013 1:28:08 PM |
| Priority: High                    |                      |
| Category: Unknown                 |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

4/19/2016 3:25:07 PM

HRS AASHTO

3519

**Complete Issue Information**

FROM: Herman Lee DATE: 5/10/2013 4:30:28 PM Eastern Daylight Time  
Submitted on behalf of Michael Taylor, MassDOT.

Received Bridgeware email:

=====  
Hi

Here is the second issue/question. This bridge's members run transversely and have been modeled as girder lines. Some of the floorbeams only have a partial deck and the remaining portion are exposed beams. I have attached two sheets of the plans and the xml file in zip format.

Here is the issue as emailed to me: "To sum up, floorbeam 4-3 is rating near zero. The floorbeam line model does not allow for brace points so we modeled them under the points of interest. This works up until point 0.7L. At this point, the program changes the unbraced length from what is defined to the full beam length and the allowable drops accordingly. This behavior remains consistent through the end of the beam. I have tried to re-enter the points of interest but there is no change."

Thanks again.

Michael Taylor  
Ratings and Overloads

=====

Reply email:

=====

Michael,

I'm not able to complete the analysis for Floorbeam 4-3. What are the tolerance settings in your database? Could you also let us know the rating method (ASD or LFD) and the vehicle you used?

I have submitted Incident 12513 for further investigation.

Thanks,  
Herman Lee

=====

FROM: Subhadeep Ghosh DATE: 5/16/2013 8:56:18 AM Eastern Daylight Time  
Sent email to the user after investigation:

=====

Hi Michael,

I have analyzed the floorbeam 4-3 in version 6.4.1 with the following settings:

Tolerance used was 0.000999' . HS20-44 was used for ASD analysis.

I checked the "Allowable Stresses" for all the POI under consideration and below is what I found:

1- The unbraced length for regions for all POI is as defined under "Bracing". I checked for points beyond 0.7 L and they display the right unbraced length.

4/19/2016 3:25:07 PM

**HRS AASHTO**

3520

**Complete Issue Information**

2-The allowable stress (Fb) for the tension and the compression flange is consistent along the length of the beam.

Attached are the results for few of the POIs along the length of the beam.

Please let me know if I am missing something.

Thanks,  
Subhadeep

=====

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 12528                                                                          |
| Subject: Overwrite to exclude shear rating using POI make the section NON COMPOSITE PS I |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Gyovai, Kane         |                      |
| Submitted By: vinayagamoorthy, vinacs | 5/15/2013 8:40:50 PM |
| Modified By: cmcmunn                  | 5/1/2014 2:46:30 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Support  |
| Trees, Geoffrey  | Assigned |          | Help     |
|                  |          |          | Bug      |
| Gyovai, Kane     | Resolved |          |          |
|                  | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Complete Issue Information**

ShearOverwrite makes the  
PSGirder NONComposite.docx  
ShearOverwrite inPSI.xml  
culvert-test2.xml

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 5/15/2013 4:47:14 PM Eastern Daylight Time  
I was trying to ignore shear in PS-I girder bridge at a location by utilizing the feature available within POI. Unfortunately, as soon as I set to ignore the shear, moment capacity reported at that location dropped as well. It seems that the software assumes the girder becomes non-composite at that analysis point.

Please check. It is nothing to do with 6.5. This problem exists within 6.4.1

FROM: Krisha Kennelly DATE: 5/20/2013 12:07:58 PM Eastern Daylight Time  
To specify that a ps section is composite, the user has to either define vertical bars extending into the deck or horizontal shear stirrups. Even if you want to ignore shear at the poi, you should enter a value for the horizontal shear reinf. so the section will be considered composite for flexure.

FROM: vinacs vinayagamoorthy DATE: 7/2/2013 11:01:57 AM Eastern Daylight Time  
I recommend that the HELP discuss this issue in detail. User may not aware of this issue at all. While user is trying to ignore shear (by override shear schedule), they are making a section "non-composite", which will result in very low rating factor.

FROM: Krisha Kennelly DATE: 7/2/2013 1:18:19 PM Eastern Daylight Time  
folder changed to support center since it exists in 6.4.1 and previous versions.

Please add the following to the help for Point of Interest: Shear:

In the 'Override schedule', add the following sentence shown in quotes between the 2nd and 3rd sentences:

...must be completed. "If this box is checked, horizontal shear reinforcement must be entered for the section to be considered composite." If this box.....

FROM: Kane Gyovai DATE: 8/29/2013 2:29:59 PM Eastern Daylight Time  
Resolved for V6.5.1

FROM: Bin Zhang DATE: 11/14/2013 5:21:20 PM Eastern Standard Time  
Verified the fix in the help for version 6.5.1 Alpha2

FROM: Creightyn McMunn DATE: 5/1/2014 10:46:30 AM Eastern Daylight Time  
Verified in v6.6 Beta 1

### Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 12536                     |
| Subject: Culvert - Analysis Results |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Litchfield, Phil | 5/16/2013 9:53:46 PM |
| Modified By: hhu               | 4/17/2014 2:01:34 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 57 0594 MJJ.xml     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 5/16/2013 6:01:15 PM Eastern Daylight Time  
When running a culvert analysis from the top of the tree in the bridge workspace, the analysis report and spec check are not viewable at the culvert segment level.

Also, the culvert segment window when fully expanded is too large to view on a standard 1366x768 screen.

FROM: Joseph Ihnat DATE: 5/20/2013 1:36:10 PM Eastern Daylight Time  
I'm not able to reproduce the first issue.

4/19/2016 3:25:07 PM

HRS AASHTO

3523

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 5/21/2013 12:41:50 PM Eastern Daylight Time  
The size of the culvert segment window has been reduced, in beta build 2. The window sizes are stored in the registry, so delete this registry key before opening the window in beta 2:  
HKEY\_CURRENT\_USER\Software\AASHTOWare Bridge Design/Rating\Bridge Design/Rating/Settings\UiCulvertSegmentView

FROM: Joseph Ihnat DATE: 5/21/2013 12:48:52 PM Eastern Daylight Time  
Can you view the spec check and report if you run just the segment? Are you able to reproduce the first problem above every time? Is it just culverts?

FROM: Phil Litchfield DATE: 5/30/2013 12:56:30 PM Eastern Daylight Time  
Yes this is just culverts and happens everytime. If I run just the segment, I can view the spec check and report. Problem still exists in beta 2 also.

FROM: Joseph Ihnat DATE: 5/30/2013 1:07:12 PM Eastern Daylight Time  
What type of analysis? 32-bit or 64-bit BrDR? What does "not viewable" mean? Are the buttons enabled? Nothing happens when you click the button? What is your Analysis Output Folder set to? (View, Preferences, Analysis tab).

FROM: Phil Litchfield DATE: 5/30/2013 1:53:39 PM Eastern Daylight Time  
LRFD Line Girder, using 64-bit. Toolbar buttons are grayed out. The analysis output folder has been set to C:\.

FROM: Joseph Ihnat DATE: 5/30/2013 3:20:58 PM Eastern Daylight Time  
Both problems exist in version 6.4.1. Changed folder to Support Center.

FROM: Joseph Ihnat DATE: 4/15/2014 9:13:05 AM Eastern Daylight Time  
Fixed for version 6.6.0

FROM: Hanjin Hu DATE: 4/17/2014 10:01:12 AM Eastern Daylight Time  
Backchecked for V6.6.0 Beta Build 1.

Issue ID: 12538  
Subject: Issue with web end block width equals to flange width

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: vinayagamoorthy, vinacs 5/18/2013 11:19:08 PM  
Modified By: sghosh 7/8/2013 8:02:30 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:25:08 PM

HRS AASHTO

3524



**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Capture.PNG         |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 5/18/2013 7:20:06 PM Eastern Daylight Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received email:

=====

Herman

One of our engineer created this PS-I girder model. However, when we tried to rate this bridge using LRFR, it crashes. Can you please check this model and let me know what data is entered incorrectly?

Thanks

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

The PS beam top and bottom flange widths are the same as the web end block width (19"). I'm able to complete the analysis after I changed the web end block width a bit smaller (18.99") than the flange width. There's a defect in computing the coordinates of the cross section when the web end block width is equal to the flange width.

FROM: Srujana Thogaru DATE: 6/3/2013 9:41:36 AM Eastern Daylight Time  
Above mentioned error has been fixed in 6.5 Beta 3

FROM: Kane Gyovai DATE: 6/12/2013 10:49:19 AM Eastern Daylight Time  
Verified for V6.5 Beta 3. Analysis completes successfully when top and bottom flange widths are the same as the web end block width.

FROM: vinacs vinayagamoorthy DATE: 6/21/2013 11:56:28 AM Eastern Daylight Time  
YES, it is working

FROM: Subhadeep Ghosh DATE: 7/8/2013 3:57:25 PM Eastern Daylight Time  
Verified for 6.5 Beta 4/Acceptance build

-----

4/19/2016 3:25:08 PM

HRS AASHTO

3525

**Complete Issue Information**

|                                              |
|----------------------------------------------|
| Issue ID: 12540                              |
| Subject: 6.4.1 - Can't get it to run on a PC |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Thompson, Todd   | 5/20/2013 3:50:58 PM |
| Modified By: tthompson         | 5/20/2013 7:29:11 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact    | Status        | Priority | Category    |
|--------------------|---------------|----------|-------------|
| Duray, Jim         | New           | High     | Unknown     |
| Bhanushali, Girish | Assigned      |          |             |
|                    | Investigation |          |             |
| Kennelly, Krisha   | Assigned      |          |             |
|                    | Suspended     |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | K0792_MembLoad_Error.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Todd Thompson DATE: 5/20/2013 11:54:28 AM Eastern Daylight Time  
 We installed Virtis Opis 6.4.1 on a machine that has never had the product before.

But when we try to log onto any DB - we get the attached screen shot - error message about not being

4/19/2016 3:25:08 PM

HRS AASHTO

3526

**Complete Issue Information**

able to create an instance.

I can not track down what the problem might be.

I tested and a user account that works on another machine produces same error message on this other PC. So it does not appear to be a DB error.

Our IT support used the same instructions to install on this PC as they did on other PC's where the product works.

So evidently there is some other issue that is causing the problem.

FROM: Joseph Ihnat DATE: 5/20/2013 12:14:32 PM Eastern Daylight Time  
To fix the "Unable to create instance of system" message, you need to re-register the Virtis DLLs.

On Windows XP, run the "register.bat" file in the folder where Virtis is installed.

On Windows 7, open Start, Programs, Accessories and right-click the Command Prompt menu item and select "Run as administrator".  
Then change directory to the folder where Virtis is installed and run "register.bat" from the command line.

Make sure all the DLLs register with "succeeded".

The cause was most likely permissions-related.

FROM: Todd Thompson DATE: 5/20/2013 3:29:10 PM Eastern Daylight Time  
Thanks - that was the problem.  
Ran the register process and works now.

|                                               |
|-----------------------------------------------|
| Issue ID: 12543                               |
| Subject: Member Load not showing up in Window |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Kennelly, Krisha |                      |
| Submitted By: Kemna, Aaron        | 5/20/2013 7:30:10 PM |
| Modified By: hlee                 | 8/2/2013 5:53:27 PM  |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:25:08 PM

**HRS AASHTO**

3527

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 5/20/2013 3:51:46 PM Eastern Daylight Time

I entered a uniform load in the member loads window. Later, I opened the window and the load was missing. It shows up in the BWS report. I'll attach the bridge. This is a curved girder. I think this has to do with the model changes, but it may be real subtle. I changed the bridge offset at one point and this would have changed the girder length. I changed the offset back, and added a new load. I could then see the first load as distributed, but the new load was missing. Anyway, somethings off. Is there anyway we can keep uniform loads as uniform loads regardless of changes to the model?

FROM: Krisha Kennelly DATE: 6/1/2013 3:07:05 PM Eastern Daylight Time

Disappearing uniform load fixed for beta 3 (it was not related to the mbr length changing).

As for keeping uniform loads when the girder length changes, this window is behaving the same as it does for a straight girder system. When the member length of a straight girder changes, the uniform loads are not kept as uniform. Their length stays the same and they become distributed loads. Changing that behavior for straight and curved girders is an enhancement.

FROM: Aaron Kemna DATE: 6/24/2013 4:05:20 PM Eastern Daylight Time

Disappearing load seems to be fixed. As for the enhancement it would be better for the user to keep uniform loads separate from distributed loads, but I would not want to make this change if it was too much work or if it would adversely affect outside engines. Accepting this incident.

Issue ID: 12545

Subject: 3D LFD analysis not running for highly skewed bridge with diaphragms

Folder: /Virtis/Support Center

Primary Contact: Kennelly, Krisha

4/19/2016 3:25:08 PM

HRS AASHTO

3528

**Complete Issue Information**

|                            |                       |
|----------------------------|-----------------------|
| Submitted By: Parker, Cody | 5/21/2013 12:48:22 PM |
| Modified By: kkennelly     | 7/3/2013 1:05:27 AM   |
| Priority: High             |                       |
| Category: Bug              |                       |

**History**

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Bug      |
|                   | Assigned |          |          |
| Kennelly, Krishna |          |          |          |
| Ghosh, Subhadeep  |          |          | Unknown  |
| Kennelly, Krishna |          |          | Bug      |
|                   |          | Critical |          |
| Ghosh, Subhadeep  | Resolved |          |          |
|                   | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | VI 12551 Simpler Bridge.xml |             |
|      | Br. 1411 and 6077.xml       |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Subhadeep Ghosh DATE: 5/21/2013 8:48:25 AM Eastern Daylight Time  
Initially it looked to be a tolerance issue, and hence asked user to use 4 decimal places instead of 3.  
But the problem still persists.

Email chain with the user:

=====

4/19/2016 3:25:08 PM

HRS AASHTO

3529

## Complete Issue Information

=====

Hi Subhadeep,

I've redone everything to four decimal places and I'm still getting the same errors with the 3D analysis, I even double checked my numbers. Could it be something else that's causing this issue?

Thanks,

Cody

From: Ghosh, Subhadeep [mailto:Subhadeep.Ghosh@mbakercorp.com]  
Sent: Friday, May 17, 2013 8:10 AM  
To: Cody Parker  
Cc: Lee, Herman  
Subject: RE: 3D FEM analysis with diaphragm sections input

Hi Cody,

This is a tolerance issue. I see that you have three decimal places input for the diaphragm locations. Can you please make sure that all the input for the bridge have at least four decimal places.

Please let me know if you have any more issues with this

Thanks,  
Subhadeep

From: Bridgeware,  
Sent: Wednesday, May 15, 2013 12:45 PM  
To: Ghosh, Subhadeep  
Subject: FW: 3D FEM analysis with diaphragm sections input

Please take care of this support.

Line Girder analysis doesn't use the diaphragm sections input. That's why the results are the same. See whether the error is due to a bug or user input.

Thanks,  
Herman

From: Cody Parker [mailto:cparker@HNTB.com]  
Sent: Wednesday, May 15, 2013 10:06 AM  
To: Bridgeware,  
Subject: 3D FEM analysis with diaphragm sections input

Hello,

I'm trying to run a highly skewed bridge with 3D FEM with the diaphragm sections input with Virtis. It ran fine with 3D FEM before I added the diaphragm sections. It still runs fine with line girder analysis with the diaphragm sections input but it gives me the exact values for line girder analysis with or without diaphragm sections input. See attachment for the file and for the error I received. Is there a

4/19/2016 3:25:08 PM

HRS AASHTO

3530

**Complete Issue Information**

way to get this to run in 3D FEM with the diaphragm sections input?

Thanks,

Cody Parker, PE  
Bridge Engineer

=====

FROM: Krisha Kennelly DATE: 7/2/2013 9:04:50 PM Eastern Daylight Time  
Fixed for the 6.5.0 release. I don't think there is a workaround.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 12551                                              |
| Subject: Prismatic section determination for 3D FEM analysis |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Ghosh, Subhadeep |                      |
| Submitted By: Grime, Katy         | 5/21/2013 7:35:46 PM |
| Modified By: kgyovai              | 7/9/2013 2:15:21 PM  |
| Priority: Critical                |                      |
| Category: Bug                     |                      |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 5/21/2013 3:41:31 PM Eastern Daylight Time

I submitted this incident on behalf of Katy Grime from Vanasse Hangen Brustlin, Inc. The communication email was listed below. Please use mem alt of G1 to reproduce this issue. The bridge model was attached in the document.

4/19/2016 3:25:09 PM

HRS AASHTO

3531

**Complete Issue Information**

\*\*\*\*\*  
\*\*\*\*\*

From: Grime, Katy [mailto:KGrime@VHB.com]  
Sent: Monday, May 13, 2013 2:53 PM  
To: Bridgewater,  
Subject: 3D FEM Analysis

The structure we are rating consists of two different rolled beam sections. Section 6.10.8.2.3 of the LRFD code states that when the beam is non-prismatic within an unbraced length the Cb value of that section shall be 1.0. When analyzing using the line girder option under analysis settings, Virtis recognizes this transition and uses the correct Cb value of 1.0 when computing the capacity. However, when I take the same model and analyze using the Virtis 3D FEM, the program does not recognize the transition. Therefore the calculated Cb values greatly increase the capacity. Is there a reason that the code provision is ignored when using the Virtis 3D FEM analysis?

Thanks,  
Katy Grime  
VHB | Vanasse Hangen Brustlin, Inc.  
Transportation | Land Development | Environmental Services  
500 Southborough Drive, Suite 105B  
South Portland, ME 04106  
Phone: 207.889.3150 x3104 | Fax: (207) 253-5596

kgrime@vhb.com  
www.vhb.com

\*\*\*\*\*  
\*\*\*\*\*

FROM: Subhadeep Ghosh DATE: 5/31/2013 2:54:47 PM Eastern Daylight Time  
Investigated and found the following bug as explained below:

Below are the findings for this incident:

I checked the 3D analysis on 6.4.1 release.

The following are the same between 2D and 3D.

Start Brace location = 41.5'  
Mid Location = 52.125'  
Right brace location = 62.75'

Un-braced length = 20.75'.

Section change occurs at 50'. The section change transition to a smaller section at 50'. Hence, the 2nd bullet (below) may apply.

The difference between 2D and 3D analysis are as below:

The section to the right of the brace point is being considered as prismatic .  
The section change location from the brace point is not less than 20% of the un-braced length

4/19/2016 3:25:09 PM

HRS AASHTO

3532



**Complete Issue Information**

(4.15' from 41.5'), hence the check for the smaller moment on the left does not apply.

Hence, the only difference between the two analysis (2D and 3D) is that the section being considered prismatic (for 41.5' (RIGHT)).

When debugged with 6.5 64-bit:

In PopulateDiaphragmInfo for the a 3D analysis the following always return zero. The below functions return finite values (Area and Izz) for 2D.

```
pBeamFiniteElement->GetBeamOnlyA()
pBeamFiniteElement->GetBeamOnlyIzz()
```

For any analysis, the change in A and Izz of the section (between dStartLoc and dEndLoc), is used to determine the section as prismatic or not. (line # 18498).

Since the above two functions are returning zero for 3D analysis, this check is not working.

User's bridge takes a while to run in 3D 64 bit debug. I have created a smaller bridge, which is attached, to highlight that the above functions are returning zero for 3D analysis..

Run Member: G1, Member Alt: Rolled SC.

FROM: Subhadeep Ghosh DATE: 6/11/2013 9:58:11 AM Eastern Daylight Time  
Fixed as per suggestions from Krisha. Fixed for 6.5 beta 3.

For testing run a 3D LRFR, and check at 41.5 (RIGHT) where the section should be considered non-prismatic and Cb = 1.0. Run this iin 64 bit.

FROM: Kane Gyovai DATE: 7/9/2013 9:42:58 AM Eastern Daylight Time  
Verified for V6.5 Beta4/Acceptance Build

|                                            |
|--------------------------------------------|
| Issue ID: 12556                            |
| Subject: Use of Box Beam Moment of Inertia |

|                                |                        |
|--------------------------------|------------------------|
| Folder: /Virtis/Support Center |                        |
| Primary Contact: Lee, Herman   |                        |
| Submitted By: Wagner, Brad     | 5/23/2013 2:52:49 PM   |
| Modified By: hlee              | 10/24/2013 12:42:27 PM |
| Priority: High                 |                        |
| Category: Enhancement          |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:25:09 PM

HRS AASHTO

3533

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Duray, Jim       | New      | High | Unknown |
|                  | Assigned |      |         |
| Lee, Herman      | New      | High | Unknown |
| Ghosh, Subhadeep | Assigned |      | Bug     |
|                  | Resolved |      |         |
|                  | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                        | Description |
|------|------------------------------------------------------------|-------------|
|      | Validation error message.png                               |             |
|      | 11 0095 SC.xml                                             |             |
|      | Shear reinforcement update for PS.pdf                      |             |
|      | 11 0096 play.xml                                           |             |
|      | BWS Report showing up non existent shear reinforcement.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 5/23/2013 10:58:18 AM Eastern Daylight Time

As I was performing some testing for incident 11889, I noticed an issue. In order to attempt to break the I/J requirements for a side by side box beam live load distribution factor, I manually changed the moment of inertia for a box beam. Virtis allowed me to save the changes, but when the live load distribution factor was calculated, it was based on the calculated moment of inertia for the beam, not the manually entered value. I assume that the calculated value is still being used in other parts of the program, but I did not test this. If Virtis is not going to use the hand entered value, you should not be allowed to change it.

FROM: Herman Lee DATE: 6/19/2013 10:16:04 AM Eastern Daylight Time

The PS Box Beam window's Properties tab specified that "Note: Analysis engine computes section properties based on the dimensions given on the 'Dimensions' tab.".

Brad, is it ok to change this incident to an enhancement request for the capability of overriding the computed properties during analysis with user entered section properties in the UI?

4/19/2016 3:25:09 PM

HRS AASHTO

3534

**Complete Issue Information**

FROM: Brad Wagner DATE: 6/19/2013 3:08:14 PM Eastern Daylight Time  
I think that the Properties Tab should be made "Read Only" by default, and that having the ability to change and save a value that is not used in the program is a BUG. I also believe that this statement applies to all prestressed beam shape Properties tabs.

I do agree that adding the capability to override dimensions may not have been intended and thus would be an enhancement.

FROM: Herman Lee DATE: 6/20/2013 7:46:43 AM Eastern Daylight Time  
The original concept of BrDR is to enter the bridge model as complete and detail as possible and the model is independent of the capabilities of the analysis engine. This becomes confusing when it's hard to figure out what are used during analysis. In the coming rewrite and redesign of the software architecture, we need to implement some feedback mechanisms for both the inputs and the analysis messages.

FROM: Herman Lee DATE: 10/24/2013 8:34:09 AM Eastern Daylight Time  
Duplicate of Incident 12216.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 12558                                                              |
| Subject: Shear reinforcement detail update with change in span length for PS |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Ghosh, Subhadeep     |                       |
| Submitted By: vinayagamoorthy, vinacs | 5/23/2013 3:12:07 PM  |
| Modified By: kgyovai                  | 11/14/2013 5:45:36 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Complete Issue Information**

**Description**

FROM: Subhadeep Ghosh DATE: 5/23/2013 11:12:08 AM Eastern Daylight Time  
Submitting this incident on behalf of Vinacs:

The incident is described in detail in the attached Shear reinforcement update for PS.pdf (that contains the email chain).

Adding to the email chain:

The BWS report shows the section of deleted span length for the shear reinforcement ranges (even when all the shear reinforcements are deleted manually). This only happens when the beam length/span length is modified for the copied bridge.

The validation for G1 (for 11 0096 play), after changing the beam length and the corresponding shear reinforcement detail shows an error (ERROR: Shear reinforcement definition is outside the beam). This is probably due to existent deleted span length shear reinforcement detail in the model.

FROM: Subhadeep Ghosh DATE: 7/15/2013 2:19:19 PM Eastern Daylight Time  
Resolved for 6.5.1.

FROM: Kane Gyovai DATE: 11/14/2013 12:01:27 PM Eastern Standard Time  
Verified for V6.5.1

- 1) Schematic displays properly after changing span length and reconfiguring shear reinforcement ranges. Notation from base bridge (the bridge from which the copy was created) no longer displayed on the schematic.
- 2) When copying G1 to G2 and removing the shear reinforcement ranges for G2, the expected Error message displays and the analysis does not complete.
- 3) Shear reinforcement ranges for the copied bridge display correctly in the BWS report.
- 4) Validation for G1, after copying and updating shear reinforcement ranges, no longer displays an error message related shear reinforcement that was removed.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 12560                                         |
| Subject: Frame Structure simplified definition behavior |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: vinayagamoorthy, vinacs | 5/24/2013 5:26:21 PM  |
| Modified By: kgyovai                  | 11/14/2013 5:48:11 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

**History**

4/19/2016 3:25:10 PM

HRS AASHTO

3536

### Complete Issue Information

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Duray, Jim      | New                | High     | Unknown  |
| Lee, Herman     | Assigned           |          |          |
|                 | Information Needed |          |          |
| Ihnat, Joseph   | Assigned           |          | Bug      |
| Lee, Herman     | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | 17855_final.xml                       |             |
|      | 12561_CulvertSpecCheckerV6<br>41.docx |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 5/24/2013 1:26:49 PM Eastern Daylight Time  
Submitted on behalf of Vinacs via the comments received for the Post Tension mockups vesion 1:

Currently we have problems with the data entry with "Frame Structure Option." A brief explanation is given here: a user enters values for the elastic support with the "Frame Structure Option" is turned on. Later (after realizing his/her mistake), user turns off (or de-link) the "Frame Structure Option", the support constraint entered in the support does not get changed to "Roller" support and this may yield erroneous analysis (unless user corrects it). So, please provide warning whenever user changes the "Framing option" after saving the data. If the user "de-links" the substructure from superstructure, support condition should be changed to "Roller."

FROM: Herman Lee DATE: 7/16/2013 10:19:44 AM Eastern Daylight Time  
Added a message box for the user to review Supports window when frame connections are changed on the Superstructure Definition window or the Member window.

Resolved for 6.5.1 release.

FROM: Kane Gyovai DATE: 11/14/2013 12:45:47 PM Eastern Standard Time

4/19/2016 3:25:10 PM

HRS AASHTO

3537

## Complete Issue Information

Verified for V6.5.1.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12561                                                           |
| Subject: BrR shuts down if try to launch the LFR spec checker for culvert |

|                                 |                      |
|---------------------------------|----------------------|
| Folder: /Virtis/Support Center  |                      |
| Primary Contact: Lee, Herman    |                      |
| Submitted By: Murgoitio, Shanon | 5/24/2013 6:44:38 PM |
| Modified By: smurgoitio         | 6/19/2013 5:33:16 PM |
| Priority: High                  |                      |
| Category: Bug                   |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Load Rater Shanon Murgoitio DATE: 5/24/2013 3:03:30 PM Eastern Daylight Time  
We received a bridge model containing a culvert definition from a consultant that was done in V6.4.1. I imported the xml file into both V6.4.1 and V6.5Beta1. Every time I try and launch the LFR spec checker in either 6.4.1 or 6.5Beta1 for the culvert definitions BrR shuts itself down and gives the following message details.

### V6.4.1 Details

Files that help describe the problem:

- C:\Users\smurgoit\AppData\Local\Temp\WERFAFE.tmp.WERInternalMetadata.xml
- C:\Users\smurgoit\AppData\Local\Temp\WERF59.tmp.appcompat.txt
- C:\Users\smurgoit\AppData\Local\Temp\WER1295.tmp.mdmp

### V6.5 Beta 1 Details

Files that help describe the problem:

- C:\Users\smurgoit\AppData\Local\Temp\WERFA85.tmp.WERInternalMetadata.xml
- C:\Users\smurgoit\AppData\Local\Temp\WER1028.tmp.appcompat.txt

4/19/2016 3:25:10 PM

HRS AASHTO

3538

## Complete Issue Information

C:\Users\smurgoit\AppData\Local\Temp\WER127A.tmp.mdmp

When I go to the file location listed I can't find the WER files. This did not happen to the consultant we received the file from so I am wondering if there is something wrong with the import/export process. Please find the xml file attached.

Thank you,  
Shanon Murgoitio

FROM: Herman Lee DATE: 5/26/2013 7:36:22 AM Eastern Daylight Time  
I tried the attached bridge using 6.4.1. For both culvert definitions, I'm able to open the Spec Check Viewer after the LFR analysis.

Please give more details on how to reproduce the problem. For example, which item in the Bridge Workspace tree selected for analysis and which item selected before opening the Spec Check Viewer. Thanks.

FROM: Load Rater Shanon Murgoitio DATE: 5/28/2013 1:12:11 PM Eastern Daylight Time  
Hello Herman.

I have attached a second file with screen shots from V6.4.1 showing the icons I am clicking on and how I am trying to launch the spec checker. I am running Windows 7 on a 64 bit machine and using the AASHTO LFR engine. The attached xml contains a Superstructure Alternative that is not a culvert definition and the spec checker launches just fine for that. Only the Culvert Definitions are causing BrR to shut down.

Thank you,  
Shanon Murgoitio

FROM: Load Rater Shanon Murgoitio DATE: 5/28/2013 1:28:49 PM Eastern Daylight Time  
I forgot to mention everything shown in the attached word document is the same for V6.5 Beta 1 with the exception of the file names listed that describe the problem under "details". Those are shown above. I have V6.5 beta 1 loaded on a different machine than v6.4.1, but it is also running the 64 bit version of Windows 7.

FROM: Herman Lee DATE: 5/29/2013 10:06:25 AM Eastern Daylight Time  
Following the instructions in the Word document, I'm able to reproduce the crash.

FROM: Joseph Ihnat DATE: 5/29/2013 1:34:10 PM Eastern Daylight Time  
The analysis output is being written to the wrong location:  
AASHTOWARE\BrDR65\17855\PosM-CulvertModule12RCF\ITDMethod-12SectionofRCFCornerNegativeMoment\ITDMethod-StifflegNegativeMoment  
Should be:  
AASHTOWARE\BrDR65\17855\PosM-CulvertModule12RCF\PosM-CulvertModule12RCF\PosM-CulvertModule12RCF

FROM: Herman Lee DATE: 6/19/2013 8:42:52 AM Eastern Daylight Time  
Fixed the output path when the analysis has both superstructure and culvert. The fix will be available in 6.5 Acceptance Build for Beta testing.

Resolved for 6.5 release.

4/19/2016 3:25:10 PM

HRS AASHTO

3539

## Complete Issue Information

FROM: Load Rater Shanon Murgoitio DATE: 6/19/2013 1:33:16 PM Eastern Daylight Time  
This issue still exists in 6.5 Beta 3. I think it has something to do with having a superstructure definition in the same file with a culvert definition. If you delete the superstructure definition the spec checker launches normally for the culvert definition. From the above comment it looks like the intention was to resolve the issue before the acceptance build, but I thought I would mention my discovery regarding the superstructure definition.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 12567                                                       |
| Subject: Vehicle Schematic - Wrong Title for Agency Standard Vehicles |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Thompson, Todd   | 5/29/2013 2:04:05 PM |
| Modified By: sthogaru          | 7/8/2013 5:28:29 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | standard_Agency_Schematic.<br>PNG |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

4/19/2016 3:25:10 PM

HRS AASHTO

3540



**Complete Issue Information**

FROM: Todd Thompson DATE: 5/29/2013 10:12:01 AM Eastern Daylight Time  
For 6.4.1

I noticed that for Agency Standard Vehicles - Schematics -- the Window Title is NSG Vehicle Schematic.

See attached Screen Shot

Error still exists in Beta 2 6.5.0

Actually - it appears we have a wrong title for ALL vehciles that are Standard Gage.

FROM: Joseph Ihnat DATE: 5/29/2013 11:21:22 AM Eastern Daylight Time  
Fixed for version 6.5.0 (Beta 3).

FROM: Kane Gyovai DATE: 6/12/2013 11:09:41 AM Eastern Daylight Time  
Verified for V6.5 Beta 3

FROM: Todd Thompson DATE: 6/18/2013 3:51:02 PM Eastern Daylight Time  
Tested in Beta 3

Looks like this was corrected.

FROM: Srujana Thogaru DATE: 7/8/2013 1:21:48 PM Eastern Daylight Time  
Re-Verified for V6.5 Beta 4

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 12571                                                                                        |
| Subject: Engine Related Help link for "Bridge Materials - Soil" directs the user to the wrong location |

|                                  |                       |
|----------------------------------|-----------------------|
| Folder: /Virtis/Support Center   |                       |
| Primary Contact: Trees, Geoffrey |                       |
| Submitted By: Murgoitio, Shanon  | 5/29/2013 8:58:37 PM  |
| Modified By: hlee                | 10/23/2013 1:44:40 PM |
| Priority: High                   |                       |
| Category: Bug                    |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | C-470W-sjh.xml                                  |             |
|      | C-470W errors.docx                              |             |
|      | 12612-Error in adding the shear connectors.docx |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Load Rater Shanon Murgoitio DATE: 5/29/2013 5:04:52 PM Eastern Daylight Time  
The engine related help link for "Bridge Materials – Soil" directs the user to the engine related help for "Bridge Materials – Structural Steel" if the engine configuration is set to "AASHTO Culvert LFD". It should direct the user to the engine related help for "Bridge Materials – Soil" instead. See screen prints on attached word document.

Thank you,  
Shanon Murgoitio

FROM: Geoffrey Trees DATE: 5/31/2013 11:20:43 AM Eastern Daylight Time  
Resolved.

FROM: Kane Gyovai DATE: 6/12/2013 11:54:04 AM Eastern Daylight Time  
Verified for V6.5 Beta 3

FROM: Srujana Thogaru DATE: 7/8/2013 1:13:10 PM Eastern Daylight Time  
Re-Verified for V6.5 Beta 4

Issue ID: 12612

Subject: Error in adding the shear connectors

Folder: /Virtis/Support Center

Primary Contact: Ghosh, Subhadeep

Submitted By: Hart, Sean

6/4/2013 1:12:54 PM

Modified By: kgyovai

11/14/2013 7:48:25 PM

4/19/2016 3:25:11 PM

HRS AASHTO

3542

**Complete Issue Information**

|                |
|----------------|
| Priority: High |
| Category: Bug  |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Ihnat, Joseph   | Assigned  |          | Unknown     |
|                 | Resolved  |          | Bug         |
|                 | Verified  |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | Member Alt Selection within CurveBridge.docx |             |
|      | Variable Strip Typical Section View.docx     |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 6/4/2013 9:13:06 AM Eastern Daylight Time  
 Error in adding the shear connectors  
 I submitted this incident on behalf of Sean Hart from Baker (SHart@mbakercorp.com). The communication email was listed below. The error message and the bridge XML file were attached in the document.

\*\*\*\*\*

From: Hart, Sean  
 Sent: Thursday, May 30, 2013 12:26 PM  
 To: Lee, Herman  
 Subject: Virtis Help

I'm getting the attached errors when running the attached file for G6 & G7. I messed around with the diaphragm locations to move some of the concentrated loads around and I'm still getting the errors.

4/19/2016 3:25:11 PM

HRS AASHTO

3543

**Complete Issue Information**

Any insight as to what the issue is?

\*\*\*\*\*

Please use AASHTO LRFR, member alternative of G6 to reproduce this issue. The error message was listed in figure 1.

Figure 1 Error message for AASHTO LRFR, G6

There are 2 bugs need to be fixed here. The 1st one located in the GUI for the Shear Connectors. The shear connectors information cannot be updated if I change the Support Number (figure 2).

Figure 2 GUI error for the Shear Connectors

The 2nd bug located in the AbaSpecCtrl, the AddShearConnectorMaxZeroMinMomentLocations function (figure 3). There is no code to handle the situation when all the positive LL moments are zero within a span (figure 4).

Figure 3 AddShearConnectorMaxZeroMinMomentLocations()

Figure 4 All the positive LL moments in span 1 and span 3 are zero

Please read the attached WORD document for details (12612-Error in adding the shear connectors.docx).

FROM: Subhadeep Ghosh DATE: 7/17/2013 10:55:37 AM Eastern Daylight Time  
Resolved for 6.5.1.

FROM: Kane Gyovai DATE: 11/14/2013 12:48:21 PM Eastern Standard Time  
Verified for V6.5.1

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12617                                                |
| Subject: Member Alt Type choice within Structure Definition UI |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center        |                       |
| Primary Contact: Ilnat, Joseph        |                       |
| Submitted By: vinayagamoorthy, vinacs | 6/5/2013 1:38:54 PM   |
| Modified By: bzhang                   | 11/15/2013 4:21:38 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

4/19/2016 3:25:11 PM

HRS AASHTO

3544

**Complete Issue Information**

|      |         |         |         |
|------|---------|---------|---------|
| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | Crash as result of xsl file location.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 6/5/2013 9:41:35 AM Eastern Daylight Time  
I understand that Member Alt Type is only used to display the Virtis Tree.  
However, I would like to have the similar behavior of displaying/not displaying member alternative choices made by the user.

FROM: Herman Lee DATE: 6/5/2013 10:02:32 AM Eastern Daylight Time  
Vinacs, could you clarify what you meant by "displaying/not displaying member alternative choices made by the user"? Thanks.

FROM: vinacs vinayagamoorthy DATE: 7/2/2013 11:29:30 AM Eastern Daylight Time  
I have attached a wrong document for you. Here is the write up on the issue (Member Alt Type choice).

FROM: Herman Lee DATE: 7/7/2013 10:42:40 AM Eastern Daylight Time  
From the Help:

=====  
These types will automatically be selected when a corresponding member alternative type is created. These checkboxes cannot be unchecked if a corresponding member alternative type exists. For example, if a prestressed concrete member alternative currently exists, the P/S box will be checked and disabled. You can not uncheck the box while that prestressed concrete member alternative exists.  
=====

Joe, please mark this as duplicate if this is the same as Incident 12278.

FROM: Joseph Ihnat DATE: 10/16/2013 9:27:41 AM Eastern Daylight Time  
Not the same as 12278. Fixed in 6.5.1

FROM: Bin Zhang DATE: 11/15/2013 11:09:07 AM Eastern Standard Time  
Verified for version 6.5.1 aplha 2, the program behaves as described in the help now.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 12625                                                    |
| Subject: Crash due to the location of user defined xsl file format |

### Complete Issue Information

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center        |                     |
| Primary Contact: Ihnat, Joseph        |                     |
| Submitted By: vinayagamoorthy, vinacs | 6/6/2013 2:34:24 PM |
| Modified By: jihnat                   | 6/6/2013 2:36:16 PM |
| Priority: High                        |                     |
| Category: Unknown                     |                     |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                              | Description |
|------|--------------------------------------------------|-------------|
|      | analysis window.JPG                              |             |
|      | 77011000C01.xml                                  |             |
|      | POI defined for all members.JPG                  |             |
|      | Spec checks missing interior and right walls.JPG |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 6/6/2013 10:35:22 AM Eastern Daylight Time  
See attached document.

## Complete Issue Information

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 12627                                                 |
| Subject: Missing POI for interior and right walls in Spec Check |

|                                   |                      |
|-----------------------------------|----------------------|
| Folder: /Virtis/Support Center    |                      |
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Wagner, Brad        | 6/6/2013 5:01:25 PM  |
| Modified By: bwagner              | 7/3/2013 12:39:47 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 6/6/2013 1:07:41 PM Eastern Daylight Time  
I've ran the xml file in both 6.4.1 and 6.5.0 beta 2 and I got the same things as shown in the attachments. POI for the interior and right walls are missing from the spec checks. I can see POI for top/bottom slab and left wall.

Dan

4/19/2016 3:25:12 PM

HRS AASHTO

3547

**Complete Issue Information**

FROM: Srujana Thogaru DATE: 6/13/2013 4:28:49 PM Eastern Daylight Time  
This error exists in 6.4.1 release

FROM: Srujana Thogaru DATE: 6/18/2013 3:08:04 PM Eastern Daylight Time  
Fixed for 6.5 release

FROM: Subhadeep Ghosh DATE: 7/1/2013 12:57:09 PM Eastern Daylight Time  
Verified for 6.5, next release to Beta 3.

FROM: Brad Wagner DATE: 7/3/2013 8:39:47 AM Eastern Daylight Time  
Verified in updated beta 3.  
Dan

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12628                                                           |
| Subject: Shear Reinforcement data within database is not cleared entirely |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Ghosh, Subhadeep     |                      |
| Submitted By: vinayagamoorthy, vinacs | 6/6/2013 5:14:50 PM  |
| Modified By: hlee                     | 7/16/2013 7:52:05 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

**History**

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Duray, Jim       | New       | High     | Unknown  |
| Ghosh, Subhadeep | Assigned  |          |          |
|                  | Duplicate |          | Bug      |

4/19/2016 3:25:12 PM

HRS AASHTO

3548





**Complete Issue Information**

|                       |                     |
|-----------------------|---------------------|
| Modified By: hlee     | 6/7/2013 6:40:17 PM |
| Priority: High        |                     |
| Category: Enhancement |                     |

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Unknown  |
| Ghosh, Subhadeep |          |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Todd Thompson DATE: 6/7/2013 2:33:26 PM Eastern Daylight Time

Our designers have requested that it would be very useful in design to include moment and shear envelopes for Strength I, Strength II, Service I and Service III. Currently, only Strength I is shown under critical loads.

We should also make sure this falls in the "reports" bucket of enhancements.

**Complete Issue Information**

Issue ID: 12648  
Subject: Deck rating summary missing from Report Tool's BWS report

Folder: /Virtis/Support Center  
Primary Contact: Ghosh, Subhadeep  
Submitted By: Lee, Herman 6/11/2013 11:25:13 AM  
Modified By: sthogaru 3/20/2014 7:51:16 PM  
Priority: High  
Category: Unknown

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 6/11/2013 7:26:11 AM Eastern Daylight Time  
Submitted on behalf of Alex Pence (Alex.Pence@dot.wi.gov), WisDOT.

Part of the received Bridgeware email on 6/10/2013.

=====  
1. As you are aware, the transverse deck results do not show up in the Rating Summary Table (incident #11149). Is there a way to view them in a BWS Report? In my timber deck-girder bridge, I was only able to figure out how to add the rating summaries for the girders, but not the deck.  
=====

## Complete Issue Information

Issue ID: 12653

Subject: Data Missing within BWS Report Tool

Folder: /Virtis/Support Center

Primary Contact: Thogaru, Srujana

Submitted By: vinayagamoorthy, vinacs 6/11/2013 2:43:21 PM

Modified By: kgyovai 7/9/2013 1:16:22 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
| Trees, Geoffrey  |          |          |          |
| Thogaru, Srujana | Resolved |          |          |
|                  | Verified |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |

4/19/2016 3:25:13 PM

HRS AASHTO

3552

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Srujana Thogaru DATE: 6/11/2013 10:44:14 AM Eastern Daylight Time  
Based on the attached email, from Vinayagamoorthy, Murugesu@DOT  
[mailto:murugesu.vinayagamoorthy@dot.ca.gov] this incident is created

1. Diaphragm Definitions attributes has been added to the BWS report tool.
2. Frame connection attributes has been added to the BWS report tool. Frame Connections Indicator attribute has been removed.
3. AC Thickness field measure attributes already exists
4. Ignore the positive moment at supports is Under Member Alt Definition
5. Mild Reinforcement Attributes has been added to the report toll

Above fixes are made in 6.5 Beta 3

FROM: Srujana Thogaru DATE: 6/12/2013 8:40:29 AM Eastern Daylight Time  
Geoff please implement the sql script I have send to you in DB.

FROM: vinacs vinayagamoorthy DATE: 6/12/2013 12:52:26 PM Eastern Daylight Time  
Analysis Envet - Rating Summary Attributes does not contain Location by Span-(%) as well. Can we include that as well?

FROM: Geoffrey Trees DATE: 6/12/2013 1:15:42 PM Eastern Daylight Tim  
Changes prior to 6/12 are implemented.

FROM: Girish Bhanushali DATE: 6/12/2013 3:24:41 PM Eastern Daylight Time  
Hi Vinacs,  
We have created a separate incident (VI# 12655) to reflect your above request regarding - Span - (%) in rating summary report.  
Thanks.

FROM: Srujana Thogaru DATE: 6/13/2013 3:23:41 PM Eastern Daylight Time  
Other than 12655, this issue has been fixed in 6.5 Beta 3

4/19/2016 3:25:13 PM

HRS AASHTO

3553

**Complete Issue Information**

FROM: Kane Gyovai DATE: 6/14/2013 3:38:53 PM Eastern Daylight Time  
Verified for V6.5 Beta 3

FROM: vinacs vinayagamoorthy DATE: 6/26/2013 10:31:00 AM Eastern Daylight Time  
I have tested the BWS report on diahragm. It needs improvement  
(1) Attributes should include the name of the diaphragm definiton, type of diaphragm selected  
(2) It is somehow not recognizing the concrete diaphragms and reporting incorrect data. Please see the attached word document and bridge file, where Interior diaphragms and Interior Concrete diaphragm are included.

FROM: Srujana Thogaru DATE: 6/26/2013 3:05:43 PM Eastern Daylight Time  
Name of the diaphragm, type of diaphragm selection attributes are under Diaphragm Def. I have missed concrete name, Concrete Height and Concrete Thickness. These three attributed implemented for 6.5 Beta4/ acceptance build under Diaphragm Def.

FROM: Kane Gyovai DATE: 7/9/2013 8:50:06 AM Eastern Daylight Time  
Verified for V6.5 Beta 4/Acceptance Build

Diaphragm Def Includes: Name and Type, Concrete Diaphrams reporting correctly.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 12655                                        |
| Subject: Rating Summary Report - % Span column missing |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 6/12/2013 7:22:24 PM |
| Modified By: hlee                     | 6/14/2013 2:32:57 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

**History**

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Thogaru, Srujana | New       | High     | Unknown     |
| Lee, Herman      | Assigned  |          | Enhancement |
|                  | Suspended |          |             |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

4/19/2016 3:25:13 PM

HRS AASHTO

3554

**Complete Issue Information**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Girish Bhanushali DATE: 6/12/2013 3:23:14 PM Eastern Daylight Time  
This issue is forked from 12653.

Comment below is copied from 12653.

////////

FROM: vinacs vinayagamoorthy DATE: 6/12/2013 12:52:26 PM Eastern Daylight Time  
Analysis Envet - Rating Summary Attributes does not contain Location by Span-(%) as well. Can we include that as well?

///

FROM: Girish Bhanushali DATE: 6/12/2013 3:40:55 PM Eastern Daylight Time  
Additional information received from vinacs:

This applies to all relevant canned (abr) reports shipped.

This column is available on Tabular Results window in addition to the absolute location.

Primarily it needs to be confirmed if this is a bug to help determined it can be pursued as an enhancement to update all relevant canned report(s) to show that column.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 12671                                           |
| Subject: Curved Steel Girder Diaphragm Wizard Improvement |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Huang, George    | 6/17/2013 7:00:01 PM |
| Modified By: hlee              | 8/2/2013 5:48:35 PM  |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**Complete Issue Information**

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Lee, Herman      | Assigned           |          |          |
| Thogaru, Srujana |                    |          |          |
| Skow, Wayne      |                    |          | Bug      |
|                  | Information Needed |          |          |
|                  | Duplicate          |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: George Huang DATE: 6/17/2013 3:06:36 PM Eastern Daylight Time  
In the case: Reference Line = Superstructure def. ref. line; and Diaphragm Spacing= Enter groups of equal spacing, the span information may be added in the data entry to make this function more efficient. See attached file for details.



## Complete Issue Information

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 12698                                                        |
| Subject: AASHTO LRFD - Error in Shear Envelop for a Prestressed Girder |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center      |                      |
| Primary Contact: Skow, Wayne        |                      |
| Submitted By: Woldemichael, Berhanu | 6/21/2013 4:20:41 PM |
| Modified By: hlee                   | 5/29/2014 6:30:08 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0810012.xml         |             |
|      | 0810012-error.jpg   |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Berhanu Woldemichael DATE: 6/21/2013 12:27:15 PM Eastern Daylight Time  
For 6.5 Beta 3, AASHTO LRFD run for a prestressed Girder has an error. For a simple sapan the Strength envelop should change signs around the mid-span. The case was reported for a steel run in the previos versions.

FROM: Srujana Thogaru DATE: 6/26/2013 9:28:55 AM Eastern Daylight Time  
This issue exists in 6.4.1 release. Hence it is a release bug.  
Reason for above issue is due to, considering absolute value of shear in 5.8.3.3 article.

FROM: Wayne Skow DATE: 3/20/2014 2:32:46 PM Eastern Daylight Time

4/19/2016 3:25:13 PM

HRS AASHTO

3557

**Complete Issue Information**

Berhanu, can you tell me specifically where you're seeing positive shears but think they should be negative. If you click on the "View Analysis Charts" button, you will get shear diagrams showing just what you're describing above. If it's the articles you're talking about, most have been written to work with positive shear values (they take the absolute value of whatever the shear is, positive or negative). Those values are reflected in the summary reports. Changing all those would be a large task.

|                                  |
|----------------------------------|
| Issue ID: 12709                  |
| Subject: Flared Girder Run Error |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Litchfield, Phil | 6/24/2013 9:41:17 PM  |
| Modified By: hlee              | 6/25/2013 12:00:27 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Phil Litchfield DATE: 6/24/2013 6:06:29 PM Eastern Daylight Time  
While trying to analyze the attached model, all girders will run except the flared girder which errors.

4/19/2016 3:25:14 PM

HRS AASHTO

3558

**Complete Issue Information**

I've attached the error message. Can you please help decipher the message and help find the cause?

FROM: Herman Lee DATE: 6/25/2013 7:35:14 AM Eastern Daylight Time

I'm able to complete the analysis for G9 after I changed the right girder start distance of the last diaphragm in girder bay 8 from 37.6597 ft to 37.639267 ft.

|                             |
|-----------------------------|
| Issue ID: 12712             |
| Subject: Duplicate Bar Mark |

|                                   |                        |
|-----------------------------------|------------------------|
| Folder: /Virtis/Support Center    |                        |
| Primary Contact: Kennelly, Krisha |                        |
| Submitted By: Teal, Dean          | 6/26/2013 12:43:06 PM  |
| Modified By: hlee                 | 10/14/2014 12:58:37 PM |
| Priority: High                    |                        |
| Category: Maintenance             |                        |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:25:14 PM

HRS AASHTO

3559

**Complete Issue Information**

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Kennelly, Krisha | Assigned  |      |             |
|                  | Suspended |      | Maintenance |
| Lee, Herman      | New       | High | Unknown     |
|                  | Suspended |      | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | One additional Attribute for Girder Member.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Dean Teal DATE: 6/26/2013 8:46:04 AM Eastern Daylight Time  
Beta 3

Notice in my screen shot I have a duplicate bar mark (S14)  
As far as I can tell they are identical  
The program does give an error and allows this

Should duplicate bar mark names be allowed?

FROM: Krisha Kennelly DATE: 6/27/2013 9:07:42 AM Eastern Daylight Time

It looks like the current behavior is to not allow duplicate names for appurtenances but duplicate names are allowed for everything else (eg materials, beam shapes, diaphragm definitions, factors, weld definitions, shear connector definitions, stiffener definitions, stirrup definitions, bar mark definitions were tested and allowed to have duplicates). Folder changed to Support since this is not new to beta testing of 6.5.

FROM: Herman Lee DATE: 10/14/2014 8:50:44 AM Eastern Daylight Time

Duplicate of BRDRSUP-452.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 12715                                                   |
| Subject: Span length attribute should be added to "Girder Member" |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:25:14 PM

HRS AASHTO

3560

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 6/26/2013 2:49:32 PM |
| Modified By: hlee                     | 6/26/2013 3:05:31 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description                                                                                   |
|------|---------------------|-----------------------------------------------------------------------------------------------|
|      |                     | Number of decimal for data when user chose the display option within preferences<br>docx.docx |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 6/26/2013 10:55:25 AM Eastern Daylight Time  
When I create the BWS report, I noticed that the span length of individual girders cannot be reported. Please note the span length along the reference line does not always equal the span length of girders (for curve bridges and bridges with differing skewed support). When the data of individual girders are reviewed, span length of individual girders become an important item.

As a result, we would like to generate the span length of individual girder in the BWS report.

## Complete Issue Information

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 12716                                                                     |
| Subject: Data within BWS report should reflect the values entered into the software |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center        |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 6/26/2013 4:06:02 PM |
| Modified By: hlee                     | 6/26/2013 4:48:59 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 6/26/2013 12:08:49 PM Eastern Daylight Time  
When we create the report, the BWS report round the values to nearest two or four decimal point (depending on display setting). Values should be reported as entered by the user or values established by the software, instead of truncating to the nearest tolerance.

## Complete Issue Information

Issue ID: 12719

Subject: Duplicate row within DeckConcrete UI of CurveBridge does not copy the End Effective Flange width

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: vinayagamoorthy, vinacs 6/26/2013 6:09:23 PM

Modified By: vvinayagamoorthy 12/13/2013 8:47:33 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

4/19/2016 3:25:15 PM

HRS AASHTO

3563

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MPN3.73U2 WB.xml    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: vinacs vinayagamoorthy DATE: 6/26/2013 2:13:13 PM Eastern Daylight Time  
As the Subject states, when I duplicate a row within the DeckConcrete UI, it does not copy the end effective flange width.

It will fill the values, if the user click on APPLY button. If the user user close the UI by clicking OK button "End Effective flange width" does not get updated.

FROM: Joseph Ihnat DATE: 9/26/2013 10:54:58 AM Eastern Daylight Time  
I'm able to reproduce this in the 6.4 Release. Changed Folder to Support Center. Fixed for 6.5.1.

FROM: Bin Zhang DATE: 11/15/2013 11:22:13 AM Eastern Standard Time  
Verified for version 6.5.1 Alpha2.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 12725                                                                         |
| Subject: AASHTO LFR is conservative when applying the DC2 shear force from uniform load |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Cavanaugh, Scott | 6/27/2013 9:04:07 PM |
| Modified By: hlee              | 5/29/2014 6:04:51 PM |
| Priority: High                 |                      |

4/19/2016 3:25:15 PM

**HRS AASHTO**

3564



**Complete Issue Information**

Category: Bug

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | virtis error.png    |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

**Description**

FROM: Bin Zhang DATE: 6/27/2013 5:05:23 PM Eastern Daylight Time  
 I submitted this incident on behalf of Scott E. Cavanaugh from HNTB. The communication email was listed below. Please use AASHTO LFR, type 3 vehicle, member alternative of G1 to reproduce this issue.

AASHTO considers the shear force signs in the grid. However, AASHTO applied the worst combination of the stage 2 shear forces in the spec check. This made the AASHTO rating conservative when the user applied the negative stage 2 uniform load for the member. The bridge model was attached in the document.

\*\*\*\*\*  
 \*\*\*\*\*

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
 Sent: Thursday, June 27, 2013 3:48 PM  
 To: Bridgewater,  
 Subject: RE: load direction in virtis

Herman,  
 Based on my review a few minutes ago, I saw the same sign for shear when running both POSITIVE and NEGATIVE uniform loads. Rating results are the same for shear for these two cases when viewing the VIEW ANALYSIS REPORT button.

I have attached the file for your review. I will direct the consultant to use POSITIVE dead loads (positive downward) for all ratings. Please let me know if you do confirm a bug in the program.

Thanks

4/19/2016 3:25:15 PM

HRS AASHTO

3565

## Complete Issue Information

Scott

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Thursday, June 27, 2013 3:39 PM  
To: Scott Cavanaugh  
Subject: RE: load direction in virtis

Scott,

The sign of the shear should be taken into account also. Is the DL shear used in the rating computation the same for both the positive and negative uniform load? How about the shear actions listed in the Analysis Results window? Are the signs listed there the same or opposite? Please send us the bridge if you suspect there's a bug in the system.

Herman

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
Sent: Thursday, June 27, 2013 3:20 PM  
To: Bridgeware,  
Subject: RE: load direction in virtis

Herman,

You are correct. My initial quick run showed the same rating results for both POSITIVE and NEGATIVE uniform load, however, that was because shear was controlling. Does virtis consider the absolute value for shear?

For flexure I confirmed using SPEC CHECK that there is a difference between the POSITIVE and NEGATIVE runs (virtis is considering the sign here).

Thanks  
Scott

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Thursday, June 27, 2013 2:22 PM  
To: Scott Cavanaugh  
Subject: RE: load direction in virtis

Scott,

I think Virtis will take the sign of the load into account. Have you check into the rating computation in the Spec Check Viewer?

Herman

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
Sent: Thursday, June 27, 2013 1:26 PM  
To: Bridgeware,  
Subject: load direction in virtis

Herman,

In reviewing another consultants load rating in virtis, I see for the first time that they have input a

4/19/2016 3:25:15 PM

HRS AASHTO

3566

### Complete Issue Information

negative load for DC1, DC2, etc. Review of the output using both + and – values returns the same rating.

So, it seems virtis will always assume the loading is downward regardless of sign? This particular load was a uniform load.

Please let me know if I am understanding this correctly.

Thanks  
Scott

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Thursday, June 27, 2013 10:38 AM  
To: Scott Cavanaugh  
Subject: RE: Riveted steel girder haunch

Scott,

The haunch width is not used to compute section properties. The haunch depth, represented as a gap between the deck and the beam, is used to compute the section properties. You have to compute and enter the haunch load separately.

Herman

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
Sent: Thursday, June 27, 2013 10:14 AM  
To: Bridgeware,  
Subject: Riveted steel girder haunch

Herman,

Can you please confirm that haunch dead load is not automatically computed by Virtis based on input in the CROSS SECTION / HAUNCH tab? I have this information jotted down, but upon review of the CROSS SECTIONS: HAUNCH help information, I find it a little confusing, with some indication that “you must enter haunch dead load separately”, but in other areas it says “The haunch width is used to compute dead load only”.

Can you please clarify?

Thanks  
Scott E. Cavanaugh, P.E.  
Project Engineer / Team Leader  
HNTB Corporation  
State Route 3 Eastbound  
Turnpike Maintenance Yard  
East Rutherford, NJ 07073  
Tel (201) 528-9069  
Fax (201) 939-2383  
Cell (201) 522-1321  
www.hntb.com

4/19/2016 3:25:15 PM

HRS AASHTO

3567

**Complete Issue Information**

---

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

---

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

---

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

\*\*\*\*\*  
\*\*\*\*\*

FROM: Krisha Kennelly DATE: 6/28/2013 9:14:49 AM Eastern Daylight Time

1. Loads acting downward on the member should be entered with a positive sign on the Member Loads window. A negative sign on these loads means the load is an uplift load. BrDR will take into consideration the sign entered here when applying the load.

BrDR considers the absolute value for the shear force when evaluating the Spec articles. This is not a bug as indicated in the email from Ben on 6/27. Shear does not have a sign when evaluating spec articles.

2. The AASHTO engines compute the haunch dead load based on the haunch width and depth entered by the user. The AASHTO engines only consider the gap between the deck and beam (haunch depth) for section property calculations. The AASHTO engines do not include the area of concrete haunch in the section properties.

The note in the BrDR help for Cross Sections:Haunch instructing the user to enter the haunch dead load separately is incorrect. It appears this note is left over from when the BRASS engines were the only engines available in BrDR.

a. The BrDR help should be revised to say:

**Haunch Depth**

Enter the haunch depth, measured from the bottom of the slab to the top of the girder flange or web, as previously selected and as shown in the sketch. Refer to the Engine Related Help and Dead Loads topics for how this data is used by the analysis engine.

**Haunch Width**

Enter the haunch width. Refer to the Engine Related Help and Dead Loads topics for how this data is used by the analysis engine.

b. The BrDR Engine Help for Cross Sections:Haunch should be revised to say:

**Haunch Depth**

This data is used to compute the haunch dead load. This data is also used to determine the gap between the concrete slab and steel beam when computing the section properties. The area of the

**Complete Issue Information**

concrete haunch is not considered in the section property calculations.

**Haunch Width**

This data is used to compute the haunch dead load. This data is not used when computing the section properties. The area of the concrete haunch is not considered in the section property calculations.

FROM: Krisha Kennelly DATE: 6/28/2013 12:04:38 PM Eastern Daylight Time  
Note that item #1 is actually a bug. BrDR should be using the absolute value of the sum of the shears for each stage and load type (DC, DW) not the absolute value of each individual load effect when determining what shear force to use in the spec articles.

FROM: Mehrdad Ordoobadi DATE: 3/7/2014 10:10:23 AM Eastern Standard Time  
From: Krisha Kennelly  
Sent: Friday, March 7, 2014 10:03 AM  
To: Mehrdad Ordoobadi  
Cc: Wayne Skow; Herman Lee  
Subject: RE: Release Bug Fix for the 6.6 Alpha Build 4 (March 24) Testing

I believe this is the same as BRDRSUP-39 which Wayne worked on fixing back in September. The fix however caused some problems in the LFR rating and we were trying to include this fix in the critical patch to 6.5.0 but didn't want to risk breaking anything in the patch so we rolled back Wayne's changes.

We should make this fix for 6.6 now. I think Wayne should take the lead on this issue since he worked on BrDRSup-39.

Wayne – can you review 12725 and BrDRSup-39 and verify that they are the same problem? Then you can add this 12725 and BRDSup-39 to your list of items to work on for 6.6.

Thanks.

FROM: Wayne Skow DATE: 4/8/2014 10:28:18 AM Eastern Daylight Time  
Yes, they are the same problem.

FROM: Herman Lee DATE: 5/29/2014 2:02:50 PM Eastern Daylight Time  
Fixed for 6.6 Release.

Issue ID: 12732  
Subject: error message with new user

Folder: /Virtis/Support Center  
Primary Contact: Ihnat, Joseph  
Submitted By: Doerr, Gary 7/1/2013 8:11:19 PM  
Modified By: jhnat 7/2/2013 11:45:23 AM  
Priority: High  
Category: Support

4/19/2016 3:25:15 PM

**HRS AASHTO**

3569

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gary Doerr DATE: 7/1/2013 4:18:13 PM Eastern Daylight Time

I have a new user that now when trying to open a bridge from the explorer he gets the attached message. There is not much info in how to track it down. Did I miss some permissions somewhere? he was able to start a bridge, the auto save didn't appear to be working well and now he can't even open an existing structure from the bridge explorer.

Gary  
Gary L. Doerr  
Bridge Managment Section  
NDDOT  
701-328-4844  
gldoerr@nd.gov

FROM: Joseph Ihnat DATE: 7/2/2013 7:43:24 AM Eastern Daylight Time  
Try granting Full Control to Everyone for the folder where Virtis is installed.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 12738                            |
| Subject: Wheel location for 3D nsg vehicle |

|                                   |                     |
|-----------------------------------|---------------------|
| Folder: /Virtis/Support Center    |                     |
| Primary Contact: Kennelly, Krisha |                     |
| Submitted By: Kennelly, Krisha    | 7/3/2013 6:45:53 PM |
| Modified By: kkennelly            | 7/4/2013 3:28:33 AM |
| Priority: High                    |                     |
| Category: Bug                     |                     |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Krisha Kennelly DATE: 7/3/2013 2:46:30 PM Eastern Daylight Time  
Discovered during beta testing for 6.5.0. For 3d analysis, nonstandard gage vehicles have wheels at CL of truck instead of their correct location.

FROM: Krisha Kennelly DATE: 7/3/2013 11:28:37 PM Eastern Daylight Time  
fixed for acceptance build for 6.5.0

## Complete Issue Information

Issue ID: 12739

Subject: Skew Error when adding Stringer Group Definition to FS Geometry

Folder: /Virtis/Support Center

Primary Contact: Ghosh, Subhadeep

Submitted By: Jackson, Amanda

7/3/2013 7:27:18 PM

Modified By: gtrees

11/15/2013 6:38:00 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Zhang, Bin       | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Ghosh, Subhadeep |                    |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:25:16 PM

HRS AASHTO

3572



## Complete Issue Information

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | CA_curvedsteel_VI12748.docx |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 7/3/2013 3:44:24 PM Eastern Daylight Time

In the attached bridge, superstructure named Spans 3 and 4, whenever I try to add the Span 3 stringer group definition to Unit 1 and the Span 4 stringer group definition to Unit 2, I get the attached error message. I'm guessing it is a rounding error somewhere, but I'm not sure where the rounding error is happening. I verified that I am also getting this error in version 6.5, beta 3.

Also, regardless of how much I change the skew lengths and span lengths, whenever I try to choose a stringer definition for Unit 1 Stringer 1 in the Stringer Unit 1 layout, I get the following error:

Stringer Definition length mismatch. The stringer definition length of xx.xxxx ft assigned to this stringer member alternative does not match the stringer member length of 72.9721 ft.

The xx.xxxx varies depending on the definition I use, but the stringer member length of 72.9721 never changes. It should get recalculated every time I make a change that affects it. This is also happening in 6.5 beta 3.

FROM: Herman Lee DATE: 7/3/2013 3:48:11 PM Eastern Daylight Time  
Amanda, please attach the bridge to this incident again. Thanks.

FROM: Herman Lee DATE: 7/8/2013 10:48:21 AM Eastern Daylight Time  
Please see below for a workaround.

1. Modify support skews in the Structure Framing Plan window.
  - Change Support 1 Skew from 3.2129 to 3.2130
  - Change Support 2 Skew from -14.3664 to -14.3660
  - Change Support 2 Skew from -3.1774 to -3.1770
2. Reselect skew angles in Span 3 and Span 4 Stringer Group Definitions.
3. Assign Span 3 Stringer Group Definition to Unit 1 and Span 4 Stringer Group Definition to Unit 2 in the Floor System Geometry window.

#### Developer Note:

Need to keep all decimal places when saving skew angles in the Stringer Group Definition Geometry window.

FROM: Subhadeep Ghosh DATE: 9/12/2013 12:03:38 PM Eastern Daylight Time

As per Herman's note, all the decimal places will be saved for the skew angle as mentioned in the

4/19/2016 3:25:16 PM

HRS AASHTO

3573

**Complete Issue Information**

Framing Plan window.

For the second issue that the user has reported about the member length not changing with the skew or the span length change, please do the following:

- Deassign Stringer Group Definiton to "None" for stringer unit affected by the span or skew change in Floor System Geometry window
- Select the Stringer Group Definiton Geometry affected by the span or skew change and reselect the Possible Floorbeam Spacing, select the skew angle as appropriate.
- Hit OK
- Reaassign the Stringer Group Definiton for stringer unit affected by the span or skew change in the Floor System Geometry window
- Create Stringer member alternative for the affected unit.

The above steps update the member length.

Resolved for 6.5.1.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 12748                                               |
| Subject: It's Difficult To Modified Entries in Girder Profile |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Huang, George    | 7/8/2013 7:29:47 PM  |
| Modified By: hlee              | 7/14/2013 1:29:23 AM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

**History**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 7/8/2013 3:36:22 PM Eastern Daylight Time

In "Girder Profile", if there is mistake with missing line, it's difficult to modify the entries without modify all the line after the wrong entry or missing entry. It will be use full if there is function for insert a line, or enter a correct line at the end and move it correctly to the right position, and user can modify the rest lines. See attached file from the screen shot.

FROM: Krisha Kennelly DATE: 7/9/2013 10:41:57 AM Eastern Daylight Time

Tihs is an enhancement request to modify how data is entered in the Girder Profile window. Folder changed to support center.

Issue ID: 12762

Subject: Virtis Culvert Engine Fails To Run

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Campisi, Paul

7/12/2013 6:44:40 PM

Modified By: jihnat

7/26/2013 6:26:33 PM

Priority: High

Category: Support

### History

4/19/2016 3:25:16 PM

HRS AASHTO

3575

**Complete Issue Information**

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Paul Campisi DATE: 7/12/2013 2:53:38 PM Eastern Daylight Time

The Culvert Engine fails to run on the department's Citrix server. When load rating a culvert, the application crashes stating "Unable to create AASHTO Culvert Engine." Attached is the message detail. This occurs for both LFR and LRFR modules.

Paul Campisi  
 NYSDOT  
 Office of Structures

FROM: Joseph Ihnat DATE: 7/17/2013 7:55:44 AM Eastern Daylight Time  
 Please attach the message detail.

FROM: Joseph Ihnat DATE: 7/26/2013 2:25:39 PM Eastern Daylight Time  
 Resolved by registering AbxnAashtoEngine.dll

## Complete Issue Information

|                                                |
|------------------------------------------------|
| Issue ID: 12764                                |
| Subject: Custom Section Properties Enhancement |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Jackson, Amanda  | 7/12/2013 7:55:46 PM |
| Modified By: hlee              | 7/12/2013 8:25:59 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | Assigned | High     | Unknown  |
| Ghosh, Subhadeep |          |          |          |
| Lee, Herman      |          |          |          |
| Ghosh, Subhadeep |          |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Problem Running Virtis.pdf |             |
|      | 2249090.xml                |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Amanda Jackson DATE: 7/12/2013 4:04:43 PM Eastern Daylight Time  
Requesting an enhancement that allows the user to enter custom section properties for a steel girder, floorbeam, or stringer. The user enters all section properties at each cross-section, and those section properties are used in the analysis. The need for this occurs when there are bridges with girder configurations that are not supported by BrDR. For example, we have several bridges in Montana with

4/19/2016 3:25:17 PM

HRS AASHTO

3577

### Complete Issue Information

what we call a Transverse Girder. I've also heard of it as a Straddle Girder. It can be modeled as a floorbeam and faked in as a built-up steel section, but the section we have is truly a box shape. Modeling it as an I shape works for bending analysis, but the I shape has a much lower lateral and torsional stiffness than a box section, which can be problematic. If we were allowed to enter custom section properties that we hand-calculate, we could get around these types of problems without having to do a more complex enhancement that creates a completely new type of section to analyze. It would be useful in many situations where the bridge in the field doesn't quite match the type of configuration we are able to define in BrDR.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 12782                                                              |
| Subject: Unable to perform analysis for PS box beam without bottom thickness |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Ghosh, Subhadeep |                       |
| Submitted By: Lee, Herman         | 7/18/2013 4:49:54 PM  |
| Modified By: kgyovai              | 11/14/2013 7:51:10 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 7/18/2013 12:50:32 PM Eastern Daylight Time  
Submitted on behalf of Richard Ng (rng@bheng.com), B&H Engineering.

4/19/2016 3:25:17 PM

HRS AASHTO

3578

## Complete Issue Information

Received Bridgeware email:

=====  
From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Thursday, July 18, 2013 8:23 AM  
To: rng@bheng.com  
Cc: jose camacho; Steven Schroeder  
Subject: RE: Virtis Problem 1

Richard,

For the warning message (first screen capture), the BRASS Engine does not come with BrR (formerly Virtis) since version 6.3. Please contact the agency that you do your work for whether to switch to the AASHTO Engine.

For the crash problem when using the AASHTO Engine (second screen capture), please send us the bridge for further investigation.

Thanks,  
Herman Lee

From: Richard Ng [mailto:rng@bheng.com]  
Sent: Wednesday, July 17, 2013 5:49 PM  
To: Bridgeware,  
Cc: jose camacho; Steven Schroeder  
Subject: FW: Virtis Problem 1

Joe,

Thank you for your patience and assistance during the upgrade.

The 6.4 program is working.

However, we encountered an error message while analyzing a prestress beam (multi-beam system).

Attached are two print screens with the associated error message shown and refer to below email.

Please reply to all so that the engineers copied are informed of your response.

Thanks

Sincerely Yours,  
Richard Y. Ng, P.E.  
B&H Engineering, P.C.  
141-07 20th Ave., Ste. 501  
Whitestone, N.Y. 11357

From: Jose Camacho [mailto:jcamacho@bheng.com]  
Sent: Wednesday, July 17, 2013 5:31 PM  
To: 'Richard Ng'  
Cc: Steven Schroeder

4/19/2016 3:25:17 PM

HRS AASHTO

3579

**Complete Issue Information**

Subject: Virtis Problem 1

Hi Richard,

When I was running the program for Pre-stress Beam (multi-beam system) the 2 sheets that you see in the attachment is what I got and It did not run.

When I run the program for regular steel multi-girder system the first sheet shows up, but once you press continue it run normally.

Thank you,  
Jose.

=====

This incident is for the crash problem when using the AASHTO Engine. See the second screen capture in the attached PDF file.

To reproduce the problem, rate the G1 member in the Spans 1 and 2 superstructure definition with the AASHTO LFD Engine.

The PS box beam assigned to the G1 member doesn't have a bottom thickness.

FROM: Subhadeep Ghosh DATE: 9/19/2013 12:33:20 PM Eastern Daylight Time

Here are the findings:

- The crash in Virtis 6.4 was caused by box dimension bottom slab thickness = 0.0.
- Bottom slab thickness = 0.0 for rectangular void ps box beam classifies it as an inverted U beam.
- BrDR 6.5 does not have the capability to handle a PS inverted U beam.
- This can be an enhancement.
- For the time being we can generate a message and abort the analysis when the bottom slab thickness = 0.0 to avoid the crash

Workaround for the issue in 6.4:

- Define the bottom slab thickness = 0.001 in
- The only impacted component will be Torsional Constant "J". Other cross sectional properties vary by an average of 0.5%
- Running girder G1 for Span 1 and 2 with AASHTO LFD shows critical section due to "Design Flexure".

FROM: Herman Lee DATE: 9/19/2013 3:15:05 PM Eastern Daylight Time  
Please add an error message and return analysis failed when the bottom slab thickness is zero.

FROM: Subhadeep Ghosh DATE: 9/23/2013 11:55:31 AM Eastern Daylight Time  
Added an error message "Cannot define beam cross section! Please check beam dimensions." and returned analysis failed.

4/19/2016 3:25:17 PM

**HRS AASHTO**

3580



**Complete Issue Information**

Implemented for 6.5.1.

FROM: Kane Gyovai DATE: 11/14/2013 2:49:15 PM Eastern Standard Time  
Verified for V6.5.1.

|                                           |
|-------------------------------------------|
| Issue ID: 12783                           |
| Subject: Invalid validation error message |

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center                 |
| Primary Contact: Trees, Geoffrey               |
| Submitted By: Lee, Herman 7/18/2013 6:37:26 PM |
| Modified By: hlee 7/18/2013 6:39:05 PM         |
| Priority: High                                 |
| Category: Unknown                              |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Trees, Geoffrey | Assigned | High     | Unknown  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Clinton Towpath Bridge.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Herman Lee DATE: 7/18/2013 2:37:44 PM Eastern Daylight Time  
Submitted on behalf of Mike Jurcak (mjurcak@jonesstuckey.com), Jones-Stuckey.

"ERROR: Deck panel ranges not on structure definition."  
Need to determine whether the error message is valid.

## Complete Issue Information

Issue ID: 12786

Subject: Tolerance issue for the Diaphragm in the Framing Plan View

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: vinayagamoorthy, vinacs 7/22/2013 7:35:07 PM

Modified By: vvinayagamoorthy 12/13/2013 8:33:22 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Zhang, Bin      | New      | High     | Unknown  |
|                 | Assigned |          |          |
| Ihnat, Joseph   | Resolved |          |          |
|                 | Verified |          | Bug      |

### Contacts

4/19/2016 3:25:18 PM

HRS AASHTO

3582

**Complete Issue Information**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bin Zhang DATE: 7/22/2013 3:37:42 PM Eastern Daylight Time  
 I submitted this incident on behalf of Vinacs from Caltrans. The communication email was listed below.  
 Please use Span 1(MDL 1 of 1) in the attached bridge to reproduce this issue.

\*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

From: Vinayagamoorthy, Murugesu@DOT [mailto:murugesu.vinayagamoorthy@dot.ca.gov]  
 Sent: Monday, July 22, 2013 10:15 AM  
 To: Lee, Herman  
 Subject: FW: potential Virtis Issue

Since Krisha will be out office till July 29th, I am sending this to you:

From: Vinayagamoorthy, Murugesu@DOT  
 Sent: Monday, July 22, 2013 7:13 AM  
 To: Mccracken, Mike B@DOT  
 Cc: 'Kennelly, Krisha'  
 Subject: RE: potential Virtis Issue

Mike

This issue came up many times when we load rated steel girder bridges. Source of the problem is the tolerance. We have reported this issue many times to Bakers. Bakers had tried their best; for some reason, fixes do not completely removes all these little issues. Bakers may need to tweak the source code that is used within Framing Plan View routine.

In your case, instead of entering 72.849556, you enter 72.849555 (just 0.000001ft less), software will place the end diaphragm. Similarly, I was able to show the end diaphragms in Abutment 2 by adjusting the point by reducing by 0.000001ft.

For Flared girder bridges, my recommendation is to use the Virtis estimated girder length (as you said in the email) and then adjust the length by 0.000001ft either side so that the Diaphragm is displayed in the Framing Plan View.

I don't think this will affect the 3D analysis, since 3D model generator will be separate from Framing Plan View generator and that could be adjusted to have larger tolerance.

Vinacs

4/19/2016 3:25:18 PM

HRS AASHTO

3583

**Complete Issue Information**

Krishna:

1. Could you please whether you could check this model and see whether source code could be improved in Framing Plan view.
2. Whether 3D Model

From: Mccracken, Mike B@DOT  
 Sent: Friday, July 19, 2013 2:06 PM  
 To: Vinayagamoorthy, Murugesu@DOT  
 Subject: potential Virtis Issue

Vinacs,

Here's a potential Virtis Issue:

For splayed bridges, Virtis calculates the span length for each girder.  
 For splayed bridges, "Diaphragm Wizard" is not available, and the user has to manually calculate the location of the end diaphragm at the second support.  
 Typically, we put the end diaphragm directly over the support. Therefore, it would make sense to copy and paste the Virtis-calculated "Span Length" into the "Start Distance" field when the diaphragm locations are being specified.

This is what I did, and the resulting framing plan did not show the presence of the end diaphragms. I'm not sure if this is merely an error in the way that the framing plan is displayed, or if the model is actually not recognizing the diaphragm.  
 If the later is true, then this could potentially pose a problem for any future 3D analysis.

Here are images that represent the data that was copied and pasted, and the resulting framing plan.

Span 1:

Mike McCracken, P.E.  
 Caltrans, Division of Maintenance  
 Office of Structural Design & Analysis  
 Mail Station 9-1/9i  
 1820 Alhambra Blvd  
 Sacramento, CA 95816  
 (916) 227-8180

```
*****
*****
*****
```

**Complete Issue Information**

FROM: Bin Zhang DATE: 8/28/2013 1:17:29 PM Eastern Daylight Time

It's a cosmetic issue regarding the display of the framing plan. I checked the 3D FEM model, all the diaphragms are placed at the right location.

FROM: Joseph Ihnat DATE: 8/29/2013 11:43:48 AM Eastern Daylight Time

Tolerance issue was in DoReferenceLine::ComputePosition(). Fixed for 6.5.1

FROM: Kane Gyovai DATE: 11/14/2013 2:51:34 PM Eastern Standard Time

Verified for V6.5.1.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 12794                                                 |
| Subject: Problem creating backup file for a bridge in Windows 8 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Kennelly, Krisha | 7/29/2013 5:51:55 PM |
| Modified By: hlee              | 7/31/2013 3:28:52 PM |
| Priority: High                 |                      |
| Category: Unknown              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 7/29/2013 1:52:20 PM Eastern Daylight Time

I'm running 6.5.0 release 64 bit. when I open a bridge I get the following error message:

4/19/2016 3:25:18 PM

HRS AASHTO

3585

**Complete Issue Information**

File error while writing data.  
01:50:53 PM - Line 987 in source file DmBridgeCache.cpp.  
File exception!  
Error accessing file [C:\Program Files\AASHTOWare\BrDR65\Bridgeld\_26\_revert.bak]!  
The file could not be accessed.

Bridge opens after closing this message.

If I run BrDR as an administrator, I don't get this message.

Issue ID: 12795  
Subject: Structure Framing Plan Details:Diaphragms help for curved girders

Folder: /Virtis/Support Center  
Primary Contact: Gyovai, Kane  
Submitted By: Kennelly, Krisha 7/29/2013 7:54:22 PM  
Modified By: jihnat 11/14/2013 4:00:00 PM  
Priority: High  
Category: Bug

**History**

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Trees, Geoffrey | Assigned | High     | Help<br>Bug |
| Gyovai, Kane    |          |          | Help<br>Bug |

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Resolved  |      |             |
|                  | Verified  |      |             |
| Lee, Herman      | New       | High | Unknown     |
| Kennelly, Krisha | Duplicate |      | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 7/29/2013 4:08:28 PM Eastern Daylight Time  
the help doesn't contain any info on the new fields added for curved girder systems. this can't make it into 6.5.0 but should be updated in case users ask for it before 6.5.1 is released.

1.

#### Spacing Reference Type

Select the method of defining the diaphragm spacing as being defined along the left girder, right girder or both girders of the bay. If 'left girder' is selected, enter the start distance and spacing along the left girder. The program will determine the start distance and spacing along the right girder of the bay by casting a line perpendicular to the left girder at each diaphragm location along the left girder. Selecting 'right girder' has a similar procedure to determine the diaphragm locations along the left girder of the bay. Select 'both girders' when the diaphragms are not radial to either girder. This field is only available for curved girder systems.

2. add the following to the end of the Diaphragm Spacing section:

For curved girder systems the spacing is entered along the left and right girders of the bay as described in the Spacing Reference Type.

3. add the following to the end of the length section:

For curved girder systems the length is computed along both the left and right girder of the bay.

FROM: Kane Gyovai DATE: 8/29/2013 2:36:23 PM Eastern Daylight Time  
Resolved for V6.5.1

FROM: Joseph Ihnat DATE: 11/14/2013 10:40:47 AM Eastern Standard Time  
Verified fixed in 6.5.1 Alpha Build 2.

4/19/2016 3:25:18 PM

HRS AASHTO

3587

**Complete Issue Information**

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 12796                                                     |
| Subject: Check box for AASHTO LRFD Table 4.6.2.2b-1 Type g (case 2) |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Kennelly, Krisha |                       |
| Submitted By: Silvis, Bryan       | 7/30/2013 12:16:03 PM |
| Modified By: hlee                 | 7/30/2013 12:35:48 PM |
| Priority: High                    |                       |
| Category: Enhancement             |                       |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Cosmetic |
|                 | Assigned |          | Bug      |
| Ihnat, Joseph   |          |          | Unknown  |
|                 | Resolved |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description                |
|------|---------------------|----------------------------|
|      |                     | diaphragm missing text.png |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Bryan Silvis DATE: 7/30/2013 8:19:21 AM Eastern Daylight Time

The Compute from Typical Section button for LRFD/LRFR Live Loads needs a check box for Concrete Beams (e.g. voided slabs) used in Multi-Beam Decks connected only enough to prevent relative displacement at the interface (AASHTO LRFD Table 4.6.2.2b-1). This addition would make the Compute from Typical Section button functional for all Type f and g structures. Based on earlier Support correspondence, I believe this functionality is categorized as an enhancement.

FROM: Herman Lee DATE: 7/30/2013 8:34:18 AM Eastern Daylight Time

Duplicate of Incident 9734.

4/19/2016 3:25:18 PM

HRS AASHTO

3588



## Complete Issue Information

Issue ID: 12797

Subject: Diaphragm Loading Selection window text is missing

Folder: /Virtis/Support Center

Primary Contact: Ihnat, Joseph

Submitted By: Kennelly, Krisha

7/30/2013 1:41:01 PM

Modified By: jihnat

3/27/2014 1:19:41 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 7/30/2013 9:41:15 AM Eastern Daylight Time

See attached screenshot of this window in 64 bit release of 6.5. I think we're missing the word 'analysis'. this should be fixed post 6.5 release.

4/19/2016 3:25:19 PM

HRS AASHTO

3589

**Complete Issue Information**

FROM: Joseph Ihnat DATE: 8/1/2013 7:45:08 AM Eastern Daylight Time  
This is probably a Windows 8 issue. Looks OK on W7 and XP.

FROM: Joseph Ihnat DATE: 3/27/2014 9:18:58 AM Eastern Daylight Time  
Fixed for version 6.6

Issue ID: 12798  
Subject: Phi value shows up as Zero in 9.17 article for LFR/LFD analysis

Folder: /Virtis/Support Center  
Primary Contact: Thogaru, Srujana  
Submitted By: Thogaru, Srujana 7/30/2013 8:26:05 PM  
Modified By: sthogaru 3/17/2014 5:42:29 PM  
Priority: High  
Category: Support

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          | Support  |

4/19/2016 3:25:19 PM

HRS AASHTO

3590

**Complete Issue Information**

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier                         | Description |
|------|---------------------------------------------|-------------|
|      | VI-12799-DiaphAssignments<br>not Saved.docx |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Srujana Thogaru DATE: 7/30/2013 4:27:03 PM Eastern Daylight Time

Based on Bridgeware email - bridge xml file attached  
=====

From: Jiangong Xu [mailto:jixu@HNTB.com]  
Sent: Friday, July 26, 2013 11:55 AM  
To: Bridgeware,  
Subject: Virtis problem with resistance factor for flexure

My current Virtis Version is 6.4.1.3001. When I run attached file which was imported from Version 6.2.0.3001, I got all zero value for LFR loading rating at 90% of Span 1 and I found the Resistance factor at that point is 0.0 (should be 1.0).  
Can you help me take a look?  
Thanks.

Jiangong Xu, P.E., Ph.D.  
Project Engineer/Squad Leader

HNTB Corporation  
5 Penn Plaza 6th Floor  
New York, NY, 10001-1810

Tel (212) 594-9717  
Fax (212) 947-4030  
www.hntb.com

FROM: Srujana Thogaru DATE: 3/17/2014 1:35:12 PM Eastern Daylight Time  
Reason for zero value for LFR loading rating at 90% of Span 1 is that for negative moment there are no harped strands and flexural capacity is zero.

Please see beam capacity summary report for details.

4/19/2016 3:25:19 PM

**HRS AASHTO**

3591

## Complete Issue Information

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 12799                                                                                    |
| Subject: Diaphragm assignments are not transferred when copying a bridge from the bridge workspace |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center      |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Mlynarski, Mark       | 7/31/2013 1:48:15 PM  |
| Modified By: jhnat                  | 11/14/2013 4:00:15 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Mark Mlynarski DATE: 7/31/2013 9:56:07 AM Eastern Daylight Time

If diaphragms are assigned on the 'Diaphragms' tab of the 'Structure Framing Plan Details' window (see below) they are not transferred when the bridge is copied/pasted from the bridge workspace. This was discovered near the end of testing of 6.5 but was an existing issue in 6.4.1.

You can test the behavior with BID 26 in the sample database.

FROM: Mehrdad Ordoobadi DATE: 8/8/2013 8:30:43 AM Eastern Daylight Time  
I am able to reproduce this issue. I will investigate.

FROM: Mehrdad Ordoobadi DATE: 8/9/2013 1:38:10 PM Eastern Daylight Time  
Fixed for 6.5.1.

FROM: Joseph Ihnat DATE: 11/14/2013 10:51:25 AM Eastern Standard Time

4/19/2016 3:25:19 PM

HRS AASHTO

3592

**Complete Issue Information**

Verified fixed in 6.5.1 Alpha Build 2.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 12801                                                             |
| Subject: Horizontal Stirrup Wizard not creating Composite regions correctly |

|                                |                     |
|--------------------------------|---------------------|
| Folder: /Virtis/Support Center |                     |
| Primary Contact: Zhang, Bin    |                     |
| Submitted By: Kennelly, Krisha | 8/1/2013 5:41:06 PM |
| Modified By: hlee              | 8/1/2013 5:48:39 PM |
| Priority: High                 |                     |
| Category: Bug                  |                     |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Krisha Kennelly DATE: 8/1/2013 1:41:33 PM Eastern Daylight Time  
A region with the name 'Composite' should be defined only by the start distance and length, not number

4/19/2016 3:25:19 PM

HRS AASHTO

3593

## Complete Issue Information

of spaces and spacing.

Issue ID: 12802

Subject: Full vehicle live load and pedestrian load incorrectly applied concurrently

Folder: /Virtis/Support Center

Primary Contact: Zhang, Bin

Submitted By: McMunn, Creightyn

8/1/2013 6:42:23 PM

Modified By: hlee

11/2/2013 3:07:43 PM

Priority: High

Category: Unknown

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:25:20 PM

HRS AASHTO

3594

### Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
| Zhang, Bin       | Assigned           |      |         |
|                  | Information Needed |      |         |
| Mlynarski, Mark  | New                | High | Unknown |
| Skow, Wayne      | Assigned           |      |         |
| Kennelly, Krisha | Resolved           |      | Bug     |
| Skow, Wayne      | Verified           |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 00030 - 18113-Stiff.xml  |             |
|      | ODOT Permit Vehicles.xml |             |
|      | LRFR Run Fail.docx       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Creightyn McMunn DATE: 8/1/2013 3:04:26 PM Eastern Daylight Time  
In the attached file, there is pedestrian load applied to Girder D. Per the AASHTO LRFD code, pedestrian live load and full vehicular live load need not be considered concurrently. For girder D, it does not appear as though the reduced live load distribution factor shown in the detailed calculations (also attached) is being used when the pedestrian load is applied.

FROM: Bin Zhang DATE: 8/16/2013 4:17:52 PM Eastern Daylight Time  
The Live Load Distribution Factor (LLDF) was calculated based on the travelway the user defined. The vehicular live load actions in the rating summary grid have included the LLDF. The pedestrian load actions do not include any LLDF.  
What does the "reduced live load distribution factor" mean in your description?

FROM: Herman Lee DATE: 10/24/2013 8:52:10 AM Eastern Daylight Time  
Information Needed E-mail sent on 10/24/13.

4/19/2016 3:25:20 PM

HRS AASHTO

3595

**Complete Issue Information**

FROM: Creightyn McMunn DATE: 11/1/2013 4:12:53 PM Eastern Daylight Time  
Hi,

I believe the reduced live load referred to is based on AASHTO 3.6.1.1.2-1, "The multiple presence factor of 1.20 for single lane loads does not apply to the pedestrian loads." mpf = 1.0 for truck + ped load. Since the 1.2 is already factored in to the equations from the 4.6 tables for single lane loaded, it should be divided out when BrR is calculating the R.F.'s for truck + ped loads. i.e.

Axle Load LLDF's: Moment - 0.293 Shear - 0.567  
Truck + Ped LLDF's: Moment - 0.244 Shear - 0.473

The same thing should have happened if the lever rule was used:  
Axle Load LLDF's: Moment/Shear - 0.287  
Truck + Ped LLDF's: Moment/Shear - 0.239

|                                                    |
|----------------------------------------------------|
| Issue ID: 12804                                    |
| Subject: Curved Steel Bridge Analysis Fail in LRFR |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Sharp, Rachel    | 8/2/2013 8:58:44 PM   |
| Modified By: bzhang            | 11/15/2013 7:50:01 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Rachel Sharp DATE: 8/2/2013 5:03:57 PM Eastern Daylight Time  
Ran 18113 curved steel girder using 3D LRFR with operating and permit and it will not run. I am using permit vehicles OL4 and OL11.

4/19/2016 3:25:20 PM

HRS AASHTO

3596



**Complete Issue Information**

FROM: Rachel Sharp DATE: 8/5/2013 9:04:31 AM Eastern Daylight Time  
This same bridge ran with the same OL4 and OL11 vehicles successfully in LFD.

FROM: Mark Mlynarski DATE: 8/6/2013 5:19:45 PM Eastern Daylight Time  
Wayne, You can get this to fail using 2 deck elements between girders and the Type 3 vehicle under operating. Use LRFR 3D-FEM. Mark

FROM: Wayne Skow DATE: 8/7/2013 7:19:36 AM Eastern Daylight Time  
Run this bridge with analysis settings set at lowest level for fastest processing speed. Set the cursor on superstructure def so all girders are processed. Set a breakpoint in CAba3DController::ComputeContraflexureRanges(). The problem is that one of the girders (IMbrObjectld == 2427) isn't getting a contraflexure range and so it's left out of the m\_MbrNegContRange list. This is problematic in CAba3DController::ProcessInfluenceSurfaces() where it is expecting to find 2427 in the list at line 7812.

FROM: Wayne Skow DATE: 8/16/2013 9:27:51 AM Eastern Daylight Time  
Two problems were discovered and fixed:

1. The FeModel copy function was not copying the inclined supports.
2. Uniform member loads used to create moments in the girders for contraflexure ranges were changed to nodal forces.

Fixed in v6.5.1. This fix will also be included in a special v65 patch.

FROM: Rachel Sharp DATE: 8/29/2013 4:19:43 PM Eastern Daylight Time  
Backcheck is okay.

FROM: Bin Zhang DATE: 11/15/2013 2:40:40 PM Eastern Standard Time  
Verified for version 6.5.1 alpha2.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 12808                                                 |
| Subject: Curved Steel Girder LFR Spec Web Shear Rating LL issue |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Sharp, Rachel    | 8/6/2013 8:46:19 PM   |
| Modified By: gtrees            | 11/15/2013 7:41:45 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Mlynarski, Mark | New    | High     | Unknown  |

4/19/2016 3:25:20 PM

**HRS AASHTO**

3597

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Thogaru, Srujana | Assigned |      |         |
| Skow, Wayne      |          |      |         |
| Lee, Herman      | New      | High | Unknown |
|                  | Resolved |      | Support |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Open Spec Check Viewer.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rachel Sharp DATE: 8/6/2013 5:06:10 PM Eastern Daylight Time

The LL shear (kips) for certain points don't match the live load in the analysis results table. For example, Girder 2 Span 2 89.20 ft (location = 186.98ft). For OL11, the negative shear is -26.44 kips and the positive shear is 10.11 kips in the analysis table but in the spec article the negative shear is -163.64 kips and the positive shear is 200.11 kips. The OL4 is different too.

Also, in the spec article, I believe the LL should be labeled LL + I.

FROM: Mark Mlynarski DATE: 8/6/2013 5:35:45 PM Eastern Daylight Time

Srujana, I think we need to determine if this was an existing issue or is specific to 3D curved girder.  
Mark

FROM: Srujana Thogaru DATE: 8/20/2013 3:20:42 PM Eastern Daylight Time

Positive and Negative live load values switch in the article has been fixed.

Wayne is working on the differences in the values between analysis results table and article.

FROM: Wayne Skow DATE: 8/22/2013 5:28:55 PM Eastern Daylight Time

This problem was specific to 3d curved girder. The problem was in new code added to function CSCSuperStructureGirderElement::FindFiniteElement to determine where the current (x,y) point is relative to an element's start end. The error produced a DistFromElementStart value that was longer than the length of the element. This created an amplification effect when unfactored action values were set through interpolation between the start and end of the element. The error became greater relative to the distance away from the start of the girder, the amount of curvature in the girder and the shortness of an element.

Fixed in v6.5.1 This fix will also be included in a special v65 patch.

4/19/2016 3:25:20 PM

HRS AASHTO

3598

**Complete Issue Information**

FROM: Wayne Skow DATE: 8/26/2013 10:59:38 AM Eastern Daylight Time

FROM: Rachel Sharp DATE: 8/29/2013 4:19:19 PM Eastern Daylight Time  
Backcheck is okay.

|                                          |
|------------------------------------------|
| Issue ID: 12809                          |
| Subject: Stress output and member output |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Lee, Herman   |                       |
| Submitted By: Nataluk, Ryan    | 8/6/2013 10:46:14 PM  |
| Modified By: hlee              | 8/12/2013 12:47:12 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Ryan Nataluk DATE: 8/6/2013 6:50:39 PM Eastern Daylight Time  
I am trying to see any output values or tables of stress levels in a steel girder web and tension flanges I have assembled in Virtis Bridge Rating software. I have input the necessary values to build the rolled member but would like to see output values such as stress and even moment of inertia.

Any help would be greatly appreciated.

FROM: Herman Lee DATE: 8/12/2013 8:39:24 AM Eastern Daylight Time  
For the AASHTO Engine, detailed specification check calculations are available in the Specification Check Viewer.

4/19/2016 3:25:21 PM

HRS AASHTO

3599

## Complete Issue Information

Issue ID: 12811

Subject: Unable to print Live Load results

Folder: /Virtis/Support Center

Primary Contact: Ghosh, Subhadeep

Submitted By: lhnat, Joseph

8/7/2013 6:36:57 PM

Modified By: bzhang

11/15/2013 4:25:47 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:25:21 PM

HRS AASHTO

3600

**Complete Issue Information**

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Joseph Ihnat DATE: 8/7/2013 2:37:28 PM Eastern Daylight Time  
Submitted on behalf of Scott Rostek, Stantec, Denver (Scott.Rostek@stantec.com):

I am having problems printing any live load results. I can print dead load and load factor summary tables but for some reason not the live load results. Here is a screenshot of what is popping up: on the left is the screen I am trying to print and on the right is the error message. [image attached]

FROM: Joseph Ihnat DATE: 8/7/2013 3:26:15 PM Eastern Daylight Time  
I'm able to reproduce this with TrainingBridge1. Throwing exception in UiMemberResultsReportVw.cpp, line 8904.

FROM: Subhadeep Ghosh DATE: 9/6/2013 10:10:18 AM Eastern Daylight Time  
Resolved for 6.5.1.

FROM: Bin Zhang DATE: 11/15/2013 11:24:33 AM Eastern Standard Time  
Verified for version 6.5.1 alpha 2.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 12813                                                     |
| Subject: Truck pair loading not considered in 3D LRFD/LRFR analysis |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Kennelly, Krisha | 8/13/2013 4:59:45 PM  |
| Modified By: bzhang            | 11/15/2013 4:30:28 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Closed    |          | Bug      |
|                 | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | longitudinal stiffener position indicator.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/13/2013 1:00:21 PM Eastern Daylight Time  
The Truck Pair loading is not being considered in multi-span bridges for 3D LRFD/LRFR analysis.

FROM: Wayne Skow DATE: 8/21/2013 3:35:03 PM Eastern Daylight Time  
Intermediate piers were not being added to the load manager for curved girders. Therefore, all load cases were treated as single spans.

Fixed in v6.5.1.

FROM: Bin Zhang DATE: 11/15/2013 11:26:26 AM Eastern Standard Time  
Verified for version 6.5.1 alpha 2.

**Complete Issue Information**

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12814                                                |
| Subject: Longitudinal Stiffener position for curved girder web |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Lee, Herman   |                      |
| Submitted By: Ghosh, Subhadeep | 8/13/2013 5:53:16 PM |
| Modified By: hlee              | 8/13/2013 7:57:16 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Shear design ratio.docx |             |
|      | 00028 - 18113-Stiff.xml |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Subhadeep Ghosh DATE: 8/13/2013 1:53:48 PM Eastern Daylight Time  
 For updating article 6.10.11.3.3 we need to add a field (for curved girders) indicating on which side of web do we have the longitudinal stiffeners to compute (shown below).

All the other values are available in the article. The implementation is similar for all the editions. The article implementation flowchart is attached.

4/19/2016 3:25:21 PM

HRS AASHTO

3603

**Complete Issue Information**

FROM: Subhadeep Ghosh DATE: 8/13/2013 2:27:28 PM Eastern Daylight Time  
Incident moved to JIRA BRDRSUP-27. Hencing closing the incident Vi

|                                                |
|------------------------------------------------|
| Issue ID: 12815                                |
| Subject: Curved Steel Girder Bridge LRFR Specs |

|                                |                       |
|--------------------------------|-----------------------|
| Folder: /Virtis/Support Center |                       |
| Primary Contact: Skow, Wayne   |                       |
| Submitted By: Sharp, Rachel    | 8/15/2013 1:04:18 PM  |
| Modified By: bzhang            | 11/15/2013 5:05:50 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Rachel Sharp DATE: 8/15/2013 9:09:52 AM Eastern Daylight Time  
Should the absolute value of negative shear be taken when calculating the design ratio?  
Also, this should be labeled negative and positive shear.

4/19/2016 3:25:22 PM

HRS AASHTO

3604



**Complete Issue Information**

FROM: Wayne Skow DATE: 8/23/2013 7:24:42 AM Eastern Daylight Time  
Article 6.10.9 (4E2008, 5E and 6E) fixed in v6.5.1.

This fix will also be included in a special v65 patch.

FROM: Rachel Sharp DATE: 8/29/2013 4:19:10 PM Eastern Daylight Time  
Backcheck is okay.

FROM: Bin Zhang DATE: 11/15/2013 11:30:53 AM Eastern Standard Time  
Verified for version 6.5.1 alpha 2.

Issue ID: 12818  
Subject: Lateral Deflections results are not listed "view analysis report"

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Crudele, Brenda 8/15/2013 3:10:23 PM  
Modified By: kkennelly 8/21/2013 5:32:03 PM  
Priority: High  
Category: Enhancement

**History**

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |

4/19/2016 3:25:22 PM

HRS AASHTO

3605

**Complete Issue Information**

|           |             |
|-----------|-------------|
| Suspended | Enhancement |
|-----------|-------------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brenda Crudele DATE: 8/15/2013 12:20:00 PM Eastern Daylight Time

With the 3D engine the lateral deflections (or X deflections) are listed as zero in the view analysis report (tabular report giving moments/shears/deflections for each load case. Also since this is a 3D model there will be more than one lateral deflection at each POI along the bridge. Each node will have it's own XYZ deflections.

Request that all the nodal deflections be put together in a useful report. I don't want a list of the xyz deflections for every node number. I would like to see a meaningful report similar to the tabular reports so that it shows the distance along the girder and it is easily readable.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 12819                                       |
| Subject: Lateral Bending Moments not given in outputs |

|                                |
|--------------------------------|
| Folder: /Virtis/Support Center |
|--------------------------------|

4/19/2016 3:25:22 PM

HRS AASHTO

3606

**Complete Issue Information**

|                                    |                       |
|------------------------------------|-----------------------|
| Primary Contact: Kennelly, Krishna |                       |
| Submitted By: Crudele, Brenda      | 8/15/2013 4:20:22 PM  |
| Modified By: hlee                  | 10/23/2013 9:31:53 PM |
| Priority: High                     |                       |
| Category: Enhancement              |                       |

**History**

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Skow, Wayne     | Assigned  |          | Bug      |
|                 | Duplicate |          |          |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier     | Description                                                  |
|------|-------------------------|--------------------------------------------------------------|
|      | 00028 - 18113-Stiff.xml | LRFR SPECS Curved Steel lateral moment and shear stress.docx |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brenda Crudele DATE: 8/15/2013 12:21:22 PM Eastern Daylight Time  
Request that lateral bending moments be listed for top and bottom flanges in a tabular output.

FROM: Herman Lee DATE: 10/23/2013 5:29:40 PM Eastern Daylight Time  
Duplicate of BRDRSUP-49

## Complete Issue Information

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 12820                                                              |
| Subject: Curved Steel Girder Bridge - LRFR lateral moments, fl, and LL shear |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Skow, Wayne   |                      |
| Submitted By: Sharp, Rachel    | 8/15/2013 7:04:00 PM |
| Modified By: rsharp            | 8/29/2013 8:18:30 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rachel Sharp DATE: 8/15/2013 3:14:17 PM Eastern Daylight Time

The lateral moments, fl and LL shear are very different from the left and right location. Please verify the correct values are being pulled from the raw data into the spec checks.

Also, can the rows in the lateral moment tables be labeled for the clarity? Is it a difference in location along beam? It is unclear to me.

FROM: Rachel Sharp DATE: 8/15/2013 3:28:13 PM Eastern Daylight Time

The live load shear in the specs do not appear to match the live load shear tables.

4/19/2016 3:25:22 PM

HRS AASHTO

3608

**Complete Issue Information**

FROM: Wayne Skow DATE: 8/23/2013 12:35:24 PM Eastern Daylight Time  
This is the same problem as issue 12808 which has been resolved.

FROM: Rachel Sharp DATE: 8/29/2013 4:18:30 PM Eastern Daylight Time  
backcheck is okay.

Issue ID: 12821  
Subject: Input of Curved Girder Model

Folder: /Virtis/Support Center  
Primary Contact: Kennelly, Krisha  
Submitted By: Litchfield, Phil 8/19/2013 7:50:22 PM  
Modified By: kkennelly 8/22/2013 6:00:19 PM  
Priority: High  
Category: Support

**History**

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Resolved           |          | Support  |

4/19/2016 3:25:23 PM

HRS AASHTO

3609

## Complete Issue Information

|  |
|--|
|  |
|--|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | NBI 27961 Export File.xml |             |
|      | ERROR.docx                |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Phil Litchfield DATE: 8/19/2013 3:57:54 PM Eastern Daylight Time

I'm having trouble getting this structure to model correctly. Part of the problem is the skew is detailed in reference to the tangent near midspan. I believe that I have that figured out but my beam lengths are still not correct? I attached the plans and my model.

FROM: Krisha Kennelly DATE: 8/20/2013 3:04:09 PM Eastern Daylight Time

Hi Phil. There are no plans attached to the issue so I'm not sure how to review your input. I did notice that 'Distance from superstructure definition refererence line to leftmost girder' on the Framing Plan Details: Layout tab is not entered. Maybe that is causing the girder radii to be computed incorrectly which would in turn cause the member lengths to be computed incorrectly. Please attach your plans if that does not fix your problem.

FROM: Phil Litchfield DATE: 8/20/2013 3:13:43 PM Eastern Daylight Time

Sorry about that, plans should be attached now.

FROM: Krisha Kennelly DATE: 8/21/2013 1:08:55 PM Eastern Daylight Time

Please see attached calcs for the BrDR skew calculation using the Ramp G BL as the superstructure definition reference line.

I've also attached some screen shots showing how I modified the input so the Ramp G BL is the superstructure def ref line. Modified xml file also attached. BrDR girder lengths match the plans taking into consideration the plans "L" value includes the projection beyond the cl brg and the BrDR span lengths do not.

FROM: Phil Litchfield DATE: 8/22/2013 12:15:10 PM Eastern Daylight Time

Program crashes and closes when I try to import the modified xml.

FROM: Krisha Kennelly DATE: 8/22/2013 1:47:30 PM Eastern Daylight Time

Sorry about that, I exported from the 6.5.1 debug build. The 6.5.0 release can't import from a future build. The screenshots 12821 1.bmp and 12821 2.bmp show the only changes I made for the bridge. You can follow those screenshots to modify your data.

4/19/2016 3:25:23 PM

HRS AASHTO

3610

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 12822                                  |
| Subject: PS U-Beams - Error Performing PS Losses |

|                                   |                       |
|-----------------------------------|-----------------------|
| Folder: /Virtis/Support Center    |                       |
| Primary Contact: Thogaru, Srujana |                       |
| Submitted By: Pichura, Mike       | 8/23/2013 12:40:08 PM |
| Modified By: kgyovai              | 11/14/2013 8:02:35 PM |
| Priority: High                    |                       |
| Category: Bug                     |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |
|                 | Assigned |          | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Contraflexure Points Question.JPG |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Mike Pichura DATE: 8/23/2013 8:56:39 AM Eastern Daylight Time  
None of the beams in the PS U-beam bridge will run. There is an error performing PS loss spec checking.

FROM: Herman Lee DATE: 8/23/2013 8:57:30 AM Eastern Daylight Time  
The haunch is causing the problem.

Developer Note: Failed in ComputeCoordinates.

4/19/2016 3:25:23 PM

HRS AASHTO

3611

**Complete Issue Information**

FROM: Srujana Thogaru DATE: 10/3/2013 2:36:01 PM Eastern Daylight Time  
Fixed for 6.5 SP 1. For internal testing fixed for Alpha 2.

FROM: Kane Gyovai DATE: 11/14/2013 2:58:04 PM Eastern Standard Time  
Verified for V6.5.1. Analysis completes successfully for all beams in the attached bridge.

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 12823<br>Subject: Cannot verify loads in "uniform load contraflexure points" output table. |
|------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center<br>Primary Contact: Lee, Herman<br>Submitted By: Crudele, Brenda 8/26/2013 3:10:07 PM<br>Modified By: hlee 8/26/2013 5:48:29 PM<br>Priority: High<br>Category: Unknown |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**History**

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

**Description**

FROM: Brenda Crudele DATE: 8/26/2013 11:20:20 AM Eastern Daylight Time  
Using BrD version 6.4.1 for LRFD and I am seeing an output table in the tabular results showing

4/19/2016 3:25:23 PM

**HRS AASHTO**

3612



**Complete Issue Information**

"uniform load contraflexure points" (see attached screenshot). I have checked this with several different steel bridges and I cannot verify where these numbers are coming from. I have zeroed out all of the loads except the steel and the deck and they still don't add up to this load. I have searched around in the help menu and method of solutions for LRFD and cannot find an explanation.

Please provide an explanation of how this is calculated and what it is used for.

FROM: Herman Lee DATE: 8/26/2013 11:20:48 AM Eastern Daylight Time  
The Uniform Load Contraflexure Points load case is used only for locating the contraflexure locations for continuous span. Simple span analysis will also have this load case. The contraflexure locations are used internally in the AASHTO Engine.

FROM: Herman Lee DATE: 8/26/2013 11:50:43 AM Eastern Daylight Time  
=====  
Brenda,

The uniform load used for that load case is fixed to 1 k/ft. The span length is 108.27 ft on the screen shot.  $M_{max}$  is  $1 * 108.27^2 / 8 = 1465.30$  k/ft and  $V_{max}$  is  $1 * 108.27 / 2 = 54.14$  k. It's a side effect for displaying that load case in the user interface. The user interface is independent of the analysis engine, it just displays what have analyzed. We will take a look to see whether something can be done inside the AASHTO Engine to prevent that load case from showing up. If there's a need for the user to know the locations of the contraflexure points (confirming distribution factor ranges...), perhaps we should keep it there and clarify this load case in the AASHTO Engine Method of Solution. Please let me know your comments.

Thanks,  
Herman

From: Crudele, Brenda (DOT) [mailto:Brenda.Crudele@dot.ny.gov]  
Sent: Monday, August 26, 2013 11:47 AM  
To: Lee, Herman  
Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority has been resolved.

Herman,  
Why can't I verify the moments/shears? If it is used internally is it appropriate to show in the output?  
Thanks,  
Brenda

Brenda Crudele, P.E.  
NYSDOT Office of Structures  
Structures Design Bureau  
=====

FROM: Herman Lee DATE: 8/26/2013 12:50:05 PM Eastern Daylight Time  
Respond from Brenda Crudele:  
=====

Herman,  
I think the most appropriate course of action would be to take it out of the tabular results where it is now

4/19/2016 3:25:23 PM

**HRS AASHTO**

3613

**Complete Issue Information**

and add an article to the spec check that lists where the contra-flexure points are. This would get rid of the confusion.

Thanks for your help.  
Regards,  
Brenda

Brenda Crudele, P.E.  
NYSDOT Office of Structures  
Structures Design Bureau

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 12824                                              |
| Subject: Landesk Installations Failing With Result Code = -3 |

|                                |                      |
|--------------------------------|----------------------|
| Folder: /Virtis/Support Center |                      |
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Campisi, Paul    | 8/26/2013 8:03:23 PM |
| Modified By: jihnat            | 4/8/2014 6:47:09 PM  |
| Priority: High                 |                      |
| Category: Support              |                      |

**History**

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Support  |

**Contacts**

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

**Documents**

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | setup.iss-o         |             |
|      | setup.iss           |             |

**Tasks**

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

## Complete Issue Information

### Description

FROM: Paul Campisi DATE: 8/26/2013 4:06:59 PM Eastern Daylight Time

We were able to initially automate our installation using "setup.iss" in a LANDesk package. But lately our installs are failing on almost every machine. Our Information Technology Services Group is now requesting more information about this error. I am also attaching the "setup.iss" files that we use in automating the install. The install will go through till the end and fails giving Result code= -3 error.

Thanks

Paul Campisi  
NYSDOT  
Office of Structures

FROM: Joseph Ihnat DATE: 4/8/2014 2:45:02 PM Eastern Daylight Time  
Same as BRDRSUP-180.

## Issue - Complete Information

### Complete Issue Information

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 60                                                                                 |
| Subject: Enhance BRASS to select the proper cross section properties based on pos/neg moment |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Barnhill, Gale          | 1/12/1999 1:00:11 PM |
| Modified By: administrator            | 6/19/2008 3:56:47 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

### History

| Primary Contact       | Status      | Priority | Category                     |
|-----------------------|-------------|----------|------------------------------|
| Goodrich, Brian       | Resolved    | High     |                              |
|                       | Resubmit    |          |                              |
|                       | Development |          |                              |
| Generated, task force |             |          |                              |
| Goodrich, Brian       | Suspended   |          | Enhancement<br>Enhance BRASS |
|                       | Discard     |          |                              |
| Goodrich, Brian       | Discard     | High     | Enhance BRASS                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S002X_50361.dat     |             |

### Tasks

4/19/2016 3:02:17 PM

HRS AASHTO

1

Complete Issue Information

| Name    | Current State | Summary                                                                             |
|---------|---------------|-------------------------------------------------------------------------------------|
| 60.9353 | Discard       | Enhance BRASS to select the proper cross section properties based on pos/neg moment |
| 64.9350 | Discard       | Import needs to pick up ASD factors from CT01 or CDATA                              |

Description

from: Gale date: 7 jan 99

No BRASS XSECT-G commands are created by EXPORT for slab rebar in the negative moment area of an imported or new created composite bridge.

FROM: bgoodrich DATE: 1/15/99

The XSECT-G commands are not generated because BRASS-LFD does not accept both a slab and rebar in the same cross section. I added a warning message to indicate when both a slab and rebar exist. We will address this issue in the future.

Fixed for Beta Build 3

From Gale 17 Feb

The messages help, but we still need to make the EXPORT smart enough to know when the section is in a negative moment area & should use the slab rebar.

FROM: bgoodrich DATE: 02/26/1999 17:14:00

BRASS may be modified, so a slab and rebar can be specified. BRASS would determine the cross section data depending on positive or negative flexure.

FROM: jduray DATE: 03/03/1999 19:04:08

This is a problem in BRASS LFD/ASD. BRASS needs to know if slab or rebar and this is dependent on + bending or - bending at the section.

FROM: bgoodrich DATE: Thursday, May 23, 2002 10:24:05 AM

The BRASS engine properties were expanded to include locations of contraflexure along each span. These locations are utilized to establish where positive and negative bending regions are located. The slab (if defined) is exported in positive bending regions and the rebar (if defined) is exported in negative bending regions. This change was implemented in version 3.0. However, BRASS still does not support a slab and rebar at the same location.

FROM: jduray DATE: 4/28/2008 2:33:40 PM

Discarded by TAG 12/07.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 64                                                    |
| Subject: Import needs to pick up ASD factors from CT01 or CDATA |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Martin, Ed           |                       |
| Submitted By: Barnhill, Gale          | 1/12/1999 12:57:54 PM |

4/19/2016 3:02:17 PM

HRS AASHTO

2

Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 3:56:47 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

History

| Primary Contact | Status             | Priority | Category      |
|-----------------|--------------------|----------|---------------|
| Duray, Jim      | New                | Medium   |               |
|                 | Information Needed |          |               |
|                 | Resubmit           |          |               |
|                 | Development        |          | Enhance BRASS |
|                 |                    | High     |               |
|                 | Resolved           |          |               |
| Duray, Jim      | Resolved           | High     | Enhance BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name     | Current State | Summary                                              |
|----------|---------------|------------------------------------------------------|
| 616.8807 | Resolved      | Beam self weight not displayed in any results report |

Description

from: Gale date: 8 jan 99

BARS data on CT01 can be used to determine the allowable stress for operating and posting. The values can also be set at defaults in the CDATA file. Import needs to check for these values to set the correct ASD Factors on the MEMBER ALTERNATIVE DESCRIPTION - Factors tab.

NOTE: We do not have a column for POSTING allowable stresses in the ASD Factors area.

FROM:jduray DATE:01/12/1999 07:58:49

Based on previous discussions we removed Posting and Safe Load. Should we not have removed

4/19/2016 3:02:17 PM

HRS AASHTO

3

Complete Issue Information

them.

FROM: gale DATE: 12 jan

I guess it falls back on whether we support ASD ratings and if we Post at Operating levels for LFD ratings.

BARS allows Posting ASD stresses to be different than Operating, but as far as I know, BARS forces Posting to be the same as Operating for LFD.

We may need to wait until the Users meeting & see what the majority wants and then change it as an enhancement.

FROM:jduray DATE:4/28/2008 2:33:35 PM

Discarded by TAG 12/07.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 616                                                 |
| Subject: Beam self weight not displayed in any results report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 2/24/1999 5:23:40 PM |
| Modified By: administrator            | 6/19/2008 3:56:05 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

Cannot verify moments due to beam self weight. See example in incident 541. It would be nice if we could get the loadings displayed in a tabular format for easy verification - beam, slab, sdl etc.

FROM:jduray DATE:02/24/1999 14:32:58

4/19/2016 3:02:17 PM

HRS AASHTO

Complete Issue Information

Do the tabular reports not include what you need?

FROM:bmccaffrey 3/1/99:

I'm looking for the weight/foot used to use to get the moments, shears, etc. I don't see them in the tabular reports area.

I haven't seen 'w' values anywhere else. I know BRASS does not report them.

FROM:jduray DATE:5/10/02 12:53:04 PM

This enhancement is in development and will be released in the next release.

FROM:kkennelly DATE:7/11/2003 11:14:04 AM

Resolved as per incident 3901

|                                                      |
|------------------------------------------------------|
| Issue ID: 695                                        |
| Subject: View the Summary of Rating Results from BWS |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: vinayagamoorthy, vinacs | 2/26/1999 6:09:15 PM |
| Modified By: administrator            | 6/19/2008 3:55:59 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact       | Status   | Priority | Category |
|-----------------------|----------|----------|----------|
| Duray, Jim            | Q/A      | High     |          |
|                       | Resubmit |          |          |
| Generated, task force | Assigned |          |          |

4/19/2016 3:02:18 PM

HRS AASHTO

5



Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad |           |      |             |
|                    | Suspended |      |             |
| Martin, Ed         | New       | High |             |
|                    | Assigned  |      |             |
|                    | Suspended |      |             |
|                    |           |      | Enhancement |
|                    | Discard   |      |             |
| Martin, Ed         | Discard   | High | Enhancement |

Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name     | Current State | Summary                                                    |
|----------|---------------|------------------------------------------------------------|
| 840.8586 | Discard       | Import preference for BRIDGE NAME - related to incident 56 |

Description

Vinacs: I have run a bridge that has three structures. Each structure has one alternatives. Each structure definition has two to six members. Once I have done the analysis, how do I see the rating summary at bridge, structure, and structure definition level. (I am able to view the rating summary at member level.)

Vinacs: I changed this from Q/A to Resubmit, since this feature is very important for us to view the summary of the rating results.

FROM:jduray DATE:03/03/1999 15:59:12

At the present time there is no way from the BWS to display what you are asking. We need TF direction on this.

FROM:rdquinn DATE:04/21/1999 11:20:26

This was also brought up by users at the training workshop.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 840                                                       |
| Subject: Import preference for BRIDGE NAME - related to incident 56 |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Martin, Ed           |

4/19/2016 3:02:18 PM

HRS AASHTO

6

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Barnhill, Gale | 3/12/1999 8:24:12 PM |
| Modified By: administrator   | 6/19/2008 3:55:49 PM |
| Priority: High               |                      |
| Category: Enhancement        |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Martin, Ed      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |
| Martin, Ed      | Discard   | High     | Enhancement |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | gross a i.dat       |             |

### Tasks

| Name     | Current State | Summary                                                       |
|----------|---------------|---------------------------------------------------------------|
| 890.8536 | Discard       | BETA 4 - Import of gross A & I - not in detailed data section |

### Description

From Gale 12 March BETA 4

I'll enter this so we don't forget it. I'll accept the solution to Incident 56 (set an import preference for a text string for BRIDGE NAME) for now, but I think we need to see what the users want. My solution would be to let the preference be a pick list of - BRIDGE ID, BARS CT05 DATA, BARS 6 DIGIT ID - (Ed - Jim & I talked about this)

FROM:hlee DATE:4/30/2008 2:15:40 PM

Discarded by TAG 12/07.

4/19/2016 3:02:18 PM

HRS AASHTO

7

Complete Issue Information

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 890                                                          |
| Subject: BETA 4 - Import of gross A & I - not in detailed data section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Barnhill, Gale          | 3/17/1999 2:24:02 PM |
| Modified By: administrator            | 6/19/2008 3:55:45 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

From Gale 17 march BETA 4  
Now that we are doing a section look-up for A & I in the detailed data, can we expand that to include the non-detailed data ?? Again, I know it's late in the game, but this would really make the Import pretty robust & make believers out of most of the BARS folks. The attached data file comes from Ohio.

FROM:hlee DATE:4/30/2008 2:16:39 PM  
Discarded by TAG 12/07.

## Complete Issue Information

Issue ID: 983

Subject: Not getting rating values for locations specified in Points of Interest - only get controlling RF

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Generated, bbeerman 3/23/1999 4:40:28 PM

Modified By: administrator 6/19/2008 3:55:38 PM

Priority: High

Category: Enhancement

### History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | Medium   |          |
| Goodrich, Brian    | Assigned  | Urgent   |          |
| Duray, Jim         | Suspended | High     |          |
|                    | Resubmit  |          |          |
|                    | Suspended |          |          |
| Ordoobadi, Mehrdad | Assigned  |          |          |

4/19/2016 3:02:18 PM

HRS AASHTO

9

### Complete Issue Information

|            |           |      |  |             |
|------------|-----------|------|--|-------------|
|            | Suspended |      |  | Enhancement |
| Duray, Jim | Suspended | High |  | Enhancement |
| Duray, Jim | Suspended | High |  | Enhancement |
|            | Resolved  |      |  |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 1091.10288 | Suspended     | Need "Fishbelly" web variation |

### Description

For 2 spans @ 75', the following Points of Interest were entered:

- Span1 0.0'
- Span1 30.0'
- Span1 75.0'
- Span2 30.0'

The rating results showed the following:

- Axle rating at 30.0'
- Lane rating at 75.0'

Also, the output doesn't specify which span the rating values correspond to.

FROM: bgoodrich DATE: 03/23/1999

The rating results only show the critical rating factors and the corresponding location (for each vehicle) from all the points of interest specified. You would have to look at the BRASS output summaries to find the critical rating factor for each vehicle at each point of interest.

The rating location references the left end of the bridge, however, it does not indicate the "side" (Left or Right) as is input on the Point of Interest window. Jim - Does this need to be addressed? If so, the results object will need to be modified and the BRASS DLLs will need to be modified to pass the "side" to the results object.

FROM:jduray DATE:03/24/1999 08:47:57

We should not modify at this time. We should ask the users/TF if they want rating values at all POI. This is an enhancement.

4/19/2016 3:02:18 PM

HRS AASHTO

10

Complete Issue Information

FROM:bbeerman 3/24/99

The Rating Summary doesn't appear whenever a POI is not entered. If a POI is entered the Rating Summary appears and only the controlling rating point(s) is shown. The POI entered does not appear in the table.

FROM:jduray DATE:05/03/1999 10:58:05

This needs to be coordinated with Brian. First modify the results object, then add to BRASS, then modify GUI.

|                                         |
|-----------------------------------------|
| Issue ID: 1091                          |
| Subject: Need "Fishbelly" web variation |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Duray, Jim              | 4/13/1999 5:17:53 PM  |
| Modified By: hlee                     | 10/13/2009 5:19:27 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jduray DATE:04/13/1999 13:17:04

Need to be able to handle a reverse parabolic variation.

FROM:jduray DATE:04/21/1999 14:03:57

FROM: Herman Lee DATE: 10/13/2009 1:16:39 PM Eastern Daylight Time  
Resolved in 6.1 Release.

## Complete Issue Information

Issue ID: 1201  
Subject: Summary of Ratings

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Shah, Shyam 6/11/1999 3:49:31 PM  
Modified By: administrator 6/19/2008 3:59:37 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | New    | High     |           |
|                 | Closed |          |           |
| Duray, Jim      | Closed | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:02:19 PM

HRS AASHTO

12

Complete Issue Information

|            |                |                                 |              |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |
|------------|----------------|---------------------------------|--------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 1267.10117 | Resolved      | Import of composite beam |

Description

FROM: snshah DATE: 6/10/1999 4:34 PM

When we rate a bridge from the bridge explorer, only the rating factors are displayed. It would be convenient if the load rating in tons was also displayed and a column showing which member(s) are being rated. We would also like to see a table which shows all of the bridge members rated with their rating in tons and rating factors rather than having to select each member individually.

FROM: jduray DATE: 06/11/1999 11:49:57

You can get to the members by selecting the bridge(s) and clicking View Structure Rating Results button. Then select all structures and click View Member Rating Results. The Member Rating Results window displays more info including the rating in tons.

|                                   |
|-----------------------------------|
| Issue ID: 1267                    |
| Subject: Import of composite beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Best, Richard           | 7/9/1999 3:58:17 PM  |
| Modified By: administrator            | 6/19/2008 3:59:32 PM |
| Priority: High                        |                      |

4/19/2016 3:02:19 PM

HRS AASHTO

13



### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact | Status      | Priority | Category       |
|-----------------|-------------|----------|----------------|
| Duray, Jim      | New         | High     |                |
|                 | Suspended   |          |                |
| Ihnat, Joseph   | Assigned    | Urgent   |                |
|                 | System Test |          |                |
|                 | Closed      |          |                |
| Ihnat, Joseph   | Closed      | Urgent   | Change Request |

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 1276.10108 | Closed        | Rounding needed |

### Description

FROM: rmbest DATE: 7/9/1999 11:07 AM

VIRTIS - composite bridges which have non-composite regions will not import correctly. C and N sections are defined but the effective flange width on N sections will need to be set to zero by the user. This seems to be a bug.

FROM: emartin DATE: 1/31/2000 10:24 AM

Effective width set to zero for non-composite ranges.

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 1276           |
| Subject: Rounding needed |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Best, Richard           | 7/9/1999 4:28:11 PM  |
| Modified By: administrator            | 6/19/2008 3:59:32 PM |
| Priority: Urgent                      |                      |
| Category: Change Request              |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: rmbest DATE: 7/9/1999 11:36 AM

VIRTIS - Import of feet & inches are converted to decimal values of 6 or more places. This can be a problem when editing a VIRTIS file because some things like section ranges have to add up perfectly. It would be nice if these values were rounded to two decimal places automatically.

FROM: jduray DATE: 07/20/1999 10:31:45

We have tried to deal with this issue by placing a tolerance on the comparison.

FROM: jduray DATE: 04/18/2000 08:43:22

We need to limit the number of decimal digits (precision) permitted in the grids and edit controls.

This was approved by the TF 4/13/00.

I would like to finish this work and include it in a service pack in the near future.

4/19/2016 3:02:19 PM

HRS AASHTO

15

Complete Issue Information

FROM:jduray DATE:05/26/2000 14:05:45

This will be fixed in version 4.0.

|                           |
|---------------------------|
| Issue ID: 1277            |
| Subject: Rivited Sections |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Best, Richard           | 7/9/1999 4:31:19 PM  |
| Modified By: administrator            | 6/19/2008 3:59:32 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     |             |
| Martin, Ed      | Assigned           |          |             |
| Duray, Jim      | Suspended          |          |             |
|                 | Information Needed |          | Enhancement |
|                 | Discard            |          |             |
| Duray, Jim      | Discard            | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:02:19 PM

HRS AASHTO

16

Complete Issue Information

|              |                         |                           |                |
|--------------|-------------------------|---------------------------|----------------|
| Richard Best | Illinois DOT            | BESTRM@nt.dot.state.il.us | 217-785-2922   |
| Ed Martin    | Michael Baker Jr., Inc. | emartin@mbakercorp.com    | (304) 769-2126 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 1322.10063 | Discard       | BRASS Import doesn't recognize new commands |

Description

FROM: rmbest DATE: 7/9/1999 11:39 AM

The cross section for a Riveted Plate Girder does not import into VIRTIS successfully. If holes are input in BARS as part of the section, then VIRTIS does not know how to handle them.

FROM: jduray DATE: 07/20/1999 10:30:45

Is this true? What do you suggest we do?

FROM: emartin DATE: 7/22/1999 8:15 AM

Yes.

Virtis enhancement.

FROM: jduray DATE: 12/9/02 3:32:59 PM

The preferred way to describe hole within Virtis in order to be consistent with describing a bridge is to describe the holes, not just A and I. However, since BARS may not have that detail how do you suggest we implement this request?

BRASS does not handle holes.

FROM: jduray DATE: 9/8/2003 10:29:05 AM

FROM: hlee DATE: 4/30/2008 2:17:25 PM

Discarded by TAG 12/07.

|                                                      |
|------------------------------------------------------|
| Issue ID: 1322                                       |
| Subject: BRASS Import doesn't recognize new commands |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Duray, Jim              | 7/26/1999 12:13:01 PM |
| Modified By: administrator            | 6/19/2008 3:59:29 PM  |
| Priority: High                        |                       |

4/19/2016 3:02:20 PM

HRS AASHTO

17

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     |                |
|                 | Open     |          |                |
|                 | Resolved |          |                |
| Duray, Jim      | Resolved | High     | Change Request |

### Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 1356.10029 | Resolved      | Updates are too slow |

### Description

FROM:jbosch DATE:07/26/1999 08:11:52

VIRTIS does not recognize many of the newer commands of BRASS such as stiffeners, lateral bracing etc. Even when we try taking a BRASS file that VIRTIS created and import it back into VIRTIS, the commands are still not recognized. Why doesn't VIRTIS recognize these commands.

FROM:hlee DATE:4/30/2008 2:17:42 PM

Discarded by TAG 12/07.

Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 1356                |
| Subject: Updates are too slow |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Best, Richard           | 8/2/1999 9:03:08 PM  |
| Modified By: administrator            | 6/19/2008 4:38:35 PM |
| Priority: High                        |                      |
| Category: Change Request              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: rmbest DATE: 8/2/1999 4:11 PM

As a test, we imported Pontis Data for 10,900 existing structures into VIRTIS. The All Bridges folder in the Bridge Explorer became incredibly slow in retrieving and updating bridge list. In fact screen updates take almost 1.5 minutes with a Pentium III / 450. Operations were much improved when small groups of these bridges were placed in sub folders, as long as the All Bridges folder was not engaged. Something needs to be done to drastically speed up the update process?

FROM: jduray DATE: 08/03/1999 10:11:08

Version 2.1 (to be released in a few weeks) saves (to the registry) the name of the last folder used in the Bridge Explorer. When the Explorer is initially opened that most recent folder will be the current folder. You should be able to operate without using the All Bridges folder. We are also looking at ways to improve the performance, however.

FROM: jduray DATE: 08/03/1999 12:27:52

Paul Jensen and Gale also reported this problem.

4/19/2016 3:02:20 PM

HRS AASHTO

19

## Complete Issue Information

The following are things to consider/investigate:

- 1) provide an option to not display checkout status. The checkout status results in four outer joins and one join.
- 2) denormalize the checkout and store a flag in abw\_bridge to indicate status and perhaps owner name.
- 3) enable retrieval of a subset of rows, continue fetch when list is scrolled - this would disable the database disconnect feature which is planned.
- 4) investigate the use of indexes and tune the queries (again).
- 5) get bulk fetches working (problems are in MFC record sets)

Try solution 3 above.

FROM:jduray DATE:08/04/1999 14:25:43

Solution 3 is implemented in the GUI and works well to improve performance once the server has buffered the results of the query. However, it still takes the server too long. The majority of the time is spent by the server because of #1 above. That needs to be improved. Indexing seems to be correct.

FROM:jduray DATE:08/04/1999 14:29:46

The GUI changes may be in version 2.1 but more likely 3.0 because they need to be tested more thoroughly.

FROM:jduray DATE:08/04/1999 14:34:20

According to ISQL the current view with four joins for the checkin/out info takes approx. 20 times more I/O (295615, vs 13812) for 12925 rows.

When we implement this we will need to add a Retrieve All to the menu/toolbar.

The view uses the Distinct keyword which causes the poor performance. It is needed so that we don't get the same bridge\_id returned for each structdef checked out.

Performance may be improved by doing the checkout info in memory within Virtis (as a lookup into a map of checked out bridges (incl. owner)). This may be better since it is expected that not many bridges would be checked out so the list to process for each bridge would be small and fast.

Issue ID: 1444

Subject: Bearing stiffener location - Entering zero vs. leaving blank

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Best, Richard

8/23/1999 2:21:43 PM

Modified By: administrator

6/19/2008 3:59:20 PM

Priority: High

Category: Enhancement

## History

4/19/2016 3:02:20 PM

HRS AASHTO

20

Complete Issue Information

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | Low      |                |
| Duray, Jim      | New        | High     |                |
| Goodrich, Brian | Assigned   |          |                |
| Duray, Jim      | On Hold    |          |                |
| Goodrich, Brian | Assigned   |          | Bug - BRASS    |
|                 | Open       |          | Bug - Export 2 |
|                 | Patch Test |          |                |
|                 | Accepted   |          |                |
|                 | Closed     |          |                |
| Goodrich, Brian | Closed     | High     | Bug - Export 2 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name      | Current State | Summary              |
|-----------|---------------|----------------------|
| 1470.9915 | Closed        | Tapered cover plates |

Description

FROM: rmbest DATE: 8/23/1999 9:24 AM

In the bearing stiffener location folder, for each support, the user must set the offset to zero instead of leaving it blank, or an error results. It would be nice if the user could leave this blank in order to indicate zero. This would be consistent with other fields where a blank field means zero.

FROM:jduray DATE:08/23/1999 11:32:07  
Joe - let's make this change for 3.0.

FROM:jihnat DATE:08/23/1999 12:50:55

4/19/2016 3:02:20 PM

HRS AASHTO

21



Complete Issue Information

Maybe we should default to zero instead of blank (i.e. show the zero in the cell instead of a blank cell). Fields that are blank get set to null, which is distinct from a value of zero.

FROM:kkennelly DATE:7/2/01 9:26:19 AM

I think this was resolved, if you open this window for the first time now it defaults to 0 not blank.

|                               |
|-------------------------------|
| Issue ID: 1470                |
| Subject: Tapered cover plates |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 8/27/1999 2:22:26 PM |
| Modified By: administrator            | 6/19/2008 4:38:35 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: bmccaffrey DATE: 8/27/1999 10:35 AM

When entering tapered cover plates I get the following error during the analysis.

For Span 1 composed of sections from the library, the starting and cross sections must be the same. BRASS does not allow tapering one library section into another.

10:29:52 AM - Line 346 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating SPAN-C or SPAN-D commands!

10:29:52 AM - Line 260 in source file D:\Virtis\GUI\abxbrass\BrassSpanCDCmd.cpp.

Complete Issue Information

The plate is not from the library. The analysis log follows:

WARNING (Low):

There are no member alternative component sets defined!

The BRASS engine properties for the member alternative have not been specified!

WARNING (Low):

The default BRASS engine properties for the member alt were used!

INFO - Using the current load scenario in the list of scenarios!

WARNING (Low):

Using computed loading sequence indicator!

WARNING (Low):

There are no structure definition component sets defined!

The BRASS engine properties for the structure definition have not been specified!

WARNING (Low):

The default BRASS engine properties for the structure definition were used!

WARNING (Low):

The BRASS engine properties for the analysis event have not been specified!

WARNING (Low):

The default BRASS engine properties for the analysis event were used!

COMMENT AASHTO

COMMENT 1027320b

TITLE Member: 1

COMMENT Member Alt: 2

COMMENT Generated Cross Section 1

COMMENT W 36x182 = W36X182

XSECT-STD 1, W36X182

XSECT-A 1, 33.00, 33.00, 33.00

XSECT-C 0.0000, 0.0000, , 8.0000, 1.0000

COMMENT Generated Cross Section 2

COMMENT W 36x182 = W36X182

XSECT-STD 2, W36X182

XSECT-A 2, 33.00, 33.00, 33.00

XSECT-C 0.0000, 0.0000, , 10.0000, 1.0000

COMMENT Generated Cross Section 3

COMMENT W 36x182 = W36X182

XSECT-STD 3, W36X182

XSECT-A 3, 33.00, 33.00, 33.00

ANALYSIS 1, 0, 3, , 0.000650, 5

PROPERTIES-ST1 490.000, 29000.00, 4.000, 36.000

ERROR - For Span 1 composed of sections from the library, the starting and cross sections must be the same. BRASS does not allow tapering one library section into another.

WARNING (Low):

There are no member alternative component sets defined!

The BRASS engine properties for the member alternative have not been specified!

WARNING (Low):

The default BRASS engine properties for the member alt were used!

INFO - Using the current load scenario in the list of scenarios!

WARNING (Low):

Using computed loading sequence indicator!

4/19/2016 3:02:20 PM

HRS AASHTO

23

Complete Issue Information

COMMENT Steel Girder Control Schedules  
STEEL-GIRDER-CONTROL 1, 0.0000, 50.0000, 2  
DEAD-LOAD 1, , , , 0.000, 0.000, 0.000  
INFO - Using the current load scenario in the list of scenarios!  
Exporting Load Case: sdl  
COMMENT  
LOAD-DESCR 1, 1, 0.00, sdl  
UNIFORM-DL1 , 0.0000, 0.500, 50.0000, 0.500  
COMMENT Selfweight of Slab Load Case  
COMMENT This load case is derived from data provided.  
LOAD-DESCR 2, 1, , Selfweight of Slab Load Case  
UNIFORM-DL1 1, 0.0000, 0.612, 50.0000, 0.612  
Using Std impact factors from member alternative!  
COMMENT BRASS uses the multiple-lane loaded distribution factor  
COMMENT for moment as the wheel fraction.  
LIVE-LOAD 3, 1.0000, 100.00, 100, 0.0000, ,  
TRUCK-WFR 1.000, 1.000  
TRUCK-IMP ,  
TRUCK-CODE1 HS20-44\_TRK, HS20-44\_LAN  
WARNING (High):  
No points of interest (analysis points) are defined!  
The DESIGN, INVENTORY, etc. commands will not be generated.  
The STEEL-1, STEEL-2, etc. commands will not be generated.  
Therefore, 'Rating Results' will not be available.

Analysis failed!

FROM:jduray DATE:09/16/1999 11:59:26  
We need to discuss this.

FROM:bgoodrich DATE: 9/16/1999 7:27 PM  
Jim - When a wide flange section is specified, BRASS does not allow the cover plates to taper along the range. Jay, Dan, and I discussed this issue a while back and felt that it would not occur that often. However, it looks like it has. We cannot address this issue with BRASS funds until after Oct. 1 as we are out of funds now.

FROM:jduray DATE:2/4/02 4:41:06 PM  
is this an enhancement for BRASS or a bug?

FROM:bgoodrich DATE:02/04/2002 17:30:51  
Jim - This issue is an enhancement if addressed in the BRASS engines. However, we may be able to address this issue in the export. We could detect when the cover plates tapered and then force the export to generate plate girders with cover plates instead. This would be similar to what is done when deterioration is specified in a rolled beam.

FROM:jduray DATE:2/5/02 9:39:44 AM  
Please discuss with Jay and provide an estimate and recommendation. My preference is to handle in the export if the cost is the same as handling in BRASS and if the results are the same.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 12:16:26 PM  
Brian and Jay discussed this issue with WYDOT on 2/19/02. WYDOT indicates this is not a priority for

4/19/2016 3:02:20 PM

HRS AASHTO

24

Complete Issue Information

BRASS. Therefore, we will have to address it in the export.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 12:18:07 PM

Jim - I can set a flag in the export when a rolled beam with tapered cover plate is detected. Then, instead of exporting a rolled beam, I can export an equivalent plate girder instead. This should only take a couple hours to implement and test. The logic will be similar to that for exporting a rolled beam as a plate girder when deterioration is specified.

FROM:jduray DATE:2/25/02 8:33:46 AM

What will the user see in the BRASS output file? Will they be confused when they see a plate girder description for their wide flange beam? Actually, it doesn't matter, if WyDOT isn't willing to fix BRASS then our only choice is to handle in the export. That is better than not handling at all.

Do it!

Can we get this into this service pack?

FROM:bgoodrich DATE:Tuesday, February 26, 2002 2:42:23 PM

I will implement this change in time for the service pack.

FROM:bgoodrich DATE:Thursday, February 28, 2002 1:38:00 PM

I modified the export to generate an equivalent plate girder when tapered cover plates are detected. The export issues the following message:

"Rolled beams are exported as equivalent plate girders when tapered cover plates are detected."

Fixed for Version 4.1 Service Pack 1.

FROM:bgoodrich DATE:Friday, April 12, 2002 10:46:11 AM

Closed.

|                                         |
|-----------------------------------------|
| Issue ID: 1513                          |
| Subject: Rolled beam with cover plates. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Schwagler, Tim          | 9/23/1999 1:26:24 PM |
| Modified By: administrator            | 6/19/2008 3:59:16 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     |          |
| Goodrich, Brian | Assigned |          |          |

4/19/2016 3:02:21 PM

HRS AASHTO

25

Complete Issue Information

|                  |          |  |        |         |
|------------------|----------|--|--------|---------|
|                  | Open     |  |        |         |
| Kennelly, Krisha |          |  | Urgent |         |
| Duray, Jim       | New      |  | High   |         |
|                  | Assigned |  | Low    |         |
| Duray, Jim       | Assigned |  | Low    | Comment |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name      | Current State | Summary                                                                        |
|-----------|---------------|--------------------------------------------------------------------------------|
| 1662.9726 | Assigned      | (Mockup comprison) No mockup of Cross Section Ranges(Rcl) window is available. |

Description

FROM: tschwagler DATE: 9/23/1999 9:08 AM

Modeling a rolled beam structure with cover plates top and bottom at the pier does not run. Using cover plates on the top flange at the pier with reinforcing does not run.

FROM: bgoodrich DATE: 10/7/1999 8:26 AM

I have been able to reproduce the bug and will work on a solution. For now the work around would be to enter the member alternative as cross section based instead of schedule based.

FROM: jduray DATE: 10/12/1999 14:45:26

Brian thinks this is a problem in the domain computations for cross sections from a schedule.

FROM: kkennelly DATE: 10/19/1999 14:43:40

Fixed in 2.1 and 3.0. Fixes for 2.1 being put on web site.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 1662                                                                          |
| Subject: (Mockup comprison) No mockup of Cross Section Ranges(Rcl) window is available. |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                                |                        |
|--------------------------------|------------------------|
| Primary Contact: Duray, Jim    |                        |
| Submitted By: Generated, yzhai | 10/28/1999 12:57:00 PM |
| Modified By: administrator     | 6/19/2008 3:59:07 PM   |
| Priority: Low                  |                        |
| Category: Comment              |                        |

### History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | Low      |             |
| Goodrich, Brian    | Assigned  |          |             |
| Duray, Jim         |           |          |             |
| Ordoobadi, Mehrdad | Suspended | High     | Enhancement |
|                    | Discard   |          |             |
| Ordoobadi, Mehrdad | Discard   | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name      | Current State | Summary                                  |
|-----------|---------------|------------------------------------------|
| 1773.9615 | Discard       | "Analysis Results" window for live loads |

### Description

FROM:yzhai DATE:10/28/1999 08:57:20

Since no mockup of Cross Section(Rcl) window is available, this window has not been checked yet.

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 1773                                    |
| Subject: "Analysis Results" window for live loads |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ordoobadi, Mehrdad   |                        |
| Submitted By: Generated, jmckool      | 11/29/1999 10:23:59 PM |
| Modified By: administrator            | 6/19/2008 3:58:59 PM   |
| Priority: High                        |                        |
| Category: Enhancement                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jmckool DATE:11/29/1999 17:22:39

It would be helpful to know if the live load effects reported in these windows include impact/dynamic load allowance.

FROM:jduray DATE:12/01/1999 10:18:06

How can we provide this?

FROM: bgoodrich DATE: 12/1/1999 4:45 PM

If the results come from BRASS, the results include impact. Could a results object variable be added to

Complete Issue Information

indicate if impact is included or not and then the GUI could show a checkbox.

FROM:hlee DATE:4/30/2008 2:18:15 PM  
Discarded by TAG 12/07.

|                                     |
|-------------------------------------|
| Issue ID: 2112                      |
| Subject: viewing up to date ratings |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Boucher, Brian          | 12/30/1999 2:55:15 PM |
| Modified By: administrator            | 6/19/2008 4:02:42 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     |           |
|                 | Resolved |          |           |
| Duray, Jim      | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:02:21 PM

HRS AASHTO

29



Complete Issue Information

|               |                          |                                 |              |
|---------------|--------------------------|---------------------------------|--------------|
| Brian Boucher | Bayside Engineering Inc. | bboucher@baysideengineering.com | 617-625-4696 |
|---------------|--------------------------|---------------------------------|--------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 2113.11244 | Resolved      | Import and Export of bridge files |

Description

FROM: bboucher DATE: 12/30/1999 9:40 AM

I'm trying to weed through the yards of data provided by the virtis rating summary. I've found that the rating summary retains all runs for each bridge. When I use the "up to date" option, all runs which have been performed under the current version of the bridge (last saved) are displayed. I was wondering if there is any way to restrict what is shown to the last run performed. This would make debugging the bridges much easier.

I've also noticed that when I try to look at the specific beams for more than one bridge at a time, the program is not selective (or it won't let me be). I get the one bridge or all the bridges, nothing in between.

FROM: jduray DATE: 01/05/2000 08:38:47

At the present time there is no way to restrict what is shown. Suggestions are welcome as this is an area that we recognize needs improvement.

|                                            |
|--------------------------------------------|
| Issue ID: 2113                             |
| Subject: Import and Export of bridge files |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Boucher, Brian          | 12/30/1999 3:05:30 PM |
| Modified By: administrator            | 6/19/2008 4:02:42 PM  |
| Priority: High                        |                       |

### Complete Issue Information

Category: Education

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     |          |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          |          |
| Goodrich, Brian | Resolved           | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 2114.11243 | Resolved      | Bearing Stiffeners in plate girders |

### Description

FROM: bboucher DATE: 12/30/1999 9:59 AM

I have tried to export a bridge from the bridge explorer and import the file into a different bridge explorer (on another machine). Either of these actions will cause the program to not permit the saving of files. The file can be imported to the other bridge explorer (again, it cannot be saved), modified, and analyzed but that's it.

What can I do?

FROM:jduray DATE:01/05/2000 08:41:56

Version 2.1 does not support import into a different database. 3.0 will.

Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 2114                               |
| Subject: Bearing Stiffeners in plate girders |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Boucher, Brian          | 12/30/1999 3:17:27 PM |
| Modified By: administrator            | 6/19/2008 4:02:42 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: bboucher DATE: 12/30/1999 10:11 AM  
 I have a plate girder bridge (2-span continuous) that is failing in shear at the center support. I have significant bearing stiffeners at this point but it still fails. I tried varying the size of the stiffeners and the number but the rating did not change.  
 Does BRASS not take these into account?

FROM: bgoodrich DATE: 1/5/2000 11:11 AM  
 BRASS does rate the bearing stiffeners, but it does so separately from shear. If the bearing stiffeners are causing the rating to fail, the BEARING STIFFENERS will be listed for the limit state. If shear is the lowest rating, then the ULTIMATE SHEAR CAPACITY will be shown. You should turn on the BRASS intermediate output for the pier point of interest on the Engine tab of the Point of Interest window. Then look for the detailed shear output in the BRASS output file to help find out what is causing shear to control.

4/19/2016 3:02:22 PM

HRS AASHTO

32

Complete Issue Information

If this does not address your concerns, please resubmit and attach the BRASS data file (\*.dat) so I can see what commands the export generated. Thanks.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 2165                                                    |
| Subject: Rel 2.1 - Plastic analysis for compact composite section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Barnhill, Gale          | 1/10/2000 9:02:53 PM |
| Modified By: administrator            | 6/19/2008 4:02:39 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     |             |
| Goodrich, Brian | Assigned  |          |             |
| Duray, Jim      | Suspended |          |             |
|                 | Discard   |          | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | bracing schedule.zip |             |
|      | bracing schedule.bbd |             |

## Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 2210.11149 | Resolved      | rel 2.1 - BRASS export doesn't seem to create correct bracing schedule |

## Description

FROM: gbarnhill DATE: 1/10/2000 2:52 PM

The 4th parameter of the STEEL GIRDER CONTROL command provides for certain conditions of plastic section analysis (it's the same control as on the POINT-OF-INTEREST command).

# 492 STEEL-GIRDER-CONTROL 1, 0.0000, 37.9167, 4

The allowable inputs include:

4 = Composite steel & concrete section where dead load moment is positive (tension in bottom of section). See Note 1.

5 = Composite steel and concrete section where the dead load moment is negative (tension in top of the section). See Note 1.

41 = The steel girder cross section at this point may be compact and the girder cross sections at the adjacent pier(s) are compact or moment released (i.e. hinge or pin connected) and you desire the program to check AASHTO Equation 10-129b and 10-129c. If you want the section at this point to be analyzed as non-compact, code 4. See Note 2.

I can't find an ENGINE TAB that allows me to force the parameter to "41" for a positive moment range of the STEEL GIRDER CONTROL command. I can do it on the ENGINE TAB of the POI WINDOW, but that doesn't override the settings on the STEEL GIRDER CONTROL command.

FROM: jduray DATE: 01/12/2000 10:30:11

Can you address this?

FROM: bgoodrich DATE: 1/12/2000 10:37 AM

The export uses the contraflexure percents to determine if the 4 or 5 option should be exported to the STEEL-GIRDER-CONTROL command. There is no place on the engine tabs to indicate if the 4 or 41 option should be used. We could add an option to the engine data for the user to choose which one to use (4 or 41), but it would have to be used in every positive moment region. Would this be enough or would a user want to use option 4 for the positive moment region of one span and option 41 for the positive moment region of another span?

If BRASS-LFD allowed the point of interest commands to override the schedules, this would not be as

4/19/2016 3:02:22 PM

HRS AASHTO

34

Complete Issue Information

big of a problem. Please discuss this issue with Jay.

FROM: gbarnhill DATE: 1/12/2000 12:42 PM

The POI override of the schedules seems to be the best solution. Some positive areas may qualify for 41 and some may not, so setting all to 41 would give incorrect results.

FROM:jduray DATE:01/17/2000 14:27:21

This is an enhancement to be discussed with the TF.

FROM:bgoodrich DATE:Friday, January 24, 2003 12:31:20 PM

The BRASS-GIRDER export utilizes the corresponding engine properties to determine if the adjacent pier sections are compact or not. Then, for each positive bending region in which the the adjacent pier sections are compact and there is a slab, the 41 code is exported. If the user does not want to take advantage of Mp, then, the adjacent pier sections for each span should be marked as non-compact in the engine properties.

BRASS-GIRDER should therefore support plastic section capacity based on AASHTO Equation 10-129b and 10-129c, however, it doesn't appear that 10-129b is considered. I will forward this issue to WYDOT immediately.

FROM:hlee DATE:4/30/2008 2:20:04 PM

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 2210                                                                  |
| Subject: rel 2.1 - BRASS export doesn't seem to create correct bracing schedule |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Barnhill, Gale          | 1/18/2000 10:29:16 PM |
| Modified By: administrator            | 6/19/2008 4:02:36 PM  |
| Priority: Urgent                      |                       |
| Category: Education                   |                       |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     |           |
| Kennelly, Krisha | Assigned | Urgent   |           |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | Urgent   | Education |

Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

4/19/2016 3:02:22 PM

HRS AASHTO

35

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 2288.11073 | Resolved      | LFD-Live Load Distribution Factor |

Description

FROM: gbarnhill DATE: 1/18/2000 4:23 PM

I'm trying to input bracing for a composite rolled beam 3 span bridge.

The spans are 60 ft, 78 ft, 60 ft.

I've tried to input so the pier diaphragm is placed only once, using the spacing in spans 1 & 3.

I've attached a bitmap showing the bracing input tab, the BRASS output and the BRASS help. Also the exported bridge workspace.

FROM:kkennelly DATE:01/19/2000 13:40:38

I think the export is correct based on your input.

Your input:

| Span | Start Dist | Spacing | # spaces | Length | End Dist |
|------|------------|---------|----------|--------|----------|
| 1    | 0          | 20      | 3        | 60     | 60       |
| 2    | 26         | 26      | 1        | 26     | 52       |
| 3    | 0          | 20      | 3        | 60     | 60       |

A diaphragm is not located at the start distance you put in Virtis so the above input translates into this framing plan:

Span 1 Diaphragm at 20', 40', 60' (the one at 60' is the diaphragm at the pier). Note that you do not have a diaphragm at the beginning of the member (0').

Span 2 Diaphragm at 52'. This is the only one in span 2. One does not exist at the start dist = 26'.

Span 3 Diaphragm at 20', 40', 60'. Note that you do not have a diaphragm at the beginning of this span (0').

I think the BRASS bracing schedule generated by the export matches the framing plan I described above.

FROM: gbarnhill DATE: 1/20/2000 10:37 AM

I think I now see how to set the ranges for what I want.

See Incident 2214 for a follow-up.

|                                            |
|--------------------------------------------|
| Issue ID: 2288                             |
| Subject: LFD-Live Load Distribution Factor |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Duray, Jim           |

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Koenig, David | 2/9/2000 6:05:47 PM  |
| Modified By: administrator  | 6/19/2008 4:02:32 PM |
| Priority: High              |                      |
| Category: Education         |                      |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Goodrich, Brian | Suspended | High     | Enhancement   |
| Goodrich, Brian | Suspended | High     | Enhancement   |
|                 |           |          | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | virtis.bbd          |             |

### Tasks

| Name       | Current State | Summary                                                                     |
|------------|---------------|-----------------------------------------------------------------------------|
| 2513.10864 | Suspended     | How do I turn off the rating analysis based on Bearings within Steel Module |

### Description

FROM: dkoenig DATE: 2/9/2000 11:59 AM

I have found what appears to be a problem with the calculation of the live load distribution factors for an exterior girder when the bridge has been input using metric. The bridge data is as follows: girder spacing=2.92m, curb width=.41m, overhang width=1.21m, and the number of girders=6. The system calculated distribution factor shows up as being 1.5205 for shear, shear at the supports, and moment. Using the standard AASHTO formula for an exterior girder (with english units) gives a DF of 1.4981 for moment and shear. Using the simple beam model, I came up with a distribution factor of 1.493 for shear at the support (this assumes the first wheel line is .6m from the face of the barrier curb). For the interior girders, I was able to match what the system had calculated. This is only a small difference. However, I thought that since I was able to match the programs calculations on the interior girder, I should be able to also match the programs calculations on the exterior girder. Also, the fact that all three distribution factors were showing up the same seemed a little odd to me. By the way, I have not encountered this problem whenever I have put the structures in the system

4/19/2016 3:02:23 PM

HRS AASHTO

37

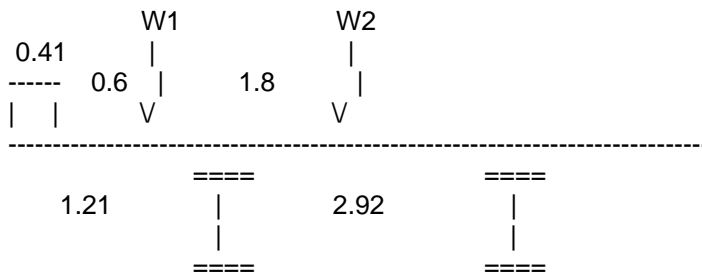


Complete Issue Information

using english dimensions.

FROM:kkennelly DATE:02/09/2000 14:31:52

W1 is 0.2m to left of ext girder and W2 is 1.6m to right of ext girder.



by simple beam calculations, 
$$\text{Ext DF} = \frac{W1(2.92+0.2) + W2(1.32)}{2.92} = 1.5205W$$

FROM: dkoenig DATE: 2/9/2000 4:32 PM

Your basically using a lever principle to come up with the DF. We have always assumed the wheel line on the cantilever to contribute 100% or 1.0.

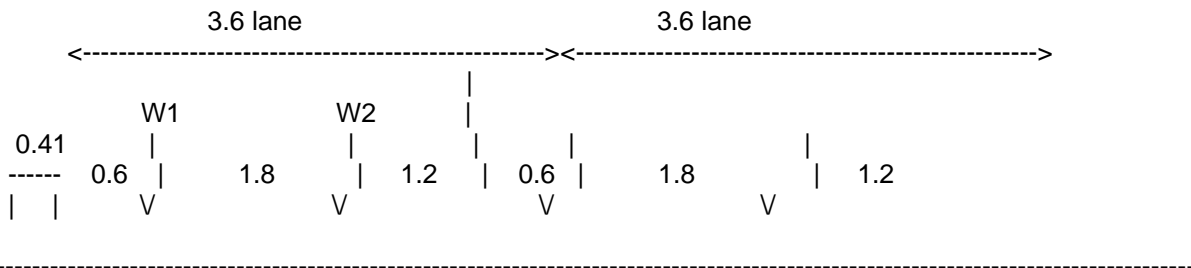
As a side note, based on a 3.6m wide design lane, I believe that there would actually be a third wheel line at .12m from the interior girder. This would result in a final DF of 1.5616. Let me know if you agree.

Thanks for your help.

FROM:kkennelly DATE:02/10/2000 08:08:17

We use the lever rule for the wheel on the cantilever since it's more conservative. Some states might want the more conservative DF and others might want to use 1 for DF. We don't currently have a mechanism to change the calculation of the DF contribution of this wheel. If more users want to use 1 for its DF maybe we can have an enhancement to add this choice of calculation but I don't think anyone else has asked for this so far.

The next wheel line has to be 0.6m into the lane so that puts it 0.48m to the right of the interior girder and it doesn't contribute to the DF.



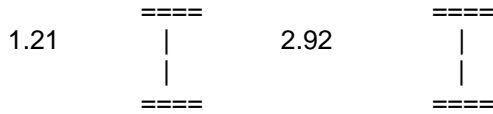
4/19/2016 3:02:23 PM

HRS AASHTO

38

Complete Issue Information

-----



FROM:kkennelly DATE:02/10/2000 08:20:24

FROM: dkoenig DATE: 2/10/2000 7:57 AM

Actually, what I conveyed above was not quite the way I calculated the contribution from the third wheel line. Some of our designers (including me) space the trucks transversely across the bridge based on the .6m dimension. As a result, I placed the third wheel line 1.2m from the second wheel line and ignored the 3.6m design lane width.

As far as adding this as an option in Virtis, I don't believe that it is real important. The difference between the way the program calculates it and the way we calculate it is small. There both conservative numbers anyway when compared to actual field measurements. If we decide that we want to use our numbers versus what Virtis calculates we can always input them manually.

Thanks.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 2513                                                                       |
| Subject: How do I turn off the rating analysis based on Bearings within Steel Module |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: vinayagamoorthy, vinacs | 3/9/2000 11:21:28 PM   |
| Modified By: hlee                     | 10/16/2011 11:06:01 PM |
| Priority: High                        |                        |
| Category: Enhance BRASS               |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:02:23 PM

HRS AASHTO

39

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

How do I turn off the rating analysis based on Bearings within Steel Module.

FROM: bgoodrich DATE: 3/15/2000 3:16 PM

The only way to get BRASS to neglect rating of bearings is to not enter any bearing data in Virtis. You need to set the number of pairs of bearing stiffeners to zero for each support. If any points of interest are specified, do not override the bearing stiffener schedule.

FROM: VVinayagamorthy DATE: 3/17/2000 11:38 AM

It looks like that we need to modify BRASS program to ignore rating based on bearing. Consider a scenario where a bridge is designed using OPIS and passed on to VIRTIS. Bearings details will be there and erasing this data is an Option at this point. When we route extra legal trucks, user may want to ignore the effects on bearings; as a result, user may want to ignore the rating based on bearing plates. This cannot be accomplished with the present BRASS.

(Enhancement for BRASS)

FROM: bgoodrich DATE: 3/23/2000 5:23 PM

Notes for later: A checkbox could be added to the engine data or to one of the Virtis/Opis windows to indicate that rating of bearing stiffeners. If an option was added to BRASS to ignore bearing stiffener analysis, this flag could be exported directly to a BRASS command. However, the ignore bearing option is not implemented in BRASS, the export could use this flag to know when to skip over generating bearing stiffener related commands, so BRASS would not consider bearing stiffeners in the rating.

FROM: bgoodrich DATE: Tuesday, February 26, 2002 2:51:04 PM

Not a short-term priority to WYDOT. WYDOT considers this a possible long-term enhancement.

FROM: bgoodrich DATE: Monday, September 08, 2003 3:34:05 PM

Ute Ganjanathavat (OK DOT) submitted the following:

I ran a bridge data and got moments and shears but all ratings are zeros. Would you please look at the attached file. Thanks. (See attached file: virtis.bbd)

FROM: bgoodrich DATE: Monday, September 08, 2003 3:36:08 PM

I did an LFD rating of Member 1 and bearing stiffeners are controlling. The output shows the bearing stiffener rating as:

Bearing Strength 10-132 (BS) = 394.42 (kips)  
Dead Load Reaction (DLR) = 643.13 (kips)  
Live Load Reaction (LLR) = 68.55 (kips)

$$\text{R.F.} = \frac{[\text{BS}] - \text{DLR}}{\text{LLR}}$$

## Complete Issue Information

\*\*R.F. = -3.6280

As you can see, the resistance is less than the applied dead load. BRASS-GIRDER calculates the rating as negative and then sets the rating to zero. The bearing stiffeners at the first interior support are 18 inches apart. One of the limitations of BRASS-GIRDER is that it only supports ONE line of bearing stiffeners, so the export merges multiple lines into one, thereby causing the area of the web between the stiffener lines to be neglected. This results in a lower bearing resistance. Even if BRASS-GIRDER calculated the resistance correctly (686 kips), this still would not be enough to get a bearing stiffener rating greater than 1.0. This issue is the same as Incident 4626.

This issue could also pertain to Incident 2513, which requests that the rating of bearing stiffeners be ignored.

The virtis.bbd file is for Virtis 5.0.1.

|                                                 |
|-------------------------------------------------|
| Issue ID: 2547                                  |
| Subject: Rating of bearing stiffeners incorrect |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Generated, jmckool      | 3/20/2000 2:30:18 PM |
| Modified By: administrator            | 6/19/2008 4:02:20 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Plate_girder.zip    |             |

### Tasks

4/19/2016 3:02:24 PM

HRS AASHTO

41

Complete Issue Information

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 2547.10830 | Resolved      | Rating of bearing stiffeners incorrect                                   |
| 2564.10813 | Suspended     | Load Case Name for Settlement load should be listed within Review report |

Description

FROM:jmckool DATE:03/20/2000 10:04:38

BRIDGE IDENTIFICATION

Arizona Department of Transportation  
Statewide steel bridge rating project  
Bridge ID: 01311

BRIDGE DESCRIPTION

Six-span continuous composite welded steel plate girder.

CONSULTANT

Michael Baker Jr., Inc.  
Phoenix, AZ  
Joseph McKool, P.E. (Baker's Coraopolis, PA office)  
(412) 269-6362

Virtis is reporting that the bearing stiffeners control the inventory and operating rating for both HS-20 truck and lane loadings. However, upon closer inspection of the BRASS output file it appears that in the Load Rating Summary Report, BRASS is reporting the rating from the right side of the support (point 300.00), but it is only using point 210.00 (the left side of the support) to define the bearing stiffener. We know this because if you look at the "Section Dimensions" reports in the BRASS output, at point 210.00 it lists a 5.63"X0.75" bearing stiffener, but at point 300.00 there is no bearing stiffener listed. Also, under the Bearing Stiffener Report for point 210.00, the "Available Reaction" (i.e. strength) is 265.00 kips, while at point 300.00 it is 221.11 kips. Since points 210.00 and 300.00 are the left and right sides of the same support node, we would expect the bearing stiffener strength and rating factors to be the same.

Because of this apparent bug, we are unable to obtain a correct rating for this bridge.

FROM: bgoodrich DATE: 3/20/2000 2:13 PM

Joe sent me the BRASS input and output files, which I have attached. I have forwarded this incident to WYDOT.

FROM: bgoodrich DATE: 3/23/2000 5:14 PM

Using the Virtis 3.0 acceptance build and the corresponding BRASS-LFD DLL, I do not get any difference in the rating factors for bearing at the 210 and 300 points. This issue appears to have been fixed sometime after the Virtis 2.1 release. There are some BRASS output issues that we are working on, but they will not be ready for the version 3.0 release. The bearing stiffener summary data may be missing for some of the points of interest.

|                |
|----------------|
| Issue ID: 2564 |
|----------------|

### Complete Issue Information

Subject: Load Case Name for Settlement load should be listed within Review report

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: vinayagamoorthy, vinacs 3/21/2000 3:31:14 PM  
Modified By: hlee 10/16/2011 10:21:55 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | Resolved | High     | Education |

### Contacts

| Name          | Company                         | Email 1              | Phone 1       |
|---------------|---------------------------------|----------------------|---------------|
| Robert Kelley | Michigan Dept of Transportation | kelleyr@michigan.gov | (517)322-1398 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 2645.10732 | Resolved      | Error Message |

### Description

FROM: VVinayagamoorthy DATE: 3/21/2000 8:26 AM

This is a follow up on incident 2135.

According to help, user could select any of the load case for settlement. However, when the user review selected load case name should be printed so that he could check his entry properly.

Low priority

FROM: jduray DATE: 03/21/2000 14:03:35

I don't understand the above description. Please clarify.

FROM: VVinayagamoorthy DATE: 3/21/2000 12:11 PM

Sorry for this poorly worded incident

I created a bridge with settlement. I assigned an additional dead load case to the settlement.

4/19/2016 3:02:24 PM

HRS AASHTO

43

### Complete Issue Information

When I reviewed the member for my data entry to see correct data was entered, I noticed that the program did not write the load case that was assigned for the settlement. I would like to see the load case name assigned to the settlement written within the review report.

Because of this lack of written information, I revisited to the GUI to make sure the correct load case was assigned or not.

|                        |
|------------------------|
| Issue ID: 2645         |
| Subject: Error Message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kelley, Robert          | 4/27/2000 1:10:34 PM |
| Modified By: administrator            | 6/19/2008 4:02:15 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: rkelley DATE: 4/27/2000 9:02 AM We got the following message "Structural Analysis Errors (2103) Element Too Small  
Error No.: 2103  
Type: Structural Analysis Error

4/19/2016 3:02:24 PM

HRS AASHTO

44

Complete Issue Information

Location: Data File

Error

The change point located 19.30 feet from the left end of span 1 is within .099 feet of the 2th tenth point of span 1. .... See page 10.1 Volume 1.

How do we get the manual referenced? We have no Volume 1 to refer to.

FROM:jduray DATE:04/27/2000 11:11:41

With the Bridge Workspace open go to Help/BRASS LFD Help in the menu. The BRASS Help file will open, click "10. Span Description" and read under the \*\*\*\*Note\*\*\*\*.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 2697                                                           |
| Subject: LL Distribution Factors Compute from Typ Section Details window |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 5/22/2000 1:14:31 PM |
| Modified By: administrator            | 6/19/2008 4:02:13 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |



## Complete Issue Information

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A4141test.bbd       |             |
|      | A5842d.bbd          |             |
|      | A5842dtest.bbd      |             |
|      | A3344 test.bbd      |             |
|      | A4141.bbd           |             |
|      | A5842d.txt          |             |
|      | A3344 test.txt      |             |
|      | A4141.txt           |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 2698.10679 | Closed        | Deleting Bridges From Database |

### Description

FROM:kkennelly DATE:05/22/2000 09:13:10

It would be nice to have a Details window (similar to PS Design Tool Review Details) where we could show the calcs used to compute the distribution factors.

Issue ID: 2698

Subject: Deleting Bridges From Database

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:02:25 PM

HRS AASHTO

46

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Koenig, David | 5/22/2000 7:09:15 PM |
| Modified By: administrator  | 6/19/2008 4:02:13 PM |
| Priority: Urgent            |                      |
| Category: Bug               |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | Duplicate | High     | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 2700.10677 | Duplicate     | Copying Problems on Girder Line Definition |

### Description

FROM: dkoenig DATE: 5/22/2000 2:10 PM

We have encountered a problem that we can't figure out. We have just moved Virtis into a production environment. I have gone in on the production version of the database and have been deleting all of the sample bridges etc. that we don't want in the production version of the database. I have been able to delete all of the bridges. However, whenever I select the empty deleted bridges folder command on the edit menu it will not allow me to delete two of the structures. The error message that we are getting is shown below.

Unable to delete bridge from the database!

01:14:22 PM - Line 2562 in source file D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp.

Error deleting record from database record set.

01:14:22 PM - Line 1099 in source file E:\virtis\Dev\data management\abmbrdg\DmStructDefRefLine.cpp.

No rows were affected by the update or delete operation.

These two bridges have run for us without any errors. They were checked in and the user authorization was set so that I have access to the structures. My user ID is setup so that I have full access to the software. What I thought was a little odd about the above error message was that it is

4/19/2016 3:02:25 PM

HRS AASHTO

47

## Complete Issue Information

referring to the E drive. On my machine, the E drive is the CD drive. I also have copied the structure and have imported it into one of our testing versions of the database. In both of these instances, I was able to delete it. I don't think that the error is related to our database setup because I get the same error in our production database and one of our testing databases.

FROM:jduray DATE:05/24/2000 14:38:34

The reference to the E drive is a result of how we built the executable and is not referring to anything on your PC. Which two sample bridge cause this? The version referred to above is 2.1. Is that correct or are you working with 3.0?

FROM:dkoenig DATE: 5/24/2000 3:48 PM

We are using Version 3.0 for our production and testing versions of the database. The two bridges that are causing this error are not any of the sample structures that were sent with Virtis. They are structures that we have input in the system.

FROM:kkennelly DATE:05/26/2000 10:49:08

Can you export and attach the bbd files for these bridges to this incident so I can test them? I'm not able to reproduce this.

FROM:dkoenig DATE: 5/30/2000 11:02 AM

The two files are attached. You can look at them and see if you can find anything. My guess is that you won't have any problems with them because we have copied these and imported them into the other versions of our database and did not previously have any problems deleting them. We did try something new this morning. We imported these bridges directly from our production database into one of our other databases and could not save these files. We have been discussing this problem with Jim. You may want to visit with him about this again because there may be some connection between this incident and the saving problem.

FROM:kkennelly DATE:05/31/2000 15:16:01

You were right, I can't reproduce this by importing your bridges. When you tried to save these bridges, what type of error message did you get? Do you know if spans and/or girders were added or deleted to these bridges?

FROM:dkoenig DATE: 6/1/2000 1:20 PM

We figured out the saving problem. We had not made both the NBI number and the Bridge ID unique. As far as I know, we have not added or deleted spans/girders to these structures. We have three Oracle databases in place for Virtis. One is for production, and the other two are for testing. On A584d.bbd, we can't delete it from any of our databases. Structure A4141 can not be deleted from our production database and from one of our testing databases. The only testing database that it can be deleted from is out on a server by itself. I exported both files again and have attached them below. You can try the newly imported files and see if it makes a difference. We first encountered this problem on our production database. Our DBMS group migrated our testing database to a production environment. Once they did this, I went in and selected all of the structures from explorer and selected delete so as to clean out the testing bridges. When I went in to empty the deleted bridges folder, it would delete everything down to one of these structures. I would then have to remove this bridge from the delete folder before I could delete anymore structures. In the end, I was left with the two structures that wouldn't delete. We are not sure what to do with this problem.

FROM:kkennelly DATE:06/02/2000 12:49:01

Still no luck reproducing this problem. Could you try validating one of the bridges you are trying to delete (Bridge, Validate) and see if the validation lists any error messages? Also try exporting the

4/19/2016 3:02:25 PM

HRS AASHTO

48

## Complete Issue Information

bridges to a .txt file (File, Export, Save as type .txt) so I can check for irregularities.

FROM: dkoenig DATE: 6/5/2000 12:29 PM

The text files are attached below. No errors show up when the bridges are validated. We do get some warning messages, but they are the same ones that we have been getting on other structures. Is it possible to open a file in version 3.0 that was created in version 2.1? I was wondering if maybe these two files were not included whenever our IS staff backed up the earlier version of the database to load the 3.0 database. I don't know enough about the Oracle myself to know whether this could happen or cause a problem. It is just something else that I thought of that may have happened to these two files.

FROM: dkoenig DATE: 6/14/2000 3:36 PM

We have another structure that we have found that we can't delete. It was one that we have just created. The only thing that we have done on this structure that was a little different is the diaphragms were first created manually, then the manually created ones were replaced with wizard defined diaphragms. I have attached both of the files below. The bridge is A3344 Test. The errors that we get are the same as on the other structures.

FROM: dkoenig DATE: 6/15/2000 8:12 AM

One of our IS people has tried deleting these bridges also. The error message that she gets is slightly different than the one that I get. It is shown below.

Unable to delete bridge!

10:06:14 AM - Line 2715 in source file  
D:\Virtis\gui\abgdtop\UiDescDtopGridView.cpp

Error deleting record from database record set.  
10:06:14 AM - Line 1099 in source file  
E:\virtis\Dev\data  
management\abmbrdg\DmStructDefRefLine.cpp.

No rows were affected by the update or delete operation.

FROM: jduray DATE: 06/19/2000 09:02:42

I spoke with Tamara Clutts (573-526-3959) and had her open the BWS for one of the problem bridges. I had her do the following:  
delete the bridge alt  
save (this was successful)  
delete the structdef  
save (this failed with the above error)  
export the bbd and txt files and email them to me

We were working with version 3.0.

I am hoping that the bbd file shows the faulty reference line.

FROM: jduray DATE: 06/20/2000 09:17:16

The following sql showed the export and the db matched:

```
select bridge_id, struct_def_id, struct_def_ref_line_id, b.display  
from abw_struct_def_ref_line a, abw_sys_type b  
where b.sys_type= a.line_type and bridge_id= XXXXX
```

4/19/2016 3:02:25 PM

HRS AASHTO

49

Complete Issue Information

where XXXXX is the BID shown in the Bridge Explorer.

FROM:jduray DATE:06/20/2000 09:25:00  
The following tables reference abw\_struct\_def\_ref\_line:  
Table Dm

-----  
abw\_girder\_member CDmSuperStructMbr uses CDmSuperStructSpngMbr uses CDmGirderMbr  
abw\_support\_line CDmSupportLine

I have not been able to import the attached bbd file. An error occurs while reading CDmStlComponent.

FROM:jduray DATE:06/21/2000 14:10:19  
Incident 2748 records problems with the import of bbd files that were discovered while investigating this incident.

FROM:jduray DATE:08/23/2000 16:38:42

FROM:jduray DATE:08/23/2000 16:43:10  
The exported txt does not show enough decimal digits for the reference line coordinates to determine if the database and domain match.

Refer to Incident 2802 for more detail on the same problem Ks had. We will try to resolve it the same way.

FROM:jduray DATE:10/09/2000 09:24:08  
Gale confirmed this is fixed for Version 3.0 SP4.

Issue ID: 2700  
Subject: Copying Problems on Girder Line Definition

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Koenig, David 5/22/2000 8:07:51 PM  
Modified By: administrator 6/19/2008 4:02:12 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 2701.10676 | Resolved      | Virtis Crashes in Strand Layout Window |

Description

FROM: dkoenig DATE: 5/22/2000 3:09 PM

I believe that this problem is the same issue as in Incident 2653, and you may already have this corrected. I figured that I would provide some more specific information on this so that you could make sure that it is fixed. What we have found is that this copy problem only shows up on the girder line structure definition. We define the initial member within the structure definition. If we copy this member for use in defining another member, then we have the following problems when copying. Using the cross-section based input method, if the following items on the second member's member alternative are changed, then they are also changed on the first member's member alternative. The items are the additional self weight, Cross-Section Data(name), splice locations, cross-section ranges, and the bearing stiffeners(name). In a similar manner for schedule based input, the following are the items: additional self weight, splice locations, girder profile data, and the bearing stiffeners(name). Hopefully, all of these were fixed with the solution to incident 2653. I just thought that I would provide some more detail so that the fix could be tested more if you so desired.

FROM: jduray DATE: 05/24/2000 14:25:24

The fix for this is in Service Pack 2 (soon to be released). Do not copy members until you get the service pack.

|                                                 |
|-------------------------------------------------|
| Issue ID: 2701                                  |
| Subject: Virtis Crashes in Strand Layout Window |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Koenig, David           | 5/22/2000 9:13:10 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:02:12 PM |
| Priority: Urgent           |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Duray, Jim      | Resolved | High     | Enhance BRASS |
| Duray, Jim      | Resolved | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 2720.10657 | Resolved      | Enhancement Request - GUI not engine dependent please |

### Description

FROM: dkoenig DATE: 5/22/2000 4:22 PM

When entering the strand layout window, Virtis will crash if you try to enter the radius of the bend without having the appropriate harped point radial button selected. The crash happens whenever you try to apply or okay the window. This is annoying because you can lose some data if you have not recently saved. My suggestion would be to have this box grayed out and non-enterable unless you have the radial button for that particular harped point selected. This would keep the user from accidentally entering it and causing the program to crash.

FROM:kkennelly DATE:05/23/2000 12:59:35

I cannot reproduce the crash but I found something else. I can only change the radius if I select the Modify button first and enter a harp distance then enter the radius. Symmetry not checked.

FROM: gbarnhill DATE: 5/23/2000 4:23 PM

I crashed. I have a beam with harped strands defined. I entered a number for the radius for the LEFT HARP PT and click APPLY. OK so far. Then I clicked the LEFT END radio button, typed a new number in the RADIUS for the LEFT HARP POINT, click APPLY and the program crashes.

FROM:kkennelly DATE:05/24/2000 07:50:33

I am able to reproduce what Gale submitted.

4/19/2016 3:02:25 PM

HRS AASHTO

52

Complete Issue Information

FROM:kkennelly DATE:05/24/2000 08:11:29

FROM:jihnmat DATE:05/24/2000 12:22:32  
Fixed for Version 3.0 Patch 2 and Version 4.0

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 2720                                                 |
| Subject: Enhancement Request - GUI not engine dependent please |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 5/30/2000 6:15:35 PM |
| Modified By: administrator            | 6/19/2008 4:02:11 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: tthompson DATE: 5/30/2000 1:05 PM

I would like to see an enhancement so that the GUI and it's related data is not so engine dependent. I too frequently run across the following error(s):

Structural Analysis Errors (2103) - Element too small  
01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

Structural Analysis Errors (2103) - Element too small  
01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.



Complete Issue Information

Structural Analysis Errors (2103) - Element too small

01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

Structural Analysis Errors (2103) - Element too small

01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

Structural Analysis Errors (2103) - Element too small

01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

Structural Analysis Errors (2103) - Element too small

01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

Structural Analysis Errors (2103) - Element too small

01:03:37 PM - Line 2124 in source file E:\virtis\Dev\DOMAIN\aborslt\DoMemberResults.cpp.

----- Contents of BRASS Error File -----

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

File: C:\Program Files\AASHTO BridgeWare\VirtisOpis30\24134099\Girder\_1\S01\Mbr\_Alt\_1.ERR

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Fatal Error Encountered - Unexpected Termination

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Data File: tisOpis30\24134099\Girder\_1\S01\Mbr\_Alt\_1.dat

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 2.75 FEET FROM THE LEFT END OF SPAN 2 IS WITHIN  
0.099 FEET

4/19/2016 3:02:26 PM

HRS AASHTO

54

Complete Issue Information

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 1TH TENTH POINT OF SPAN 2. NUMERICAL INSTABILITY WILL RESULT. ADJUST THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 1TH TENTH POINT. SEE PAGE 10.1 OF VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 24.83 FEET FROM THE LEFT END OF SPAN 2 IS WITHIN 0.099 FEET

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 9TH TENTH POINT OF SPAN 2. NUMERICAL INSTABILITY WILL RESULT. ADJUST THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 9TH TENTH POINT. SEE PAGE 10.1 OF VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

4/19/2016 3:02:26 PM

HRS AASHTO

55

Complete Issue Information

Type : Structural Analysis Error  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 2.75 FEET FROM THE LEFT END OF SPAN 3 IS WITHIN  
0.099 FEET

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 1TH TENTH POINT OF SPAN 3. NUMERICAL INSTABILITY WILL RESULT. ADJUST  
THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 1TH TENTH POINT. SEE PAGE 10.1 OF  
VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 24.83 FEET FROM THE LEFT END OF SPAN 3 IS WITHIN  
0.099 FEET

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 9TH TENTH POINT OF SPAN 3. NUMERICAL INSTABILITY WILL RESULT. ADJUST

Complete Issue Information

THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 9TH TENTH POINT. SEE PAGE 10.1 OF VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 2.76 FEET FROM THE LEFT END OF SPAN 4 IS WITHIN 0.099 FEET

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 1TH TENTH POINT OF SPAN 4. NUMERICAL INSTABILITY WILL RESULT. ADJUST THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 1TH TENTH POINT. SEE PAGE 10.1 OF VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

4/19/2016 3:02:26 PM

HRS AASHTO

57

Complete Issue Information

Location : Data File

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

\*\*\*\* ERROR \*\*\*\*

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

THE CHANGE POINT LOCATED 24.83 FEET FROM THE LEFT END OF SPAN 4 IS WITHIN  
0.099 FEET

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE 9TH TENTH POINT OF SPAN 4. NUMERICAL INSTABILITY WILL RESULT. ADJUST  
THE LOCATION

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

OF THE CHANGE POINT SLIGHTLY AWAY FROM THE 9TH TENTH POINT. SEE PAGE 10.1 OF  
VOL 1

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

-----  
01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Error No.: 2103

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Type : Structural Analysis Error

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

Location : Data File

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

One or more elements are too small. See detailed error messages above.

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

----- End of Contents of BRASS Error File -----

01:03:37 PM - Line 914 in source file D:\Virtis\GUI\abxbrass\BrassAnalysisCtl.cpp.

I would like to be able to enter the bridge as found on the plans and then if necessary, let the export utility do any massaging of the data to allow the data to work. It can be very frustrating getting all the data enter as found on the plans, only to find when running the analysis, that there are (in this case) all

Complete Issue Information

the section range lengths are not valid for BRASS.

FROM:jduray DATE:05/31/2000 15:06:24  
Brian - I thought we did something about this?

FROM:bgoodrich DATE: 6/8/2000 4:08 PM  
Jim - This issue was reported in Incidents 545 and 2498, however, we suspended them. Significant export or engine modifications will be necessary to address the short element issue.

FROM:bgoodrich DATE:Thursday, May 23, 2002 10:41:43 AM  
Both BRASS programs were modified so node points are not placed any closer than the short element length (about 0.12 feet). Therefore, the short element error should no longer occur. This incident is a duplicate of 545 and 2498.

|                                    |
|------------------------------------|
| Issue ID: 2723                     |
| Subject: Bridge Explorer - sorting |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Thompson, Todd          | 5/31/2000 1:11:11 PM |
| Modified By: administrator            | 6/19/2008 4:02:11 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | Assigned  | High     | Bug - GUI 2 |
|                    | On Hold   |          |             |
| Ordoobadi, Mehrdad | Assigned  |          |             |
| Ihnat, Joseph      | On Hold   |          |             |
|                    | Suspended |          | Enhancement |
| Ihnat, Joseph      | Suspended | High     | Enhancement |

Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

Documents

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 2759.10618 | Suspended     | Stiffness of multi-layered decks for Girder Distribution Factors |

Description

FROM: tthompson DATE: 5/31/2000 8:03 AM

I'm not sure if this is intended to work this way or not. But, If I sort the bridge list by bridge id (for example) and I then highlight a structure and then check out the bridge. After I check out the bridge, the bridge explorer resorts the bridge list based on the user preference of either ascending or descending BID. I don't like this behavior because the user then has to re-sort his/her bridge list. The only purpose I see for the BID is knowing the order bridges were created or imported - nothing more.

As a side issue, it would like to see the list be sorted by bridge id rather than BID as a default. Or better yet, a more robust explorer to let the user create his/her own items to sort by.

FROM: jduray DATE: 05/31/2000 15:22:14

Investigate not requerying the db after the checkout. The other suggestions are enhancements. After the requerying after checkout is resolved change this to an enhancement request and mark as "Suspended".

FROM: jduray DATE: 11/7/2003 7:55:00 AM

FROM: hlee DATE: 1/9/2007 10:27:25 AM

Fixed for 5.6.0.

Changed to Enhancement request and marked as Suspended for the side issues.

FROM: hlee DATE: 1/12/2007 4:06:40 PM

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 2759                                                            |
| Subject: Stiffness of multi-layered decks for Girder Distribution Factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 6/27/2000 4:19:37 PM |
| Modified By: administrator            | 6/19/2008 4:02:09 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Martin, Ed      | Resolved | High     | Bug      |

### Contacts

| Name         | Company                 | Email 1                   | Phone 1        |
|--------------|-------------------------|---------------------------|----------------|
| Richard Best | Illinois DOT            | BESTRM@nt.dot.state.il.us | 217-785-2922   |
| Ed Martin    | Michael Baker Jr., Inc. | emartin@mbakercorp.com    | (304) 769-2126 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 2760.10617 | Resolved      | BARS Import fails to bring over Slab Material |

### Description

FROM: dteal DATE: 6/27/2000 11:14 AM

I think Virtis is passing on the wrong structural thickness to BRASS for calculating stiffness for girder distribution factors.

Girder System Example(attached):

180 mm Total Deck Thickness on the Struc Typ Sec, Deck (Cont'd) tab

40 mm SFO Thickness on the Struc Typ Sec, Wearing Surface tab

210 mm Structural Thickness on the Deck Profile Deck Conc tab

180 mm deck + 40 mm SFO - 10 mm wear = 210 mm Structural Thickness

When you go to the \*.DST output you find 180 mm for both structural thickness (ts) and for the thickness used to compute the dead load.

For computing the dead load it should use 180 mm deck + SFO of 40 mm and then the thickness used to compute stiffness should be ts = 210 mm.

FROM:jduray DATE:06/27/2000 16:14:51

Brian - please check this. Krishna checked on this and thinks we are passing the correct value and she checked with the engineers that are doing the ADOT ratings and they agreed. Please confirm.

FROM: dteal DATE: 6/27/2000 3:37 PM

I am not referring to an LFD rating. I am looking at the \*.DST file created from a LRFD design review.

FROM:kkennelly DATE:06/28/2000 10:54:02

What I looked into is which deck thickness BRASS LFD and LRFD use when determining the stiffness of the member when calculating the moments and shears along the member. I found that by greatly varying the structural thickness on the deck profile window, I could achieve different LL moments and

4/19/2016 3:02:27 PM

HRS AASHTO

61



## Complete Issue Information

shears in Stage 3.

I did not check what is used in the .dst file.

FROM: bgoodrich DATE: 7/5/2000 1:28 PM

The export has no way of knowing that the information entered on the wearing surface tab is structural or just an overlay. There is no field in Opis for which to enter this information. Also, BRASS does not support a structural contribution from a wearing surface. For this case, you need to compute distribution factors by hand and enter them into Opis.

Jim - Do you agree?

FROM: jduray DATE: 08/18/2000 14:40:21

Brian - please check with Jay on this. We discussed at User Grp mtg and I think he said the computation of DF is not very sensitive to this. I agree that if the user doesn't like the way BRASS or Virtis/Opis computes the distribution factors he/she should compute his/her own.

FROM: jduray DATE: 08/22/2000 14:48:01

E-mail from jay:

Hi Jim:

It appears to me that we need to establish a workplan for this, gain approval for any engine-related changes. Note that this is related to TennDOT's issue where they want to remove a layer significant layer of concrete and then redeck. We should examine both issues at the same time. This will likely take modifications in the database, domain, GUI, and engines.

Jay

FROM: jduray DATE: 09/15/2000 13:03:19

From Jay:

This is definitely an enhancement as far as BRASS is concerned to get a correct analysis and perform the spec checks. I can think of two options:

Option 1:

Enhance BRASS to provide another construction stage where the top concrete or wearing surface layer is considered as a structural element. Enhancing BRASS will not be a trivial issue because it effectively adds a construction stage. This means array subscripts have to be increased, hard-coded conditionals have to be found and changed, and the section analysis has to be carefully reworked. New commands or parameters have to be added and the manuals and help files have to be updated. I think this enhancement is on the order of 4+ weeks for each BRASS program. The export could most likely be enhanced in 2-3 days depending on the new commands or parameters.

Also, if Virtis is modified to allow several (not just two) structural layers, modifying BRASS as described above will be of little help. I don't think we should just increase the number of stages by some arbitrary value.

Every time we add a stage to BRASS-GIRDER(LRFD), we increase the amount of memory required for each point of interest, which is already large.

4/19/2016 3:02:27 PM

HRS AASHTO

62

Complete Issue Information

Option 2:

The export could be modified to merge the two structural layers (of different thickness and material) into an "effective" structural layer. This would require no changes to BRASS. Export work would take 3-4 days.

----- end of Jay's response-----

FROM:jduray DATE:11/08/2000 12:44:02

I think we need to discuss this with the Task Force since it is an enhancement.

FROM:dteal DATE:Thursday, March 06, 2003 2:28:22 PM

I think #4315 is the same subject

|                                                        |
|--------------------------------------------------------|
| Issue ID: 2760                                         |
| Subject: BARS Import fails to bring over Slab Material |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Best, Richard           | 6/27/2000 4:32:29 PM |
| Modified By: administrator            | 6/19/2008 4:02:09 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: rmbest DATE: 6/27/2000 11:22 AM BARS Import fails to bring over Materials \ Concrete properties for the slab on a CPS structure. Below is a sample BARS input file. To get the analysis to run in VIRITS we had to add the concrete to the Materials list and then specify it in the deck profile.

Complete Issue Information

AA NEW XX  
 01 011996TACKETT 0.00 0.000.00\*LT\*  
 99010075  
 02010075 VERHULST PPCI 94 71 0 32 0 1  
 05010075001-00756001 FA 506 127B-1 13756 6-205 IL 96  
 060100751 SINGLE SPAN PPCI WITH 2" FWS.  
 060100752 CURBS DISTRIBUTED EQUALLY TO ALL BEAMS.  
 060100753 S-1 IS WITH THE FWS. S-2 IS WITHOUT THE FWS.  
 08010075S 1 1 65 0 CPS 270-60001.061  
 08010075S 2 1 65 0 CPS 270-60001.061  
 10010075S 1 1 W 283 65 0  
 10010075S 2 1 W 137 65 0  
 11010075S 1 1 1 65 0 1  
 11010075S 2 1 1 65 0 1  
 14010075S 1 1 1 65 0 C 1 70.0 7.5 16 1 70.0 7.5 3.75  
 14010075S 2 1 1 65 0 C 1 70.0 7.5 16 1 70.0 7.5 3.75  
 15010075S 1 1 42 16 4 25 6 8 6 22 1L 608 2.0  
 15010075S 1 1 2L 608 4.0  
 15010075S 1 1 3L 408 6.0  
 15010075S 1 1 4L 208 8.0  
 15010075S 1 1 5T 1.24 43.94  
 15010075S 1 1 6T 1.81 46.31  
 15010075S 2 1 42 16 4 25 6 8 6 22 1L 608 2.0  
 15010075S 2 1 2L 608 4.0  
 15010075S 2 1 3L 408 6.0  
 15010075S 2 1 4L 208 8.0  
 15010075S 2 1 5T 1.24 43.94  
 15010075S 2 1 6T 1.81 46.31

FROM: emartin DATE: 8/11/2000 2:43 PM  
 FROM: emartin DATE: 10/9/2000 3:29 PM

FROM:kkennelly DATE:10/13/2000 10:05:29  
 Tested and repinned in 3.0Maintenance for Patch 5

Issue ID: 2765  
 Subject: Trouble matching BARS ASD rating results for RC Slabs

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Duray, Jim  
 Submitted By: Best, Richard 6/28/2000 6:10:24 PM  
 Modified By: administrator 6/19/2008 4:02:09 PM  
 Priority: High  
 Category: Bug

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | KLH.log             |             |
|      | KLH.DAT             |             |

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 2773.10604 | Resolved      | BRASS Import |

### Description

FROM: rmbest DATE: 6/28/2000 1:04 PM We are having trouble matching BARS ASD rating results for RC Slabs. It seems that for RC Slab bridge imports from BARS we have to go into the VIRTIS Member Alternative Description and fill in the ASD Factors for reinforcement before we get the correct results from VIRTIS.

FROM: jduray DATE: 6/29/2000 10:11 PM  
Ed - please investigate and suggest solution.

FROM: rmbest DATE: 7/5/2000 11:17 AM  
FROM: emartin DATE: 10/30/2000 3:54 PM

FROM: emartin DATE: 10/30/2000 5:06 PM  
BRASS uses defaults of 0.4 and 0.6 for Inventory and Operating ASD factors.  
BARS uses values that are dependent on the year of construction.  
Added code to read allowables for Inventory and Operating rating from BARS CDATA file (.SE 1400) and compute the ASD factors for Rebars.

Jim -- Would anyone want this also done for Steel or Concrete?

## Complete Issue Information

|                       |
|-----------------------|
| Issue ID: 2773        |
| Subject: BRASS Import |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: fulton, keith           | 7/6/2000 8:17:22 PM  |
| Modified By: administrator            | 6/19/2008 4:02:09 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Martin, Ed      | Accepted | High     | Bug      |

## Contacts

| Name          | Company                 | Email 1                 | Phone 1        |
|---------------|-------------------------|-------------------------|----------------|
| Gale Barnhill | Earth Tech              | gale.barnhill@aecom.com | (402)363-9515  |
| Ed Martin     | Michael Baker Jr., Inc. | emartin@mbakercorp.com  | (304) 769-2126 |

## Documents

| Name | Resource Identifier | Description                 |
|------|---------------------|-----------------------------|
|      | 02110.dat           | error in bracing ranges.bbd |

## Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 2776.10601 | Accepted      | 3.0 SP 3 - BARS import for LFD steel doesn't put in a zero range for bracing |

## Description

FROM: kfulton DATE: 7/6/2000 2:09 PM

When importing BRASS files I have found the following problems.

- 1) The rolled beam section designator in the XST command has to be in all caps.
- 2) If a file has a span copy command with the third parameter set to 0 (zero) the structure will not be imported in. If the third parameter is blank or a 1 then the import works fine.
- 3) When additional loads are in the data set and the load group name (LDE comand 4 parameter)is

4/19/2016 3:02:27 PM

HRS AASHTO

66

### Complete Issue Information

close to the number of allowable characters or larger, I get the following error message:

Unable to do save of bridge object!

Assignment of data to recordset variables failed.

Trying to set NAME to NULL in table ABW\_SUPER\_LOAD\_CASE, but the field is not allowed to be NULL.

The log file does not show any problems and has the saving bridge... at the end, but the bridge is not saved in the DB. i have attached the data set and log file.

FROM: bgoodrich DATE: 7/19/2000 3:59 PM

I have corrected the three issues from above and will send the modified source code to Jim.

1. I modified the FindBrassXSection import function so it converts the section strings to uppercase before comparing them.
2. I modified the import function that interprets the SPAN-COPY command. It checked if parameter 3 was a positive integer and zero is not considered a positive integer. I added another section to check if a zero is entered.
3. The load case name is limited to 32 characters within Virtis database. The BRASS load case name is now trimmed before populating the load case name in the domain.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 2776                                                                        |
| Subject: 3.0 SP 3 - BARS import for LFD steel doesn't put in a zero range for bracing |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Barnhill, Gale          | 7/17/2000 9:14:42 PM |
| Modified By: administrator            | 6/19/2008 4:02:08 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:02:28 PM

HRS AASHTO

67

Complete Issue Information

Description

FROM: gbarnhill DATE: 7/17/2000 4:10 PM

I imported a BARS file with bracing ranges described. I added tranverse and bearing stiffener definitions and updated the schedule as needed. When I tried to rate the bridge, I get the following message from the BRASS run.

Input Errors (1878) - BRACING-SCHEDULE: The first range used for defining cross bracing for a span, must begin at 0.0 feet.

----- Contents of BRASS Error File -----

File: D:\VirtisOpis30\S089L\_\_02110\Girder\_1\G01\Mbr\_Alt\_1.ERR

Fatal Error Encountered - Unexpected Termination

Data File: is30\S089L\_\_02110\Girder\_1\G01\Mbr\_Alt\_1.dat

-----  
Error No.: 1878

Type : Input Error

Location : Input Data File

\*\*ERROR\*\* BRACING-SCHEDULE

The first range used for defining cross bracing for a span, must begin at 0.0 feet.

----- End of Contents of BRASS Error File -----

I've attached the BARS file I started with and the BBD file with stiffeners added.

FROM:jduray DATE:07/19/2000 13:25:57

Krishna - please investigate to determine where the problem is (import or export).

FROM:kkennelly DATE:07/26/2000 09:39:31

FROM:kkennelly DATE:07/26/2000 10:56:58

I think the problem is in the import. I'm not too familiar with BARS or the import but Card 16 in the BARS file has "SPSP" in columns 28-31 which I think means the range has a support at both the left and right ends of the range. The import needs to create a diaphragm set with distance = 0, spacing = 0', 1 space since in Virtis a diaphragm does not exist at the start of a range. Seems funny nobody noticed this before.

FROM: emartin DATE: 10/30/2000 2:02 PM

FROM: emartin DATE: 10/30/2000 3:46 PM

Added check for "SP" code on first range of structure and if found add diaphragm at start of structure (at 0' with spacing of 0')

Added check for "NS" code on left end of range and reduce number of spaces by one or skip adding if only one.

FROM: gbarnhill DATE: 12/12/2000 8:22 AM

OK in V4.0 Beta 2

|                |
|----------------|
| Issue ID: 2777 |
|----------------|

4/19/2016 3:02:28 PM

HRS AASHTO

68

### Complete Issue Information

Subject: 3.0 SP3 - BARS import should create a rolled beam shape if detail AIS matches library

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Martin, Ed  
Submitted By: Barnhill, Gale 7/17/2000 9:36:36 PM  
Modified By: administrator 6/19/2008 4:02:08 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                                      | Description |
|------|----------------------------------------------------------|-------------|
|      | Plate_Girder.out                                         |             |
|      | A5957.bbd                                                |             |
|      | Plate_Girder.STS                                         |             |
|      | Plate_Girder.dat                                         |             |
|      | Report on Bridge Problem<br>Submitted by Dave Koenig.doc |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 2783.10595 | Resolved      | Strange rating for a plate girder bridge |

### Description

FROM: gbarnhill DATE: 7/17/2000 4:16 PM

Now that we are storing the beam shape data with the bridge workspace, BARS import should create a beam shape for the bridge instead of creating plates when it finds a match in the shapes library for detailed AIS data in BARS.

I've attached a BARS file with AIS data that matches the standard library and another BARS file with

4/19/2016 3:02:28 PM

HRS AASHTO

69



Complete Issue Information

AIS that matches my agency library prepared from NY data.  
(Jim, you should have a copy of my DB on the CD I gave you at the IBC.)

FROM:jduray DATE:07/19/2000 13:43:07  
Ed - I need an estimate for doing this.

FROM:jduray DATE:08/08/2000 11:55:10  
Ed's estimate is 4-5 days plus testing.

Gale - I will need a more detailed description of what is needed here so the TF understands the issue. I think it is important to do this given that there are so many BARS files yet to be imported and this can save time. Can you help with such a description?

FROM: gbarnhill DATE: 8/8/2000 12:47 PM  
When Import finds AIS that matches a shape in the library, we see the following message:

```
>>>>>
The detail element number 0 of section number 1
was specified by A & I
(Area = 20.020000, Inertia = 1478.300000)
The element will be changed to three plates based on a W 21x68
Flange plates: 8.270000 x 0.685000
Web plate: 19.760000 x 0.430000
>>>>>
```

Instead of creating a plate girder MEMBER ALTERNATIVE with CROSS SECTIONS using flange and web dimensions, Import should create a BEAM SHAPE - STEEL BEAM SHAPE - I SHAPE and then create a rolled shape MEMBER ALTERNATIVE.

A word of caution. This will only work when the entire member is made up of rolled shapes (with or without cover plates). Import will have to "check ahead" or "review previous data" to see if part of the member is a plate girder.

FROM:hlee DATE:4/30/2008 2:22:54 PM  
Discarded by TAG 12/07.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 2783<br>Subject: Strange rating for a plate girder bridge |
|---------------------------------------------------------------------|

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Koenig, David           | 7/21/2000 3:20:38 PM |
| Modified By: administrator            | 6/19/2008 4:02:08 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 2784.10594 | Resolved      | Pasting into Virtis |

### Description

FROM: dkoenig DATE: 7/21/2000 10:23 AM

A 3-span continuous plate girder bridge was created and analyzed in Virtis. The rating report shows that the operating rating is below the inventory rating. This is impossible. BRASS is getting confused when an analysis point is located at a contraflexure point (Before now, I did not know that the contraflexure points needed to be input manually. Locating the contraflexure points, or differentiating between positive and negative moment, seems to be an easy task for engineering software). For different load cases (all positive moment), BRASS is using composite and non-composite properties. This creates the unusual operating rating. More information along with plans on this bridge were given to Brian Goodrich at the recent user meeting.

The Virtis and BRASS files are attached.

FROM: dkoenig DATE: 7/21/2000 10:36 AM

The bbd file is attached along with the BRASS files for Girder 8.

FROM: bgoodrich DATE: 7/21/2000 9:28 AM

I gave Dan Glandt the plans and he is currently working on this issue.

FROM: bgoodrich DATE: 9/5/2000 2:56 PM

I attached a document from Dan Glandt that discusses this issue.

FROM: bgoodrich DATE: 9/5/2000 3:10 PM

I submitted Incident 2824, which was spawned from this incident.

FROM: bgoodrich DATE: 9/22/2000 10:37 AM

This issue appears to be resolved as far as BRASS goes. Jim - Please review and mark accordingly.

FROM: jduray DATE: 10/03/2000 16:51:49

4/19/2016 3:02:28 PM

HRS AASHTO

71

### Complete Issue Information

This is resolved in the version of Brass Girder that will be distributed with the Virtis/Opis Verson 4 release.

|                              |
|------------------------------|
| Issue ID: 2784               |
| Subject: Pasting into Virtis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Koenig, David           | 7/21/2000 3:53:19 PM |
| Modified By: administrator            | 6/19/2008 4:02:08 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dkoenig DATE: 7/21/2000 10:56 AM

There is a problem with pasting data into Virtis. A specific example is pasting from Excel into the Framing Plan – Diaphragms tab.

More specifically, this error occurs from pasting data over previously applied data. The pasted data will seem to be pasted over the previous data. After adjusting the data and applying, visually the data can be found to be absolutely correct. After accepting this data and looking at the schematic, the framing plan diagram will be incorrect. Looking at the diaphragm tab will show the incorrect data. This data includes the original data sometimes with an additional line or two from the pasted data. It seems that the pasted data is being pushed behind the original data, but the user cannot see this. At least while the data is being entered.

Additional problems occur if a user tries to paste data into Virtis when too few lines have been created originally. It would be nice if Virtis could create the additional lines needed when the data is pasted. I am not sure how difficult this would be.

4/19/2016 3:02:29 PM

HRS AASHTO

72

Complete Issue Information

FROM:jduray DATE:07/28/2000 16:21:38  
I thought we disabled pasting into our grid?

FROM:jihnata DATE:08/02/2000 15:20:00  
We disabled selecting a range of cells within our grids, but this doesn't prevent someone from pasting from another program (like Excel).

I added a check so that a user cannot paste a grid that is bigger than the destination grid (allowing this would be incompatible with our grid class). Also, the modify flag is now updated so that the data will save correctly.

These changes are completed for Version 4.0.

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 2794                                                                                       |
| Subject: 3.0 SP3 - RF for Operating Rating in Virtis sometimes greater than from BARS for PS members |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Barnhill, Gale          | 8/2/2000 9:39:15 PM  |
| Modified By: administrator            | 6/19/2008 4:02:08 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Accepted | High     | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                         | Phone 1      |
|----------------|------------------|---------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

report on 90% tendon limit.doc

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 2805.10574 | Resolved      | Plate Girder problems under Girder System |

Description

FROM: gbarnhill DATE: 8/2/2000 4:23 PM

In comparing Load Factor Virtis Operating Ratings to BARS for some PS members, I've noticed that Virtis rating factors are higher. In investigating, I've found that BARS (by default) for an operating level checks the criteria for 0.90 of yield point stress for the lowest tendon. Virtis (BRASS) only checks for ultimate strength.

The Manual for Condition Evaluation of Bridges - 1994 edition, 1996 Interim, in section 6.6.3.3 implies that the 0.90 limit should be checked for all members. In previous versions of the manual, the check was recommended for only "SITUATIONS OF UNUSUAL DESIGN WITH WIDE DISPERSION OF THE TENDONS".

In BARS, the check can be turned off.

If states want to include the check (which they have been doing if they let BARS do the default analysis), then we need to consider allowing a user option to do the check in Virtis.

FROM: bgoodrich DATE: 8/18/2000 10:50 AM  
Dan Glandt is currently investigating this issue.

FROM: bgoodrich DATE: 8/26/2000 3:15 PM  
Dan resolved the issue and his report is attached.

FROM: gbarnhill DATE: 12/12/2000 8:21 AM  
OK in V4.0 Beta 2

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:19:32 PM  
Track field marked with "A", so status set to Accepted.

FROM:bgoodrich DATE:Wednesday, April 10, 2002 12:26:19 PM  
Closed.

|                                                    |
|----------------------------------------------------|
| Issue ID: 2805                                     |
| Subject: Plate Girder problems under Girder System |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Shah, Shyam             | 8/18/2000 3:46:52 PM |
| Modified By: administrator            | 6/19/2008 4:02:07 PM |

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | On Hold  | High     | Bug - BRASS |
| Duray, Jim      | Assigned |          |             |
| Goodrich, Brian |          | Urgent   |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 2807.10572 | Resolved      | Concrete Shear Capacity |

### Description

FROM: snshah DATE: 8/18/2000 10:40 AM

I am having problems analyzing a 3 span continuous steel plate girder using girder system. The same information runs using girder line, but for some reason it fails to run using girder system. The exported bridge data file is included.

FROM:kkennelly DATE:08/23/2000 13:01:11

When I try to analyze the 540' Interior Beam member alt for Member G2 with BRASS LFD, it gives an error in the Analysis Progress window as follows: "ERROR - Splayed girders and/or tapered overhangs are not allowed!" (That is a BRASS LFD limitation as indicated in the BRASS LFD Engine Related Help in the Structure Framing Plan Details: Layout topic.)

If you go to the Structure Typical Section window and place the cursor in the Start Left Overhang edit control, you will see the value of the overhang is 2.4167'. The End Left Overhang value is only 2.42'. If you change the End Left Overhang to 2.4167', BRASS LFD will run.

(FYI, We are currently working on an enhancement to Virtis/Opis version 4 to let the user enter a tolerance when comparing numbers. For example, in the next release you will be able to enter a number like 0.01' for the tolerance on feet and then 2.4167' will be evaluated the same as 2.42' and

4/19/2016 3:02:29 PM

HRS AASHTO

75

Complete Issue Information

BRASS will run.)

|                                  |
|----------------------------------|
| Issue ID: 2807                   |
| Subject: Concrete Shear Capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Best, Richard           | 8/18/2000 9:41:33 PM |
| Modified By: administrator            | 6/19/2008 4:02:07 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: rmbest DATE: 8/18/2000 4:30 PM

The following may be a source discrepancy in ratings between BARS and BRASS for conditions where shear controls in concrete girders. The problem lies in the use of AASHTO 8.16.6.2. BARS uses equation 8-48 while BRASS uses the simplified equation 8-49 for the computation of the shear capacity for concrete. The difference in ratings would become more pronounced when the girder is under-reinforced for shear and capacity is therefore relying more on the strength of the concrete. This should be investigated or at least BARS users should be aware.

FROM: jduray DATE: 08/21/2000 11:58:12

FROM: bgoodrich DATE: 8/23/2000 1:15 PM

BRASS only uses the simplified equation 8-49. I forwarded this issue to WYDOT to determine if they would like to address this issue with an enhancement to BRASS or by adding some discussion to the

Complete Issue Information

manual and help.

FROM:bgoodrich DATE:08/09/2001 13:24:10

I am suspending this incident until we get a directive from WYDOT to perform this work.

FROM:bgoodrich DATE:02/01/2002 15:02:39

Dan Glandt has enhanced BRASS-GIRDER to utilize Equation 8-48. This will be available in BRASS-GIRDER 5.8.5, which should be included in the first patch for Virtis 4.1.

Jim - Note that there is currently no way in Virtis to set the new Parameter 4 (Reinforced Concrete Shear Equation) on the ANALYSIS command. An initial option would be to leave the parameter blank as is done in the export now and the new BRASS default (AASHTO Equation 8-48 method) would be used. In the next major release, a new field could be added to Virtis itself or to the BRASS engine properties. These last two options would require database changes, which we are trying to avoid between major releases. How should we address the export?

FROM:jduray DATE:2/4/02 4:24:48 PM

The export should do whatever it has to do to produce exactly the same ratings as before the change in BRASS. The user should not have to change the description of a bridge after a release because of a new feature in BRASS. The only time a user may not get the same rating is if the original rating was wrong because of a bug in Virtis/Opis or BRASS. If the new BRASS default causes a new method of analysis then the export should specify the option that uses the old method.

Adding new data items to Virtis/Opis or the engine data tabs is an enhancement and should be entered in a separate incident. This incident should deal with fixing either BRASS or the export so users get the rating they got with 4.0. I think we should add this data to the engine data. We can do that anytime because that does not require a db change.

FROM:bgoodrich DATE:02/06/2002 19:00:12

The latest release notes indicate that Equation 8-48 will not be available in BRASS-GIRDER 5.8.5. The equation is scheduled for release in BRASS-GIRDER 5.8.6, but no release date has been established.

FROM:bgoodrich DATE:Thursday, March 07, 2002 11:08:22 AM

The shear capacity changes have now been made to BRASS-GIRDER 5.8.5, which should be released with Virtis 4.1 Service Pack 1.

Issue ID: 2814

Subject: Copying Girders from Girder Line to Girder System

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Shah, Shyam

8/25/2000 2:39:34 PM

Modified By: administrator

6/19/2008 4:02:06 PM

Priority: High

Category: Education

4/19/2016 3:02:30 PM

HRS AASHTO

77



## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category       |
|-----------------|--------------------|----------|----------------|
| Duray, Jim      | Information Needed | High     | Bug<br>Unknown |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State      | Summary         |
|------------|--------------------|-----------------|
| 2818.10561 | Information Needed | P/S strand grid |

### Description

FROM: snshah DATE: 8/25/2000 9:28 AM

I am having problems trying to copy a girder, created under Girder Line, to a matching girder under Girder System. Is it possible to do this, or am I required to enter the girder into a Girder System from scratch? This option would be beneficial in order to easily convert the imported Girder Line BARS files into VIRTIS Girder System files.

Attached is a file that illustrates my problem. It allows me to copy a girder from the Girder Line model to the Girder System setup, but then VIRTIS will not run.

FROM: jduray DATE: 08/28/2000 12:38:12

You may not copy a member. You may copy the member alternative.

FROM: kkennelly DATE: 08/28/2000 13:16:23

Your girder system member alt is not running for the following reasons: Your girder system structure def "Continuous Steel Span" has 158.7917' as the length for span 3. Your girder line mbr alt "Continuous Steel Plate Girder, 540' Interior Girder" has 158.7900' for Span 3's length. The girder profile, deck profile, and haunch profile data under Continuous Steel Span that you copied from the girder line mbr alt all have ranges ending at 158.79'. When you try to run the girder system, BRASS thinks the beam ends at 158.7917' in span 3 but the plates, deck and haunch don't end there. You have to be consistent with the precision you use throughout the structure definition.

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 2818           |
| Subject: P/S strand grid |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: McCaffrey, Brian        | 8/29/2000 2:08:25 PM  |
| Modified By: hlee                     | 10/26/2012 1:20:06 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 2824.10555 | Discard       | Rating Results |

## Description

FROM: bmccaffrey DATE: 8/29/2000 10:00 AM

When entering an allowable strand grid for voided prestressed slabs, the horizontal spacing is not reflected in the strand layout window.

This results in strands showing up in the voids.

FROM: jduray DATE: 08/29/2000 10:30:45

You are correct about ignoring the horiz spacing. We use the horiz spacing for the bottom row. The

4/19/2016 3:02:30 PM

HRS AASHTO

79

Complete Issue Information

other rows (I'm not sure of hand what we do for the other rows that are below the voids) are based off the bottom row. If that doesn't fit within the box we center them within the width which causes them to appear within the voids. This doesn't matter (other that the annoyance) for straight strands and debonded strands but it is a problem for harped strands because we don't allow harping to a position that is not directly above the mid-span strand location.

The problem is we don't know the cover to the side of the box or the cover at the voids so we don't really know where the strand positions are horizontally. Most programs don't care where they are horizontally. Only the number of strands per row matter and most programs describe cross-sections instead of a schedule as we are trying to do so they don't care how a strand is harped.

We probably should handle this more exactly by storing the exact position in the db and provide a wizard for describing the strand location grid. Do you have any other suggestions for displaying the strand positions?

|                         |
|-------------------------|
| Issue ID: 2824          |
| Subject: Rating Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: puckett, jay            | 9/5/2000 9:16:06 PM  |
| Modified By: administrator            | 6/19/2008 4:02:06 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: bgoodrich DATE: 9/5/2000 3:07 PM

4/19/2016 3:02:30 PM

HRS AASHTO

80

Complete Issue Information

This issue is submitted for Jay Puckett. It originated from Incident 2783.

If a specification check is not satisfied, e.g., inadequate stiffener size, then how should the rating/results/etc. be reported and at what level?

FROM:hlee DATE:4/30/2008 2:23:01 PM  
Discarded by TAG 12/07.

Issue ID: 2835  
Subject: Importing BARS file that was entered as a symmetrical structure.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Neubauer, Scott 9/12/2000 8:15:36 PM  
Modified By: hlee 10/26/2012 1:19:00 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | Information Needed | High     | Bug      |

4/19/2016 3:02:31 PM

HRS AASHTO

81

## Complete Issue Information

Unknown

## Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Richard Best  | Illinois DOT     | BESTRM@nt.dot.state.il.us | 217-785-2922 |
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 2838.10541 | Resolved      | BARS Import login |

## Description

I have imported a concrete t-beam, 3 span, structure that was entered in BARS with the symmetrical code. VIRTIS does not handle this well at all. After I went into the shear reinforcement range folder and added the reinforcement that was missing, I receive a message when I apply the changes. The message says that the end distance is shorter than the beam length. After checking the numbers several times, I found that the numbers I entered do add up to the beam length. There must be a glitch in the programming. FROM: sneubauer DATE: 9/12/2000 2:57 PM

FROM: jduray DATE: 9/14/2000 11:14 AM

The values you enter must be to at least 4 decimal places.

For example, if you entered (or is imported from BARS) the beam length as 34.667 and the sum of the ranges is 34.6667 The two numbers are not equal and you may get the message you describe. You must be consistent in the number of decimal places used.

We are making some improvements in Version 4 relative to this issue.

Issue ID: 2838

Subject: BARS Import login

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Best, Richard           | 9/14/2000 1:41:51 PM |
| Modified By: administrator            | 6/19/2008 4:02:05 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Bug      |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                |
|------------|---------------|----------------------------------------------------------------------------------------|
| 2921.10458 | Closed        | 3.0 - SP 4a -- schematic view does not update for bearing stiff and shear conn changes |

### Description

FROM: rmbest DATE: 9/14/2000 8:33 AM The import facility tool in Bridge Explorer requires the user to login for a second time. This should not be necessary and can be a source of frustration if the user specifies the wrong database. Virtis/Opis should pass the login information to the import program.

FROM: jduray DATE: 9/14/2000 10:24 AM

This is reasonable to do on the command line for the import when opened from within Virtis.

Joe - please modify Virtis to pass the username, password and data source on the command line. Then in the BARS and BRASS import read the command line and pass to the login dialog in the import. The user will still have to click Ok on the dialog. Perhaps we can bypass the dialog.

Do for Version 4.

FROM: tthompson DATE: 9/14/2000 3:43 PM

Just a comment. Some users may wish to use the BARS import tool when they're not logged on/into VIRTIS/OPIS. So we still want this to run "stand-alone".

FROM: rmbest DATE: 9/15/2000 9:20 AM It is not a big deal, but there should be a way to make work both ways.

4/19/2016 3:02:31 PM

HRS AASHTO

83

Complete Issue Information

FROM:jihnat DATE:09/15/2000 12:34:30  
 Done for Version 4.0. (It works either way.)

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 2921                                                                                  |
| Subject: 3.0 - SP 4a -- schematic view does not update for bearing stiff and shear conn changes |

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Ihnat, Joseph                     |
| Submitted By: Barnhill, Gale 10/25/2000 6:22:33 PM |
| Modified By: administrator 6/19/2008 4:02:01 PM    |
| Priority: High                                     |
| Category: Bug                                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gbarnhill DATE: 10/25/2000 1:06 PM  
 With the SCHEMATICS - PROFILE VIEW window open for a girderline, when the BEARING STIFF LOCATION window is changed and APPLY clicked, the schematic does not update until it is closed and re-opened.

With SCHEMATICS open, if in the SHEAR CONN tab of DECK PROFILE the start distance or length of

Complete Issue Information

the range is changed, when APPLY is clicked, the previous spacing data is not removed when the new data is placed. When the schematic is closed and reopened, the old data is gone.

FROM: jduray DATE: 10/26/2000 16:05:05  
Fix for version 4.

FROM: jihnat DATE: 11/03/2000 10:23:16  
Done.

FROM: gbarnhill DATE: 11/15/2000 8:21 AM  
OK in V4.0.0 Beta 1

Issue ID: 2922  
Subject: 3.0 - SP 4a -- SCHEMATICS PROFILE VIEW not correct for BRACING RANGES in girderline- incorrectly shows diaph at start of range

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Barnhill, Gale 10/25/2000 6:38:42 PM  
Modified By: administrator 6/19/2008 4:02:01 PM  
Priority: High  
Category: Bug - GUI 2

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | Resubmit | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
| Ihnat, Joseph   | Resolved |          |             |
|                 | Accepted |          |             |

4/19/2016 3:02:31 PM

HRS AASHTO

85



### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
|                  | Closed   |      |             |
| Ihnat, Joseph    | Closed   | High | Bug - GUI 2 |
| Kennelly, Krisha | Accepted | High | Bug         |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | stiffener schedule.zip |             |

### Tasks

| Name       | Current State | Summary                                                                                |
|------------|---------------|----------------------------------------------------------------------------------------|
| 2923.10456 | Accepted      | 3.0 - SP 4a - Export does not pick up different trans stiff groups when mixed together |

### Description

FROM: gbarnhill DATE: 10/25/2000 1:21 PM

Please work this one with Incidents 2918 and 2785.

With a zero/zero start/space line in the BRACING RANGES table and then a line with numbers for start/space, an extra diaphragm is shown on the schematic. It corresponds with the start distance of the second line in the table. In accordance with Virtis rules, there is not a diaphragm at the start distance of any range.

FROM:gbarnhill DATE:12/28/2000 12:53:22

Just so you don't forget this one, here's what Virtis HELP says in 4.0 Release.

#### Start Distance

Enter the distance from the selected support to the left end of the range. A diaphragm is not located at the start distance. However, it is located at all other locations within the range, including the end distance. For an example illustrating the locations of diaphragms within this range, go to Ranges Example.

Enter a table like this:

support 1, start 0, space length 0, 1 space

support 1, start 4, space length 4, 1 space

This shows 3 "X" in the schematic. There should only be 2.

4/19/2016 3:02:32 PM

HRS AASHTO

86

Complete Issue Information

FROM:jduray DATE:4/12/2005 11:22:42 AM

FROM:jihnat DATE:7/19/2005 8:18:00 AM  
Fixed for 5.4.0

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 2923                                                                                  |
| Subject: 3.0 - SP 4a - Export does not pick up different trans stiff groups when mixed together |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Barnhill, Gale          | 10/25/2000 9:17:13 PM |
| Modified By: administrator            | 6/19/2008 4:02:01 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gbarnhill DATE: 10/25/2000 4:01 PM

I created two transverse stiffeners. tr1 is a single and tr2 is a pair. I built a STIFFENER RANGE table with single stiff between the abut and the first diaphragm, a pair at the diaphragm, a single between diaphragms and a pair at the next diaphragm.

Export created a schedule of spaces with only single stiff up to the second diaphragm and then a single spaced pair at the next support (this pair does not show on the schematic).

The attached bitmap shows the table, schematic and export log.

FROM: bgoodrich DATE: 10/31/2000 7:55 AM

In Virtis/Opis, the user enters the physical locations of the stiffeners, however, on the BRASS transverse stiffener schedule commands, the user defines the spacing of stiffeners and the stiffener dimensions within a start distance and range. For your case, there was a stiffener pair (tr2) with single

## Complete Issue Information

stiffeners (tr1) on each side. The export exported the stiffener group with the smallest area because of the way the BRASS command is structured. This is why you have single stiffeners up to the second diaphragm. There must not be any stiffeners right of the second diaphragm, which is why the pair shows up from 12 to 60 feet.

I checked the export and I don't think any warning message is output. We will have to issue a warning and update the engine help to indicate how the export generates the transverse stiffener schedule commands.

FROM: bgoodrich DATE: 11/1/2000 9:26 AM  
I added the following warning message in the export:

WARNING: For span X, a different Virtis/Opis transverse stiffener definition was detected at the start and end of a BRASS stiffener range. Therefore, the stiffener group with the smallest area will be exported.

I also added a similar warning when BRASS stirrup schedules are generated because an algorithm similar to the transverse stiffeners is used.

Krishna – Please add the following information to both BRASS engine helps for the transverse stiffener and vertical shear reinforcement topics. If you think it belongs somewhere else, let me know.

For transverse stiffeners, add:

The BRASS transverse stiffener schedule command is used to define the stiffener spacing and stiffener group within a particular start distance and range. Therefore, the export superimposes all Virtis/Opis stiffener schedules and searches for consecutive stiffeners with common spacing and stiffener definition (group). When a transverse stiffener is located between two transverse stiffeners of one or more different groups, the stiffener schedule command will be generated such that the stiffener group with the smaller area will be exported for the corresponding range. The search process continues for the remaining Virtis/Opis schedules.

For vertical shear reinforcement, add:

The BRASS stirrup schedule command is used to define the stirrup spacing and stirrup group within a particular start distance and range. Therefore, the export superimposes all Virtis/Opis vertical shear reinforcement (stirrup) schedules and searches for consecutive stirrups with common spacing and stirrup definition (group). When a stirrup is located between two stirrups of one or more different groups, the stirrup schedule command will be generated such that the stirrup group with the smaller area will be exported for the corresponding range. The search process continues for the remaining Virtis/Opis schedules.

FROM:kkennelly DATE:12/04/2000 16:10:08  
Added to BRASS LFD and LRFD engine help files for Version 4.0 Beta 2.

FROM: gbarnhill DATE: 12/12/2000 8:20 AM  
OK in V4.0 Beta 2

FROM:kkennelly DATE:12/21/2000 09:13:32  
Accepted based on A in track field.

|                |
|----------------|
| Issue ID: 2944 |
|----------------|

### Complete Issue Information

Subject: 3.0 SP4a - Import puts 2 hinges in the same location

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Martin, Ed  
Submitted By: Barnhill, Gale 11/2/2000 9:01:29 PM  
Modified By: administrator 6/19/2008 4:02:00 PM  
Priority: Urgent  
Category: Bug

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                           |
|------------|---------------|-----------------------------------------------------------------------------------|
| 2960.10419 | Resolved      | 4.0 Beta 1 - Do we intend to show deterioration on the schematics-profile view ?? |

### Description

FROM: gbarnhill DATE: 11/2/2000 3:45 PM

I think this came up before, but I could not find a previous incident regarding hinges for V3.0. I imported a 3 span comp(CSC) girder with 2 hinges in span 2. In the BWS hinge window, 4 hinges are shown, 2 at the left location and 2 at the right.

I imported a 3 span non-comp(SS) girder with all else the same. Only 2 hinges are shown.

I imported a 5 span non-symm comp girder with 2 hinges in span 3. Only 2 hinges are shown in span 2. There are also hinges in span 1 and 5.

I imported the same 5 span girder with the hinges in span 2 and 5. Now 4 hinges are shown in span 2 and 1 in span 5.

FROM:jduray DATE:11/07/2000 10:03:45

4/19/2016 3:02:32 PM

HRS AASHTO

89

Complete Issue Information

Are you referring to BARS import or Virtis import/export?

FROM: jduray DATE: 11/07/2000 10:10:16

BARS problem. See attached files.

FROM: emartin DATE: 11/16/2000 7:52 AM

FROM: emartin DATE: 11/16/2000 10:03 AM

The hinges were being duplicated when the range data (CT11) was being split up based on the slab ranges (CT14).

Fixed.

FROM: gbarnhill DATE: 12/12/2000 8:19 AM

OK in V4.0 Beta 2

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 2960                                                                             |
| Subject: 4.0 Beta 1 - Do we intend to show deterioration on the schematics-profile view ?? |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Barnhill, Gale          | 11/13/2000 9:30:02 PM |
| Modified By: administrator            | 6/19/2008 4:01:59 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gbarnhill DATE: 11/13/2000 3:18 PM

For a schedule based girder line definition, can we show the limits of deterioration on the SCHEMATICS - PROFILE VIEW window ??

Complete Issue Information

FROM:jduray DATE:11/14/2000 08:41:01  
This was not intended but I agree it is needed.

FROM:jduray DATE:5/21/02 9:29:21 AM

FROM:jihnath DATE:5/14/2007 1:48:23 PM  
In version 5.6.0

Issue ID: 2971  
Subject: 4.0 Beta 1 - Impact Factor override in Analysis Settings not correct

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Barnhill, Gale 11/15/2000 10:14:34 PM  
Modified By: administrator 6/19/2008 4:01:58 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact  | Status    | Priority | Category      |
|------------------|-----------|----------|---------------|
| Kennelly, Krisha | Suspended | High     | Enhance BRASS |
|                  | Resolved  |          |               |
| Kennelly, Krisha | Resolved  | High     | Enhance BRASS |

4/19/2016 3:02:33 PM

HRS AASHTO

91

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 2976.10403 | Duplicate     | Deterioration schematics |

Description

FROM: gbarnhill DATE: 11/15/2000 4:01 PM

In reading Incident 2969, I checked the ADVANCED button on the ANALYSIS SETTINGS tab.

Virtis Help says:

Impact

For the displayed vehicle, enter the impact factor as a factor by which the live load is to be multiplied to obtain both live load and impact. For example, enter 1.30 if the impact is 30%.

Export creates the following for 1.30 entered on the tab:

TRUCK-IMP 30.00, 30.00

From BRASS Help for Truck-Imp

Example:

Assuming that trucks #4 and 8 are special overload trucks that are restricted to 35 mph over structures and impact is to be reduced by 1/2 (50%)

TRUCK-IMP , , , 50

TRUCK-IMP , 50

Therefore, BRASS takes the entered percent times the standard impact factor calculated and takes the result times live load to generate live load + impact.

Entering "1" or "0" results in no impact added.

Entering "2" results in standard impact.

FROM: bgoodrich DATE: 11/28/2000 2:50 PM

The UI should definitely not allow an impact override less than 1.0 because 1.0 equals 0% impact.

Otherwise, there would be a negative impact factor.

Gale - You are correct that entering 1.0 results in 0% (no) impact and entering 2.0 results in 100% (full) impact. I need some more information regarding what exactly is wrong.

FROM: bgoodrich DATE: 12/4/2000 5:28 PM

4/19/2016 3:02:33 PM

HRS AASHTO

92

## Complete Issue Information

I spoke with Gale today. The issue is that the BRASS export is using this factor as a modifier on the standard impact entered on the impact windows. The Virtis help says the impact override is effectively the impact factor on a per truck basis. The impact override will be used for permit trucks, but I'm not sure how this issue is handled by rating engineers. Should it be used as indicated in the Virtis help or as described by BRASS on the TRUCK-IMP command. The problem is that BRASS does not directly support an impact factor for each individual truck. We may be able get the information into BRASS by doing the following:

1. Setting the global impact factor on the LIVE-LOAD command to that specified on the Impact windows.
2. Setting the percent impact to zero for each truck for which a impact override factor was specified.
3. Adjusting the wheel fractions on the TRUCK-WFR command by the impact override for each truck. This command is currently generated using the wheel fraction for moment set on the LL Distribution window for the appropriate number of lanes loaded, which depend on the Single Lane vehicle override.

The problem with mixing impact and wheel fraction is that is may confuse the user if just looking at the BRASS output.

FROM:jduray DATE:12/12/2000 12:25:50

I think we should submit to WyDOT for enhancement to BRASS. Until the enhancement is completed we should change the Help to match what BRASS is doing.

FROM:jduray DATE:12/13/2000 08:53:33

Discussion with Gale - fix the Help to match what is currently being done within BRASS. Submit modification of BRASS as an enhancement request with Wyoming.

FROM:bgoodrich DATE: 12/14/2000 10:28 AM

I will forward the enhancement request to WYDOT via Jay.

FROM:kkennelly DATE:12/14/2000 13:30:32

Virtis helped revised to say:

Impact

For the displayed vehicle, enter the factor by which the standard impact factor is to be multiplied to obtain both live load and impact. For example, if the vehicle is a permit vehicle restricted in speed and the standard impact is to be reduced by  $\frac{1}{2}$  (50%), enter 1.50.

Let me know if that is not correct. Revised for Version 4.0 Release.

FROM:gbarnhill DATE: 12/19/2000 2:08 PM

What Krisha wrote is in fact what has to be done to accomplish the end result. B-U-T, it seems a little backwards to say "enter the factor..." and ask the user to input "1.5" to get the end result of "0.5" as a multiplier.

Wouldn't it be more straight forward to change the variable definition so the user can enter "0.5" to get 50% ??

If this is a bit much to work on this close to release, I'd be willing to wait until V4.1 to resolve this and just do the HELP the way it's written for now. Since this variable isn't written to the database, it will just be a matter of user education later.

FROM:gbarnhill DATE:12/28/2000 11:39:53

4/19/2016 3:02:33 PM

HRS AASHTO

93



Complete Issue Information

HELP write-up OK in Version 4.0 Release

FROM: bgoodrich DATE: 06/08/2001 13:40:58

Jay and I discussed this issue regarding BRASS. WYDOT has approved a BRASS enhancement to allow fixed impact factors on a per truck basis. We will try to get this into the Version 4.1. When this feature is available in BRASS, we suggest that the name of this field should be changed to "Impact Factor" or "Impact Factor Override". How these factors are entered (say 1.3 for an increase of 30%) should be discussed and documented, so the UI and export can interpret them properly.

|                                   |
|-----------------------------------|
| Issue ID: 2976                    |
| Subject: Deterioration schematics |

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis            |
| Primary Contact: Duray, Jim                      |
| Submitted By: puckett, jay 11/17/2000 2:22:15 PM |
| Modified By: administrator 6/19/2008 4:01:58 PM  |
| Priority: High                                   |
| Category: Enhancement                            |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: jduray DATE: 11/17/2000 09:21:36

Deterioration does not appear on the schematic diagram - likely should.

FROM: hlee DATE: 7/14/2005 12:39:35 PM



### Complete Issue Information

| Name           | Company                            | Email 1                             | Phone 1       |
|----------------|------------------------------------|-------------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc.                   | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |
| Robert Kelley  | Michigan Dept of<br>Transportation | kelleyr@michigan.gov                | (517)322-1398 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 3035.12313 | Resolved      | Cannot get 4.0 database to work or get 3.0 database upgraded |

### Description

FROM: bgoodrich DATE: 12/12/2000 10:02 AM

Mike Perham, Bayside Engrs. inquired about where he could find any loss output computed by BRASS-LFD. This output is available from BRASS-LFD, but a control parameter has not been implemented in the engine properties. Parameter 1 on the SYSTEM-1 command controls this output as well as other prestress concrete related computations. I request that these options be implemented in the Analysis event engine properties for BRASS-LFD.

FROM: jduray DATE: 12/18/2000 11:59:45

FROM: bgoodrich DATE: Monday, November 04, 2002 12:03:55 PM

This issue has been assigned to BRASS Problem Log 366. Ideas for the format of a prestress loss output report for BRASS-GIRDER were prepared and submitted to WYDOT for review.

FROM: bgoodrich DATE: Thursday, November 21, 2002 12:48:40 PM

A new loss report was implemented in BRASS-GIRDER 5.8.6. I updated AboBrass and AbxBrass2, so the user can control if they want the loss report or not. The default is no report. I updated AbxBrass to export the SYSTEM-1 command, which controls the loss report in BRASS. Fixed for Version 5.0.

FROM: bgoodrich DATE: Tuesday, July 29, 2003 1:13:20 PM

Closed.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 3035                                                        |
| Subject: Cannot get 4.0 database to work or get 3.0 database upgraded |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kelley, Robert          | 1/3/2001 5:52:03 PM  |
| Modified By: administrator            | 6/19/2008 4:06:11 PM |

4/19/2016 3:02:33 PM

HRS AASHTO

96

### Complete Issue Information

|                                 |
|---------------------------------|
| Priority: High<br>Category: Bug |
|---------------------------------|

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Resolved | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Built Up Girder.bbd |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3037.12311 | Resolved      | Section Property Error in Built Up Girder |

### Description

FROM:rkelley DATE:01/03/2001 12:52:03

We are upgrading to 4.0 and have the following problems:

1) We cannot log onto the 4.0 sample databases shipped with the product. I tried to get into the 4.0 database via the Virtis application, by the Sybase ISQL tool, and using Infomaker. NONE of these worked.

2) We cannot upgrade the 3.0 sample database using the script supplied. We connect using the ISQL, and run the Sybase script and encounter the message: Error at line 1 communication error. This happens at the ALTER TABLE pontis\_bridge MODIFY struct\_num VARCHAR(15) NOT NULL;

It appears to us that the 4.0 sample database either is corrupt or there is a username/password that we simply don't know. We tried virtis/virtis as the key for lack of better information.

Please contact us as soon as possible to help us through this. My number is (517) 322-1398.

FROM:jduray DATE:1/4/01 4:10:16 PM

FROM:jduray DATE:1/9/01 8:11:49 AM

Robert got Virtis working but later called with another problem as follows:

4/19/2016 3:02:34 PM

HRS AASHTO

97

Complete Issue Information

After migrating a 3.0 database he gets the following error:

"Unable to verify database schema!  
Please contact database administrator."

|                                                    |
|----------------------------------------------------|
| Issue ID: 3037                                     |
| Subject: Section Property Error in Built Up Girder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Best, Richard           | 1/4/2001 8:50:50 PM  |
| Modified By: administrator            | 6/19/2008 4:06:11 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:rmbest DATE:01/04/2001 15:52:11

Version 4.0 - There is an error in the section properties that BRASS is using in the attached example. This is a 3 span built up steel girder. It seems that BRASS is not seeing the flanges over portions of the beam. Span points 1.0 – 1.7, 2.3 – 2.7, and 3.3 – 4.0 are shown in the Output (Beam Properties) to be web only in all stages. I have tried to simplify the example by using just one section over the entire bridge.

FROM:jduray DATE:1/4/01 4:09:17 PM

FROM:bgoodrich DATE:01/11/2001 16:57:32

I found the problem in the export (BrassStdCrossSections.cpp). The GenerateSteelCmds function issued a warning and exited the function without having generating the XSECT-H command. I corrected the file and sent it to Baker.

4/19/2016 3:02:34 PM

HRS AASHTO

98

Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 3057                 |
| Subject: BRASS ASD Factors Bug |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 1/17/2001 1:51:31 PM |
| Modified By: administrator            | 6/19/2008 4:06:10 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Goodrich, Brian | Closed | High     | Bug - BRASS |
| Goodrich, Brian | Closed | High     | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 3058.12290 | Discard       | Enhance BRASS-GIRDER to use shear distribution factors |

Description

FROM:bgoodrich DATE:01/17/2001 08:51:32

The engineer at MASS Highway (Binh T. Ha, P.E., (617) 973-7561, binh.ha@state.ma.us) found the allowable flexural stresses for an ASD steel rating are not correct. There is not a problem with the BRASS export from Virtis. I have forwarded this issue to Dan Glandt for investigation.

FROM:bgoodrich DATE:01/17/2001 08:53:19

Dan Glandt corrected this issue in BRASS. I will request approval from WYDOT for release this in a Virtis patch.

FROM:kkennelly DATE:5/31/01 3:43:18 PM

Unable to test this.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 3058                                                  |
| Subject: Enhance BRASS-GIRDER to use shear distribution factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 1/17/2001 1:55:36 PM |
| Modified By: administrator            | 6/19/2008 4:06:10 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

4/19/2016 3:02:34 PM

HRS AASHTO

100

### Complete Issue Information

| Primary Contact | Status  | Priority | Category      |
|-----------------|---------|----------|---------------|
| Goodrich, Brian | Discard | High     | Enhance BRASS |
| Goodrich, Brian | Discard | High     | Enhance BRASS |
| Goodrich, Brian | Discard | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                         |
|------------|---------------|---------------------------------------------------------------------------------|
| 3059.12289 | Discard       | Enhance BRASS-GIRDER to use positive section properties for structural analysis |

### Description

FROM:bgoodrich DATE:01/17/2001 08:55:37

Several users at the Boston training requested that BRASS be enhanced to utilize shear distribution factors and not just moment DF. This should be extended to include shear, reaction, and deflection distribution factors.

FROM:bgoodrich DATE:02/26/2001 14:09:22

I have forwarded this issue to Jay Puckett/WYDOT for their consideration.

FROM:bgoodrich DATE:08/01/2001 10:58:33

Implementing additional wheel fractions in BRASS-GIRDER is planned for the Spring 2002 release. Suspended until then.

FROM:jduray DATE:5/23/02 11:52:33 AM

Based on email from Brian:

Waiting on approval from WYDOT to begin work.

Expecting a response very soon.

FROM:elutgen DATE:Thursday, January 09, 2003 8:52:23 AM

FROM:bgoodrich DATE:Thursday, February 12, 2004 11:08:24 AM

The statement regarding the Spring 2002 release is no longer applicable. This issue has been placed

4/19/2016 3:02:34 PM

HRS AASHTO

101



Complete Issue Information

on the BRASS enhancement list and is subject to the prioritization established by the users. This issue is ranked as #9 in the BRASS-GIRDER enhancement list. Issues with another BRASS engines could be given a higher overall priority, so there is no way to predict when this issue will be addressed.

FROM:hlee DATE:4/30/2008 2:23:28 PM  
Discarded by TAG 12/07.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 3059                                                                           |
| Subject: Enhance BRASS-GIRDER to use positive section properties for structural analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 1/17/2001 1:57:32 PM |
| Modified By: administrator            | 6/19/2008 4:06:10 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:01/17/2001 08:57:33

An engineer at MASS Highway (Binh T. Ha, P.E., (617) 973-7561, binh.ha@state.ma.us) would like BRASS enhanced to exercise AASHTO 10.38.1.6 (1996 spec), i.e., use the positive section properties for the entire girder when performing the structural analysis, but then use the appropriate section properties (positive or negative) when performing section analysis and specification checks. BRASS would need to be enhanced to so both a slab and rebar can be specified within the same cross section. We have had similar requests before.

FROM:bgoodrich DATE:Tuesday, October 28, 2003 1:12:24 PM

This issue was placed on the BRASS Enhancement List.

4/19/2016 3:02:35 PM

HRS AASHTO

102

Complete Issue Information

FROM:bgoodrich DATE:Friday, February 27, 2004 11:11:03 AM  
See Incidents 4440 and 4860 also.

FROM:hlee DATE:4/30/2008 2:23:39 PM  
Discarded by TAG 12/07.

Issue ID: 3062  
Subject: 4.0.1 - POI overrides seem to work in WYDOT BRASS but not in Virtis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Barnhill, Gale 1/24/2001 9:40:54 PM  
Modified By: administrator 6/19/2008 4:06:10 PM  
Priority: Urgent  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Suspended | Urgent   | Enhancement |
|                 | Discard   |          |             |
| Goodrich, Brian | Discard   | Urgent   | Enhancement |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3064.12284 | Accepted      | Bracing at beam ends not handled by BARS import |

Description

FROM:gbarnhill DATE:01/24/2001 16:40:57

In a schedule based member alt, I wanted to force a compact analysis at POI 104. I coded the engine tab for the POI for SECTION TYPE 41. The engine tab for MEMBER ALT is set at POI CONTROL = 5. The analysis log includes the following message:

WARNING (High):

The POI control parameter on the ANALYSIS command indicates to generate points of interest from the schedule data. BRASS currently does not allow the generated data to be overridden with the data entered on the point-of-interest commands.

I took the BRASS data file created by Virtis, added the STEEL 1 and STEEL 2 commands and then ran it in WYDOT BRASS Rel 5.8.2. The results include the "41" code from the STEEL 1 command.

BRASS HELP for the STEEL 1 command, NOTE 3, seems to indicate that I should be able to add the STEEL 1 command to schedule based input.

I've attached the Virtis BBD file, the Virtis log file from the analysis run and the BRASS data file with STEEL commands added.

FROM:jduray DATE:01/25/2001 08:56:52

FROM:bgoodrich DATE:01/30/2001 18:04:14

The export was not modified to allow the POI override, yet. This enhancement should be considered in the next release.

FROM:bgoodrich DATE:Friday, July 02, 2004 3:23:42 PM

Incident 5102 is a duplicate of this incident.

FROM:hlee DATE:4/30/2008 2:23:46 PM

Discarded by TAG 12/07.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3064                                           |
| Subject: Bracing at beam ends not handled by BARS import |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Duray, Jim              | 1/25/2001 2:01:18 PM |
| Modified By: administrator            | 6/19/2008 4:06:10 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Martin, Ed      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Martin, Ed      | Discard   | High     | Enhancement |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 3065.12283 | Discard       | BARS import ignores deterioration and bolt holes |

### Description

FROM:jduray DATE:01/25/2001 09:01:19

BARS files for steel beams with bracing at the ends specified by a letter code are not handled properly by the import. No bracing is added.

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 3065                                            |
| Subject: BARS import ignores deterioration and bolt holes |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Martin, Ed           |                      |
| Submitted By: Duray, Jim              | 1/25/2001 2:04:04 PM |
| Modified By: administrator            | 6/19/2008 4:06:10 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:4/30/2008 2:23:53 PM  
Discarded by TAG 12/07.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 3088                             |
| Subject: Stiffener Spacing near girder end |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Thompson, Todd          | 1/30/2001 10:44:20 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Unknown  |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

## Complete Issue Information

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | B032920.dat             |             |
|      | b032920.bbd             |             |
|      | Interior_Girder_asd.txt |             |
|      | Interior_Girder_Lfd.txt |             |

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 3090.12258 | Resolved      | Bearing Stiffeners |

### Description

FROM:ttompson DATE:01/30/2001 17:44:21  
Virtis/Opis 3.0 Release Service Pack 4a

I was entering Transverse Stiffener Spacing for the end span of a structure.

The Span length was 110 ft and I entered the following:

| Start | # | Spacing | End Dist  |
|-------|---|---------|-----------|
| 0     | 8 | 45      | 30 ft     |
| 30    | 5 | 48      | 50 ft     |
| 50    | 8 | 60      | 90 ft     |
| 90    | 4 | 48      | 106 ft    |
| 106   | 1 | 39      | 109.25 ft |

The last tranverse stiffener is located 9 inches from the End of the girder. But I keep getting an Error message that says End Distance is 639.25 ft. Beam Distance is 640 ft. Do you want to change the spacing? Yes or No. (I attached WORD doc with snapshot).

What am I doing wrong? Seems that I've entered dozens of structures simliar to this, but haven't had this problem. I've also tried adding 1 additional stiffener as:  
109.25 1 9 110

But I still get the same error message? What's up?  
I've also attached the bbd file for this structure.

FROM:kkennelly DATE:1/31/01 8:09:18 AM

Part of the validation in Virtis checks if the last stiffener or diaphragm, etc. is within 1' of the end of the beam. If it is, Virtis asks if you want to change the spacing. If you answer yes, Virtis will change the spacing for you so that the end distance matches the end of beam length. If you answer No, the window will close without changing the spacing. This is not an error message that prevents you from running Virtis or BRASS. Just answer No to close the window. This Validation was added to Virtis to help the user when entering data for a bridge with a beam length that ends in many digits beyond the decimal place and maybe the spacing the user entered doesn't exactly match the beam length. A lot of users had problems with getting BRASS to run when they had gaps in their Virtis input (before we added the tolerances to Version 4.0) The distances you are getting (639.25' and 640') are measured

4/19/2016 3:02:36 PM

HRS AASHTO

108

Complete Issue Information

from the leftmost CL Brg (Support 1).

Incident 3017 and 2931 also deal with the message being issued for rows of data that are not the last rows in the grid. Data can be entered out of order so the Validate does this check for all rows not just the last row. That's why you got the message when you entered a stiffener at 110. Incident 3017 addresses changing the Validation so it only checks this 1' distance for the rightmost piece of data entered.

|                             |
|-----------------------------|
| Issue ID: 3090              |
| Subject: Bearing Stiffeners |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Neubauer, Scott         | 2/1/2001 8:03:55 PM  |
| Modified By: administrator            | 6/19/2008 4:06:08 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |

Contacts

| Name           | Company     | Email 1                 | Phone 1      |
|----------------|-------------|-------------------------|--------------|
| Scott Neubauer | Iowa D.O.T. | sneubau@max.state.ia.us | 515-239-1290 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:sneubauer DATE:02/01/2001 15:03:57

When bearing stiffeners are entered for a steel beam, the analysis usually has the bearing stiffeners controlling the rating. Many times the rating is very low or 0. The governing factor is the compression or bearing capacity. I believe that the bearing and compression areas used for the calculation are incorrect. Please look into these calculations.

FROM:kkennelly DATE:2/5/01 10:18:09 AM



## Complete Issue Information

Please export one of the bridges that is having this problem and attach it to this incident so I can investigate this.

There have been several previous incidents entered for problems with bearing stiffeners in BRASS. Refer to incidents 2690, 2660, 2547 to see if they have any info useful to you.

You can turn on the BRASS intermediate output for the support points of interest on the Engine tab of the Point of Interest window. Then look for the detailed output in the BRASS output file to help find out what is causing this problem.

FROM:sneubauer DATE:02/07/2001 11:52:20

The bearing stiffener sizes are as follows:

Abutments = 2-6x 5/8" plates

Piers = 2-8x 3/4" plates

Intermediate stiffeners are a single 4 x 5/16" plate

FROM:kkennelly DATE:2/7/01 12:08:48 PM

Can you export the Virtis information and attach it to this incident so I can be sure I am checking the same bridge you have entered in Virtis. You can export Virtis data by opening the Bridge Workspace of the bridge in question, then selecting File/Export. This will create a \*.bbd file that I can then import into Virtis. Also, are you running BRASS ASD or LFD? And what version of Virtis are you running?

FROM:sneubauer DATE:02/07/2001 12:57:15

I am running release 3.0. The incident 2547 issues are not resolved in release 3.0. The right side of the pier is not being recognized as having stiffeners present.

FROM:kkennelly DATE:2/7/01 1:38:42 PM

I imported your bridge into Virtis, ran BRASS LFD on member G02 and got a controlling rating of 0.698 due to brg stiffeners at span 2 100%. I added a point of interest at Span 3 0% to this member and re-ran BASS LFD. I looked in the BRASS output file for the detailed intermediate BRASS calculations for point 2 100% and point 3 0%. The calculations for the bearing stiffener strength at these 2 points is the same. I've attached a file to this incident that contains this output, interior\_girder\_lfd.txt. This file contains an abbreviated version of the BRASS LFD output file that you can view after running BRASS in Virtis. The BRASS calculations for the bearing strength appear to be correct.

I did similar things for a BRASS ASD run, got similar results (brg stiffs control). Interior\_girder\_asd.txt attached to this incident shows the same brg stiff strength at point 2 100% and point 3 0%.

I know it seems unlikely that bearing stiffeners should control the rating of an existing bridge but they do according to these calculations. If you want to ignore the bearing stiffener rating factors, you can remove the bearing stiffeners from Virtis. BRASS will run and you will probably get moment or shear to control the rating. There currently is no option in Virtis or BRASS to turn off these bearing stiffener rating factor calcs.

Issue ID: 3121

Subject: Area of Steel in the X-Section - Add validation to domain

Folder: /Virtis/Support Center/Virtis

4/19/2016 3:02:36 PM

HRS AASHTO

110

### Complete Issue Information

|                                    |                      |
|------------------------------------|----------------------|
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Teal, Dean           | 2/15/2001 4:50:01 PM |
| Modified By: administrator         | 6/19/2008 4:06:06 PM |
| Priority: High                     |                      |
| Category: Bug - Domain 2           |                      |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Closed | High     | Education |
| Duray, Jim      | Closed | High     | Education |

### Contacts

| Name          | Company                        | Email 1                       | Phone 1       |
|---------------|--------------------------------|-------------------------------|---------------|
| Dean Teal     | Kansas Dept. of Transportation | teal@ksdot.org                | (785)291-3001 |
| Dale Klossner | Minnesota DOT                  | Dale.Klossner@dot.state.mn.us | 651-366-4480  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3126.12223 | Closed        | Restricting Users during database upgrade (Oracle) |

### Description

FROM:dteal DATE:02/15/2001 11:50:02

In the highlighted row in the attached Word document, Span Location Point 1.118, there is 6120 sq mm of re-steel. According to my x-section input, I only have 4080 sq mm at this point. This point is where the steel from the previous section is terminated. ie: At span location 1.025 there is 6120 sq mm. This section range goes from point 1.025 to 1.100 where the section changes to 4080 sq mm.

I have found this discrepancy at other points also?

FROM:dteal DATE:02/16/2001 14:09:14

I believe that this example better explains the situation.

An example at one point:

4/19/2016 3:02:36 PM

HRS AASHTO

111

## Complete Issue Information

POI 109.36 and 300.64 below are identical points. Both are the first bar termination points from the centerline of the pier beam into Span 1 from Pier 1 and into Span 3 from Pier 2. The x-section at these two point should both contain 12 bars in the top of the slab. Point 109.36 shows 8 bars while point 300.64 shows 12 bars. To eliminate the symmetry errors I entered all the x-sections for all three spans.

### PERFORMING AASHTO SPECIFICATION CHECKS - 5.7.3.4 Control of Cracking by Distribution of Reinforcement

Point of Interest : 109.36

Determining fsa for NEGATIVE Flexure:

Input Parameters:

ds = 60.500 mm      No. Bars = 8.000  
b = 1800.000 mm      Z (top) = 23000.000 N/mm  
dc = 60.500 mm      fy = 420.000 MPa

Calculated Values:

A = 2 \* ds \* b / No. Bars = 27225.000 mm<sup>2</sup>  
Limit = 0.6fy = 252.000 MPa  
fsa = Z / (dc \* A)<sup>(1/3)</sup> = 194.754 MPa [AASHTO (5.7.3.4-1)]

Limiting Tensile Stress:

fsa = MIN(fsa, Limit) = 194.754 MPa

### PERFORMING AASHTO SPECIFICATION CHECKS - 5.7.3.4 Control of Cracking by Distribution of Reinforcement

Point of Interest : 300.64

Determining fsa for NEGATIVE Flexure:

Input Parameters:

ds = 60.500 mm      No. Bars = 12.000  
b = 1800.000 mm      Z (top) = 23000.000 N/mm  
dc = 60.500 mm      fy = 420.000 MPa

Calculated Values:

A = 2 \* ds \* b / No. Bars = 18150.000 mm<sup>2</sup>  
Limit = 0.6fy = 252.000 MPa  
fsa = Z / (dc \* A)<sup>(1/3)</sup> = 222.938 MPa [AASHTO (5.7.3.4-1)]

Limiting Tensile Stress:

fsa = MIN(fsa, Limit) = 222.938 MPa

FROM:kkennelly DATE:2/16/01 2:33:55 PM

Can you attach a bbd file for the bridge that has this problem?

FROM:dteal DATE:02/16/2001 15:55:59

I am doing a Design Review, not a Rating.

4/19/2016 3:02:36 PM

HRS AASHTO

112

## Complete Issue Information

FROM:kkennelly DATE:2/16/01 4:11:59 PM

I think there is a problem with your input. In the cross section ranges window, you have the following range in span 1:

| Start Sec | End Sec | Start Dist | Length | End Dist |
|-----------|---------|------------|--------|----------|
| 1.110     | 1.120   | 10.945     | 3.1    | 14.045   |

Cross Section 1.110 has 8 bars in the top layer and Cross Section 1.120 has 12 bars in the top layer. I don't think you should be able to vary the number of bars within a cross section range cause Virtis doesn't know where the 4 new bars start. I thought we had code that would give you an error message about this, I don't know why it's not giving an error. I'll look into that on Monday morning.

FROM:kkennelly DATE:2/19/01 8:49:14 AM

These cross sections are generated by the BRASS LRFD export, not the domain. Brian, should the export give a warning if the user has a cross section range with a different number of rebars in the start and end sections?

FROM:dteal DATE:02/19/2001 11:59:16

I have rechecked my sections and ranges – they are correct. Ranges are going from left to right. Looking at top steel only over pier 1 and pier 2.

Pier 1:

Section 1.100 has 4 bars that run from 1.100 to 1.110 (bars change in the bottom)

Section 1.110 has 8 bars that run from 1.110 to 1.120

Section 1.120 has 12 bars that run from 1.120 to 1.130

Section 1.130 has 12 bars that run from 1.130 to 2.000

Now Pier 2:

Section 3.000 has 12 bars that run from 3.000 to 3.130

Section 3.130 has 12 bars that run from 3.130 to 3.120

Section 3.120 has 8 bars that run from 3.120 to 3.100

Section 3.100 has 4 bars that run from 3.100 to 3.090

See attached xls spread sheet

FROM:dteal DATE:02/19/2001 12:00:48

FROM:kkennelly DATE:2/19/01 1:17:26 PM

The data that is entered into Virtis is as follows:

In the cross section ranges window, you have the following range in span 1:

| Start Sec | End Sec | Start Dist | Length | End Dist |
|-----------|---------|------------|--------|----------|
| 1.110     | 1.120   | 10.945     | 3.1    | 14.045   |

Cross Section 1.110 has 8 bars in the top layer, slab is 565.8mm deep and Cross Section 1.120 has 12 bars in the top layer, slab is 737.7 mm deep. Based on the data you entered in the cross section ranges window, you are saying that the section varies from Section 1.110 at 10.945m to Section 1.120 at 14.045. It's ok for the slab depth to vary over this range but the number of rebars cannot vary over the length of the range. When do the additional 4 bars appear in this cross section range?

4/19/2016 3:02:36 PM

HRS AASHTO

113

## Complete Issue Information

FROM:dteal DATE:02/19/2001 16:28:26

The additional 4 bars you are asking about begin at sections 1.110 and then again at 1.120. I think the excel spreadsheet drawing shows this.

The number of bars didn't vary over this range. But they can and do vary from section to section. Sect. 1.110 has 8 bars. These 8 bars go from Sect. 1.110 to Section 1.120. This is correct. At Sect. 1.120 we start a new bar count of 12 bars. These 12 bars go from Section 1.120 to Section 1.130. This is correct.

When you enter sections, you enter as many sections as it takes to define the points where the bars are terminated, thus a change in bar counts (top & bottom) and change in geometry. Each section represents a change in something or a critical POI. Your ranges are entered from left to right only. What ever rebar count is present in Section 1.110, will extend to the next section, which is section 1.120. Now at section 1.120 we have a different bar count, this bar count will extend to the right to the next section (1.130) where it's bar count could change again.

FROM:bgoodrich DATE:02/23/2001 18:28:08

Dean - When applying cross sections to the cross section ranges, the starting cross section is that which is just right of the starting distance, while the ending cross section is that which is just left of the ending distance. If the slab dimensions are different between the starting and ending cross sections, then the dimensions will be interpolated accordingly. However, the number and size of reinforcing steel MUST remain constant throughout the range, i.e., the starting and ending cross section for a range must have the same number and size of rebar.

Krishna – I cannot find any place in the export that detects when the rebar is different between the starting and ending cross sections in a range. This check is not really engine-specific because it pertains to a user error with specifying fundamental bridge geometry to Opis, so I suggest adding this check to the validation. If this validation is done at the window level, we will probably have to implement some validation in the export because other 3rd parties may not use a different input method. Alternatively, this validation could be included in the global validation. Then export could call this validation check once in place, so we do not have to write the same code twice. Please discuss with Jim and let me know if I need to implement something in the export. I already have some code in place to detect unique BRASS cross sections, so it would not take me long to detect if the rebar is different between two sections.

FROM:dteal DATE:02/26/2001 13:07:57

I really think the point is being missed here.

The user has no instructions to anything different. They will first enter x-sections at bar termination points and change in slab geometry points. Now they would connect these x-sections starting at the left and moving to the right, assuming that what ever x-section you had on the left would be used until you give it another x-section (change point). This obviously would be a bad assumption.

Brain, you stated that: "the number and size of reinforcing steel MUST remain constant throughout the range, i.e., the starting and ending cross section for a range must have the same number and size of rebar." If this is the case then you can never change the amount of steel, it would be constant.

There two aspects that need to be considered.

First – as a designer:

I need to establish 2 things regarding rebar. The need to establish and check that the area of steel provided is adequate and the need to determine where the bars may be terminated. In a three span

4/19/2016 3:02:36 PM

HRS AASHTO

114

## Complete Issue Information

RC Haunched Slab there are many bar termination points that need checking. With a 3 bar top pattern and 4 bar bottom pattern we could have as many as 6 top and 8 bottom termination points per span. That would be 14 points plus a span start and end point and the point the slab changes form uniform to parabolic. I have found that you can not arrive at economical designs using tenth points. Our longest standard span would have over 7 feet between tenth points.

During the design process, the first time you enter your data (x-sections and ranges) it will only be a guess. To find economy we must start moving these sections. When you move parabolic sections, you are changing the section depth with each move. I have not come up with a reasonable method of modeling these structures properly.

In a nut shell – you can not use Opis for design if you can not define where the bars should terminate. If you can not use Opis to find bar termination points then we are back to using BRASS to find design moments and then using spreadsheets (like what we have done in the past) to calculate the area of steel required and find bar termination points.

### Second – as a rating

This first thing we would like to do is use the input we used for Opis. This is impossible. Virtis will not let you have any more than 15 sections per span (Incident #3132). Now I have to have a second input file with less sections, one that would ignore some sections that you know would not be critical for a rating. The work around for the problem described for design is to add another x-section very close to the bar termination point. The problem with this is not enough sections allowed by Virtis. We already had too many.

The second problem is what is described in incident #3133. Design uses a structural “d” that does not include the sacrificial wear. The 1” of concrete that was noted as sacrificial wear was accounted for as additional self weight. But in our bridge ratings we would use the entire depth of the section to calculate capacity.

I have spent much time in trying to describe RC Slab problems. It may be best if I was to send you a typical slab bridge we use here in Kansas and have you code up a suitable design and rating in Virtis & Opis so we can see how BRASS intended for the software to be used and so you can really see first hand the problems we are experiencing here.

FROM:kkennelly DATE:3/8/01 3:14:14 PM

FROM:kkennelly DATE:3/9/01 8:12:48 AM

Jim, should we add validation to the domain to check if the user has entered starting and ending cross sections in a cross section range that have constant rebar properties?

FROM:dteal DATE:Friday, September 05, 2003 1:54:39 PM

This will go away with schedule based input

FROM:kkennelly DATE:8/14/2006 1:22:07 PM

Validation added for cross section based rc members in version 5.5

FROM:dteal DATE:Thursday, September 21, 2006 10:24:42 AM

Accepted

Issue ID: 3126

Subject: Restricting Users during database upgrade (Oracle)

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 2/19/2001 5:09:04 PM |
| Modified By: administrator            | 6/19/2008 4:06:05 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Closed | High     | Education |
| Duray, Jim      | Closed | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3127.12222 | Closed        | Unable to Change Folder Properties |

### Description

FROM:dteal DATE:02/19/2001 12:09:05

We use Oracle

How do I restrict users from logging into the database – like during a database upgrade. I don't want to go into the Config. Browser and edit all the users, we have 21. Isn't there a generic way to lock users out temporarily?

FROM:jduray DATE:2/19/01 3:51:21 PM

Your dba can disable access to the database. He/She should know how to do this.

## Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 3127                              |
| Subject: Unable to Change Folder Properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 2/19/2001 6:09:25 PM |
| Modified By: administrator            | 6/19/2008 4:06:05 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:02/19/2001 13:09:25

I created some folders back in version 2.???. I now wanted to change the description with the folder properties window. I checked the save option radio button so the save folder button is available. I am not allowed to save it?? I get a system error message "Unable to create bridge group, error updating the database". I am logged in as administrator.

I have not applied the Service Pack 2 yet. Still using 4.01.

4/19/2016 3:02:37 PM

HRS AASHTO

117



Complete Issue Information

FROM:jduray DATE:2/19/01 3:53:01 PM

These is a problem with changing filter folders in 4.0.1 that 4.0.2 fixes.

FROM:dteal DATE:05/25/2001 10:07:42

|                                  |
|----------------------------------|
| Issue ID: 3128                   |
| Subject: Sidewalk Loads and DF's |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Punkay, Stephen         | 2/19/2001 9:35:35 PM |
| Modified By: administrator            | 6/19/2008 4:06:05 PM |
| Priority: Low                         |                      |
| Category: Education                   |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Kennelly, Krisha | Resolved | Low      | Education |

Contacts

| Name      | Company            | Email 1               | Phone 1 |
|-----------|--------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., | jduray@mbakercorp.com |         |

4/19/2016 3:02:37 PM

HRS AASHTO

118

## Complete Issue Information

|                |                            |                     |              |
|----------------|----------------------------|---------------------|--------------|
| Stephen Punkay | Inc.<br>Forte and Tablada, | punkays@ftcsd.com   | 225-927-9321 |
| Joseph Ihnat   | Inc.<br>Michael Baker Jr., | jihn@mbakercorp.com | 412-269-6354 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3129.12220 | Closed        | test incident (web) |

## Description

FROM:spunkay DATE:02/19/2001 16:35:36

We tried to use the sidewalk command on a P/S 7-girder system bridge to act as a median barrier in the Structure Typical Section. The schematic depicted what features are in existence. The Brass output does not appear to reflect the additional 6" slab weight or the non-standard (GS/5.5) Live Load Distribution (LLD) Factors. It appears that manually overriding these items is the only solution at present. It is my understanding that the LLD's and loads for sidewalks (and other similar appurtenances) should be calculated by Virtis and pushed into BRASS. Where do we go from here?

Thanks for reviewing!  
Stephen Punkay

FROM:jduray DATE:02/27/2001 14:08:36

FROM:kkennelly DATE:3/2/01 1:30:26 PM

I imported your bridge and saw the sidewalk entered on the Structure Typical Section window. When I ran BRASS, the BRASS input file had the following commands in it:

```
COMMENT      Sidewalk Load
DECKC-LODU   3, 0.0750, 36.3750, 8.9583, 2
```

You entered the width, thickness etc of the sidewalk into Virtis and the export created the above DECKC-LODU command for BRASS. The 0.075 value is the weight/sf of the sidewalk based on the sidewalk thickness you entered. The BRASS output doesn't contain output for just the sidewalk, it combines all of the superimposed stage 2 dead loads into one load case. For your case, BRASS combined the parapet and sidewalk loads into the "SUPERIMPOSED UNIFORM DEAD LOAD ON TOP SPANS" and that is where you can find the dead load forces due to the parapet and sidewalk. The following warning message is given in the log file when you run BRASS to alert you to the fact that BRASS doesn't use the load case names you entered into Virtis:

WARNING (High):

BRASS cannot apply the loads specified on the Structure Typical Section window, such as the concrete deck, appurtenances, sidewalks, and wearing surface, to the load cases assigned to them. Instead, BRASS

4/19/2016 3:02:37 PM

HRS AASHTO

119

### Complete Issue Information

internally applies them to the appropriate Superstructure Dead Load case for the stage specified in the original Virtis load case.

I'm not sure what you are questioning regarding the non-standard LL distribution factors. BRASS LFD uses the live load distribution factors for the member entered on the Live Load Distribution window in Virtis. You can use the Compute from Typical Section button on that window to have Virtis calculate the DF for you. It will calculate them based on the location of the beam, type of beam, beam spacing and location of the travelways as entered on the Lane Position tab of the Structure Typical Section window. If you want to use a different DF, you have to enter that value in the Live Load Distribution Window instead of using the Compute button.

|                              |
|------------------------------|
| Issue ID: 3129               |
| Subject: test incident (web) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Ihnat, Joseph           | 2/21/2001 4:19:33 PM |
| Modified By: administrator            | 6/19/2008 4:06:05 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | Closed | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jihnat DATE:02/21/2001 11:19:33  
descr

Complete Issue Information

Issue ID: 3149  
Subject: Printing the Schematics: RC Cross Section View unavailable

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Bertos, Steve 3/5/2001 8:24:34 PM  
Modified By: administrator 6/19/2008 4:06:04 PM  
Priority: High  
Category: Bug - GUI 2

History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | Assigned   | High     | Bug - GUI 2 |
| Ihnat, Joseph   | Patch Test |          |             |
|                 | Accepted   |          |             |
|                 | Closed     |          |             |

Complete Issue Information

|               |        |      |             |
|---------------|--------|------|-------------|
| Ihnat, Joseph | Closed | High | Bug - GUI 2 |
|---------------|--------|------|-------------|

Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | revm06010(299).bbd  |             |

Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3152.12197 | Accepted      | Rating error about distributed loads |

Description

FROM:sbertos DATE:03/05/2001 15:24:34

Virtis is unable to print the cross section schematics for Reinforced Concrete Tee Beam.

FROM:jihnata DATE:1/23/2002 2:56:17 PM

Fixed for version 4.1.1 and 4.2.0

FROM:jduray DATE:4/4/02 2:47:46 PM

Accepted by Gale (informed via email).

|                                               |
|-----------------------------------------------|
| Issue ID: 3152                                |
| Subject: Rating error about distributed loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Ihnat, Joseph           | 3/6/2001 8:04:14 PM  |
| Modified By: administrator            | 6/19/2008 4:06:04 PM |

4/19/2016 3:02:38 PM

HRS AASHTO

122

## Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

## History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Kennelly, Krishna | Resolved | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | rev-0540049.bbd     |             |
|      | 0540049.bbd         |             |

## Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 3163.12186 | Resolved      | Duplication of distributed loads |

## Description

FROM:jihnat DATE:3/6/01 3:02:10 PM

Reported by Sylvester Yongho of Stone & Webster. Phone: 617-589-7048 Email: sylvester.yongho@stoneweb.com

This is actually 3 different problems.

1) When he starts Virtis he gets an error: Program failed to initialize properly. 0xC0000043. This is not a Virtis message as far as I can tell.

2) Error messages when rating the first member of his bridge (m-06-010(299).bbd in the docs directory). I'm not sure if this is a precision problem or a problem with his input.

Error generating LFD/ASD load commands!

02:50:33 PM - Line 158 in source file D:\Virtis\GUI\abxbrass\BrassStdLoadControl.cpp.

Error generating load group commands!

02:50:33 PM - Line 775 in source file D:\Virtis\GUI\abxbrass\BrassLoadControl.cpp.

Error getting start distance and range for distributed dead load!

02:50:33 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

4/19/2016 3:02:38 PM

HRS AASHTO

123

Complete Issue Information

Error preparing distributed load for BRASS commands!  
02:50:33 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Unable to determine span where range ends!  
02:50:33 PM - Line 289 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error determining start distance and range!  
02:50:33 PM - Line 4785 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

3) If these messages refer to his uniform loads, he thinks message should say uniform instead of distributed.

FROM:kkennelly DATE:3/7/01 2:22:45 PM  
2. Think problem is with gui for uniform and member loads. His bridge has 4 mbr\_distrib\_loads in db with 2 rows in the db having a span length slightly longer than actual span length so FindSpanByDistance() fails. (If you do BWS report for member 1, you'll see 4 mbr distrib loads reported not the 2 that are visible in the gui) Not sure if these rows with long span length were created by user entering loads as distrib loads with slightly longer span lengths or entered as uniform loads and then span length changed. Jim found if enter distrib load with length slightly too long, hit OK, reopen window and load doesn't appear on either uniform or distrib tabs. So distrib load window needs fixed, should still find out if somehow changing span length or skew contributed to this problem.

FROM:kkennelly DATE:3/7/01 2:38:35 PM  
I removed the 2 rows that I think are causing the problem in the db and exported the bridge to revm06010(299).bbd and attached this export file to this incident. Sylvester, try to import this bridge and verify that Member G1 has the correct uniform loads that you want.

FROM:kkennelly DATE:3/8/01 1:52:03 PM  
GUI fixed for patch 3, added tolerances to uniform load tab.

FROM:jduray DATE:5/25/01 4:15:15 PM  
Gale tested and found to be ok.

FROM:gbarnhill DATE:05/31/2001 12:18:40  
All loads now appear after input.  
NOTE: When DISTRIBUTED LOADS are input as the same magnitude at start and end and over a length exactly equal to total structure length, when the window is reopened the load appears in the UNIFORM LOADS tab. This makes sense, since the load should have been entered as UNIFORM in the first place, but it's confusing to see it reported under a different tab than where it was input.  
OK in Service Pack 3 for version 4

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 3163<br>Subject: Duplication of distributed loads                |
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Kennelly, Krisha |

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Best, Richard | 3/20/2001 5:16:23 PM |
| Modified By: administrator  | 6/19/2008 4:06:03 PM |
| Priority: High              |                      |
| Category: Bug               |                      |

### History

| Primary Contact | Status            | Priority | Category |
|-----------------|-------------------|----------|----------|
| Ihnat, Joseph   | Assigned          | High     | Bug      |
|                 | Closed - Inactive |          |          |
| Ihnat, Joseph   | Closed - Inactive | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State     | Summary                   |
|------------|-------------------|---------------------------|
| 3166.12183 | Closed - Inactive | Trouble installing v4 SP1 |

### Description

FROM:rmbest DATE:03/20/2001 13:17:20

The attached bbd file will not run. We are getting an error generating load group - "Error getting start distance and range for distributed dead load". The BWS report shows that a distributed load was input twice. Actually it was entered as a uniform load. This duplication doesn't show up in the Member Loads windows and we can't delete them (if they really exist). I also noticed that if the user changes a span a length then his uniform loads get switched to distributed load window. This could account for how the duplication happened in the first place.

FROM:jduray DATE:3/22/01 8:34:45 AM

FROM:kkennelly DATE:4/2/01 8:24:39 AM

This incident is the same as incident 3152. Virtis only stores distributed loads in the database, the gui then has to determine if the load is uniform (same load at start and end and applied over an entire span) or distributed. The uniform load window was not using tolerances when determining if the load was uniform or distributed so the loads don't show up on the uniform tab but the distributed tab did use the tolerances so the load doesn't show up there either. This has been fixed for Service Pack 3.

FROM:kkennelly DATE:4/2/01 8:47:51 AM

I removed the 2 extra distributed loads and attached the bbd as rev-0540049.bbd. After I removed the

4/19/2016 3:02:39 PM

HRS AASHTO

125



Complete Issue Information

2 extra dead loads, I was still unable to run this member. I got the error about distributed dead loads again, this time it was due to the Deck Concrete Profile. When the export tried to generated the dead loads for the slab it appears to have a problem with the deck being entered as 583.48953 ft long. The span lengths as entered on the Member window add up to 583.4895 ft. If I change the deck profile to 583.4895 ft long, BRASS LFD runs. The steel web plate was also entered as 583.48953 but BRASS didn't complain about that dimension so I'm not sure if we're not consistent with tolerances.

Brian, my debug version is not working so I can't step through this. Can you verify that the export is using the correct tolerances when it creates the dead load command for the slab? Also, can you issue a different error message when the export has a problem creating the dead load command for the slab? The current message is now the same message as for a user input distributed load and it is misleading if the problem is with the export calculated slab.

FROM:bgoodrich DATE:04/16/2001 10:05:43

The export internally stores the distances for loads (input by the user or generated from say slab dimensions) in inches or millimeters. I increased my tolerance for inches to 0.001 and the export ran fine. At the point that the error messages are issued, the export does not know where the load originally came from, so a detailed error message cannot be issued as you requested. However, I did add some wording (to BrassLoadControl.cpp) that outputs the load case name in the error message, so the user knows to look at distributed loads in that particular load case, which may come from loads input by the user or from loads generated from section dimensions.

Krishna - I will send updated source to Joe.

FROM:kkennelly DATE:5/23/01 10:52:12 AM  
tested in 4.0.3

|                                    |
|------------------------------------|
| Issue ID: 3166                     |
| Subject: Trouble installing v4 SP1 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Duray, Jim              | 3/22/2001 4:17:07 PM |
| Modified By: administrator            | 6/19/2008 4:06:03 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Member Loads Test.bbd |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3169.12180 | Closed        | P/S Girderline Stage 2 and 3 Loads |

### Description

FROM:jduray DATE:3/22/01 12:13:53 PM

Travis Fox called - he is having trouble installing SP1. He runs the vw40sp1.exe and get a message that the "old file is missing".

vw40sp1.exe is in the directory where Virtis is installed.

FROM:jihnata DATE:4/6/01 4:01:28 PM

Travis had installed Virtis from his PC onto an Oracle server. But when he went to apply the Service Pack, there was a problem with applying the patch to abgreport.dll, which was the first patched file that was not an 8.3 filename. I was able to duplicate this: It worked OK on an NT server but not on an Oracle server.

Issue ID: 3169

Subject: P/S Girderline Stage 2 and 3 Loads

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Koenig, David

3/23/2001 4:21:34 PM

4/19/2016 3:02:39 PM

HRS AASHTO

127

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:06:02 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | On Hold  | High     | Bug - GUI 2 |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3192.12157 | Resolved      | Version 4.02 database filtering of sub-folders |

### Description

FROM:dkoenig DATE:03/23/2001 12:21:34

I created two girderline bridges, a 3 span continuous P/S I, and a 3 span continuous Box Girder. Both bridges are modeled as simple span for non-composite loads made continuous for composite loads. I entered barrier and wearing surface loads in the Member Loads window. The load case descriptions are for stage 2 (I also tried stage 3). When I analyzed the bridge, I found that all loads were applied to stage 1 – Simple span. I can select any of the options in the Member Alternative Engine Properties window and I will still get these results.

Unfortunately I am still working with 3.0, so maybe this has been rectified for 4.0. I would like to know if this is a problem with Virtis/Brass or am I doing something wrong.

I have attached the P/S I .bbd file.

FROM:bgoodrich DATE:04/10/2001 09:58:40

I corrected a problem in the export with the determining the stage when load cases are combined to fit within the number load cases allowed by BRASS. This correction should be available in the next 4.0 Service Pack.

4/19/2016 3:02:39 PM

HRS AASHTO

128

Complete Issue Information

FROM:gbarnhill DATE:05/31/2001 11:56:37

For an LFD analysis of a PS girderline member alt, the BRASS results now correctly interpret the stage 1 and stage 2 dead loads as set up in the load case description OK in Service Pack 3 for version 4

FROM:bgoodrich DATE:06/13/2001 07:58:13

Closed.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3192                                          |
| Subject: Version 4.02 database filtering of sub-folders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 4/19/2001 2:26:15 PM |
| Modified By: administrator            | 6/19/2008 4:06:01 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:04/19/2001 10:26:17

The bridges that I've sorted by district and county do not get placed in the folders that I created for them in the bridge workspace - I'm using Oracle for my database. I have all the appropriate settings in place in the configuration browser to sort our bridges. I can find my data in the 'all bridges' folder in the bridge workspace.

FROM:jduray DATE:4/25/01 11:57:03 AM

Did you create static (yellow) folders or dynamic (red) folders?

4/19/2016 3:02:40 PM

HRS AASHTO

129

Complete Issue Information

FROM:bmccaffrey DATE:01/27/2002 14:56:48

Dynamic

|                                         |
|-----------------------------------------|
| Issue ID: 3194                          |
| Subject: BARS/Virtis Rating Discrepancy |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Shah, Shyam             | 4/20/2001 4:08:24 PM |
| Modified By: administrator            | 6/19/2008 4:06:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Accepted | High     | Bug      |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:02:40 PM

HRS AASHTO

130

### Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3204.12145 | Closed        | Error message |

### Description

FROM:snshah DATE:04/20/2001 12:08:24

I imported a continuous prestressed bridge into Virtis from a BARS file. After comparing the results, I found that the inventory rating in Virtis falls below the HS-20 design loading (R.F. = 0.933), however, when running the same file in BARS the inventory rating meets the design requirement (R.F. = 1.0358) at the negative section, see G23 for details. I was wondering what could be causing the difference in rating? I have attached the BARS file for your analysis. Thanks for your help.

FROM:snshah DATE:04/20/2001 12:11:59

FROM:jduray DATE:4/25/01 11:47:06 AM

Have you reviewed the Virtis bridge description to determine if it is correct?  
Have you reviewed the BRASS output file and compared things like actions, properties and capacities?

FROM:snshah DATE:04/26/2001 12:22:20

I looked at the BARS output and it seems to match up with the data in Virtis. I then looked at the information exported to BRASS from Virtis. I noticed that the depth of the negative reinforcement was not exporting correctly. According to my calculations the distance from the bar center to the top of the top flange should be 5.8", however, in the file exported to BRASS it says that the distance to the center of the bar is 4.8". (see XSECT-G for details) I did look at other prestressed girders that have steel in the deck, however, I did not notice the same behavior. What could be causing this to occur in this particular file?

FROM:gbarnhill DATE:05/03/2001 12:30:40

I asked Jim to send me the BARS file that Shyam attached. I imported & got similar results. As far as I can tell, the IMPORT process is good. For G23, the REINFORCEMENT tab of DECK PROFILE shows the rebar at 3.2 inches from top of structural slab, which agrees with the BARS input dimension of 59.8 inches from bottom of PS girder. (54" girder, 2" haunch, 7" slab)  
EXPORT shows on XSECTG top-of-girder to rebar as 4.8".  
It appears EXPORT is dividing the HAUNCH dimension Y1 by 2. Y1 shows as 2" in the HAUNCH PROFILE, but XSECTC shows 1" for dimension between top-of-girder and bottom-of-slab.

4/19/2016 3:02:40 PM

HRS AASHTO

131

## Complete Issue Information

FROM:gbarnhill DATE:05/03/2001 17:56:57

More information.

Check PCITrainingBridge5 in the Database.

It seems EXPORT uses the correct Y1 dimension for haunch on XSECTC. (0.5")

Maybe there is something different about an imported bridge.

FROM:bgoodrich DATE:05/03/2001 21:15:05

There are two dimensions that Virtis supports for describing the haunch thickness (Y1 and Y2). The Y2 dimension is only available for exterior girders. If Y1 and Y2 both contain a value, then the export averages them to get the BRASS haunch depth. If the Y2 value is null (left blank), then the Y1 value is used for the BRASS haunch depth. The BARS import sets the Y2 value to zero, which is not null. Therefore, the average of 2" and 0" is computed by the export as 1". At any rate, the BARS import should not be setting Y2 to zero because I don't think the BARS data file supports this dimension. The Y2 dimension should be left null or set the same as Y1 during import.

I found a work-around to delete the Y2=0.0 values for your imported bridge. Open the member window for G12, change the Member Location radio button to Exterior, and click the Apply button. Then, for the member alternative under the G12 member, open the PS Haunch Range window (Haunch Profile in the tree), delete the values in the Y2 column, and click the OK button. Now, return to the G12 member window and change the Member Location back to Interior, and click OK. Finally, repeat this for the G13, G22, and G23 members.

Jim - I am not sure why we decided to use the average, but the export and the domain function that converts schedules to cross sections both average the Y1 and Y2 values as described above. Maybe it makes more sense to always use the Y1 value for the haunch depth. The Y2 value is used to specify the depth of the slab at the edge of the deck, which the export uses for determining dead loads. What should we do here?

FROM:kkennelly DATE:5/7/01 9:44:29 AM

FROM:kkennelly DATE:5/11/01 2:23:50 PM

I think we should continue using the average of Y1 and Y2 for the haunch depth in the export and domain. The import should be changed so that the Y2 value is set as Null, not zero.

FROM:snsah DATE:05/25/2001 11:04:46

I cannot locate in the BARS file where it defines the haunch to be anything other than 2". Where is the BARS importing program getting a Y2 value of 0.00?

Also, I agree that Y1 and Y2 should be averaged, however, this should only apply for an exterior girder. Since Y2 is not available and cannot even be changed for an interior girder, it should not be exported to BRASS to be analyzed.

FROM:jduray DATE:6/6/01 8:49:35 AM

Ed - change the import so the Y2 value is set as Null, not zero.

FROM:kkennelly DATE:9/26/01 9:04:41 AM

I've changed my mind. Y2 should not be used in the export and domain for an interior beam. Since girderline mbrs can toggle between interior and exterior beam in UI, user could get a Y2 dimension in the database for an ext mbr, then change mbr location to int mbr and the Y2 is still in the db but not

4/19/2016 3:02:40 PM

HRS AASHTO

132

Complete Issue Information

visible to user.

FROM:kkennelly DATE:9/26/01 11:00:41 AM

Code fixed for Beta Build 1. Import changed to set y2 = null. Domain changed to check if mbr is interior or exterior when it computes the haunch depth for a generated cross section. Y2 not used if the member is an interior member. If member is exterior beam, haunch depth = 1/2(y1+y2) unless if y2 = null then haunch depth = y1.

Brian, Do you need to make any changes to the export to match what the domain is doing?

FROM:bgoodrich DATE:09/26/2001 15:06:39

I modified the export to determine if the member is interior or exterior and use the Y1 and/or Y2 dimensions as specified by Krisha. I sent Joe the export modifications.

FROM:gbarnhill DATE:10/12/2001 17:26:18

OK in V410 Beta 1

FROM:bgoodrich DATE:10/22/2001 11:33:21

Closed.

|                        |
|------------------------|
| Issue ID: 3204         |
| Subject: Error message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Punkay, Stephen         | 4/27/2001 1:51:05 PM |
| Modified By: administrator            | 6/19/2008 4:06:00 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category  |
|-----------------|--------|----------|-----------|
| Duray, Jim      | Closed | High     | Education |
| Duray, Jim      | Closed | High     | Education |

Contacts

| Name           | Company                 | Email 1           | Phone 1      |
|----------------|-------------------------|-------------------|--------------|
| Stephen Punkay | Forte and Tablada, Inc. | punkays@ftcsd.com | 225-927-9321 |

Documents



Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3206.12143 | Closed        | Contraflexure Error Message |

Description

FROM:spunkay DATE:04/27/2001 09:51:06

I received an error message when I tried to generate a rating for a type IV P/S girder span modeled as girder system. I have tried to modify a copy of an existing file that runs successfully and also create a new file from scratch. I get the same error message for both, see below.

Error generating LFD/ASD load commands!

Error generating load group commands!

Unable to get adjusted distance of load (P/S beams)!

Error preparing concentrated load for BRASS commands!

Unable to compute span where load is applied!

Please review this error message and send me feedback wrt a solution.

Thank You!

Stephen

FROM:jduray DATE:5/1/01 8:48:10 AM

Is this still an issue or did you resolve it by adjusting lengths?

FROM:spunkay DATE:11/07/2001 09:01:15

Adjusting lengths resolved the error message. Sorry for the delayed response!

|                                      |
|--------------------------------------|
| Issue ID: 3206                       |
| Subject: Contraflexure Error Message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Punkay, Stephen         | 5/1/2001 3:06:22 PM  |
| Modified By: administrator            | 6/19/2008 4:06:00 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category          |
|-----------------|----------|----------|-------------------|
| Martin, Ed      | Assigned | High     | Bug - BARS Import |
|                 | On Hold  |          |                   |
| Li, Xinmei      | Resolved |          |                   |
| Li, Xinmei      | Resolved | High     | Bug - BARS Import |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                 |
|------------|---------------|-----------------------------------------------------------------------------------------|
| 3219.12130 | Resolved      | BARS import should warn users if stiffener ranges created with no stiffener definitions |

### Description

FROM:spunkay DATE:05/01/2001 11:06:22

I encountered another error message while modeling a prestressed girder system made continuous for live load. Please direct me to a solution to remedy this problem. The error message reports as follows:

Error filling general change point array!

One or more properties are not valid!

Error retrieving LFD/ASD engine specific member alt properties!

An invalid contraflexure location was specified!

Error retrieving LFD/ASD engine specific member alt properties!

FROM:bgoodrich DATE:05/02/2001 08:07:36

I believe the structure definition started out as a simple span and then the number of spans was increased to five. The default engine properties were set according to the original one-span structure. After increasing the number of spans, the engine properties were internally adjusted for the new spans, but the contraflexure locations for span 1 remained blank (i.e., set to NULL). The contraflexure locations are only applicable to steel, so I modified the export (BrassStdEngineData.cpp) to bypass checking for valid values for concrete member alternatives. For steel member alternatives, the check will still be performed because the user is allowed to change these locations. This issue will be available in a future service pack.

FROM:jduray DATE:5/31/01 2:46:10 PM

4/19/2016 3:02:40 PM

HRS AASHTO

135

Complete Issue Information

FROM:bgoodrich DATE:06/05/2001 09:35:00

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 3219                                                                                   |
| Subject: BARS import should warn users if stiffener ranges created with no stiffener definitions |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Li, Xinmei                         |
| Submitted By: Kennelly, Krisha 5/18/2001 3:31:43 PM |
| Modified By: administrator 6/19/2008 4:05:59 PM     |
| Priority: High                                      |
| Category: Bug - BARS Import                         |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:5/18/01 11:29:30 AM

The BARS import should issue a warning message for steel beams imported that have transverse stiffener ranges but no stiffener definitions created. We currently import the stiffener spacings as transverse stiffener ranges with no stiffener definition assigned to them. This is ok but we should warn user.

FROM:xli DATE:4/14/2006 11:22:57 AM

Added warning message in ProcessRang() function. Also added import message to the member alt.

## Complete Issue Information

Issue ID: 3221

Subject: Stiffener Definition Does Not Populate From BARS Import

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Shah, Shyam

5/21/2001 12:51:20 PM

Modified By: administrator

6/19/2008 4:05:59 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:02:41 PM

HRS AASHTO

137

Complete Issue Information

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3221.12128 | Resolved      | Stiffener Definition Does Not Populate From BARS Import |
| 3222.12127 | Accepted      | Error # 2101 Message                                    |

Description

FROM:snshah DATE:05/21/2001 08:51:21

When importing a bridge with stiffeners from a BARS file, a stiffener definition is not populated. This should be done automatically.

FROM:kkennelly DATE:5/22/01 9:29:35 AM

We cannot create a stiffener definition for you when importing a BARS file because the BARS file does not contain any data about the stiffener plate or angle sizes. We don't even know how many different stiffener definitions exist for the structure. We would really be making up data if we tried to create stiffener definitions.

Jim and I discussed this on 5/17 based on another user's questions and we decided the import cannot create the stiffener definition for the user. Incident 3219 is going to add a warning to the BARS import that the user is responsible for creating a stiffener definition and applying it to the appropriate transverse stiffener ranges.

After you import, you should create a stiffener definition based on the plans and apply it to the appropriate stiffener ranges. If you don't have the plans, you can enter 0 for the stiffener width and thickness and BRASS LFD will run. The width/thickness ratio for the stiffeners won't be satisfied but it shouldn't control the rating. BRASS LRFD will not run if the width or thickness is 0 so you have to enter the actual plate sizes.

|                               |
|-------------------------------|
| Issue ID: 3222                |
| Subject: Error # 2101 Message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Aboesono, Bobby         | 5/23/2001 6:26:54 PM |
| Modified By: administrator            | 6/19/2008 4:05:59 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:02:41 PM

HRS AASHTO

138

### Complete Issue Information

|                   |          |      |             |
|-------------------|----------|------|-------------|
| Kennelly, Krishna | Accepted | High | Bug         |
| Goodrich, Brian   | Closed   | High | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | M-12-028.bbd        |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3252.12097 | Closed        | BRASS-ASD gives incorrect critical rating |

### Description

FROM:baboosono DATE:05/23/2001 14:26:54

I've encountered an error 2101 while trying to rate a 900-ft 5-span continuous steel plate girder span. Can somebody explain to me what this error-msg means and tips on how to fix it?

Error No.: 2101

Type : Structural Analysis Error

Location : meshds.for

ERROR: A fatal error occurred generating the finite element mesh distances.

FROM:baboosono DATE:05/23/2001 16:23:21

BTW, I included the bridge file. It's Span P1-P5 continuous span.

FROM:bgoodrich DATE:05/24/2001 13:47:34

This error message means that BRASS was unable to create a structural analysis model because a short element exists. On the Web tab of the Girder Profile window, the second range for span 1 has a Start Distance of 120.833' and a Length of 14.42', which sums to 135.253'. The next range then has a Start Distance and Length of 135.253' and 14.75', respectively, and sum to 150.003'. Hence, the ranges for span 1 exceed the span length, which throw off the web ranges for the rest of the bridge. The best advice I can give is to make sure you are consistent when entering digits right of the decimal. I changed the Start Distance of the second range from 120.833' to 120.83' and the Length of the last range from 120.827' to 120.83'. BRASS then got a little further in the analysis, but gave another error message regarding transverse stiffeners. The first transverse stiffener range in span 5 starts at 0.00002' from the support. Change this to 0.0'.

4/19/2016 3:02:41 PM

HRS AASHTO

139

Complete Issue Information

Finally, BRASS issues the following error:

Input Errors (1203) - Web segment depth invalid

Error No.: 1203

Type : Input Error

Location : new\_paraabola.for

\*\*\*\*ERROR\*\*\*\* In span 1 the input web depth of adjacent parabolas does not equal the depth of a single parabola at that point. Input parabolic segments can not be converted to a single parabola. Distance to point from left end of span = 125.820 ft

BRASS tries to merge adjacent parabolic segments when the web depth at the junction is the same. BRASS then computes what the web depth at the junction assuming a continuous parabola and compares it to the value input by the user. You must make sure the web depth between adjacent parabolic segments are correct. In this case, the web depth at 125.82' was generated by Virtis/Opis and given to the BRASS export.

Jim - Why is the web depth computed by the domain not consistent with BRASS? BRASS incorporates the slope of the linear segment adjacent to the parabolas when computing the web depth. I don't think the domain is doing this, but it probably should.

Also, I tried viewing the girder profile schematic for the member alt. The Fit to View option does not work and there are no scroll bars to pan the view. Maybe this has been fixed in Service Pack 3.

FROM:jduray DATE:5/24/01 3:41:39 PM

Are you using Windows NT or 2000? I've seen this behavior in the schematic window on 95 and 98 but not NT/2000.

FROM:baboesono DATE:05/25/2001 09:31:21

I'm using Windows NT 4.0 SP6

FROM:bgoodrich DATE:05/25/2001 10:29:10

I am running Windows ME.

FROM:kkennelly DATE:6/1/01 3:48:24 PM

Code changed in domain to take slope of adjacent web range into account when calculating depth of parabola. Code changed for 4.1 and 4.0.4 (if there is a service pack 4).

FROM:gbarnhill DATE:07/06/2001 12:30:11

4.0.4 - OK for the situation with a linear slope followed by two parabolas.

OK in Service Pack 4 for version 4

FROM:dteal DATE:07/13/2001 12:07:07

Issue ID: 3252

Subject: BRASS-ASD gives incorrect critical rating

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Boucher, Brian          | 6/21/2001 6:46:23 PM |
| Modified By: administrator            | 6/19/2008 4:05:58 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | Accepted | Medium   | Change Request |
|                 | Closed   |          |                |
| Lee, Herman     | Closed   | Medium   | Change Request |

### Contacts

| Name        | Company                        | Email 1                   | Phone 1       |
|-------------|--------------------------------|---------------------------|---------------|
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| jay puckett | BridgeTech, Inc.               | puckett_bt@compuserve.com | 307-766-2223  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3308.12042 | Closed        | str def text change |

### Description

FROM:bgoodrich DATE:06/21/2001 14:46:27

Entered on behalf of Brian Boucher:

Analyzed Spans 1 & 3, S1-Exterior in attached bridge and received critical rating factor of 99.0.

FROM:bgoodrich DATE:06/21/2001 14:49:32

Comments from e-mail from Krisha:

I ran BRASS ASD for Spans 1 & 3, S1-Exterior and also got a rating factor of 99 at span 1 - 100%. I looked in the BRASS output file for the calculations used to compute this rating factor. In the BRASS output for this point I see the rating factor for bearing stiffeners (bearing) is being printed as \*.\*.(. If I look into the output further I see that the actual bearing stress in bearing is printed out as \*\*\*\*\*. That leads me to believe BRASS can't calculate the bearing stress. Further review of the BRASS output file shows that the bearing stiffener dimensions are input as: width = 6", thickness = 0.5" and clip

4/19/2016 3:02:42 PM

HRS AASHTO

141



Complete Issue Information

= 6". With a clip of 6" and width of 6", the bearing stress cannot be calculated. I believe BRASS prints out the 99 rating factor as a flag to the user that they should investigate their input and the rating factor calcs further.

As for the message in Virtis that the shear in the cover plate governs, I will ask Brian Goodrich to investigate if BRASS is sending the correct message back to Virtis for display when Brian gets back from vacation.

FROM:bgoodrich DATE:06/21/2001 14:49:32

Krishna is correct in her assessment of the problem. The inside clip of the the bearing stiffener equaled the stiffener width, so the underlying issue seems to be an input error. However, BRASS should output something other than ".\*.,(" for the rating factor. I added a check to the export (BrassStifBearScheduleGroupCmd.cpp) to make sure the inside clip is not greater than or equal to the stiffener width.

In general, a rating factor of 99 means N/A (not applicable). For this bridge, the 6.0 clip causes a problem with how the controlling rating is determined, so I forwarded this issue to the engineer who maintains the BRASS-ASD code. The "SHEAR - BOT COV PLATE" text is used for horizontal shear, but it was never implemented. When vertical shear controls, the text will read "VERTICAL SHEAR".

I have forwarded this issue to Dan Glandt for investigation.

FROM:dteal DATE:07/13/2001 12:04:05

I used MatrixBridge13. In the bearing stiffener definition I set the top and bottom clips to 1" and 5". Now with a 6" wide stiffener we have no bearing area left. I ran a Validate – Number of error messages = 0. I ran a design review – no errors where reported. It did have zero for several Rating Factors.

FROM:bgoodrich DATE:07/16/2001 13:57:18

Dean used a different bridge than the one attached to this incident, which is why he encountered the problem. I had not reviewed built-up beam results in detail. Therefore, I revised the export checks in BrassStifBearScheduleGroupCmd.cpp to detect clip dimension errors for all steel beam types. I do not have Service Pack 4 GUI files, so I cannot comment on the validation issue.

FROM:dteal DATE:07/16/2001 16:26:10

I received a new dll to try - BRASS successfully produced the error message when there was no no bearing width left after the clips where deducted.

Issue ID: 3308  
Subject: str def text change

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: puckett, jay 8/11/2001 3:36:19 PM  
Modified By: administrator 6/19/2008 4:05:55 PM  
Priority: Medium

### Complete Issue Information

Category: Change Request

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | Medium   | Unknown  |

### Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 3309.12041 | Resolved      | humidity default |

### Description

FROM:jpuckett DATE:08/11/2001 11:36:19

"Units" should be "Initial Display Units", "Default Units", or "Display Units".

FROM:jduray DATE:8/14/01 4:48:53 PM

I like "Default Display Units" or "display Units" if we are going to change the label. I checked Bridge, struct def and member alt and it looks like we have space to make the change.

FROM:jduray DATE:8/28/01 1:33:52 PM

Let's change it to "Default Units".

FROM:hlee DATE:8/30/2001 11:11:10 AM

Changed to "Default Units" in bridge, struct def, and member alt dialogs.

FROM:kkennelly DATE:9/17/01 9:25:42 AM

Help changed for 4.1

FROM:jihnat DATE:10/16/2001 1:02:50 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:39:44

Accepted

4/19/2016 3:02:42 PM

HRS AASHTO

143

Complete Issue Information

|                           |
|---------------------------|
| Issue ID: 3309            |
| Subject: humidity default |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: puckett, jay            | 8/11/2001 3:37:22 PM |
| Modified By: administrator            | 6/19/2008 4:05:55 PM |
| Priority: Medium                      |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jpuckett DATE:08/11/2001 11:37:26  
perhaps preferences should set the humidity to 70%, so that this defaults in this window instead of blank.

FROM:jduray DATE:8/14/01 8:03:43 AM  
There is a setting in the System Defaults for this.

## Complete Issue Information

Issue ID: 3315  
Subject: change of text on DL dist tab

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: puckett, jay 8/11/2001 3:53:35 PM  
Modified By: administrator 6/19/2008 4:05:54 PM  
Priority: High  
Category: Change Request

### History

| Primary Contact  | Status                  | Priority | Category       |
|------------------|-------------------------|----------|----------------|
| Kennelly, Krisha | System Test<br>Accepted | High     | Change Request |
| Kennelly, Krisha | Accepted                | High     | Change Request |

### Contacts

| Name        | Company                           | Email 1                   | Phone 1       |
|-------------|-----------------------------------|---------------------------|---------------|
| Dean Teal   | Kansas Dept. of<br>Transportation | teal@ksdot.org            | (785)291-3001 |
| jay puckett | BridgeTech, Inc.                  | puckett_bt@compuserve.com | 307-766-2223  |

### Documents

4/19/2016 3:02:42 PM

HRS AASHTO

145

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State    | Summary                   |
|------------|------------------|---------------------------|
| 3323.12027 | Not Reproducible | Version 4, Service Pack 4 |

Description

FROM:jpuckett DATE:08/11/2001 11:53:36

The text on the StructureLoad|DLDistribution tab could be changed from:

User input results from 3-D elastic analysis

to

User-defined dead load.

Rationale: these load can come from anywhere, present language is confusing.

FROM:hlee DATE:8/15/2001 3:12:12 PM

Done in 4.1 Development.

\*\*\* Help need to be revised too. \*\*\*

FROM:kkennelly DATE:9/13/01 11:35:17 AM

Help resolved for 4.1

FROM:jihnat DATE:10/16/2001 1:03:52 PM

Accepted via email by Brian Goodrich.

FROM:dteal DATE:11/01/2001 16:38:42

Accepted

|                                    |
|------------------------------------|
| Issue ID: 3323                     |
| Subject: Version 4, Service Pack 4 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Shah, Shyam             | 8/17/2001 2:18:44 PM |
| Modified By: administrator            | 6/19/2008 4:05:54 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Ihnat, Joseph   | Closed | High     | Unknown  |

### Contacts

| Name              | Company                    | Email 1                       | Phone 1      |
|-------------------|----------------------------|-------------------------------|--------------|
| Terry Leatherwood | TN Dept. of Transportation | tleatherwood@mail.state.tn.us | 615-741-0806 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3325.12025 | Closed        | Database Connection Problem |

### Description

FROM:snshah DATE:08/17/2001 10:18:47

Recently, I installed service pack 4. I later attempted to perform a rating using one of our agency-defined vehicles. The reported rating factor from VIRTIS was a 99.

Upon further investigation, I've determined that any rating performed with an agency-defined vehicle returns a rating factor of 99. This definitely was not the case before service pack 4.

I have uninstalled and reinstalled VIRTIS from my machine, and the problem continues to occur after installing service pack 4.

FROM:bgoodrich DATE:08/29/2001 16:37:05

I have run steel, R/C, and P/S bridges both ASD and LFD with Standard and Agency vehicles, but I cannot duplicate the rating factor of 99. Please attach the BBD file of your 4.0.4 bridge, so I can see exactly what you are experiencing.

FROM:snshah DATE:09/12/2001 09:31:07

After further investigation, it seems that the error is caused only when the agency-defined vehicle is selected by double-clicking the vehicle in the vehicle selection window. If I select inventory in the vehicle summary window, then select the truck in the vehicle selection window and hit the add to rating key, it works (all single clicks). The same procedure works for operating.

At this time it appears no further action is necessary.

FROM:bgoodrich DATE:09/18/2001 17:11:38

Status set to Not Reproducible.

4/19/2016 3:02:43 PM

HRS AASHTO

147

Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 3325                       |
| Subject: Database Connection Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Leatherwood, Terry      | 8/22/2001 6:17:17 PM |
| Modified By: administrator            | 6/19/2008 4:05:54 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3328.12022 | Resolved      | BARS import Card 15 contains zeros for voids |

Description

FROM:tleatherwood DATE:08/22/2001 14:17:18

We have attempted to set up our rating engineers as virtis users. Our database administrator set them up for our Oracle 8 database. We then went into virtis and set them up and assigned them to the rating engineers category. However, virtis will still not let them log on. When they attempt to log on they get an error message that says "Unable to verify database schema! Please contact database administrator." Our DBA has no idea why it does not work. We have bypassed virtis and connected to the database directly using the new user ID's and an SQL tool and it works OK. Therefore, the problem seems to be on the client (Virtis) end rather than on the server (Oracle database end. Did we miss a step in setting up the users within Virtis?

FROM:jihnat DATE:8/22/2001 3:51:17 PM

I emailed the latest ReadMe file to Rob Benshoof. This has instructions for setting up an Oracle database for Virtis/Opis. Let us know if this doesn't solve the problem.

Complete Issue Information

FROM:jihnat DATE:8/23/2001 11:36:35 AM  
See the VirtisOpis help topic "Adding Users to the Virtis/Opis Database"

FROM:jihnat DATE:8/23/2001 1:06:10 PM  
Try applying Service Pack 1. You can view the SP1 ReadMe file on the Virtis web site.

FROM:tleatherwood DATE:09/12/2001 10:41:51  
We upgraded Virtis, on all our computers, to version 4.0.4 and this seems to have fixed the problems. Our bridge rating engineers can now log on and use Virtis successfully. This incident can be considered resolved. Thanks.

Issue ID: 3328  
Subject: BARS import Card 15 contains zeros for voids

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 8/28/2001 5:32:00 PM  
Modified By: administrator 6/19/2008 4:05:53 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/28/01 1:17:18 PM  
Submitted on behalf of Travis Fox, ABMB Engineers, via email on 5/11/01:



Complete Issue Information

If Card 15 of BARS file contains zeros for void dimensions, BARS import creates a box beam for the member with no void. Based on other input dimensions, shape resembles an Ibeam.

Resolution: (will be in Virtis 4.1 Release)

Import follows BARS manual, if section doesn't have voids, columns 19-31 should be blank. Having a value entered in these columns makes import think original BARS input was meant to model something like a box with no voids.

Warning will be issued in import that user should verify the correct beam shape type.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3338                                        |
| Subject: H-15 lane rating for timber bridge incorrect |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Leatherwood, Terry      | 8/29/2001 8:07:38 PM |
| Modified By: administrator            | 6/19/2008 4:05:53 PM |
| Priority: High                        |                      |
| Category: Bug - Madero                |                      |

History

| Primary Contact | Status   | Priority | Category     |
|-----------------|----------|----------|--------------|
| Goodrich, Brian | Resolved | High     | Bug - Madero |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Beta41Tolerances.bbd    |             |
|      | Beam_No__7.err          |             |
|      | NonUniformBeam.bbd      |             |
|      | Beam_No__7.dat          |             |
|      | NonuniformSteelBeam.doc |             |

### Tasks

| Name       | Current State | Summary                                                                             |
|------------|---------------|-------------------------------------------------------------------------------------|
| 3339.12011 | Closed        | BRASS error of zero cross section area dependent on point of contraflexure location |

### Description

FROM:bgoodrich DATE:08/29/2001 16:07:40  
Entered for Terry Leatherwood (TN DOT):

I have been using Virtis some since our training session. I tried putting in a little continuous 2-span timber bridge. Since the beams are not spaced evenly, I used the girder-line method of analysis.

I got the bridge to run OK. I ran the H-15-44, HS-20-44, Type 3, Type 3S2 and Type 3-3 trucks over the bridge.

The ratings all look reasonable except for the H-15-44 Lane Load ratings. The lane loading is shown as controlling which should not be possible for this bridge. Furthermore, the tonnage figures do not match the rating factors. For example, the inventory rating factor is less than 1.0 which should give a rating of less than 15 tons. Instead the rating is over 20 tons.

I don't have a password or user name so I can't log on to your web site and enter the bug report there. Therefore, I thought I would just email the information to you.

I have exported the bridge and attached the BBD file. I have also scanned a sketch we have of the bridge into a adobe PDF file which is also attached.

If you have time (I know you will be getting ready for the User Group Meeting) perhaps you can check out this problem and see if there is a bug in Virtis or in the Madero analysis engine or did I just goof up the data input.

FROM:bgoodrich DATE:08/29/2001 16:09:05

4/19/2016 3:02:44 PM

HRS AASHTO

151

Complete Issue Information

Madero has a hard-coded lane load of 0.64 k/ft, which must be factored to get the magnitude of the H-15 lane load as 0.48 k/ft. The 0.75 factor is exported to a command parameter in Madero for lane impact. This was done so only the lane load is adjusted and not the trucks within the same Madero group. It appears that Madero does not utilize the 0.75 factor for an ASD analysis. I will try to address this issue in the Madero engine as I have exhausted any export options.

Note that TimberTrainingBridge1 produces the same problem with an H-15 vehicle.

FROM:bgoodrich DATE:09/04/2001 12:56:56

I corrected the Madero engine to apply the lane impact factor to the live load actions. This correction has been made to the Madero engines 1.0 and 1.1 for Virtis 4.0 and 4.1, respectively.

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 3339                                                                               |
| Subject: BRASS error of zero cross section area dependent on point of contraflexure location |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 8/30/2001 12:35:52 PM |
| Modified By: administrator            | 6/19/2008 4:05:53 PM  |
| Priority: Urgent                      |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resubmit | Urgent   | Bug      |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | Urgent   | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:02:44 PM

HRS AASHTO

152

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/30/01 8:31:16 AM  
Submitted on behalf of Ming Teng, via email:

Attached bridge has a point of contraflexure at 27.127%, run BRASS LFD and get error from BRASS regarding zero cross sectional area. Change point of contraflexure to 27.13% and BRASS runs.

Ming Teng  
RQAW Corporation  
4755 Kingsway Drive, Suit 400  
Indianapolis, IN 46205-1547  
(317)255-6060 ext.260  
FAX (317) 255-8354

FROM:bgoodrich DATE:09/04/2001 14:17:44

I am able to duplicate the problem with 4.0.4 and 4.1.0. The problem is caused by inserting a change point close to an existing change point in span 3. The additional change point is derived from the contraflexure locations, which is 21.9999978 feet, however, there is a point at 22.0 feet where the wide flange changes from a W36X232 to a W36X194. When generating the cross sections and ranges, the export gets the cross section (from the domain) to the right of 22.0 feet, which the domain returns as the one to the right of 21.9999978 feet because that distance is within the tolerance set in the UI. The resulting range has a W36X232 at the left and a W36X194 at the right, which BRASS cannot handle, nor is this the intended range described by the user. If the contraflexure location is set to 27.13% (22.00243 feet), then the 22.0 feet change point is reached first and everything works fine.

I created a derivative of this RQAW structure, in which I adjusted the deck ranges so a change point was located at 21.999997 feet in span 3 and I moved the contraflexure location in span 3 to 30%. The export and domain produce the same type of problem. Therefore, this is NOT just a contraflexure location issue.

Krishna - Do you have any suggestions?

FROM:kkennelly DATE:9/21/01 1:03:45 PM

First part of problem where domain returns section to right of 22 ft as the section which is really to right of 21.9999978' is due to the export adding the contraflexure point of 21.9999978' to the array of change points originally created by the domain. The AddChangePoint() in DoGirderMbrAlt checks to see if the point being added is the same as an existing change point. It is based on the tolerance, so then AddChangePoint() deletes one of the points and it deletes the point at 22.0'. So the array of unique change points used from then on has a change point of 21.9999978', we don't see that in the BRASS input file cause 21.9999978' gets rounded to 22.0000'.

FROM:kkennelly DATE:9/21/01 3:03:23 PM

I can't see anyway around this for the second case where Brian entered a deck range that ended at 21.9999978 and then a girder range that ended at 22. I think the user has to make the tolerance a larger number so 21.9999978 and 22 are the same number when the domain creates the unique change points.

4/19/2016 3:02:44 PM

HRS AASHTO

153

## Complete Issue Information

FROM:kkennelly DATE:9/24/01 1:39:44 PM

There is a bug in the AddChangePoint() code when checking if two points are the same location. Export passing points in inches but internal domain array is in feet. When comparison is made between point passed by export and point in internal domain list, inches unit used to get tolerance when it should be using ft tolerance. That seems to fix the problem of the export generating cross section ranges with the last range in span 3 having a different section at the beginning and the end which is what caused the 0 area error. Export is still generating extra duplicate cross sections and unused cross sections though when it calls FillBrassCrossSection().

FROM:kkennelly DATE:9/24/01 2:16:32 PM

Workaround is to increase inch and foot tolerance in the System Defaults window to 0.001. Will be fixed when 4.1.0 is released.

FROM:kkennelly DATE:9/24/01 3:21:03 PM

Resolved for 4.1.0.

Brian, if you run this problem with a user input tolerance of 0.001 for inches and feet the end result will be correct. But the export generates 2 extra cross sections that it doesn't apply to any ranges: Section2 W36x232, Section 6 W36x232 with a deck. Section 6 is the same as Section 1. The cross section list and ranges generated by the domain functions GenerateCrossSectionInfo() are correct, only 5 unique cross sections generated by the domain. I guess the export doesn't use the cross sections from this list since FillBrassCrossSection() calls DoGirderMbrAlt->GetSectionAtDistance(). I'm thinking the export is getting these 2 extra sections based on some checking it does if the section is in a composite region or positive bending. Can you verify that the export is creating its cross sections correctly? It seems to be creating the cross section ranges ok in the SPAN commands.

FROM:bgoodrich DATE:09/26/2001 15:10:13

After I change the tolerance to 0.001 inches and feet, the export only generates five cross sections - all of which are used. I cannot find any problems.

FROM:gbarnhill DATE:10/05/2001 13:02:02

V410 Beta 1 - I still need to set tolerances at 0.001 for feet and inches to get this bridge to analyze. Is that the final answer ??? If so, we need to publish that in the release notes & help file.

FROM:kkennelly DATE:10/5/01 1:32:54 PM

It should work at any tolerance. How many cross sections are you getting in your BRASS input file? Can you attach a copy of your BRASS input file that shows the cross sections and their ranges?

FROM:gbarnhill DATE:10/09/2001 11:51:10

Sorry I missed the message last Friday. I've attached the data and error files with tolerances set at 0.0001 for ft and in. V410 B1

FROM:kkennelly DATE:10/9/01 2:49:34 PM

Brian, I've attached Beta41tolerances.bbd which is pretty close to the original bridge in Beta1 for version 4.1 (I think the only section property difference from the original bridge and this bridge is the number of rows of rebar in the deck.) Set tolerances at 0.0001 for feet and 0.00001 for inches. Run BRASS LFD. I get the same BRASS data file as Gale attached. Cross Section 3 is a W36x232 with no deck or rebar. The domain's GetSectionAtDistance() returns a cross section with a deck for every point that it is called for. I think this Section 3 is created by the export when it checks if the section is in pos

4/19/2016 3:02:44 PM

HRS AASHTO

154

Complete Issue Information

or negative bending. Can you check into this?

FROM: bgoodrich DATE: 10/18/2001 12:42:08

I made some modifications to the CDoGirderMbrAlt::AddChangePoint function, which I have forwarded to Krishna for review.

FROM: kkennelly DATE: 10/22/2001 10:40:57 AM

I incorporated the changes you sent and it does maintain the original points in the m\_ChangePtArray but there is still a problem with the sections generated by the export. Run the attached Beta41Tolerances.bbd with the changes to DoGirderMbrAlt and the export generates a cross section 1 which is W36x232 with no deck and applies that section over the first 59.5' of span 1. CBrassCrossSections::IsRangeInPositiveBendingRegion() is returning false for the first 59.5' of span 1 when it should be returning true.

FROM: bgoodrich DATE: 10/22/2001 12:50:50

During my testing, I slightly changed the contraflexure location for span 1 (originally at 73.006104%). I changed the location to 73.006135% (59.5/81.5\*100) to coincide with the wide flange change at 59.5 ft. The tolerances for inches are used to determine if a range is within a positive bending region. The range change is at 714 in (59.5 ft) while the original contraflexure location was at 713.999697 in (73.006104/100 \* 81.5\*12). The difference between these distances is 0.0003 in, which was greater than my inches tolerance of 0.00001 in. Users are going to have to adjust their BRASS engine properties to get the desired result, which in this case is a composite section in positive bending.

FROM: kkennelly DATE: 10/22/2001 1:09:41 PM

Can you change the comparison of pts to use the distances in feet? For the attached bbd file, the user has entered a poc location that produces a poc at 59.5000' if you round to 4 decimal places like the BRASS input file uses. I don't think the user would ever be able to figure out on his own that the inches tolerance is causing this problem.

FROM: bgoodrich DATE: 10/24/2001 12:12:27

I modified the export to use feet or meters for the comparisons. Fixed for 4.1 Beta 2.

FROM: gbarnhill DATE: 11/07/2001 14:37:48

OK in V410 Beta 2

Issue ID: 3350

Subject: V4.0.4- tolerance settings affect BRASS Export model - steel composite

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krishna

Submitted By: Barnhill, Gale

9/4/2001 6:40:29 PM

Modified By: administrator

6/19/2008 4:38:35 PM

Priority: Urgent

Category: Bug

4/19/2016 3:02:44 PM

HRS AASHTO

155

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Resolved | High     | Bug - BRASS |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                              | Description |
|------|--------------------------------------------------|-------------|
|      | NewOutput_V5.8.4.zip<br>091-0007.bbd<br>memo.pdf |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3392.11958 | Resolved      | Incorrect unbraced lengths |

### Description

FROM:gbarnhill DATE:09/04/2001 14:40:30

I received a question and info from Ming Teng, RQAW Corp in Indianapolis.

A 3 span composite girder was modeled to change steel material at the splices. Grade 36 in positive moment ranges, Grade 50 in negative ranges. BRASS Export was creating a Grade 50 section for the middle range of Span 2. I imported the BBD file and confirmed the error.

I was also working on another problem and changed my INCH tolerance from 0.00001 to 0.0001. When I went back and reran Ming's problem, the Grade 50 section did not appear with the 0.0001 setting. I changed the setting back to 0.00001 and was able to duplicate Ming's results.

I've attached the bbd file and a Word file from Ming showing a drawing of the girder profile.

FROM:kkennelly DATE:9/5/01 1:43:05 PM

This is very similar to incident 3339.

FROM:kkennelly DATE:9/24/01 2:07:34 PM

Workaround is to increase inch and foot tolerance in the System Defaults window to 0.001. Will be fixed when 4.1.0 is released.

FROM:gbarnhill DATE:11/02/2001 12:40:16

4/19/2016 3:02:44 PM

HRS AASHTO

156

Complete Issue Information

OK in V410 Beta2

|                                     |
|-------------------------------------|
| Issue ID: 3392                      |
| Subject: Incorrect unbraced lengths |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Best, Richard           | 9/29/2001 4:29:03 AM |
| Modified By: administrator            | 6/19/2008 4:05:50 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:09/29/2001 00:29:04  
 E-mail from Richard Best:

Pat Clausen, one of our design engineers, points out some problems in a recent VIRTIS (LFD) run. Attached is a summary of the errors including a print out of two selected pages from the output file. Also attached is bbd file of his model. We are using VIRTIS/OPIS 4.0.4. Can you take a look at our model and the output? It looks like something is wrong in the computation of unbraced length as Pat points out in his memo.

<<memo.pdf>>  
 <<091-0007.bbd>>  
 Richard M. Best, PE  
 Computer Design Group Engineer

FROM:bgoodrich DATE:10/01/2001 17:07:00  
 I forwarded this issue to Dan Glandt for investigation.

4/19/2016 3:02:45 PM

HRS AASHTO

157



Complete Issue Information

FROM: bgoodrich DATE: 10/02/2001 14:36:10  
WYDOT assigned this issue to Problem Log #305.

FROM: bgoodrich DATE: 10/04/2001 10:49:17  
Entered for Dan Glandt:

An error was found in the 5.8.3 release of BRASS-Girder (LFD) The error was fixed in 5.8.4 and the attached output was ran on 5.8.4 which is currently being beta tested. This error fix corrected errors 1, 2 and 3, however, see below for error 3.

From version 5.8.4:

At the 2.0 (200.0 poi), M1 left = -852.57 ft kips.  
M1 right = -778.74 ft kips.

I believe this is correct for load level 1, truck 2.

At the 1.8

Stage 1 dead load moment = -100.4 kip ft  
Stage 2 dead load moment = -57.3 "  
Live load moment, truck 2 = -258.1 "

Factored moment =  $1.3 ( (100.4 + 57.3) + 5/3(258.1) ) = 764.22$  kip ft

At the 1.9

Stage 1 dead load moment = -271.3 kip ft  
Stage 2 dead load moment = -155.0 "  
Live load moment, truck 2 = -358.7 "

Factored moment =  $1.3 ( (271.3 + 155.0) + 5/3(358.7) ) = 1331.37$  kip ft

The bracing point 11.5 ft left of the 2.0 point, is at the 1.8153 point.

By interpolation, the moment at the 1.8153 is  $(1331.37 - 764.22) * .153 + 764.22 = 850.99$  which compares to the 852.57 reported.

Right of 2.0, the first bracing is as 11.5 feet.  $11.5/80 = 1.4375$  so the bracing falls .4375 of the way between the 2.1 and the 2.2. The factored moments at the 2.1 and 2.2 are 1074.3 and 370.2. By interpolation, the moment at the 2.14375 is 778.72 which matches the output.

Fixed for version 4.1 beta 2.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3395<br>Subject: Print Bridge Rating Results from the BE |
|--------------------------------------------------------------------|

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Ha, Binh      | 10/2/2001 2:36:19 PM |
| Modified By: hlee           | 6/9/2011 2:30:25 PM  |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
|                  | Assigned  |          |             |
| Kennelly, Krisha | Suspended |          | Enhancement |
| Duray, Jim       |           |          |             |
| Duray, Jim       | Suspended | High     | Enhancement |
|                  | Resolved  |          |             |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3420.11930 | Suspended     | User owned overload truck library |

### Description

FROM:bha DATE:10/02/2001 10:36:20

We selected some bridges on the Bridge Explorer to do an overload analysis. After the analysis was performed for the bridges selected, the Virtis program just allows to view the Bridge Rating Results. We want to print the Bridge Rating Results. Can you provide this function? Thanks

FROM:jduray DATE:5/17/02 8:32:13 AM

Have you tried (as a temporary workaround) selecting the data in the grid, copying, and pasting into

4/19/2016 3:02:45 PM

HRS AASHTO

159

Complete Issue Information

Excel?

FROM: Herman Lee DATE: 6/9/2011 10:28:40 AM Eastern Daylight Time  
Resolved in the 6.3 Release.

|                                            |
|--------------------------------------------|
| Issue ID: 3420                             |
| Subject: User owned overload truck library |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Barnhill, Gale          | 10/11/2001 6:43:22 PM |
| Modified By: jduray                   | 6/11/2009 7:40:00 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbarnhill DATE:10/11/2001 14:43:23

Assuming the basis for this new feature is to allow a quick overload analysis for a one time vehicle, here's my first round thoughts.

The NEW, EDIT, DELETE buttons are easy enough to interpret, but SAVE was confusing (until I read the HELP). I see the purpose for Saveing to the Library, but that means I need to give a Rating Engineer authority to write to the Libraries. I'm not sure I want to do that.

Could we set up an OVERLOAD TRUCK LIBRARY file that resides on the users hard drive (like the

Complete Issue Information

CDATA file for BARS import) ??? I'd rather have the rating person use something separate from the library that designers will see. The agency library could get quite full if a rater decided to save every overload they processed.

Why is there a CLOSE button instead of OK, APPLY, CANCEL ???

The LIBRARY-VEHICLE dialog is too busy for just a quick input overload truck. I don't need the MIN,MAX axle spacing. GAGE DIST & WHEEL CONTACT aren't used for LFD, so could they be moved to after an AXLE SPACING column ?? If I'm entering 15 or so axles, the easier the better. Since this is a rating tool, could the RATING methods be pre-coded so I don't have to check them off ??? The TANDEM & LANE tabs aren't needed.

FROM:kkennelly DATE:10/22/2001 8:57:59 AM

1. Overload Truck Library is an enhancement. We won't be able to get that into 4.1 so I'll label this as suspended enhancement.
2. The Close button is appropriate since this dialog does not contain data like one of the typical gui windows. It is a way to get to data in the Vehicle window.
3. Library-Vehicle dialog too busy: We are reusing the vehicle window we have now since the user is able to save the vehicle to the library. Gage Dist, Wheel contact appear in the same order as they do on the Library Vehicle window.
4. We added this window so the user could add vehicles as they needed when they were in the Analysis Settings window instead of them getting to the Analysis Settings window, not having a vehicle, then having to go back to the Library window, add a vehicle, then go back to the Analysis Settings window. It is not necessarily just a rating tool. It can also be used in Opis for design review.

FROM:jduray DATE:6/17/02 10:12:24 AM

The enhancement request is for an overload truck library that is owned by the user. One approach would be to store the info on the user's loacl drive instead of the db.

FROM: Jim Duray DATE: 6/11/2009 3:37:04 PM Eastern Daylight Time  
User-owned truck library is implemented for 6.1.

Issue ID: 3424  
Subject: Change span length

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Duray, Jim  
 Submitted By: Best, Richard 10/12/2001 1:22:51 PM  
 Modified By: administrator 6/19/2008 4:05:48 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

Complete Issue Information

|            |                    |      |                          |
|------------|--------------------|------|--------------------------|
|            | Information Needed |      | Enhancement              |
|            | Discard            |      |                          |
| Duray, Jim | New                | High | Unknown<br>Enhance BRASS |
|            | Suspended          |      |                          |
|            | Discard            |      |                          |
| Duray, Jim | Discard            | High | Enhance BRASS            |

Contacts

| Name         | Company      | Email 1                   | Phone 1      |
|--------------|--------------|---------------------------|--------------|
| Richard Best | Illinois DOT | BESTRM@nt.dot.state.il.us | 217-785-2922 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3426.11924 | Discard       | Moment Redistribution |

Description

FROM:rmbest DATE:10/12/2001 09:22:52

Enhancement request - Make it easier to change span lengths. Some automation is needed to cascade the corresponding changes to all affected members in a logical fashion.

FROM:kkennelly DATE:10/16/01 12:51:33 PM

I'm not sure what type of automation you are asking for. If you change the span length, skew, or girder spacing for a girder system Virtis will automatically compute the new lengths of members. By this I mean that after you make such a change, the new span length will be shown in the Member window. The entire Virtis system then knows the span lengths of the members so Validate will let you know if something like the Deck Concrete profile is not defined over the entire member length. We don't make any changes to the data you have entered in a window like the Deck Concrete profile because you may have multiple ranges describing the deck profile and we don't know which one should be changed.

FROM:rmbest

You are correct that it is best left to the user to decide what to change but it can be very tedious tracking down and changing things like diaphragm spacing, beam stirrups, slab rebar etc.

FROM:hlee DATE:4/30/2008 2:25:52 PM

Discarded by TAG 12/07.

|                |
|----------------|
| Issue ID: 3426 |
|----------------|

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Subject: Moment Redistribution        |                       |
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Best, Richard           | 10/12/2001 1:25:28 PM |
| Modified By: administrator            | 6/19/2008 4:05:48 PM  |
| Priority: High                        |                       |
| Category: Enhance BRASS               |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Cosmetic    |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Discard   | High     | Enhancement |
|                 | Discard   |          |             |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 3444.11906 | Discard       | Change rating codes on the Rating Results window |

### Description

FROM:rmbest DATE:10/12/2001 09:25:28

Enhancement request - BRASS does not support the 10% redistribution article AASHTO 10.48.1.3. This should be added as an option.

FROM:hlee DATE:4/30/2008 2:25:59 PM

Discarded by TAG 12/07.

## Complete Issue Information

Issue ID: 3444

Subject: Change rating codes on the Rating Results window

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Goodrich, Brian

10/16/2001 7:22:58 PM

Modified By: administrator

6/19/2008 4:05:47 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bgoodrich DATE:10/16/2001 15:23:00

There are rating codes on the Rating Results window. Although the help defines each, I think a short text description (Pass, Pass\*, Fail, N/A) would be more consistent with the rest of the GUI. The spec check results are reported as Pass, Fail, N/A, etc. and not with 1, 2, 3, etc.

4/19/2016 3:02:46 PM

HRS AASHTO

164

Complete Issue Information

jduray>> I agree but this may be what MinnDOT wanted...Krisha - please check.

kkennelly>> We present the codes that Minnesota gave us. The Code Explanation column on the window gives a text description of the code so you don't have to open the help.

FROM:bgoodrich DATE:10/16/2001 15:23:00

Every agency may not agree with the MinnDOT codes. Can Virtis maintain a master set of codes that can be mapped to those specified by an agency? Maybe the agency could set these somewhere in the configuration browser like what is done for districts, counties, etc. The alternative would be to hide the Code column of the grid for everyone except MinnDOT.

FROM:jduray DATE:10/18/01 4:08:09 PM

What I would like to do in the future is allow a COM-based plugin (like the analysis engine) for much of this interface. This was not part of our scope and there was no budget for this at this time. What we have is what MinnDOT asked for. Others can use the codes as is, wait for AASHTO to make enhancements or fund the enhancement themselves.

FROM:jduray DATE:1/29/02 5:04:36 PM

FROM:hlee DATE:4/30/2008 2:26:05 PM  
Discarded by TAG 12/07.

Issue ID: 3454  
Subject: Multiple values of f'c in same girder line

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Best, Richard 10/19/2001 4:10:32 PM  
Modified By: administrator 6/19/2008 4:05:46 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |
|                 | On Hold  |          |          |



Complete Issue Information

|                 |           |      |                          |
|-----------------|-----------|------|--------------------------|
|                 | Assigned  |      |                          |
|                 | On Hold   |      |                          |
| Goodrich, Brian | Assigned  | High | Unknown<br>Enhance BRASS |
|                 | On Hold   |      |                          |
|                 | Suspended |      |                          |
|                 | Discard   |      |                          |
| Goodrich, Brian | Discard   | High | Enhance BRASS            |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Bridge128.bbd<br>NEG_MOM.DOC |             |

Tasks

| Name       | Current State | Summary                                                                                     |
|------------|---------------|---------------------------------------------------------------------------------------------|
| 3495.11855 | Discard       | unrecognized stiffener in Rating - Overlapping longitudinal stiffeners not handled by BRASS |

Description

Enhancement Request – This may be a low priority but it needs to be mentioned. VIRTIS allows the input but BRASS only supports one concrete material and one rebar material for the entire girder line. For concrete bridges, the export chooses the first f'c value due to this limitation with BRASS. We have at least one multi-span prestressed I-beam bridge that falls into this category that has different f'c values in different spans. This should be considered for BRASS enhancement. Until it is fixed in BRASS, VIRTIS should either not accept the input or it should give a meaningful warning message. As it is now, the users are unaware unless they pour over that massive output file.

FROM:jduray DATE:10/22/01 10:29:12 AM  
The export should warn the user of this (if it doesn't already).

FROM:bgoodrich DATE:10/22/2001 12:58:02  
I have forwarded this issue to Jay Puckett/WYDOT. On hold until approved by WYDOT.

FROM:jduray DATE:1/10/02 4:13:06 PM  
We should, at a minimum, fix the export to warn the user. If WyDOT wants to enhance BRASS that's

Complete Issue Information

ok too but let's fix the export asap.

FROM:bgoodrich DATE:01/16/2002 12:08:33

I modified the export (CheckForUnsupportedData function in BrassCmd.cpp) to detect when the concrete material is not the same for all prestress spans. The following warning is issued when this condition is not met:

"BRASS does not support different concrete materials for each span.  
The concrete material from the first span will be utilized."

Setting status back to On Hold until WYDOT makes a decision.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 12:36:10 PM

Brian and Jay discussed this issue with WYDOT on 2/19/02. WYDOT indicated that this may be a possible long-term issue, but there are no short-term plans to address this issue.

FROM:bgoodrich DATE:Saturday, January 25, 2003 4:19:45 PM

WYDOT has placed this issue on the BRASS enhancement list.

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:43:46 PM

This same issue was also submitted in Incident 5251.

FROM:hlee DATE:4/30/2008 2:26:16 PM

Discarded by TAG 12/07.

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 3495                                                                                       |
| Subject: unrecognized stiffener in Rating - Overlapping longitudinal stiffeners not handled by BRASS |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Fox, Travis             | 11/7/2001 5:05:41 PM |
| Modified By: administrator            | 6/19/2008 4:05:44 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:02:47 PM

HRS AASHTO

167

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3497.11853 | Resolved      | calculation of the moment capacity by Virtis |

## Description

FROM:jihnat DATE:11/7/2001 12:01:57 PM

On 11-2-01, received an email from Travis Fox of ABMB with the following:

The attached file, Bridge128.bbd, is for the structure that I talked to you about yesterday. Also, attached is a word document describing the problem we are having in getting the correct rating for members G11 and G12. Basically, Virtis seems to not be recognizing the longitudinal stiffeners in its calculations, however, I could be overlooking something as well. Please have someone take a look at the problem and let me know what you find.

I forwarded this to Brian Goodrich who responded:

Mr. Fox is correct about the longitudinal stiffeners not being recognized. The issue pertains to both the export and the BRASS engine. The BRASS engine only supports one longitudinal stiffener location at any given point. In this particular bridge, there are two longitudinal stiffener locations at the same point. The export attempts to overcome this engine limitation by finding the midway point between overlapping longitudinal stiffeners, where it stops the first stiffener and starts the second one. This has worked fine until now, but for this case, the two lines of longitudinal stiffeners overlap completely, i.e., they have the same start distance and range. Therefore, the export is unable to choose which one to use. The .LOG file gives the following warnings:

### WARNING (High):

The export detected overlapping longitudinal stiffener ranges!  
BRASS does not allow this condition!  
One longitudinal stiffener range is entirely within another.  
Therefore, the current range cannot be added.

### WARNING (Medium):

If overlapping truly exists, and you do not agree with the export assumptions, override the longitudinal stiffener schedule for each point of interest in the overlapping range(s).

The user cannot override the point of interest for BRASS-LFD unless he overrides everything (transverse/bearing/longitudinal stiffeners and racing (lateral support & diaphragms)) and sets the POI control option on the member alternative engine properties to 0 (zero). This is a nine-span structure, so this option is not appealing. However, it may be the only work-around.

Please add this as an incident. We should followup with Jim and Jay Puckett to see if they have any suggestions.

4/19/2016 3:02:47 PM

HRS AASHTO

168

Complete Issue Information

FROM:bgoodrich DATE:11/07/2001 14:57:04

After discussing this issue with Jay, we suggest the following work-around:

1. Make a copy the existing member alternative.
2. Modify the longitudinal stiffener schedules such that there is only one stiffener present at any given location (generally on the compression side).
3. Document the member alternative accordingly using the description fields.
4. Analyze the bridge using BRASS.

I tested this work-around and recieved a rating of 1.15 for the HS-20 truck and 0.87 for the HS-20 Lane, which is better than the extremely low ratings without the stiffeners.

As a followup, we need to determine how many structure there are in which two lines of longitudinal stiffeners are present along the entire length of a span. This may fall outside the 85-90% of bridges that we are targeting.

In a future release, we might be able to modify the export address this issue. However, we must proceed with caution. The types of structures for which this issue is a concern are most likely major crossings with large traffic volumes. The export should not make blanket judgements for these types of issues.

FROM:bgoodrich DATE:Tuesday, February 26, 2002 2:46:00 PM

WYDOT is currently deciding if this issue will be addressed. Set to On Hold until they respond.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:19:42 AM

This issue is on the BRASS enhancement list. Status set to Suspended.

FROM:hlee DATE:4/30/2008 2:26:37 PM

Discarded by TAG 12/07.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3497                                        |
| Subject: calculation of the moment capacity by Virtis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Fox, Travis             | 11/8/2001 1:13:50 PM |
| Modified By: administrator            | 6/19/2008 4:05:44 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |

4/19/2016 3:02:47 PM

HRS AASHTO

169

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | Resolved  |      |             |
|            | New       | High | Unknown     |
|            | Suspended |      | Enhancement |
|            | Discard   |      |             |
| Duray, Jim | Discard   | High | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3499.11851 | Discard       | Routing File - Impact Missing Value |

### Description

FROM:jihnat DATE:11/8/2001 8:11:51 AM

In an email received from Travis Fox of ABMB:

In the calculation of the moment capacity by Virtis, the following calculation is always performed:

F critical for compression flange  
[4400 t/b]\*\*2

This value is checked against the yield strength and the lower of the two values is used in calculating the moment capacity. Where does the above equation come from? I have not been able to find this equation in the AASHTO Standard. (I may just be overlooking it, probably) It is causing a number of steel plate girder bridges to rate lower than they were previously rated in BARS.

If you need me to send an example please email me back.

Thanks for the help.

Travis A. Fox  
ABMB Engineers, Inc.  
225-765-7400

FROM:bgoodrich DATE:11/13/2001 11:27:14

I have forwarded this incident to Dan Glandt for review and comment.

4/19/2016 3:02:47 PM

HRS AASHTO

170

Complete Issue Information

FROM:bgoodrich DATE:11/13/2001 17:35:08

Entered for Dan Glandt:

It is in the 2000 interims, section 10.48.2 and is the formula for Fcr used in equation 10-99.

FROM:bgoodrich DATE:11/13/2001 17:35:37

Does Dan's comment address your concern?

FROM:bgoodrich DATE:11/16/2001 10:39:56

E-mail from Travis Fox:

Yes his comments do answer my question.

Thank you very much for the help.

|                                              |
|----------------------------------------------|
| Issue ID: 3499                               |
| Subject: Routing File - Impact Missing Value |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 11/9/2001 5:59:31 PM |
| Modified By: administrator            | 6/19/2008 4:05:44 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:11/09/2001 12:59:31

I don't see anywhere to enter or revise Impact for the rating trucks used in the routing xml file. Nor can find anywhere to view the impact used in the routing file – View Analysis Settings or in the Rating results output.

FROM:hlee DATE:4/30/2008 2:26:46 PM

4/19/2016 3:02:47 PM

HRS AASHTO

171

Complete Issue Information

Discarded by TAG 12/07.

|                                         |
|-----------------------------------------|
| Issue ID: 3500                          |
| Subject: Haunch Error for Steel Girders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Koenig, David           | 11/9/2001 6:41:00 PM |
| Modified By: administrator            | 6/19/2008 4:05:44 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Open     |          |          |
|                  | Resolved |          | Bug      |
| Kennelly, Krisha | Resolved | High     | Bug      |

4/19/2016 3:02:47 PM

HRS AASHTO

172

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 3515.11835 | Resolved      | Transverse Stiffener Definition window - Bolt Definition combo box |

### Description

FROM:dkoenig DATE:11/09/2001 13:41:01

I have found a problem with the third Haunch Type method for steel girder bridges. The Z values should be referenced from the edge of the flange like the schematic displays. Instead, the Z values are being referenced from the center of the girder. This can readily be seen on the structure typical section schematic. I can not be sure what data is actually being sent to Brass since the haunch load is not being calculated. Plus, I can not find any haunch data in the Brass Output. I thought I could for 3.0?

I am attaching a bbd file in case you need it.

In addition to the problem above, I was wondering if Incident 3140 would be fixed. Maybe this issue has already been resolved.

FROM:dkoenig DATE:11/09/2001 13:59:26

I am sorry about this, but the bbd file I gave you has two structure definitions on it. The second definition, "Structure Definition Check", contains this input type.

FROM:kkennelly DATE:11/16/2001 12:55:12 PM

I imported your bridge into 4.0.4 and then migrated it to Version 4.1. The export is correctly calculating the haunch dead load in version 4.1. It is entered as a Uniform-DL1 command in the BRASS LFD input file. The Structure Typ Section schematic now correctly draws the haunch in Version 4.1.

FROM:kkennelly DATE:11/16/2001 1:59:14 PM

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 3515                                                              |
| Subject: Transverse Stiffener Definition window - Bolt Definition combo box |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Ihnat, Joseph        |

4/19/2016 3:02:48 PM

HRS AASHTO

173



### Complete Issue Information

|                               |                        |
|-------------------------------|------------------------|
| Submitted By: Goodrich, Brian | 11/12/2001 11:15:48 PM |
| Modified By: administrator    | 6/19/2008 4:05:43 PM   |
| Priority: High                |                        |
| Category: Bug - GUI 2         |                        |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Goodrich, Brian | Assigned  | High     | Unknown  |
|                 | Duplicate |          |          |
| Goodrich, Brian | Duplicate | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 3529.11821 | Duplicate     | Shear capacity (Vu) BRASS |

### Description

FROM:bgoodrich DATE:11/12/2001 18:15:49

The Bolt Definition combo box (in the Transverse Stiffener Definition window) allows text to be input using the keyboard. This combo box should only allow the user to select one of the preset options.

FROM:jihnata DATE:11/13/2001 9:36:53 AM

Fixed for Version 4.1 Beta build 3.

FROM:bgoodrich DATE:11/30/2001 11:43:51

I found more combo boxes that should only allow the user to select one of the preset options. They are:

1. Bolt Definition window: Bolt diameter
2. Weld Definition window: LFD/ASD Fatigue stress category
3. Weld Definition window: LRFD Fatigue stress category
4. Weld Definition window: Electrode classification
5. Bearing Stiffener Definition window (Angle): Bolt Definition

FROM:jihnata DATE:8/10/2005 1:09:20 PM

Most of these have been fixed for some time. Except for Bolt Definition window, where the behavior seems to be intentional and I have left this window alone.

4/19/2016 3:02:48 PM

HRS AASHTO

174

Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 3529                     |
| Subject: Shear capacity (Vu) BRASS |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 11/30/2001 1:09:20 PM |
| Modified By: administrator            | 6/19/2008 4:05:42 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:11/30/2001 8:07:45 AM  
Submitted on behalf of Ming Teng, RQAW. Submitted via email.

Hi Krisha,

Could you please tell me or forward this message to whoever knows. Thanks a lot!

AASHTO 10.48.8.1

Could someone tell me how BRASS choose the "do" value (web stiffener

4/19/2016 3:02:48 PM

HRS AASHTO

175

Complete Issue Information

spacing) when computer the shear capacity (Vu)? It is very weird that sometimes BRASS will choose to use different "do" value (next to what I assign) instead of the point I assign (in the shear panel). Thank you very much. Have a great evening!

Ken

FROM:kkennelly DATE:11/30/2001 12:39:36 PM Duplicate of 3530

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 3530                                                              |
| Subject: Shear Capacity (Vu0 - How VIRTIS choose do (web stiffener spacing) |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Hart, Erich 11/30/2001 4:32:33 PM |
| Modified By: administrator 6/19/2008 4:05:42 PM |
| Priority: High                                  |
| Category: Unknown                               |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

Contacts

| Name           | Company          | Email 1   | Phone 1      |
|----------------|------------------|-----------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@ | 307 222-4688 |

Complete Issue Information

BridgeTech-Laramie.com

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3539.11811 | Resolved      | Embedding a flange and web in the deck slab - BRASS LFD |

Description

FROM:mteng DATE:11/30/2001 11:32:33

Hello,

Attached is the bbd file. From my bbd file, I run four POIs. The info is below:

For POI at Span 3 √ 19.05ft, I think do=51j", but VIRTIS use the previous one do (VISTIS) = 76.855j".

For POI at Span 3 √ 25.0ft, I think do=36j", and so does VIRTIS. (P.S. but the previous do=51j")

For POI at Span 2 √ 124ft, I think do=52.5j", and so does VIRTIS. (P.S. but the previous do=75j")

For POI at Span 2 √ 126ft, I think do=26.25j", but VIRTIS use the previous one so the do (VIRTIS) = 52.5j".

As we know, the bigger the do, the smaller the Vu. I just do not understand sometime VIRTIS will check the previous one but sometimes doesn't. If POI is near the web stiffener, VISTIS does check previous (only previous, not next one). But if POI is not near web stiffener, VIRTIS only use the exact do. Wired, isn't it?

THANK YOU VERY MUCH! :)

Ken (P.S. Do not know how to insert my bbd file.)

FROM:bgoodrich DATE:12/10/2001 12:04:00

I have forwarded this issue to WYDOT. It has been assigned Problem Log 317.

FROM:bgoodrich DATE:12/12/2001 10:06:49

Entered for Dan Glandt:

For checking shear, I built in a tolerance of 6" within a change of transverse stiffener spacing. Based on this the program is conservative. My thinking was:

If you have a transverse stiffener at 80' on a 100' span and the first stiffener to the left of that is 40 inches away and the first stiffener to the right is 20 inches away, what is the shear strength at the 1.8, 6" to the left of the 1.8 and 6" to the right of the 1.8. Realistically, I reasoned that for rating they should be the same and to be conservative, we would take the shear value based on the 40" stiffener spacing. The 6" was arbitrary. Maybe it should be more scientific like 1/2 of the smaller spacing?? or maybe we

Complete Issue Information

don't need it.

I can see now, an explanation in the intermediate output is needed if we keep the tolerance. This can easily be changed.

FROM:bgoodrich DATE:12/12/2001 10:06:49

A future release will provide an explanation in the output, the appropriate manual section, or both.

FROM:bgoodrich DATE:12/12/2001 16:19:34

The BRASS-GIRDER Command manual was modified to provide an explanation of how the transverse stiffener spacing is selected. See the examples and notes on the STIF-TRAN-SCHEDULE command for details.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3539                                                   |
| Subject: Embedding a flange and web in the deck slab - BRASS LFD |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Kennelly, Krisha        | 12/14/2001 2:34:30 PM |
| Modified By: administrator            | 6/19/2008 4:05:41 PM  |
| Priority: High                        |                       |
| Category: Bug - Export 2              |                       |

History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Goodrich, Brian  | Assigned | High     | Unknown        |
| Kennelly, Krisha |          |          | Change Request |
| Duray, Jim       |          |          | Enhance BRASS  |
|                  |          |          | Bug - Export 2 |
|                  | Resolved |          |                |
| Duray, Jim       | Resolved | High     | Bug - Export 2 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | continuous ps.bbd   |             |

Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 3562.11788 | Closed        | 410 release - reported results for ACTIONS DUE TO PS FORCE are not symmetrical |

Description

FROM:kkennelly DATE:12/14/2001 9:31:38 AM

Submitted via email on behalf of Francisca Karyadi 12/12/01. This incident pertains to the second question in the email regarding haunches.

Ms. Kennelly,

Currently I am rating a simple span COMPOSITE bridge supported on 33WF130 stringers with bottom cover plates. At mid-span, the exterior stringer has distortion caused by a collision damage. My question is whether or not VIRTIS is able to account for this loss. I calculated the distorted section properties of the stringer manually. Please advise me on how to input this loss to the section properties. VIRTIS has a cell for inputting "the deterioration profile," but it only accounts for percentage of loss to web, flanges, etc., NOT percentage of the overall capacity (section modulus).

My second question is:

I am rating a simple span COMPOSITE bridge supported on 20" I 65# stringers. My problem is that the top flange and part of the web are embedded 4" in the slab (4" from the bottom of the slab) (b eff. = 48", t slab = 9"). In the "Haunch" cell, I input the top flange to be embedded in the slab (Y1= -4 inch). Virts calculated the section capacities for stage construction 2 (3n) and 3 (n) assuming that the slab is ON the stringer. Therefore the c.g. of the composite section is higher than it is supposed to be. My question is whether VIRTIS has the capability to calculate section properties with the top flange embedded 4 inches in the slab.

Your help is greatly appreciated.  
Thank you and have a great day.

Francisca Karyadi  
Edwards and Kelcey, Inc.  
Ph. # : 617.241.4254

Brian, Can BRASS analyze a section as described with the flange and web embedded in the slab?

FROM:bgoodrich DATE:12/18/2001 11:06:54

4/19/2016 3:02:49 PM

HRS AASHTO

179

Complete Issue Information

Dan Glandt indicates that BRASS-GIRDER engine should support an embedded flange. However, the export does not currently allow the haunch distance to be negative. The BRASS-GIRDER(LRFD) engine does NOT currently support an embedded flange.

Krishna - Should I modify the export as a first step?

FROM:bgoodrich DATE:Tuesday, July 22, 2003 1:29:14 PM

I assume the user's first question was answered by Krishna. The second question has been addressed by modifying the export to permit a negative haunch depth, which results in an embedded flange. Fixed for Version 5.0.1.

FROM:kkennelly DATE:7/24/2003 2:30:50 PM

Version 5.0.1 tested. Export gets correct negative haunch (I didn't check if BRASS computes section properties correctly.)

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 3562                                                                          |
| Subject: 410 release - reported results for ACTIONS DUE TO PS FORCE are not symmetrical |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Barnhill, Gale          | 1/9/2002 9:49:16 PM  |
| Modified By: administrator            | 6/19/2008 4:05:40 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Unknown     |
| Goodrich, Brian | Assigned   |          | Bug         |
|                 |            | Urgent   | Bug - BRASS |
|                 | Patch Test |          |             |
|                 | Accepted   |          |             |
|                 | Closed     |          |             |
| Goodrich, Brian | Closed     | Urgent   | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                                                |
|------------|---------------|--------------------------------------------------------------------------------------------------------|
| 3563.11787 | Closed        | 410 release - highlighting not visible if multiple structures selected to "VIEW MEMBER RATING RESULTS" |

Description

FROM:gbarhill DATE:01/09/2002 16:49:16

I input a new 3 span continuous ps I girder. In the LFD results for the moment effects due to ps force, the numbers in span 3 are not the same as span 1. All other moment effects show symmetry.

I did an LFD analysis of PCITrainingBridge5 supplied with the 4.0.0 DB. I see similar results.

I have attached the bbd file for my input structure. I analyzed Member 2 of the ps system.

FROM:bgoodrich DATE:01/16/2002 11:10:12

The input looks symmetrical to me. The results within each span are symmetrical, but Span 1 and 3 are different in magnitudes. I have forwarded this issue to Dan Glandt for investigation.

FROM:bgoodrich DATE:02/01/2002 15:20:04

Dan Glandt has addressed this issue in BRASS-GIRDER 5.8.5, which should be available in the first patch for Virtis 4.1.

FROM:gbarhill DATE:Friday, March 29, 2002 2:13:12 PM

OK in 4.4.1 patch

FROM:bgoodrich DATE:Thursday, April 04, 2002 12:55:17 PM

Closed.

|                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|
| Issue ID: 3563                                                                                                  |
| Subject: 410 release - highlighting not visible if multiple structures selected to "VIEW MEMBER RATING RESULTS" |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Barnhill, Gale          | 1/9/2002 10:05:08 PM |
| Modified By: administrator            | 6/19/2008 4:05:40 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Unknown  |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | errormsg.txt         |             |
|      | FixGUIBitmaskSQL.doc |             |

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 3566.11784 | Resolved      | can not save if structure definition screen is opens |

### Description

FROM:gbarnhill DATE:01/09/2002 17:05:08

1. Select multiple bridges to analyze in BRIDGE EXPLORER

2. When BRIDGE RATING RESULTS window appears, highlight multiple bridges and click VIEW STRUCTURE RATING RESULTS.

3. When STRUCTURE RATING RESULTS window appears, clicking or dragging through the list does not highlight any lines. However, when the VIEW MEMBER RATING RESULTS button is clicked, the results come up for all structures that were "highlighted".

4 Close the MEMBER RATING RESULTS window and then click or drag through the list and the highlighting appears.

FROM:gbarnhill DATE:Friday, March 29, 2002 2:19:27 PM

OK in 4.4.1 patch

## Complete Issue Information

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 3566                                                |
| Subject: can not save if structure definition screen is opens |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Shah, Shyam             | 1/10/2002 10:30:13 PM |
| Modified By: administrator            | 6/19/2008 4:05:40 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

## History

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Duray, Jim      | New      | High     | Unknown       |
|                 | Resolved |          | Enhance BRASS |
| Duray, Jim      | Resolved | High     | Education     |

## Contacts

| Name    | Company                                | Email 1                 | Phone 1      |
|---------|----------------------------------------|-------------------------|--------------|
| Binh Ha | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us | 617-973-7561 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A07026(2WJ).bbd     |             |

## Tasks

| Name       | Current State | Summary                                                                                                                  |
|------------|---------------|--------------------------------------------------------------------------------------------------------------------------|
| 3569.11781 | Resolved      | The section properties of PS Shape calculated by the Virtis Library and the Brass Engine are not accurate and consistent |

## Description

FROM:snshah DATE:01/10/2002 17:30:13

I work for the LA dot. We are trying to upgrade from 4.0 to 4.1 after the data base migration we ran the fix per your instructions.

In 4.1 we can not save a bridge if at any time the structure definition screen was opened. If the

4/19/2016 3:02:50 PM

HRS AASHTO

183

Complete Issue Information

structure definition is not opened the bridge can be saved fine. This happens for all structures. I will include the error message and a copy of the spool from the fix.

Billy Metcalf

LADOTD - Bridge Rating Unit

FROM:snshah DATE:01/10/2002 17:45:01

FROM:snshah DATE:01/10/2002 17:49:38

FROM:mordoobadi DATE:1/11/2002 11:06:54 AM

Please run the following SQL Statements against your Oracle database:

```
GRANT SELECT ON BridgeWare.abw_girder_sys_struct_def TO
VIRTIS_USER_READ_ONLY_ROLE;
GRANT SELECT ON BridgeWare.abw_gline_struct_def TO VIRTIS_USER_READ_ONLY_ROLE;
GRANT SELECT, INSERT, DELETE, UPDATE ON BridgeWare.abw_girder_sys_struct_def TO
VIRTIS_USER_READ_WRITE_ROLE;
GRANT SELECT, INSERT, DELETE, UPDATE ON BridgeWare.abw_gline_struct_def TO
VIRTIS_USER_READ_WRITE_ROLE;
```

The following assumptions have been made in the SQL scripts:

Virtis/Opis database schema owner is 'BridgeWare'.

The Role names are VIRTIS\_USER\_READ\_ONLY\_ROLE and VIRTIS\_USER\_READ\_WRITE\_ROLE

If these assumptions are not correct, please modify the scripts to match your system.

FROM:mordoobadi DATE:1/15/2002 3:37:17 PM

SQL script and instructions put on Virtis/Opis web site.

|                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 3569                                                                                                                    |
| Subject: The section properties of PS Shape calculated by the Virtis Library and the Brass Engine are not accurate and consistent |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Ha, Binh                | 1/15/2002 4:01:13 PM |
| Modified By: administrator            | 6/19/2008 4:05:40 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name          | Company                  | Email 1                                                                              | Phone 1       |
|---------------|--------------------------|--------------------------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech               | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>                 | (402)363-9515 |
| Richard Best  | Illinois DOT             | <a href="mailto:BESTRM@nt.dot.state.il.us">BESTRM@nt.dot.state.il.us</a>             | 217-785-2922  |
| Brian Boucher | Bayside Engineering Inc. | <a href="mailto:bboucher@baysideengineering.com">bboucher@baysideengineering.com</a> | 617-625-4696  |

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | CompositeDetectionFlowchart.doc     |             |
|      | Incident3571 Composite Sections.doc |             |

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 3571.11779 | Accepted      | Composite Sections |

### Description

FROM:bha DATE:01/15/2002 11:01:13 We have found the calculations of section properties for PS Shape (especially for deck and box beams) are not accurate and consistent. First, we use the Library to input the dimensions of the deck beam (file enclosed), then use the compute button to compute the section properties automatically or we enter the numbers of our own. But when we analyze for rating solution the Brass engine recalculating and overriding the properties, which we have created on the Library.

SECTION PROPERTIES CALCULATED BY LIBRARY BASED ON THE DIMENSIONS GIVEN IN THE DIMENSION TAB:

AREA = 723.7 in<sup>2</sup>  
MOMENT OF INERTIA = 32760.4 in<sup>4</sup>  
Yb = 9.8801 in  
St = 2946.1 in<sup>3</sup>  
Sb = 3315.8 in<sup>3</sup>

SECTION PROPERTIES CALCULATED BY BRASS ENGINE:

AREA = 735.5 in<sup>2</sup>  
MOMENT OF INERTIA = 33953 in<sup>4</sup>  
Yb = 9.94 in

Wyoming Department of Transportation, Bridge Design Division  
Date 01/14/2002

Page 5

Member: G2

4/19/2016 3:02:50 PM

HRS AASHTO

185

Complete Issue Information

BEAM PROPERTIES

IMMEDIATE BREAK WEB DEPTH VARIATION.

SPAN NO. 1 SPAN LENGTH = 43.755 SPAN RATIO = 1.000 CONSTRUCTION STAGE  
 1 E= 4287. KSI

| THICKNESS |          | WEB FL. WIDTH |           | XSECT AREA | MOMENT OF INERTIA | DIST TO CENT(X) | WIDTH OF WEB TOP | WIDTH OF WEB BOT | FL.   |       |
|-----------|----------|---------------|-----------|------------|-------------------|-----------------|------------------|------------------|-------|-------|
| POINT TOP | DIST BOT | DEPTH TOP     | WIDTH BOT |            |                   |                 |                  |                  |       |       |
| 1.000     | 0.00     | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.024     | 1.05     | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.035     | 1.55     | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.100     | 4.37     | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.200     | 8.74     | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.300     | 13.12    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.400     | 17.49    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.450     | 19.68    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.500     | 21.87    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.600     | 26.24    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.700     | 30.62    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.800     | 34.99    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.900     | 39.37    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.964     | 42.18    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 1.975     | 42.68    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |
| 2.000     | 43.76    | 10.50         | 735.47    | 33953.     | 9.94              | 16.000          | 16.000           | 3.750            | 6.750 | 47.00 |
| 47.50     |          |               |           |            |                   |                 |                  |                  |       |       |

MOREOVER, THE TWO SETS OF SECTION PROPERTIES ARE NOT ACCURATE IF WE COMPARE TO SECTION PROPERTIES CALCULATED BY HAND OR BY CAD (ACCURATE RESULT)

AREA = 722.3 in<sup>2</sup>  
 MOMENT OF INERTIA = 33575 in<sup>4</sup>  
 Yb = 9.8889 in

Complete Issue Information

St = 3021.8 in3  
 Sb = 3395.2 in3

We suggest this problem should be fixed as soon as possible

FROM:jduray DATE:1/29/02 12:49:04 PM

Please check the BRASS engine-related help for the section properties. I think you will find that it states that BRASS computes the properties and does not use the properties from Virtis/opis.

|                             |
|-----------------------------|
| Issue ID: 3571              |
| Subject: Composite Sections |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Boucher, Brian          | 1/17/2002 7:50:25 PM |
| Modified By: administrator            | 6/19/2008 4:05:40 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | High     | Unknown        |
|                 | Open       |          | Bug            |
|                 |            |          | Bug - Export 1 |
|                 | Patch Test |          |                |
|                 | Accepted   |          |                |
| Duray, Jim      | Accepted   | High     | Bug - Export 1 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:bboucher DATE:01/17/2002 14:50:25

In the past (i.e. Versions 2.0 thru 4.0), Virtis would analyze a section as noncomposite when no structural slab was defined. Furthermore, Virtis would analyze a section as composite when a structural slab was defined.

In the earlier versions of Virtis, the presence of shear connectors flagged "warnings" stating that BRASS did not incorporate the shear connectors in the analysis. Therefore it was not an issue if shear connectors were modelled. the program worked.

Now, with Version 4.1, Virtis requires the user to define the slab regardless of whether the section will be analyzed as composite or noncomposite. In addition, it will only analyze a section as composite IF the shear connectors have been defined.

This change in the program is an expensive and devastating blow to my firm. Hundreds of bridges will need to be revised to fix the problem.

Is there a way to make all the old files run correctly (the old way) under the new version? Otherwise our entire database will be reduced to no working files.

FROM:rmbest DATE:01/18/2002 12:02:57

Illinois DOT has the same problem and the same concerns.

FROM:jduray DATE:1/22/02 2:59:19 PM

We are working on resolving this in a way that will not require that you make changes to bridges that were input prior to 4.1.

FROM:jduray DATE:2/5/02 12:11:57 PM

We are going to write a utility to update the database. The utility will look at ranges where a deck is specified and add rows to the shear connector ranges table to correspond.

Brian is preparing a list of the dependencies that we must check before adding rows to the shear connector ranges table.

We must also check girderline.

FROM:kkennelly DATE:2/15/2002 9:29:06 AM

Attached Incident3571 Composite Sections.doc with my method for determining where to add shear connector ranges. Attached CompositeDetectionFlowchart.doc with Brian's items to check.

FROM:jihnat DATE:3/1/2002 1:59:58 PM

AddShearConnRanges utility program is finished.

FROM:gbarnhill DATE:Friday, March 29, 2002 12:20:42 PM

I've tested the utility against several variations of composite/non composite ranges. It correctly identifies partial composite ranges and also merges overlapping definitions of composite slab and rebar

4/19/2016 3:02:50 PM

HRS AASHTO

188

Complete Issue Information

ranges into a single composite range.

FROM:jduray DATE:4/4/02 2:52:03 PM

I have done extensive testing by analyzing 281 bridges from Illinois DOT, Arizona DOT, NY DOT, Michigan DOT and MassHighway. Comparisons were made of rating factors and rating capacities for a Type 3 vehicle before and after running the utility. A special version of the export (abxbrass.ocx) was used to simulate 4.0.4 rating results. Less than 20 bridges showed differences. All differences were explainable.

A product validation feature was added to the Bridge Explorer to facilitate this comparison of large groups of bridges. The feature is not user friendly at this time and so will not be available in the Service Pack for end-users. It is planned to make it available in 5.0 to enable users to do there own product validations as they implement new releases of Virtis.

|                                            |
|--------------------------------------------|
| Issue ID: 3577                             |
| Subject: v/4.1 - P/S boxes - strand layout |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 1/27/2002 7:48:49 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
|                 | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3578.11772 | Closed        | BRIDGE RATINGS OF PRESTRESSED CONCRETE GIRDERS |

### Description

FROM:bmccaffrey DATE:01/27/2002 14:48:49

I defined a P/S rectangular box and set my default units to metric in the 'Member Alternative' window. In the strand layout grid, the strands closest to the wall are centered right at the wall. If the default units are set to english in the 'Member Alternative' window, the strands appear inside the box. I-beams work fine.

This was in 4.0.x also.

Issue ID: 3578

Subject: BRIDGE RATINGS OF PRESTRESSED CONCRETE GIRDERS

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Plakotos, Emmanuel 2/1/2002 6:57:41 PM

Modified By: administrator 6/19/2008 4:05:39 PM

Priority: High

Category: Education

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |
|                 | Open   |          |          |

4/19/2016 3:02:51 PM

HRS AASHTO

190

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Assigned  |      |             |
|                  | Closed    |      | Education   |
| Duray, Jim       | New       | High | Enhancement |
| Kennelly, Krisha | Suspended |      |             |
|                  | Discard   |      |             |
| Kennelly, Krisha | Discard   | High | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 3583.11767 | Discard       | Add Notional vehicle indicator to Virtis Routing Request xml file |

### Description

FROM:eplakotos DATE:02/01/2002 13:57:42

Before I installed VIRTIS 4.1.0 I was running VIRTIS 4.0.3. Importing BARS files into VIRTIS. All files consisting of simple and continuous prestressed girder spans were analysed and rated without any problems. After I installed VIRTIS 4.1.0 and run again the same files I found out that only the simple spans were analysed and rated. The continuous span members or the multispans members run as well but the rating results for inventory and operating load ratings were all zero. Please advise me of what I need to do to resolve this problem and thank you in advance.

If you need to contact me, you can call me at (504) 443-3437 or e-mail me at eplakotos@bh-ba.com

FROM:kkennelly DATE:2/1/2002 3:59:02 PM

Major changes were made in the BRASS LFD program regarding the rating of PS bridges. Some of the changes include:

1. The ASD rating calculations are now performed when BRASS LFD is run as per AASHTO Maintenance Manual 6.6.3.3. These ASD ratings may now control your beams.
2. Changes were made in the way BRASS computes the shear capacity of PS beams made continuous for live load. In Virtis Version 4.0.4, BRASS LFD computed the shear capacity of PS beams near interior supports using the current AASHTO spec. In Virtis Version 4.1, BRASS LFD computes the shear capacity of PS beams near interior supports using the 1979 or RC specs since the export generates a command to use the BRASS default. Please refer to incident 3574 for background on these changes.
3. Incident 3576 indicates BRASS LFD has an internal error in calculating the shear capacity. Please

4/19/2016 3:02:51 PM

HRS AASHTO

191

Complete Issue Information

refer to that incident for more background.

Any of the above changes could be causing your ratings to fall to zero.

It appears that items 2 and 3 will be addressed in the first service pack for Virtis 4.1.

FROM:jduray DATE:10/14/2003 4:21:40 PM

This incident is being closed because 4.1 resolved the problem. Buchart Horn no longer licenses Virtis so we cannot confirm resolution.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 3583                                                             |
| Subject: Add Notional vehicle indicator to Virtis Routing Request xml file |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 2/5/2002 6:46:54 PM  |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:2/5/2002 1:45:44 PM

Add a notional indicator to the vehicle description in the Routing Request file.

FROM:hlee DATE:4/30/2008 2:26:53 PM

Discarded by TAG 12/07.

## Complete Issue Information

Issue ID: 3584

Subject: Parabolic Haunch Bottom Slab Thickness Variation

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Pierce, Ron 2/5/2002 11:19:27 PM

Modified By: administrator 6/19/2008 4:38:35 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
|                 | Information Needed |          | Enhancement |
|                 | Suspended          |          |             |
| Duray, Jim      | Suspended          | High     | Enhancement |

### Contacts

4/19/2016 3:02:51 PM

HRS AASHTO

193

### Complete Issue Information

| Name       | Company                | Email 1             | Phone 1 |
|------------|------------------------|---------------------|---------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3585.11765 | Suspended     | Add Reinforced Concrete Box Girder Bridges to Live Possibilities |

### Description

FROM:rpierce DATE:02/05/2002 18:19:27

Incident 2, Please add the ability to handle varying bottom slab thickness in Parabolic Haunches. (Reinforced Concrete)

FROM:jduray DATE:2/12/02 8:39:38 AM

I don't understand this request. We only handle one slab...what do you mean by a bottom slab?

FROM:rpierce DATE:02/13/2002 11:29:05

Jim the structure I am analyzing is a Reinforced Concrete Box Girder that has top and bottom slabs. The bottom slab in the Parabolic Haunch varies in Thickness.

FROM:kkennelly DATE:2/14/2002 10:42:51 AM

I spoke with Ron about this issue by phone a couple of weeks ago. I think he is modeling the rc box girder as an rc I beam. Our gui lets the user vary the bottom flange thickness but BRASS doesn't accept that.

FROM:rpierce DATE:Thursday, February 21, 2002 2:27:21 PM

Jim I am referring to Reinforced Concrete Box Girder Structure. I modeled the Cross Section as an I section with variable bottom Slab thickness at the Pier that is in a parabolic Haunch. this can not be modeled by

Virtis Because the web is not parabolic shape because of the bottom slab thickness.

Issue ID: 3585

Subject: Add Reinforced Concrete Box Girder Bridges to Live Possibilities

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

### Complete Issue Information

|                           |                      |
|---------------------------|----------------------|
| Submitted By: Pierce, Ron | 2/5/2002 11:21:28 PM |
| Modified By: hlee         | 1/21/2013 9:29:57 PM |
| Priority: High            |                      |
| Category: Enhancement     |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

### Contacts

| Name       | Company                | Email 1             | Phone 1 |
|------------|------------------------|---------------------|---------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3586.11764 | Duplicate     | Hinges for Reinforced Concrete |

### Description

FROM:rpierce DATE:02/05/2002 18:21:28 Incident 3, Reinforced Concrete Box Girders. Please add this to the possible girder sections that can be analyzed. (Live Load Distribution)

FROM: Herman Lee DATE: 1/21/2013 4:26:28 PM Eastern Standard Time  
Duplicate of Incident 8991.

Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 3586                          |
| Subject: Hinges for Reinforced Concrete |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:23:44 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:rpierce DATE:02/05/2002 18:23:45 Incident 4, Hinges in the reinforced concrete slabs, and reinforced concrete box girders. Please include Hinges in slab bridges, this possibility is already available for steel girders and it is possible with BRASS Girder. It should not be to terribly difficult to add. With our local slabs Bridges with hinges we can run them with BRASS girder but can not store them in the Data base. This makes running overload permits alot more labor intensive.

FROM:jduray DATE:8/26/2003 11:51:34 AM  
Same as 3273.

## Complete Issue Information

Issue ID: 3587  
Subject: BRASS Culvert Engine 2.1 to Virtis Program

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Pierce, Ron 2/5/2002 11:25:06 PM  
Modified By: hlee 4/30/2013 1:22:30 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Closed    |          |             |

### Contacts

| Name       | Company         | Email 1             | Phone 1 |
|------------|-----------------|---------------------|---------|
| Ron Pierce | David Evans and | unknown@unknown.com |         |

4/19/2016 3:02:52 PM

HRS AASHTO

197



Complete Issue Information

|        |
|--------|
| Assoc. |
|--------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 3588.11762 | Discard       | Prestressed Concrete Girders - add transformed area method |

Description

FROM:rpierce , Incident 5, Please add the New BRASS Culvert 2.1 Engine to virtis Database. We will be able to run overload permits.DATE:02/05/2002 18:25:06

FROM: Herman Lee DATE: 4/30/2013 9:16:50 AM Eastern Daylight Time  
Implemented AASHTO Culvert Engine in the Virtis/Opis 6.4 release.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 3588                                                      |
| Subject: Prestressed Concrete Girders - add transformed area method |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:27:43 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name       | Company                | Email 1             | Phone 1 |
|------------|------------------------|---------------------|---------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3589.11761 | Suspended     | Post Tensioned Concrete |

### Description

FROM:rpierce DATE:02/05/2002 18:27:43

Please add Transformed Area Method to the options for Prestressed girder Bridge Ratings. Currently in Arizona all New Prestressed Girder Bridges are being design this way. We would like our HS20 bridges designed for HS20 to rate for HS20 as well. I believe that using the cover plate option in BRASS girder might facilitate this. The transformed prestressing strand could coded as a cover plate with a d in the bottom flange.

FROM:jduray DATE:5/23/02 11:58:22 AM

FROM:hlee DATE:4/30/2008 2:27:00 PM  
Discarded by TAG 12/07.

Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 3589                   |
| Subject: Post Tensioned Concrete |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:31:46 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Rejected  |          |             |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

Contacts

| Name       | Company                | Email 1             | Phone 1 |
|------------|------------------------|---------------------|---------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 3590.11760 | Duplicate     | Pints of Interest |

Description

FROM:rpierce DATE:02/05/2002 18:31:46  
 Please add Post Tensioned concrete to Girders & Frames types for analysis. In Arizona most urban structures are Two span Post Tensioned Box Girder Frames. On the interstate their are Post Tensioned Frames as well as Post Tensioned Box Girders.

Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 3590             |
| Subject: Pints of Interest |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:47:50 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:rpierce DATE:02/05/2002 18:47:50

Add to Points of Interest the ability to release degrees of freedom so as to model a hinge in a span.

4/19/2016 3:02:53 PM

HRS AASHTO

201

Complete Issue Information

FROM:rpierce DATE:02/05/2002 18:49:07

FROM:jduray DATE:2/12/02 9:09:42 AM  
Use the Hinge window.

FROM:rpierce DATE:02/13/2002 11:33:18  
Jim there isn't the possibility of adding a hinge to Slab Bridges I was suggesting a possible work around.

FROM:rpierce DATE:02/13/2002 11:39:55

FROM:jduray DATE:2/13/02 3:44:57 PM  
I think it best that we make the hinge window available to r/c members.

|                                         |
|-----------------------------------------|
| Issue ID: 3591                          |
| Subject: Slab Bridge Cross Section View |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:51:37 PM |
| Modified By: administrator            | 6/19/2008 4:05:39 PM |
| Priority: Medium                      |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                 |                    |        |                                      |
|-----------------|--------------------|--------|--------------------------------------|
| Ihnat, Joseph   | On Hold            | Medium | Bug                                  |
| Ihnat, Joseph   | On Hold            | Medium | Bug                                  |
| Duray, Jim      | New                | High   | Unknown                              |
| Goodrich, Brian | Assigned           |        | Bug<br>Bug - BRASS<br>Bug - Export 2 |
|                 | Information Needed |        |                                      |
|                 | Assigned           |        |                                      |
|                 | Open               |        |                                      |
|                 | Patch Test         |        |                                      |
| Goodrich, Brian | Patch Test         | High   | Bug - Export 2                       |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1345.bbd            |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3592.11758 | Patch Test    | Reinforcement multiple layers is averaged |

### Description

FROM:rpierce DATE:02/05/2002 18:51:37

When coding in A slab Bridge 1 ft width is used. The number for reinforcement is a decimal equivalent to i.e. #9's at 8 inchs would be coded number of bars as  $12/8 = 1.5$ . When the cross section is displayed to verify input it shows 2 bars at six inches. If 1.2 bars was put in it would show 1 bar at 12 inches. The internal calculator is rounding up and down and not giving the same as coded. The analysis is performed correctly but if the input is going to be verified by this graphic it would display an incorrect section.

|                                                    |
|----------------------------------------------------|
| Issue ID: 3592                                     |
| Subject: Reinforcement multiple layers is averaged |

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Pierce, Ron             | 2/5/2002 11:57:21 PM |
| Modified By: administrator            | 6/19/2008 4:05:38 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

## Contacts

| Name              | Company            | Email 1             | Phone 1      |
|-------------------|--------------------|---------------------|--------------|
| Emmanuel Plakotos | Buchart Horn, Inc. | eplakotos@bh-ba.com | 504-443-3437 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3601.11749 | Resolved      | Virtis 4.1 with Oracle 8.1.7 too slow on startup & over all |

## Description

FROM:rpierce DATE:02/05/2002 18:57:22

If there are two mats of reinforcement in BRASS output it shows that only one layer top and bottom slabs of Reinforced Concrete I girder Section. Should every layer be shown with its correct d.

FROM:bgoodrich DATE:02/13/2002 09:29:25

Within the Virtis/Opis GUI, the location of rebar is entered. Virtis/Opis does not assign rebar groups/rows. Therefore, if the rebar is located in the bottom half of the beam, it is exported to BRASS Row 1. If the rebar is located in the top half of the beam, it is exported to BRASS Row 5. BRASS will then average the rebar assigned to each row. BRASS is limited to three rows of bottom rebar and two rows of top rebar. It might be possible to fill each of these rows when the rebar distances are different. Any rebar at locations that do not exactly match those that are filled first would have to be assigned to the most appropriate row, which may or may not be how the user would like them grouped.

4/19/2016 3:02:54 PM

HRS AASHTO

204

Complete Issue Information

Jim - This is an export issue, not an engine issue. Should the export be modified?

FROM:jduray DATE:2/14/02 7:28:33 AM

I think the export should map what the user has defined to whatever BRASS is capable of doing in the most exact way possible. If there are five different d dimensions input by the user and BRASS can handle five rows, I think the user should see five rows in the output. If the user enters a sixth row and BRASS cannot handle that the export should either (1)issue an error message that BRASS cannot analyze the member or (2) the export should add an equivalent set of reinforcement to the most appropriate of the five rows and issue a warning to the user. I think we should do number (2). If users don't like that then BRASS should be enhanced to be more general.

I don't understand Ron's question...are there two mats defined, one top and one bottom? If s, based our what Brian says above, BRASS and the export should be able to handle that. What is the problem?

FROM:bgoodrich DATE:02/15/2002 13:33:22

Ron - Please elaborate and attach the BBD file.

FROM:bgoodrich DATE:Wednesday, February 20, 2002 6:14:32 PM

I attached the BBD file (1345.bbd). Ron entered two or three rows in the top and three rows in the bottom, all of which have different distances. I will modify the export as indicated above by Jim D.

FROM:bgoodrich DATE:Friday, June 28, 2002 12:24:49 AM

I modified the export (BrassCrossSections.cpp, BrassLrfdCrossSections.cpp, BrassStdCrossSections.cpp) to fill as many BRASS rows as possible and merging rebar at similar distances into the same row. Fixed for the version released after 4.2.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 3601                                                       |
| Subject: Virtis 4.1 with Oracle 8.1.7 too slow on startup & over all |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Plakotos, Emmanuel      | 2/11/2002 10:52:02 PM |
| Modified By: administrator            | 6/19/2008 4:05:38 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 3607.11744 | Suspended     | Parabolic Harping of Prestressing Strand |

Description

FROM:eplakotos DATE:02/11/2002 17:52:02

As of two days ago we have had a problem with Vertis 4.1. The program takes 20 minutes to start after a valid user ID and Password is entered in the Virtis login window. After Virtis start, opening a bridge data file takes just as long. We do not know what is the cause of this. Have you encountered a similar problem before?

We are using Oracle 8.1.7. We can login to oracle and look at tables and other information just fine.

Prior to this happening we modified some parameters in the Configuration Browser (in Virtis). We are not certain about the default parameters and are thinking that perhaps that might be a problem. Any ideas to help resolve this problem will be appreciated.

Regards

P.S. We reinstalled Virtis 4.1. That did not help.

FROM:eplakotos DATE:02/11/2002 18:02:28

We are running Windows NT 4.0 Service Pack 6.0. Our system is not out of resources (CPU or memory)

FROM:mordoobadi DATE:2/15/2002 2:18:35 PM  
ODBC tracing was turned on.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3607                                    |
| Subject: Parabolic Harping of Prestressing Strand |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Pierce, Ron             | 2/19/2002 10:06:26 PM |

4/19/2016 3:02:54 PM

HRS AASHTO

206

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:38 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Ihnat, Joseph   | Assigned  |          | Enhancement |
|                 | Suspended |          |             |
| Ihnat, Joseph   | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 3609.11742 | Suspended     | Sorting by Users ID |

### Description

Please add parabolic harping for strand layout in Virtis. BRASS Girder will perform stress calculations with this type of Harping. Please make it available in virtis.

FROM:awaheed DATE:Monday, September 08, 2003 12:30:48 PM

Can Virtis handle parabolic prestressing strands in post-tensioned concrete girders? Is there any enhancement planned to handle transverse post-tensioning of the slab on girders?

Amjad Waheed, PE  
Ohio DOT

## Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 3609               |
| Subject: Sorting by Users ID |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Teal, Dean              | 2/20/2002 3:08:51 PM |
| Modified By: tthompson                | 6/3/2009 2:47:19 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Wednesday, February 20, 2002 10:08:54 AM

As our User List grows to over 50 users we need a way to re-sort the user list alphabetically using User ID and not last name. I know the User List is sorted by Last Name right now. When you look at the User List in that order it appears not to have any order. With a growing user list it is becoming harder and harder to remember the last names associated with a user ID.

FROM:jduray DATE:2/20/02 1:54:19 PM

Add a Configuration Browser tab to the preferences dialog. On that tab put radio buttons for the sort order (Lastname, UserId).

FROM:jduray DATE:5/21/02 10:25:41 AM

4/19/2016 3:02:54 PM

HRS AASHTO

208

Complete Issue Information

FROM: Todd Thompson DATE: 6/3/2009 10:47:19 AM Eastern Daylight Time

Beta TAG 6/2009

At minimum a short term help would be to display first and last name in addition to userid.

This would be a big help for the administrator.

Example

User ID - LastName, FirstName

or

LastName, FirstName (User ID)

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 3659                                                                                      |
| Subject: Add a button to the Find Bridge dialog to add the result set bridges to the current folder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Pierce, Ron             | 3/14/2002 1:59:38 PM |
| Modified By: administrator            | 6/19/2008 4:05:35 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Ihnat, Joseph   | Assigned  |          |             |
|                 | Suspended |          | Enhancement |
| Ihnat, Joseph   | Suspended | High     | Enhancement |

Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

Complete Issue Information

|            |                        |                     |
|------------|------------------------|---------------------|
| Ron Pierce | David Evans and Assoc. | unknown@unknown.com |
|------------|------------------------|---------------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3665.11686 | Accepted      | Report Writer & Rating Results |

Description

FROM:rpierce DATE:Thursday, March 14, 2002 9:59:38 AM

Currently, It is not easy to use the find function and then it to a rating folder. For instance, I had an overload permit that three structures on the same route between two mile posts. I used the find function to locate the files I wanted, but I could not copy them to special folder to run the overload vehicle on. It seems that this should be an avialbe option. I talked to Gale Barnhill and he agreed that this should be an option as well. The work around was I had to use the copy and paste from the edit window. It would be easiler like if the copy and paste were avialbe on the right click event as with most MS applications. The on line help did not discuss this option very well.

FROM:gbarnhill DATE:Thursday, March 14, 2002 2:05:30 PM

Is it possible to add a button for ADD TO CURRENT FOLDER on the FIND BRIDGE dialog ??

FROM:jduray DATE:3/20/02 7:50:34 AM

You can use the New Folder dialog to create a new folder.

I agree you should be able to ...We will check on why we can not.

FROM:jduray DATE:3/20/02 3:49:30 PM

Ron is asking for a button on the Find Bridge dialog to add the result set bridges to the current folder (only for list folders).

FROM:rpierce DATE:Wednesday, March 20, 2002 5:32:19 PM

Jim , thats is exactly what I was talking about. What is going to take to add this?

|                                         |
|-----------------------------------------|
| Issue ID: 3665                          |
| Subject: Report Writer & Rating Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 3/21/2002 4:49:20 PM |
| Modified By: administrator            | 6/19/2008 4:05:34 PM |

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact  | Status    | Priority | Category      |
|------------------|-----------|----------|---------------|
| Duray, Jim       | New       | High     | Bug           |
| Kennelly, Krisha | Assigned  |          |               |
| Goodrich, Brian  | Resolved  |          | Unknown       |
| Kennelly, Krisha | Assigned  |          | Enhance BRASS |
| Duray, Jim       | Suspended |          | Enhancement   |
| Lee, Herman      | Assigned  |          |               |
|                  | Resolved  |          |               |
| Lee, Herman      | Resolved  | High     | Enhancement   |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 7600BARS.bbd        |             |
|      | #007600A.txt        |             |

### Tasks

| Name       | Current State | Summary                                                                                               |
|------------|---------------|-------------------------------------------------------------------------------------------------------|
| 3681.11670 | Resolved      | simple span pre-stressed girder/ Bridge Ratings-Show intermediate output for PS moment capacity calcs |

### Description

FROM:rpierce DATE:Thursday, March 21, 2002 12:49:24 PM

Currently, Report writer allows the user to create a report of just the input model in the data base. It would be helpful if the rating results could be included as well as the ability to reformat the report. Way have a hard copy rating reports that need to go in our bridge files and are sealed by the rating engineer. In the past another program was used to perform this function (MS Access). Having the

4/19/2016 3:02:55 PM

HRS AASHTO

211

Complete Issue Information

report generated in virtis would eliminate the need for using another program.

FROM:jduray DATE:3/26/02 11:57:49 AM

These suggestions are on our list of enhancements for the report tool.

FROM:jduray DATE:7/19/2003 8:32:58 AM

This was completed for 5.0. User formatting of the report is provided by the user-defined xsl file.

|                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| Issue ID: 3681                                                                                                 |
| Subject: simple span pre-stressed girder/ Bridge Ratings-Show intermediate output for PS moment capacity calcs |

|                                                      |
|------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                |
| Primary Contact: Lee, Herman                         |
| Submitted By: Plakotos, Emmanuel 4/8/2002 3:27:53 PM |
| Modified By: administrator 6/19/2008 4:38:35 PM      |
| Priority: High                                       |
| Category: Enhancement                                |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:eplakotos DATE:Monday, April 08, 2002 11:27:58 AM

I am sending you two files. One is a BARS input text file that I have imported to VIRTIS 4.1 and the other is the VIRTIS file that was created by the BARS file. In order to verify the ratings from VIRTIS I calculated them manually and unfortunately they did not match. I could not find the calculated Mu (ultimate moment) to compare it with the one I calculated. I also noticed that the operating rating factor was not equal to:

$IRF*(5/3)$  as per AASHTO and the bridge design Manual of LADOTD. I would like to know how virtis calculates the Ratings. I like to add that my calculated dead load and live load moments did match VIRTIS's. I will appreciate it if you can send me the formulas and the procedure VIRTIS is using. If you

## Complete Issue Information

need my hand calculations please let me know I can fax them to you. For member G71 of the file I am sending you, my hand calculations results are as follows:

Mdead load = 955.8 ft-kips (Mdlnc)  
Msuperimposed dl = 215.29 (Mdlc)  
Mll+l (axle) = 650 ft-kips  
Mu = 6869 ft-kips

$$\text{IRF} = \{[(\text{Mu}/1.3) - \text{Mdlnc} - \text{Mdlc}] * (3/5)\} / (\text{Mll} + \text{l}) = 3.7$$

$$\text{ORF} = \text{IRF} * (5/3) = 6.3$$

FROM:jihnat DATE:4/8/2002 12:41:55 PM

Note to programmer: The files were emailed to Bridgeware@mbakercorp.com

FROM:jduray DATE:4/9/02 8:25:44 AM

Please refer to the online help for BRASS for the details regarding analysis and rating computations.

FROM:kkennelly DATE:4/9/2002 1:23:29 PM

In the Analysis Results window of Virtis, I see that the controlling inventory rating is due to "Concrete Tension" and the controlling operating rating is due to "Ultimate Strength Flexural". The Concrete Tension limit state is checking the serviceability stresses. The different governing limit states is why the  $\text{ORF} \neq (5/3)\text{IRF}$ . The AASHTO Manual for Condition Evaluation of Bridges, Article 6.6.3.3 states that at inventory level, the rating must consider the allowable stresses at service load as specified in Article 9.15.2.2 of the AASHTO Design Specifications. That is why "Concrete Tension" is only checked for the Inventory rating and not the Operating rating.

The Mu for the controlling point 105.0 is shown as follows in the BRASS output file:

Moment Section Capacity

Phi \* Mn (pos): 0.674792E+04 (ft-kips)

There is no detailed info in the BRASS output as to how this section capacity is calculated.

Brian, is there any way to get more detailed output from BRASS as to how it computes this moment capacity? The user does have a point of interest with Detailed Output turned on at this point. I thought we could get detailed output for the section capacity calcs like we can for a steel girder?

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:59:42 PM

In general, Virtis users have little control over the prestress output. There is a way to get more intermediate output using the SYSTEM-1 command, but that command has never been generated by the export. We should be able to generate this command for prestress bridges, but I will have to consult with Dan Glandt regarding how the applicable parameter should be coded. Note that Incident 3010 pertains to the lack of loss output, which is also controlled by the same parameter on the SYSTEM-1 command.

FROM:kkennelly DATE:4/10/2002 8:18:49 AM

Emmanuel, are you satisfied with the BRASS computed moment capacity as 6747 kft vs. the hand calc of 6869 kft or do you want to request an enhancement to show more intermediate output re: computing the moment capacity in BRASS?

FROM:eplakotos DATE:Monday, April 22, 2002 4:53:22 PM

I would like to request an enhancement to show more intermediate output computing the moment capacity in BRASS.

4/19/2016 3:02:55 PM

HRS AASHTO

213



Complete Issue Information

FROM:kkennelly DATE:4/23/2002 8:09:45 AM

FROM:jduray DATE:5/23/02 10:32:30 AM  
Similar to 3010.

FROM:jihnath DATE:12/28/2005 2:50:58 PM  
UI and parser have been updated for 5.4.0 Beta 4.  
I noticed that there's no help entry for "Prestress losses", either. Perhaps that can be added when the Help is updated for this.  
Mehrddad, the property string should now be "Brass Std Analysis Event Properties,5.04.00.00,1,1,0,0,0,0".

FROM:mordoobadi DATE:2/6/2006 4:28:19 PM  
Property string updated in the sourcesafe database.

FROM:hlee DATE:2/10/2006 12:33:08 PM  
Resolved in 5.4 Beta 5.

FROM:xli DATE:3/23/2006 8:35:35 AM  
Tested with 5.4 Beta 7. Resolved.

|                                             |
|---------------------------------------------|
| Issue ID: 3697                              |
| Subject: Failure to Generate Rating Factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Leatherwood, Terry      | 4/18/2002 7:17:42 PM |
| Modified By: administrator            | 6/19/2008 4:05:32 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

Contacts

| Name              | Company                    | Email 1                       | Phone 1      |
|-------------------|----------------------------|-------------------------------|--------------|
| Terry Leatherwood | TN Dept. of Transportation | tleatherwood@mail.state.tn.us | 615-741-0806 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 3709.11643 | Closed        | Opening a bridge file in new version |

### Description

FROM:tleatherwood DATE:Thursday, April 18, 2002 3:17:42 PM

I have input the data for a steel beam bridge with coverplates and concrete deck. The deck is composite in the positive moment areas. However, when I try to analyze this bridge, I get 0.00 for the resulting rating factors. I have reviewed the data but cannot locate any error that is causing this problem. I have attached a BBD file for the bridge. Can you help me locate any errors in the data?

FROM:kkennelly DATE:4/22/2002 3:21:18 PM

I ran BRASS LFD for member G1 and noticed the following in the BRASS output file:

In the section listing the Stage 2 dead load moments and shears I see "GIRDER ACTIONS DUE TO APPLIED STATIC LOAD OF 125.00 KIPS/FT". Your stage 2 dead load moments are way more than the capacity of the beam so the rating factor is 0. Your railing is entered with a load of 250 kip/ft, you probably want to enter 0.25 kip/ft.

Also, the BRASS output file lists some warnings at the beginning of the output file regarding if your points of interest should be composite or non-composite. You should check into these warnings and be sure you have modeled the structure like you want.

Issue ID: 3709

Subject: Opening a bridge file in new version

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Neubauer, Scott

4/26/2002 1:17:32 PM

Modified By: administrator

6/19/2008 4:05:32 PM

Priority: Urgent

Category: Bug

4/19/2016 3:02:56 PM

HRS AASHTO

215

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned | Urgent   | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | Urgent   | Bug - GUI 2 |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2249180 (531).bbd   |             |
|      | 2249180.bbd         |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3735.11617 | Resolved      | Crash in 4.1.1 when viewing elevation schematic |

### Description

FROM:sneubauer DATE:Friday, April 26, 2002 9:17:35 AM

After we upgraded to version 4.1 and converted our database, I get an error message when I open a bridge file that says "System Error - Unexpected rows found." I hit O.K. and the file opens and there does not seem to be any problem with the file. Did the database conversion not work correctly or is it because there are some format changes that were made between version 4.0 and 4.1?

FROM:mordoobadi DATE:5/2/2002 9:08:23 AM

Could you please give me the Debug description of the error. To do so, when you get the System Error window select "Debug" in the drop down list control, copy the error text and paste it in your response.

FROM:sneubauer DATE:Friday, July 12, 2002 10:33:51 AM

This is the debug message:

No rows returned from database when expecting one row.

09:46:11 AM - Line 165 in source file D:\Virtis\data management\abmcf\g\DmGroupAccessPrivilege.cpp.

4/19/2016 3:02:56 PM

HRS AASHTO

216

Complete Issue Information

No rows returned from database when expecting one row.

09:46:11 AM - Line 165 in source file D:\Virtis\data management\abmcfq\DmGroupAccessPrivilege.cpp.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3735                                           |
| Subject: Crash in 4.1.1 when viewing elevation schematic |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: McCaffrey, Brian        | 5/20/2002 5:11:19 PM |
| Modified By: administrator            | 6/19/2008 4:05:30 PM |
| Priority: Urgent                      |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, May 20, 2002 1:11:22 PM

When I try to 'fit to view' in the girder elevation schematic, Virtis crashes and I get disconnected. This was a 4 span P/S continuous for live load broken into two, 2 span continuous for live load structures. The attached .bbd file only has the first structure. The schematic behaved fine until I changed the number of spans from 4 to 2.

FROM:jduray DATE:4/13/2005 3:22:42 PM  
May be same as 6138.

FROM:jihnat DATE:9/6/2005 11:06:45 AM  
This problem appears to be fixed in version 5.3.1 (but not in 5.3.0 or earlier versions)  
Virtis no longer crashes. An error message is displayed when you try to open the schematic window. The DeleteSpan function appears to have been fixed to prevent this from happening. This is not exactly the same as 6138, since that problem is still occurring.

4/19/2016 3:02:56 PM

HRS AASHTO

217

Complete Issue Information

To fix this particular bridge:

- 1) In the Structure Def window, change the number of spans back to 4, enter span lengths and click OK.
- 2) Then reopen the Structure Def window, change number of spans to 2 and click OK.

For testing, I've attached a version of the BBD file migrated to 5.3.1

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 3750                                                                                        |
| Subject: Ratings done from the Routing window always done LFD instead of using Mbr Alt default method |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Kennelly, Krisha        | 5/23/2002 12:09:53 PM |
| Modified By: administrator            | 6/19/2008 4:05:30 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:02:56 PM

HRS AASHTO

218

Complete Issue Information

| Name       | Current State | Summary                                                                                      |
|------------|---------------|----------------------------------------------------------------------------------------------|
| 3750.11605 | Resolved      | Ratings done from the Routing window always done LFD instead of using Mbr Alt default method |
| 3751.11604 | Duplicate     | Error with too many distributed loads                                                        |

Description

FROM:kkennelly DATE:5/23/2002 8:32:39 AM

Fixed for 4.2. Ratings done from the Routing window now use the default analysis method on the Member Alternative window.

|                                                |
|------------------------------------------------|
| Issue ID: 3751                                 |
| Subject: Error with too many distributed loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Thompson, Todd          | 5/23/2002 2:04:34 PM |
| Modified By: administrator            | 6/19/2008 4:05:30 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Complete Issue Information

|                  |          |      |                   |
|------------------|----------|------|-------------------|
| Duray, Jim       | New      | High | Bug               |
| Goodrich, Brian  | Assigned |      |                   |
| Duray, Jim       | New      | High | Bug               |
| Kennelly, Krisha | Assigned |      | Bug - BARS Import |
|                  | Resolved |      | Education         |
| Kennelly, Krisha | Resolved | High | Education         |

### Contacts

| Name      | Company      | Email 1                       | Phone 1      |
|-----------|--------------|-------------------------------|--------------|
| Mac Hasan | Colorado DOT | mahmood.hasan@dot.state.co.us | 303-757-9064 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A17ACD.gir          |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3752.11603 | Resolved      | Virtis Rating Results |

### Description

FROM:ttompson DATE:Thursday, May 23, 2002 10:04:34 AM  
Using Virtis 4.1.1 with ASA 7

I keep getting an error for too many distributed loads on a structure. The Load Case is SLAB. Which isn't one that I created. But I can't figure out how to reduce the number of distributed loads. This is only a 6 span structure.

I've attached the bbd for the structure. You can look at Girder 3 - Member G 3. (28035151.bbd)

FROM:ttompson DATE:Thursday, May 23, 2002 11:27:16 AM

I'm getting the same problem now on 69390535.bbd (Girder 1 - Member G 4).

Both of these structures ran okay with the previous version(s) of Virtis but not now. Evidently something has changed in the modeling?

FROM:ttompson DATE:Thursday, May 23, 2002 1:10:43 PM  
added another

4/19/2016 3:02:57 PM

HRS AASHTO

220

Complete Issue Information

FROM:ttthompson DATE:Thursday, May 23, 2002 1:30:50 PM  
addes 2 more

FROM:bgoodrich DATE:Thursday, May 30, 2002 2:24:54 PM  
Duplicate of Incident 3662.

|                                |
|--------------------------------|
| Issue ID: 3752                 |
| Subject: Virtis Rating Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Hasan, Mac              | 5/23/2002 5:35:46 PM |
| Modified By: administrator            | 6/19/2008 4:05:30 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:mhasan DATE:Thursday, May 23, 2002 1:35:46 PM  
 When using Virtis's utility to import BARS files, Virtis uses incorrect dead load (i.e., BARS input composite dead load as non-composite dead load in Virtis) in the analysis and thereby produces erroneous rating results. This problem occurred after completion of a successful importation process for a 1-span Tee-Girder bridge(i.e., cast-in-place concrete slab and girder bridge).

If you would like a copy of the BARS text file, please let me know.



Complete Issue Information

FROM:jduray DATE:5/30/02 9:41:44 AM  
The BARS file is attached.

FROM:kkennelly DATE:6/4/2002 8:07:52 AM  
Card08 for this member has RC in columns 48-50. That is a Reinforced Concrete member. There is no composite stage for such a member type. If Card08 had CRC in columns 48-50 the member would then be Composite Reinforced Concrete and it would have composite loads.

|                                                      |
|------------------------------------------------------|
| Issue ID: 3754                                       |
| Subject: Minimum Negative Flexure Slab Reinforcement |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 5/23/2002 6:42:47 PM |
| Modified By: administrator            | 6/19/2008 4:05:29 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Resolved           |          |             |
|                 | Resubmit           |          |             |

### Complete Issue Information

|             |          |      |           |  |
|-------------|----------|------|-----------|--|
|             | Resolved |      |           |  |
|             | Closed   |      |           |  |
| Martin, Ed  | New      | High | Bug       |  |
| Lee, Herman | Assigned |      |           |  |
|             | Open     |      |           |  |
|             | Resolved |      | Education |  |
| Lee, Herman | Resolved | High | Education |  |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | #000073a.dat        |             |

### Tasks

| Name       | Current State | Summary     |
|------------|---------------|-------------|
| 3762.11593 | Resolved      | bars import |

### Description

FROM:dteal DATE:Thursday, May 23, 2002 2:42:48 PM

For LRDF Spec Check 6.10.3.7, Minimum Negative Flexure Slab Reinforcement the Input Parameter f (slab) appears to be 4 times larger at mid-span than what the minimum service II moment would cause. How is f(slab) calculated? Is this calculation shown someplace in the output?

FROM:bgoodrich DATE:Wednesday, June 05, 2002 6:09:03 PM

Dean - Please update Incident 3754 with a BBD file. Also, indicate exactly which POI you are investigating and any other pertinent information.

FROM:dteal DATE:Thursday, June 06, 2002 10:38:30 AM

The specific concern is the specification check failure of AASHTO 6.10.3.7.

The first POI where this occurs is 105.

When I calculate f(slab) at that POI I get  $f(\text{slab}) < \phi * f_r$ . OPIS says  $f(\text{slab}) > \phi * f_r$  and so I need 1% steel per AASHTO 6.10.3.7. I can't find the f(slab) calculation in the output.

E.

4/19/2016 3:02:57 PM

HRS AASHTO

223

Complete Issue Information

FROM:bgoodrich DATE:Friday, June 07, 2002 12:28:21 PM

I was able to duplicate the failure code reported for LRFD 6.10.3.7. Using the minimum factored Service II moments for stages 2 and 3 and the section moduli corresponding to the sign of the factored moments, I confirmed the slab stresses that BRASS reported. These stress calculations are not printed in the output. BRASS computes the slab stress as  $M2/S2 + M3/S3$ , where M and S are the factored Service II moments and section moduli, respectively, for the subscripted stage number. Note that BRASS includes the modular ratio (3n or n) in the section modulus values. For the 105 POI, the M2 is positive, while M3 is positive for the maximum actions and negative for the minimum actions. If this does not resolve the issue, please attach an illustration of your computations.

FROM:dteal DATE:Wednesday, June 12, 2002 9:53:57 AM

Brian - I got the following reply from our staff engineer that generated the question. Attached is an excel sheet with calcs:

From Shannon:

I am still not able to duplicate the slab stress BRASS calculates for POI 105. OPIS shows  $f(\text{slab}) = 5.056 \text{ MPa}$  on the spec. check failure notification. I don't get anything close to that. I have included an Excel spreadsheet with my calc's in it. I applied the min. actions to the composite section transformed in the positive sense. (Then I applied the min. actions to the composite section transformed in the neg. sense. Then I applied the max. actions to each sense. I couldn't come up with the  $f(\text{slab})$  value BRASS gets. It seems the correct way to do it would be to apply the min. actions to the composite section transformed in the positive sense. I was just doing the other calc's to try to get an answer that matched what OPIS showed.)

Maybe I am missing the boat completely. Maybe he could send his calc's for  $f(\text{slab})$  so I can see what values BRASS uses to get  $f(\text{slab})$ .

Shannon W. Moore, P.E.

FROM:dteal DATE:Wednesday, June 12, 2002 9:56:19 AM

Resubmit 6-12-02

FROM:bgoodrich DATE:Thursday, June 13, 2002 12:32:11 PM

I attached a spreadsheet illustrating the slab stress computations (Incident3754.xls). It is a copy of the originally submitted spreadsheet with a sheet named "BRASS". For clarification, BRASS uses positive properties when the moment for a stage is positive and the negative properties when the moment for a stage is negative. Therefore, the stage 2 moment yields a compressive stress in the slab, while the stage 3 moment yields a tensile stress in the slab. Also, I believe the original spreadsheet is double-accounting for the modular ratio when computing the slab stress. The BRASS section modulus is computed as  $S = n \cdot I/c$ . Then, the slab stress is computed as  $f = M/S = (M \cdot c/I)/n$ . So, the modular ratio is already considered.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:26:58 PM

Track field marked as accepted. Incident closed.

Issue ID: 3762

Subject: bars import

4/19/2016 3:02:58 PM

HRS AASHTO

224

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Shah, Shyam             | 5/28/2002 3:44:01 PM |
| Modified By: administrator            | 6/19/2008 4:05:29 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Suspended |          | Enhancement |
|                 | Discard   |          |             |
| Goodrich, Brian | Discard   | High     | Enhancement |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3763.11592 | Discard       | Appurtenance load distribution methods for noncomposite members. |

## Description

FROM:snshah DATE:Tuesday, May 28, 2002 11:44:01 AM

I can't get the strands for this p/s girder to import correctly. Is there a way to do it.

FROM:hlee DATE:6/13/2002 4:12:19 PM

In the attached BARS Import data file, the value entered in columns 64 - 68 for Card Type 15 is the total area of prestressing steel.

There is not enough information to determine the strand sizes and layout.

4/19/2016 3:02:58 PM

HRS AASHTO

225

Complete Issue Information

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 3763                                                            |
| Subject: Appurtenance load distribution methods for noncomposite members. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Pierce, Ron             | 5/28/2002 5:07:04 PM |
| Modified By: administrator            | 6/19/2008 4:05:29 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:rpierce DATE:Tuesday, May 28, 2002 1:07:04 PM

Currently, with noncomposite members such as T-beams, RF Concrete Box Girders and slab bridges the Barriers are not distributed evenly to all girders as with composite girders. Can this be added to the next release?

FROM:jduray DATE:5/30/02 9:27:38 AM

4/19/2016 3:02:58 PM

HRS AASHTO

226

Complete Issue Information

Brian - please comment on this.

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:58:11 PM  
WYDOT has added this issue to the list of BRASS enhancements.

FROM:bgoodrich DATE:Friday, August 26, 2005 3:32:34 PM  
This issue would be solved if we could assign a distribution method by load case instead of stage.

FROM:hlee DATE:4/30/2008 2:28:55 PM  
Discarded by TAG 12/07.

Issue ID: 3788  
Subject: 4.1.1 - log file missing from output tree

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Barnhill, Gale 6/13/2002 3:22:55 PM  
Modified By: administrator 6/19/2008 4:05:27 PM  
Priority: High  
Category: Bug - GUI 2

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Ihnat, Joseph   | Assigned           |          | Bug - GUI 2 |
|                 | Information Needed |          |             |
|                 | Open               |          |             |

4/19/2016 3:02:58 PM

HRS AASHTO

227

### Complete Issue Information

|            |          |      |           |
|------------|----------|------|-----------|
|            | On Hold  |      |           |
|            | Resolved |      |           |
| Duray, Jim | New      | High | Bug       |
|            | Resolved |      | Education |
|            | Assigned |      |           |
| Duray, Jim | Assigned | High | Education |

### Contacts

| Name   | Company                 | Email 1         | Phone 1      |
|--------|-------------------------|-----------------|--------------|
| han xu | Vollmer Associates, LLP | hxu@vollmer.com | 617-210-0468 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3794.11561 | Assigned      | How to delete the page break in virtis output file |

### Description

FROM:gbarnhill DATE:Thursday, June 13, 2002 11:22:55 AM

I was looking into some of the messages in the LFD analysis log file and stumbled across this.

I did an LFD analysis of a member alt. Selected BRIDGE-OUTPUT from the menu to bring up the window of the output file tree. The LOG FILE was not available on the tree. I checked the folder on my drive and found the file in the proper place with the other LFD output files. I checked another member alt in a different superstructure definition in the same bridge workspace. That log file appeared in the tree. I discovered that by REDUCING the number of characters in the name of the first superstructure definition, the LOG FILE appeared in the tree. I also discovered that by ADDING a dash "-" or decimal "." to the first sup def name, the LOG FILE also appeared.

I've attached the bbd file for release 4.1.1.

(I checked the same database in 4.2.0 beta 1 and get the same results.)

Here's a brief synopsis of which names do and don't work.

2 span plate HPS 5 @ 3000 FIRST SUPR DEF NAME THAT DIDN'T WORK.  
2 span NU1800 5 @ 2900 2ND SUPR DEF NAME THAT DID WORK.  
zyx2 span NU1800 5 @ 2900 2ND SUPR DEF NAME REVISED & DIDN'T WORK.  
z-yx2 span NU1800 5 @ 2900 2ND SUPR DEF NAME REVISED & DID WORK.

FROM:jihnath DATE:6/17/2002 2:56:35 PM

Just the Log file?

4/19/2016 3:02:58 PM

HRS AASHTO

228

Complete Issue Information

Which version of Windows were you running?  
What is the full path name for the directory where Virtis is installed?

FROM:gbarnhill DATE:Monday, June 17, 2002 3:53:45 PM  
Yes, just the LOG file. The DATA file and OUTPUT file are in the tree.  
Windows 2000 Professional 5.00.2195 Service Pack 2  
C:\VirtisOpis41\

FROM:jihnat DATE:6/17/2002 4:17:07 PM  
I haven't been able to reproduce this.  
Have you overridden the default viewer (i.e. Notepad) in the Preferences dialog?

FROM:jihnat DATE:6/18/2002 7:49:11 AM  
Never mind, that wouldn't matter.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3794                                              |
| Subject: How to delete the page break in virtis output file |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: xu, han                 | 6/19/2002 10:10:04 PM |
| Modified By: administrator            | 6/19/2008 4:05:27 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hxu DATE:Wednesday, June 19, 2002 6:10:04 PM

when I try to copy some sections from Virtis "BRASS\_LFD" "Output file" to other files, the page break at

4/19/2016 3:02:58 PM

HRS AASHTO

229



Complete Issue Information

each page are also copied. I am not sure is there any method I can use to copy only the content without page break?  
thanks.

FROM:jihnat DATE:6/20/2002 7:49:43 AM

You can generate the reports without page breaks. Just be sure "Begin each topic on a new page when printed" is not checked. It is checked by default.

FROM:hxu DATE:Thursday, June 20, 2002 9:09:16 AM

Are you talking about the function in "report tool", I tried that, but the format did not change in "BRASS\_LFD" "OUTPUT FILE". the analysis report, I am talking about, is not generated by using "Generate" icon in "report tool" window. The output file I am talking about can be reviewed by "view latest analysis output" (the icon of a glasses). Do you have experience on that? thanks.

Issue ID: 3803  
Subject: Virtis 4.1.1: Zero rating for truck that gave rating in 4.1.0

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Hart, Erich 6/26/2002 6:34:55 PM  
Modified By: administrator 6/19/2008 4:05:27 PM  
Priority: Urgent  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | Urgent   | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |

### Complete Issue Information

|                 |            |        |             |
|-----------------|------------|--------|-------------|
|                 | Patch Test |        |             |
| Goodrich, Brian | Patch Test | Urgent | Bug - BRASS |
| Duray, Jim      | New        | High   | Bug         |
|                 | Resolved   |        | Education   |
| Duray, Jim      | Resolved   | High   | Education   |

### Contacts

| Name   | Company                 | Email 1         | Phone 1      |
|--------|-------------------------|-----------------|--------------|
| han xu | Vollmer Associates, LLP | hxu@vollmer.com | 617-210-0468 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 3805.11550 | Resolved      | Can Virtis run the rating for Prestressed Concrete Slab Bridge? |

### Description

FROM:bgoodrich DATE:Wednesday, June 26, 2002 2:34:55 PM

Entered for Ming (Ken) Teng:

I ran special trucks (attached file - special; trucks.doc) and I got wired results (attached file - special; trucks.doc). One shows a rating value but another one shows ZERO. I know (trial-error) that it may be contraflexure problem. I change my splice location a little bit, and it works for both cases. But I do NOT have this situation for version 4.1.0, and I just updated my Virtis yesterday. Is there something new for contraflexure locations for version 4.1.1?

FROM:bgoodrich DATE:Wednesday, June 26, 2002 2:43:50 PM

I investigated this issue and found that there is a bug in BRASS. The load shedding factor is incorrectly computed for composite sections at or near contraflexure loads for certain live loads. I have forwarded this issue to Dan Glandt to correct.

The work-around for now is to change the POI Control option in the member alternative engine properties to option 5. Then add points of interest to Virtis for the points you wish to rate. But, leave out the Span 1 - 80% point as this is the point at which the BRASS bug occurs.

FROM:bgoodrich DATE:Thursday, June 27, 2002 10:42:23 AM

E-mail from Ken Teng (6/27/02):

Not sure what you meant. If leave out the Span 1 - 80% point, everything will be OK (a non-zero rating factors). Why I need to set "POI Control option in the member alternative engine properties to option 5. Then add points of interest to Virtis for the points you wish to rate"?

But the wired thing is if you copy B2 into B1 and run Span 1 - 82%, which BRASS bug occurs in B2,

4/19/2016 3:02:59 PM

HRS AASHTO

231

## Complete Issue Information

you will find that this bug does not bother B1 at all (no matter what % you input). The only issue it bothers B1 is the rating factor is smaller than B2 which is not allowed (please set the Span 1 - 80% on both B1 and B2, and set/compute B1 Live Load Dist, and then run).

Could you also please investigate this two issues - why the bug does not bother B1, and why rating factors B2>B1?

FROM:bgoodrich DATE:Thursday, June 27, 2002 10:42:57 AM

The reason I suggested adding you own points of interest is because the Span 1 - 80% point is giving an incorrect rating of zero. By adding only those you want to rate, you eliminate the problem point at Span 1 - 80%. Moving the contraflexure location changes the generation of the STEEL-GIRDER-CONTROL command, which is used to indicate the type of bending (positive or negative) at a section. This may be why the rating changed from zero to a non-zero.

Regarding copying B2 to B1, the dead loads and live load distribution factors are different for B1. The Rb (load shedding) factor is dependent on Dc (depth of web in compression), which is in turn dependent on the superposition of stresses from each stage. In short, the 480k overload did not cause any problems in B1, but it did on B2 because of the stresses induced.

Even after I changed the contraflexure location from 82% to 80%, the ratings for B1 were almost identical to (0.670 vs. 0.671).

Dan and I are investigating this issue further. We will let you know when we have more information and when a patch will be available.

FROM:bgoodrich DATE:Thursday, June 27, 2002 11:07:54 AM

E-mail from Ken Teng (6/27/02):

I think you missed one of my questions.

I agree with "Even after I changed the contraflexure location from 82% to 80%, the ratings for B1 were almost identical to (0.670 vs. 0.671).", but the B2 (for 80% and 480k overload) is around 0.74 which is not allowed (AASHTO 3.23.2.3.1.4). Why?

FROM:bgoodrich DATE:Thursday, June 27, 2002 11:08:19 AM

I reviewed your bridge input and found you assigned your parapets to the DC1 load case, which is applied in stage 1 (non-composite). I believe the parapets should be assigned to the DC2 load case (stage 2). If this is done, the critical rating factor for the exterior girder is more than the interior girder, which satisfies AASHTO 3.23.2.3.1.4. Note that I had to change the contraflexure locations to 80% for both B1 and B2 to get a rating.

FROM:bgoodrich DATE:Friday, June 28, 2002 12:38:11 AM

Dan Glandt has corrected the zero rating issue in the development version of BRASS-GIRDER 5.8.6, which will be released sometime after Virtis 4.2.

Issue ID: 3805

Subject: Can Virtis run the rating for Prestressed Concrete Slab Bridge?

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:02:59 PM

HRS AASHTO

232

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: xu, han      | 7/3/2002 7:17:43 PM  |
| Modified By: administrator | 6/19/2008 4:05:26 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          | Education |
| Goodrich, Brian | Resolved | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L-04-022(32C).zip   |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 3807.11548 | Resolved      | Allowable shear too low for plate girder |

### Description

FROM:hxu DATE:Wednesday, July 03, 2002 3:17:43 PM

I know Virtis can do the rating for regular concrete slab bridge. I am not sure if Virtis can do rating for a simple span prestressed concrete slab bridge?

thanks.

FROM:kkennelly DATE:7/8/2002 8:04:27 AM

Try entering your prestressed beam as a box beam with circular voids and enter the number of voids = 0. Also enter the diameter of the void and distance from the center of the void to the bottom of the beam as zero.

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 3807                                    |
| Subject: Allowable shear too low for plate girder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Boucher, Brian          | 7/8/2002 4:58:06 PM  |
| Modified By: administrator            | 6/19/2008 4:05:26 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Monday, July 08, 2002 12:58:07 PM

Entered for Brian Boucher (6/24/2002):

Attached is a Virtis bbd file for a plate girder bridge. Also attached are the shear/web stiffener comps as designed. If you can contact me as to whether BRASS has a bug in this respect or if it works fine.

FROM:bgoodrich DATE:Monday, July 08, 2002 1:03:00 PM

After reviewing the BBD file and BRASS output, I was able to determine that BRASS is using a form of Equation 10-26 to compute the allowable shear. The BRASS allowable is:  $F_v = C * F_y / 3$ . For BRASS to use the full Equation 10-26, the Tension field action flag must be set to account for combined shear and bending. This setting is located on the ASD tab of each Point of Interest window. Currently, the

## Complete Issue Information

BRASS export does not allow schedules and point of interest data to be passed to BRASS at the same time. This is only an export limitation, which we are working to address. Therefore, the only way to get the desired shear rating from BRASS/Virtis is to do the following:

1. Change the POI Control option (member alternative engine properties) to 0, which means no stiffener schedules will be generated, however, the POI you entered manually will be exported.
2. For each POI you have specified in Virtis:
  - A. Enter the necessary stiffener, lateral support, and diaphragm information by overriding the schedules.
  - B. Enter and select the appropriate ASD information.
  - C. Adjust the POI engine properties (particularly the Section Type). When POI Control option 5 was selected, the export generated code 41.

We (the developers) intend to enhance the export to allow both schedules and POI data to be exported to a BRASS data file, so I would continue to enter the various schedules as you have done for this bridge.

The issue of overriding the schedules is addressed in other incidents.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 3811                                                    |
| Subject: Rating allowable stress of continuous support steel beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: xu, han                 | 7/12/2002 5:51:36 PM |
| Modified By: administrator            | 6/19/2008 4:05:26 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:02:59 PM

HRS AASHTO

235

Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
|----------------|------------------|-------------------------------------|--------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 17035.bbd           |             |

Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 3825.11530 | Suspended     | Prestressed Concrete - Point-of-Interest Properties: Miscellaneous (P/S) |

Description

FROM:hxu DATE:Friday, July 12, 2002 1:51:36 PM

I have a question about Virtis 4.1.1. I am rating a 3-span continuously steel girder with non-composite concrete deck bridge using BRASS ASD Engine. Since this is a continuous span bridge. My question is do we need input the INV and OPR rating allowable stresses manually, it means we need use the formula shown in Table 6.6.2.1-1 to calculate the Fb (for case B, compression flange is partially supported or unsupported). I am not sure if Virtis will do that for us, or we need do that. Could you tell me how to deal with this case using Virtis?  
Thanks in advance.

FROM:bgoodrich DATE:Monday, July 22, 2002 11:48:32 AM

If you leave the allowable stress ratios blank for structural steel in Virtis, the BRASS defaults will be used, which are 0.55 and 0.75 for Inventory and Operating, respectively. Therefore, you will need to calculate Fb from the equation, determine the stress ratio (Fb/Fy), and manually input the ratio if it is less than 0.55 (Inventory) or 0.75 (Operating).

FROM:kkennelly DATE:7/22/2002 1:59:32 PM

Can't this Fb value vary along the length of the beam? Shouldn't BRASS be able to compute this Fb?

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 3825                                                                    |
| Subject: Prestressed Concrete - Point-of-Interest Properties: Miscellaneous (P/S) |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Murgoitio, Shanon       | 7/26/2002 4:04:03 PM   |
| Modified By: hlee                     | 10/16/2011 11:04:43 PM |
| Priority: High                        |                        |
| Category: Enhance BRASS               |                        |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          | Bug - BRASS |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 17035.bbd           |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 3826.11529 | Resolved      | Prestressed Concrete - Shear Equation for Vci |

### Description

FROM:smample DATE:Friday, July 26, 2002 12:04:03 PM

I am having problems with the moment capacity based on 90% yield stress in extreme tension row of strands. When I input a value on the "Point-of-Interest Properties: Miscellaneous (P/S)" tab, the PRESTRESS-2 line is not generated in the BRASS file.

Also, when I run the analysis and select on the "Point-of-Interest Properties: Miscellaneous (P/S)" to not override the Moment Capacity (Based on 90% Yield Stress) I always get "N/A" for this condition in the output report. Why doesn't BRASS produce a rating factor for this condition?

FROM:bgoodrich DATE:Tuesday, August 13, 2002 1:17:42 PM

The export currently does not generate both schedule commands and point of interest commands to BRASS. This issue should be addressed in a future release. Incident 3062 is similar to this incident.



## Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3826                                         |
| Subject: Prestressed Concrete - Shear Equation for Vci |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Murgoitio, Shanon       | 7/26/2002 4:44:24 PM |
| Modified By: administrator            | 6/19/2008 4:05:25 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact   | Status   | Priority | Category    |
|-------------------|----------|----------|-------------|
| Duray, Jim        | New      | High     | Bug         |
| Kennelly, Krishna | Assigned |          |             |
| Duray, Jim        |          |          | Enhancement |
|                   | Resolved |          |             |
| Duray, Jim        | Resolved | High     | Enhancement |

## Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

## Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Computed Distribution Factors.doc |             |

## Tasks

| Name       | Current State | Summary                                                                                                         |
|------------|---------------|-----------------------------------------------------------------------------------------------------------------|
| 3830.11525 | Resolved      | Compute distribution factors button-Manual for Cond. Eval. has different width restrictions than Standard Specs |

## Description

FROM:smample DATE:Friday, July 26, 2002 1:10:24 PM

I am having a problem with the shear analysis for a composite prestressed concrete girder. The interior

4/19/2016 3:03:00 PM

HRS AASHTO

238

Complete Issue Information

girder is being controlled by shear due to a very low value of Vci. The correct equation is:  $V_{ci} = 0.6\sqrt{f'_c}b'd + V_{dl} + V_{iMcr}/M_{max}$ . The only way that I can match the Brass output is to use  $V_{ci} = 0.6\sqrt{f'_c}b'd + V_{dl} + V_i$ . Is this an issue that is addressed in Brass version 5.8.6 (see incident #3708)?

FROM: bgoodrich DATE: Tuesday, August 13, 2002 1:21:41 PM

This issue has been addressed in BRASS-GIRDER 5.8.6, which should be released sometime after Virtis 4.2.

|                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 3830                                                                                                           |
| Subject: Compute distribution factors button-Manual for Cond. Eval. has different width restrictions than Standard Specs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Shah, Shyam             | 8/2/2002 1:29:07 PM  |
| Modified By: administrator            | 6/19/2008 4:05:25 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: snshah DATE: Friday, August 02, 2002 9:29:07 AM

Complete Issue Information

In rating some of our ramp structures I have noticed a possible problem with the way Virtis calculates distribution factors for structures rated in girder system. Virtis calculates single lane distribution factors for clear roadway width less than 20' (per current AASHTO design specs.). Existing structures with clear roadway width between 18' and 20' should be loaded with two design lanes (per AASHTO Manual for Condition Evaluation of Bridges 6.7.2.2) therefore the Multi lane distribution factor should be used in the rating. Shouldn't Virtis calculate the multi lane distribution factors for structures with clear roadway width of 18' to 20'? Currently we have to calculate them by hand and go back and put them in manually.

William J. Metcalf  
LADOTD - Bridge Rating Unit

FROM:jduray DATE:8/12/02 9:51:10 AM

FROM:kkennelly DATE:8/12/2002 11:06:08 AM

We will need to add an option to the Live Load Distribution Factors window to compute the dist factors based on either the Standard Specs or the Manual for Condition Evaluation. The Help for this window currently states that Virtis uses the "Standard Specs" for computing dist factors using the Compute button.

Issue ID: 3831  
Subject: Units for Output

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: xu, han 8/4/2002 7:39:08 PM  
Modified By: administrator 6/19/2008 4:05:25 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
|                  | Resolved |      | Education |
| Duray, Jim       | Resolved | High | Education |
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Assigned |      |           |
|                  | Resolved |      | Education |
| Kennelly, Krisha | Resolved | High | Education |

### Contacts

| Name   | Company                 | Email 1         | Phone 1      |
|--------|-------------------------|-----------------|--------------|
| han xu | Vollmer Associates, LLP | hxu@vollmer.com | 617-210-0468 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3834.11521 | Resolved      | Live load distribution factor for shear |

### Description

FROM:hxu DATE:Sunday, August 04, 2002 3:39:08 PM

I have used metric units to create the file. How can I view the Output file in metric units?

FROM:kkennelly DATE:8/6/2002 11:35:57 AM

The BRASS Girder (LFD/ASD) output file is only available in US units.

|                                                  |
|--------------------------------------------------|
| Issue ID: 3834                                   |
| Subject: Live load distribution factor for shear |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: xu, han                 | 8/7/2002 7:08:59 PM  |
| Modified By: administrator            | 6/19/2008 4:05:25 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Bug - BRASS |
| Goodrich, Brian | Assigned    |          |             |
|                 | Resolved    |          |             |
|                 | System Test |          |             |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 332-18-7505EBL.bbd  |             |
|      | BrassFiles.zip      |             |
|      | GIRDER__2_(EBL).out |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 3848.11507 | System Test   | BRASS-GIRDER Problems for Steel |

### Description

FROM:hxu DATE:Wednesday, August 07, 2002 3:09:00 PM

I am having two questions about virtis,

1. I am confused about the live load distribution factor which Virtis used for rating. I input different live load distribution factors for moment, shear and end shear. But after checking the output file, I found Virtis picked the distribution factor for moment for shear rating. Do you know how can we let Virtis use different distribution factors for shear and moment?

4/19/2016 3:03:01 PM

HRS AASHTO

242

Complete Issue Information

2. The bridge I am rating has a very wierd geometry, none of girders are not parallel each other, the two supports have different skews. BTW, it is steel plate girders with composite concrete deck. I guess, the girder-line method is better for this bridge than girder system, how do you think? at the same time, the distribution factor and effective deck width varies through the span. so I am not sure can Virtis handle a case like this, and if it can, what is the best way to do it?  
thank you so much!

FROM:kkennelly DATE:8/12/2002 10:49:14 AM

1. The BRASS LFD program currently only uses one distribution factor for both shear and moment. If you open the Virtis help file for the Live Load Distribution Factor window you will see a link called "Engine Related Help". This link will open the engine related help that tells you what BRASS LFD will do with the data on this window. Each Virtis window help topic has such a link. (Incident 3058 was submitted by a user requesting that the BRASS LFD program be changed to use a shear dist factor instead of using the moment shear factor)

2. You can enter such a bridge into Virtis however, the export to the BRASS LFD program does not handle such a structure. You should enter such a structure as a girder line. Virtis help has a topic titled "Limitations" that lists the limitations in Virtis. This topic also has an Engine Related Help link that lists the limitations of BRASS. That engine related help topic states that splayed girders are not supported.

|                                          |
|------------------------------------------|
| Issue ID: 3848                           |
| Subject: BRASS-GIRDER Problems for Steel |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Hart, Erich             | 8/13/2002 4:38:48 PM |
| Modified By: administrator            | 6/19/2008 4:05:24 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:bgoodrich DATE:Tuesday, August 13, 2002 12:38:49 PM  
E-mail from Ken Teng (8/12/02):

My questions are below:

1. Why 'Lambda' is 12500 instead of 15400 (AASHTO 10.48.4.1)?
2. Why do two Dc be checked with two different values (one is 21.265 - 'Stage III' and another one is 19.54 - 'x-bar computation')?
3. What is 'f\_comp(used for braced sect)'? Could you give me more detailed info about it?

Dan and I reviewed his BRASS output at the user group meeting and Item 1 is definitely a bug. We believe Item 2 has been addressed in the development version of BRASS-GIRDER, but we will check just to make sure.

FROM:bgoodrich DATE:Tuesday, August 13, 2002 12:44:30 PM  
I have forwarded this issue to WYDOT to assign BridgeTech a work order.

FROM:bgoodrich DATE:Thursday, August 29, 2002 11:22:39 AM  
WYDOT assigned this issue to BRASS Problem Log #362.

FROM:bgoodrich DATE:Tuesday, October 22, 2002 4:24:40 PM  
From Dan Glandt:

Attached is the output file for your data set, GIRDER\_\_2\_(EBL).dat ran on the alpha version for the next release. I think this may clarify the output for several of your questions.

Specifically, lambda is 12500 because Dc is greater than D/2. Now there is only one calculation of Dc for a composite girder. F\_comp(used for braced section) is fb.

FROM:bgoodrich DATE:Tuesday, October 22, 2002 4:30:40 PM  
Ken's questions were answered. The next BRASS release will have enhanced output. Fixed for Virtis Version 5.0.

Issue ID: 3849  
Subject: lower rating value for a PS bridge w/ rebars in deck

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Hart, Erich 8/13/2002 4:47:37 PM  
Modified By: administrator 6/19/2008 4:05:24 PM  
Priority: High  
Category: Bug - BRASS

History

4/19/2016 3:03:02 PM

HRS AASHTO

244

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - BRASS |
| Duray, Jim      | New      | High     | Bug         |
|                 | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | WebProblem.bbd      |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3851.11504 | Resolved      | Plate Girder Schematic Problem |

### Description

FROM:bgoodrich DATE:Tuesday, August 13, 2002 12:47:38 PM  
E-mail from Ken Teng (8/12/02):

There shows a lower rating value for a PS bridge w/ rebars in deck for Land Loading. Attached is the bbd file and result file. Please see beam #2.

FROM:bgoodrich DATE:Tuesday, August 13, 2002 12:49:03 PM  
I have forwarded this issue to WYDOT to assign BridgeTech a work order.

FROM:bgoodrich DATE:Thursday, August 29, 2002 11:24:15 AM  
WYDOT assigned this issue to BRASS Problem Log #363.

FROM:bgoodrich DATE:Tuesday, October 15, 2002 11:29:17 AM  
From Dan Glandt:

I have reviewed this problem from Ken Teng. The data set works better on the current beta version, but has produces some "NaN's so there are some issues that need resolved. We may need to add a warning or an error as well. Ken has tried to rate an I beam prestressed girder three span, simple span for dead load, continuous for live load. All the strands are straight.

He ran it without deck rebar and with deck rebar. The data set without rebar in not realistic as then it is

4/19/2016 3:03:02 PM

HRS AASHTO

245



Complete Issue Information

just 3 simple spans. It should have rated 0 for neg moment. In 5.8.5, it prints a warning that there is no tension steel and that the rating for negative moment will govern. However, the 0.0 rating didn't carry through to the summary for some reason. In 5.8.6 it does and gives a zero rating which is correct. I'm thinking that if it is continuous for live load, we should probably output an error and stop if there is no deck rebar.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:03:45 PM  
Dan Glandt has addressed this issue. A conditional statement that outputs an error message when inputting deck reinforcement was corrected. Fixed for Version 5.0.

|                                         |
|-----------------------------------------|
| Issue ID: 3851                          |
| Subject: Plate Girder Schematic Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Koenig, David           | 8/15/2002 5:32:11 PM |
| Modified By: administrator            | 6/19/2008 4:05:24 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Thursday, August 15, 2002 1:32:11 PM  
We have found a peculiar thing going on with the plate girder schematic. We have a four span bridge that has hinges in the outer spans near the intermediate piers. The outer spans are 27" girders and the inner spans are 44" girders. When we put in the web, it gives us a message about the tolerance between the web dimensions being to great. I believe that this happens because the program wasn't modeled for the situation of having abrupt web depth changes instead of linear or parabolic changes. Whenever we view the schematic for G2 in the attached file, it draws a straight line from the first web range end point to the beginning of the third web range. This only happens at the beginning of the

Complete Issue Information

bridge. On the other end of the bridge this is not happening (note that the bridge is symmetrical). If we go in and insert a section with small length (ie. .0001), this problem with the schematic goes away (see G3). There appears to be some type of bug in the schematic in relation to how it interprets the data on G2 since it is not consistent on both ends of the girder. Also, the program needs to allow for the situation where you can have abrupt changes in web depth.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3852                                    |
| Subject: Longitudinal Stiffener Schematic Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Koenig, David           | 8/15/2002 5:44:38 PM |
| Modified By: administrator            | 6/19/2008 4:05:24 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | On Hold  |          | Bug - GUI 2 |
|                 | Resolved |          |             |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

Contacts

4/19/2016 3:03:02 PM

HRS AASHTO

247

### Complete Issue Information

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | DiaphragmWizardExample.gif     |             |
|      | Jasper A1983 plans.pdf         |             |
|      | DiaphragmWizardEnhancement.xls |             |

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 3853.11502 | Suspended     | Diaphragm Wizard Enhancement - input multiple groups of equal spacing |

### Description

FROM:dkoenig DATE:Thursday, August 15, 2002 1:44:38 PM

The attached file contains a three span plate girder bridge with longitudinal stiffeners over the intermediate piers. The schematic displays the stiffeners properly for the first intermediate pier. For the second intermediate pier, the schematic is only picking up half of the stiffener. Please see G2 in the attached file.

Issue ID: 3853

Subject: Diaphragm Wizard Enhancement - input multiple groups of equal spacing

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Koenig, David

8/15/2002 5:48:07 PM

Modified By: akemna

4/26/2011 6:32:39 PM

Priority: High

4/19/2016 3:03:02 PM

HRS AASHTO

248

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 3854.11501 | Suspended     | Transverse Stiffener Wizard - input multiple groups of equal spacing |

## Description

FROM:dkoenig DATE:Thursday, August 15, 2002 1:48:07 PM

The current diaphragm wizard is basically worthless if you don't have the same spacing within a span. We would like to see the diaphragm wizard enhanced to allow the user the option of inputting multiple groups of equal spacing along a girder. For example, we would like to be able to input 5 spaces at 20', 4 spaces at 15', 5 spaces at 18', etc. and have the program apply the spacing and determine the proper locations. Having this would mean that the wizard would apply to most situations encountered versus only working for occasional situations. Most of our continuous steel bridges will not have the same diaphragm spacing throughout a given span. This makes the wizard unusable for us.

FROM:dkoenig DATE:Thursday, August 30, 2007 3:53:23 PM

I have attached the files I presented at the 2007 Users Group Meeting

FROM: Herman Lee DATE: 10/13/2009 1:15:53 PM Eastern Daylight Time  
Resolved in 6.1 Release.

Complete Issue Information

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 3854                                                                |
| Subject: Transverse Stiffener Wizard - input multiple groups of equal spacing |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Koenig, David           | 8/15/2002 6:33:58 PM |
| Modified By: administrator            | 6/19/2008 4:05:24 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Thursday, August 15, 2002 2:33:59 PM

We would like to see a wizard developed for input of transverse stiffeners on plate girders. We would like to see it have the same functionality as the diaphragm wizard with the changes we have proposed in the previous incident. Example: be able to input multiple groups of stiffeners along the length of a girder.

## Complete Issue Information

Issue ID: 3855  
Subject: Stirrup Wizard

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Koenig, David 8/15/2002 6:36:13 PM  
Modified By: akemna 4/26/2011 6:33:46 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

4/19/2016 3:03:03 PM

HRS AASHTO

251

Complete Issue Information

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | DiaphragmWizardExample.gif        |             |
|      | Zero value for operating only.doc |             |
|      | I-90-44-043-2.bbd                 |             |
|      | Zero value for operating only.doc |             |
|      | I-90-44-043-2.bbd                 |             |

Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3856.11499 | System Test   | Operating rating is zero, but the Inv. is non-zero. |

Description

FROM:dkoenig DATE:Thursday, August 15, 2002 2:36:13 PM

We would like to see a wizard developed to input stirrups on prestressed concrete and reinforced concrete bridges. The wizard should allow for the input of multiple groups of stirrups at constant spacing along the length of a girder. This would have the same functionality as the transverse stiffener wizard mentioned in the previous incident. Having a wizard would make the input of stirrups go a lot quicker. At the present time, this is probably the most tedious and difficult part of a structure to enter.

FROM:dkoenig DATE:Thursday, August 30, 2007 3:45:19 PM

I have attached the files that I presentated at the 2007 Users Group Meeting.

FROM:dkoenig DATE:Thursday, August 30, 2007 3:58:13 PM

Ignore the first three files. I put them on the wrong incident.

FROM: Herman Lee DATE: 10/13/2009 1:15:29 PM Eastern Daylight Time

Resolved in 6.1 Release.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3856                                               |
| Subject: Operating rating is zero, but the Inv. is non-zero. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Hart, Erich             | 8/15/2002 6:52:04 PM |
| Modified By: administrator            | 6/19/2008 4:05:24 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

4/19/2016 3:03:03 PM

HRS AASHTO

252

### Complete Issue Information

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | Urgent   | Bug         |
| Duray, Jim       | New      | High     | Bug         |
|                  | Assigned |          | Enhancement |
| Kennelly, Krisha | Discard  |          |             |
| Kennelly, Krisha | Discard  | High     | Enhancement |

### Contacts

| Name              | Company                    | Email 1                       | Phone 1      |
|-------------------|----------------------------|-------------------------------|--------------|
| Terry Leatherwood | TN Dept. of Transportation | tleatherwood@mail.state.tn.us | 615-741-0806 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3870.11485 | Discard       | XML Update for Permit Vehicle Analysis |

### Description

FROM:mteng DATE:Thursday, August 15, 2002 2:52:04 PM

My question is that one of my Operating rating results is zero (the Inv. is not zero). Could you explain this for me? Please see attached files. Thank you so much!

I email to Krisha, and below is the answer I got:

"I created a point of interest at the 10% point of span 1 to determine why you are getting a zero operating rating. The BRASS output shows a negative moment capacity at that point for the H20 vehicle in Load Level 3. That appears to be an error to me. Please enter your problem as an incident on the Support Center website so Wyoming DOT is notified of the problem."

FROM:mteng DATE:Thursday, August 15, 2002 2:55:49 PM

FROM:bgoodrich DATE:Friday, August 16, 2002 11:28:11 AM

I have forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Thursday, August 29, 2002 10:50:30 AM

WYDOT assigned this issue to BRASS Problem Log #365.

4/19/2016 3:03:03 PM

HRS AASHTO

253



Complete Issue Information

FROM:bgoodrich DATE:Tuesday, October 22, 2002 4:34:25 PM  
This issue has been addressed for the Virtis Version 5.0.

FROM:dteal DATE:Tuesday, November 02, 2004 12:21:37 PM  
I tested this in 5.1.1 and it appears to be fixed

|                                                 |
|-------------------------------------------------|
| Issue ID: 3870                                  |
| Subject: XML Update for Permit Vehicle Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Leatherwood, Terry      | 8/17/2002 6:59:48 PM |
| Modified By: administrator            | 6/19/2008 4:05:23 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tleatherwood DATE:Saturday, August 17, 2002 2:59:48 PM

Permit vehicle analysis is an important function of the Virtis System. Many States have documented sharply increased demand for overweight permits. Many of these vehicles are heavy enough to require a detailed analysis with a bridge rating program such as Virtis.

However, each State has a different set of rules and laws which govern the permit process. This makes it almost impossible for a single system to meet the needs of all the States. As a result, solutions from Bentley, CW Beilfuss, Cambridge Systematics, etc. plus various custom systems are used.

Virtis needs the ability to work with all these different systems. It needs the ability to receive truck configuration and routing information from an external system. Once the bridge analysis is complete, it needs to be able to pass the results back to the external system. As the Minnesota enhancement

## Complete Issue Information

shows, XML provides one method to accomplish this data sharing.

To be truly useful, the XML data feature must remain current with the analysis functions built into Virtis. As these functions are enhanced, the XML import/export tool needs to be enhanced as well.

For example, Virtis 5.0 will introduce the ability to handle multiple distribution factors and impact level. This will allow Virtis to analyse a permit request under several restriction levels.

The XML import/export feature needs to also be enhanced to support this feature. It should allow the multi-level analysis and allow multiple restriction levels to be exported to an external permit system. Other proposed enhancements also could be effected. For example, it has been proposed that Virtis might calculate custom distribution factors based upon the truck axle gage. If this enhancement is implemented, the XML feature should also be updated to support it.

Basically, I am proposing an enhancement to Virtis that continually seeks to keep the XML feature updated and consistent with any new Virtis function that could support the permit vehicle analysis process.

Note that I first suggested this enhancement at the 2002 Virtis/Opis/Brass User Group meeting. I was asked to formally submit the suggestion as a Virtis incident.

FROM:jduray DATE:8/25/2003 3:30:48 PM

Based on discussion with Ed Lutgen of MnDOT we are going to hold on this request until MnDOT has had an opportunity to review the permit restrictions enhancements in 5.0.1 and reassess their needs. Ed thought eventually we should just return all of the ratings so as to allow the calling program decide how to issue the permit.

FROM:kkennelly DATE:8/25/2003 3:56:04 PM

FROM:hlee DATE:4/30/2008 2:30:06 PM

Discarded by TAG 12/07.

|                                                   |
|---------------------------------------------------|
| Issue ID: 3872                                    |
| Subject: Checking compact and non-compact section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Duray, Jim              | 8/21/2002 3:15:06 PM |
| Modified By: administrator            | 6/19/2008 4:05:23 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Bug - BRASS |

4/19/2016 3:03:04 PM

HRS AASHTO

255

Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
|                    | Resolved |      |             |
| Duray, Jim         | New      | High | Unknown     |
| Kennelly, Krisha   | Assigned |      | Bug - GUI 2 |
| Ordoobadi, Mehrdad |          |      |             |
|                    | Resolved |      |             |
| Ordoobadi, Mehrdad | Resolved | High | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2Vehicles.bmp       |             |
|      | 1Vehicle.bmp        |             |

Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 3880.11475 | Resolved      | Extra live load type in Live Load Actions report. |

Description

FROM:jduray DATE:8/21/02 11:15:22 AM

Email from Jagjit Khanuja:

In checking compact and non-compact section, AASHTO 10.48.1.1a and 10.48.2.1a ( 1996 ed ) the "b" used must be equal  $(bf-tw) = 2b'$  where, bf= flange width and tw = thickness of the web.

FROM:bgoodrich DATE:Thursday, August 29, 2002 11:16:01 AM  
I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Tuesday, October 22, 2002 4:55:57 PM  
This issue was assigned to BRASS Problem Log 371.

From Dan Glandt:  
The specification had changed and BRASS-GIRDER was correct. This was verified by a WYDOT engineer.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 3880                                             |
| Subject: Extra live load type in Live Load Actions report. |

### Complete Issue Information

|                  |                               |                      |  |
|------------------|-------------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Virtis |                      |  |
| Primary Contact: | Ordoobadi, Mehrdad            |                      |  |
| Submitted By:    | Lee, Herman                   | 9/11/2002 1:03:35 PM |  |
| Modified By:     | administrator                 | 6/19/2008 4:05:22 PM |  |
| Priority:        | High                          |                      |  |
| Category:        | Bug - GUI 2                   |                      |  |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
| Goodrich, Brian | Suspended |          | Enhance BRASS |
|                 | Discard   |          |               |
| Goodrich, Brian | Discard   | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3884.11471 | Discard       | Increase number of ranges in BRASS stirrup command |

### Description

FROM:hlee DATE:9/11/2002 8:39:15 AM

When using only Type 3S2 in rating, Live Load Actions report for Type 3S2 has only Axle type. (See attached 1Vehicle.bmp)

When using both Type3S2 and HS 20-44 in rating, Live Load Actions report for Type 3S2 has both Axle and Lane type. (See attached 2Vehicles.bmp)

FROM:kkennelly DATE:2/21/2003 3:15:46 PM

This combo box gets updated when the user changes the Live Load selection. Line 4676 in UiMemberResultsReportVw.cpp gets the Vehicle Type (lane or axle) from the results object for this vehicle and stage id. For some reason the results object has both Lane and Axle for the Type3S2 vehicle when the analysis also included an HS20 vehicle. The gui can't filter out the Lane type for this vehicle, I think it has to come from the results object.

4/19/2016 3:03:04 PM

HRS AASHTO

257

Complete Issue Information

FROM:mordoobadi DATE:3/12/2003 4:26:48 PM  
The problem was in the results domain object.  
Fixed for 5.0 Acceptance Build.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3884                                              |
| Subject: Increase number of ranges in BRASS stirrup command |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 9/25/2002 4:24:29 PM |
| Modified By: administrator            | 6/19/2008 4:05:22 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Wednesday, September 25, 2002 12:24:29 PM  
For Jeff Ruby:

A designer has brought it to my attention that BRASS limits the number of ranges in the stirrup schedule command to 50. The designer was trying to enter 66 ranges. Can this limit be increased to lets say 100?

Complete Issue Information

FROM:dteal DATE:Wednesday, September 25, 2002 12:26:29 PM  
The max allowable 50 ranges are per span.

FROM:bgoodrich DATE:Monday, November 11, 2002 10:24:27 AM  
This issue has been forwarded to WYDOT and placed on the BRASS enhancement list.

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:41:59 PM  
This same issue was also submitted in Incident 3884.

FROM:hlee DATE:4/30/2008 2:30:17 PM  
Discarded by TAG 12/07.

|                                           |
|-------------------------------------------|
| Issue ID: 3892                            |
| Subject: Horizontal Shear Schematic Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Teal, Dean              | 10/1/2002 6:57:21 PM |
| Modified By: administrator            | 6/19/2008 4:05:22 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Ihnat, Joseph   | Assigned |          | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |

### Complete Issue Information

|               |        |      |             |
|---------------|--------|------|-------------|
| Ihnat, Joseph | Closed | High | Bug - GUI 2 |
|---------------|--------|------|-------------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | R0104.bbd           |             |

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 3893.11462 | Closed        | Zero Ratings |

### Description

FROM:dteal DATE:Tuesday, October 01, 2002 2:57:21 PM  
For Ahmad Bahari

PS Beam Schematic, Horizontal Sear bars not being displayed properly.

In the attached .bbd file you will see that both the vertical and horizontal shear bars have identical spacing according to the PS-Shear Reinforcement Ranges windows. But when I view the schematic the horizontal shear bars are not displayed properly. Especially note that the ends of each span are correct, the beginning of all spans except span 1 are incorrect. They show a bar at the beginning of the span instead of 3 inches in like the vertical shear shows.

FROM:jduray DATE:Wednesday, October 02, 2002 5:55:50 AM

FROM:jihnath DATE:8/12/2005 4:00:50 PM  
For future testing, a version 5.3.1 BBD file is attached.  
Fixed for 5.4.0

FROM:dteal DATE:Tuesday, December 06, 2005 2:24:18 PM

FROM:jihnath DATE:12/8/2005 7:16:09 AM  
Track field Accepted.

|                       |
|-----------------------|
| Issue ID: 3893        |
| Subject: Zero Ratings |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

4/19/2016 3:03:05 PM

HRS AASHTO

260

Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Koenig, David      | 10/1/2002 9:25:54 PM |
| Modified By: administrator       | 6/19/2008 4:05:21 PM |
| Priority: High                   |                      |
| Category: Bug - BRASS            |                      |

History

| Primary Contact       | Status    | Priority | Category    |
|-----------------------|-----------|----------|-------------|
| Generated, task force | Assigned  | High     | New Feature |
|                       | Suspended |          | Enhancement |
| Generated, task force | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3906.11449 | Suspended     | Bearing Stiffeners for Floorbeams |

Description

FROM:dkoenig DATE:Tuesday, October 01, 2002 5:25:54 PM

This is probably the same problem as the other incidents of this nature, but I thought I would submit it just incase it wasn't. On the attached bridge, I am getting zero ratings for inventory and operating at multiple points along the structure. I reviewed point 1.2 and noticed that it is coming up with a negative rating factor. My guess is that the summary is taking a negative rating factor and coding it as zero. At the 1.2, there shouldn't even be a negative rating factor or negative moment.

FROM:jduray DATE:Wednesday, October 02, 2002 5:54:06 AM

FROM:bgoodrich DATE:Tuesday, October 22, 2002 5:16:52 PM

Dan Glandt addressed issues related to negative rating factors in BRASS-GIRDER 5.8.6. Fixed for Virtis Version 5.0.



Complete Issue Information

FROM:bgoodrich DATE:Thursday, December 04, 2003 1:22:20 PM  
E-mail from David Koenig (12/4/03):

We have looked at the point of interest calculations for this structure. While looking at the point of interest calculations, we noticed that the stage 1 dead load stress was 37000+ psi which was above the yield of the girder. Because it was stage 1 loadings, we went back and looked at the girder properties for the wide flange girder. We found that the moment of inertia was incorrect for the girder at this cross section. The moment of inertia was 110 in^4 which was off by a factor of 10. My assumption all along was that we had copied the girders from the library. After finding this mistake, it appears that this girder was actually input by the user. I apologize for not having found this earlier. After making this correction, we are now able to get decent results on this structure. Go ahead and mark this incident as resolved. Thanks for your efforts on this matter.

FROM:bgoodrich DATE:Thursday, December 04, 2003 1:23:18 PM  
Closed.

|                                            |
|--------------------------------------------|
| Issue ID: 3906                             |
| Subject: Bearing Stiffeners for Floorbeams |

|                                        |                       |
|----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis  |                       |
| Primary Contact: Generated, task force |                       |
| Submitted By: Kennelly, Krisha         | 10/17/2002 3:49:46 PM |
| Modified By: administrator             | 6/19/2008 4:05:21 PM  |
| Priority: High                         |                       |
| Category: Enhancement                  |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:10/17/2002 11:28:07 AM

4/19/2016 3:03:05 PM

HRS AASHTO

262

## Complete Issue Information

The mockups do not currently contain a window for users to enter bearing stiffeners for floorbeams.

Bearing stiffeners for floorbeams could exist for the following conditions:

Floorbeam in a Girder-Floorbeam-Stringer or Girder-Floorbeam structure definition: Intermediate supports of floorbeam could have bearing stiffeners.

Floorbeam in a Floorbeam-Stringer structure definition: Any of the floorbeam supports could have a bearing stiffener. (This type of fb does not have intermediate supports.)

Changes required to add bearing stiffeners to floorbeams:

1. Floorbeam Definition window (GFS & GF structure type): Add a checkbox to indicate intermediate supports exist. Then the BWS tree could be built including the Bearing Stiffeners if intermediate supports exist.
2. Add bearing stiffener window. Window will use different domain objects depending on the type of structure it belongs to (GFS,GF structures will use intermediate supports and FS will use all supports).
3. Add db, dm, de and do for tables to store the bearing stiffeners. (not sure if we can use the bearing stiffeners we have now or if we need new tables since they will be referencing the intermediate supports)
4. Export and help

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 3907                                                              |
| Subject: Elastic supports for Floor System Floorbeam Mbrs and Stringer Mbrs |

|                                        |                       |
|----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis  |                       |
| Primary Contact: Generated, task force |                       |
| Submitted By: Kennelly, Krisha         | 10/17/2002 4:16:38 PM |
| Modified By: administrator             | 6/19/2008 4:05:21 PM  |
| Priority: High                         |                       |
| Category: Enhancement                  |                       |

## History

| Primary Contact       | Status   | Priority | Category    |
|-----------------------|----------|----------|-------------|
| Generated, task force | Assigned | High     | New Feature |

4/19/2016 3:03:06 PM

HRS AASHTO

263

### Complete Issue Information

|                    |           |      |             |     |
|--------------------|-----------|------|-------------|-----|
|                    | Suspended |      |             |     |
| Duray, Jim         | New       | High | Enhancement | Bug |
| Ordoobadi, Mehrdad | Assigned  |      | Education   |     |
|                    | Resolved  |      |             |     |
|                    | Suspended |      | Enhancement |     |
|                    | Duplicate |      |             |     |
|                    | Resolved  |      |             |     |
| Lee, Herman        |           |      |             |     |
|                    | Accepted  |      |             |     |
|                    | Resolved  |      |             |     |
|                    | Closed    |      |             |     |
| Lee, Herman        | Closed    | High | Enhancement |     |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3908.11447 | Closed        | Search by NBI Structure ID |

### Description

FROM:kkennelly DATE:10/17/2002 11:52:27 AM

For Floor System Floorbeam and Stringer Definitions, the user interface does not provide a way for users to specify elastic support conditions. Floor Line does allow entry of elastic support conditions for Stringers but not for Floorbeams.

The following is required to provide a way for users to enter elastic supports:

1. Add db,dm,de, and do for elastic supports to the BmDefIntermediateSupport and BmDefSupport objects.
2. Revise the Intermediate Support and Support windows to display the elastic support conditions.

Complete Issue Information

3. Export and help.

FROM:kkennelly DATE:10/17/2002 1:56:03 PM

FROM:hlee DATE:4/30/2008 2:30:23 PM  
Discarded by TAG 12/07.

|                                     |
|-------------------------------------|
| Issue ID: 3908                      |
| Subject: Search by NBI Structure ID |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Teal, Dean              | 10/17/2002 6:41:04 PM |
| Modified By: administrator            | 6/19/2008 4:38:35 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Thursday, October 17, 2002 2:41:04 PM

Is there a way to search my database for a specific NBI Structure ID or did I miss something?

The NBI number as you know is unique to each bridge. I have a bridge someplace in our database that has the wrong NBI number. It just so happens that we need to enter a new structure but the NBI number for this structure is already in use. How do I go about finding it?

FROM:jduray DATE:10/17/02 5:09:26 PM

Mehrdad - I think you are going to have to explain how to find it at the database level. I don't see anyway in Virtis to do it.

4/19/2016 3:03:06 PM

HRS AASHTO

265

Complete Issue Information

FROM:mordoobadi DATE:10/21/2002 4:00:20 PM  
Dean you can query the database to find your bridge:

```
SELECT * FROM abw_v_sql_bridge_group WHERE struct_num = 'Example7';
```

if you get any results from this SQL statement, the value listed as bridge\_id is the BID (virtis/opis bridge identification number) shown in the bridge explorer.

Once you find the BID of the bridge:

- (1) Open Virtis/Opis application and
- (2) Find and Open the bridge with the matching BID.
- (3) Go to bridge description window
- (4)
  - A) If the bridge is linked to Pontis:
    - A-1) Select BridgeWare Association button and reassign the bridge to be linked to another Pontis Bridge.
  - B) If the bridge is not linked to Pontis:
    - B-1) change the value for NBI Structure ID in the bridge description window.

FROM:dteal DATE:Tuesday, October 22, 2002 8:54:15 AM

This would mean that the only way to search on an NBI number is to get our computer services group, Oracle Database Administrator, involved? This is something that should be available within Virtis or at least by somebody with virtis administrator privileges?

FROM:mordoobadi DATE:11/5/2002 1:15:26 PM  
Yes there is no EASY way to do this in GUI yet.

FROM:dteal DATE:Monday, November 25, 2002 9:13:11 AM  
Are there plans to make this easier?

FROM:dteal DATE:Wednesday, January 15, 2003 8:10:54 AM  
Can we mark this as an enhancement request - Thanks, Dean

FROM:dteal DATE:Thursday, March 06, 2003 12:23:11 PM  
We had to search for an NBI number again - a user input the wrong number

FROM:dteal DATE:Wednesday, September 03, 2003 10:30:18 AM  
And it happened again - the NBI number is cumbersome. Input errors happen. We need this enhancement.

FROM:dteal DATE:Wednesday, October 27, 2004 7:58:48 AM  
Had to search for one again - the HARD way!

FROM:jihnat DATE:12/22/2005 1:50:18 PM  
Search by NBI Structure ID is implemented on the Find Bridge - Attribute Text window, for version 5.4.0 (Beta 4)

4/19/2016 3:03:06 PM

HRS AASHTO

266

Complete Issue Information

FROM:xli DATE:3/23/2006 1:30:41 PM  
Tested with 5.4 Beta 7. Resolved.

FROM:dteal DATE:Tuesday, March 28, 2006 3:32:13 PM  
In 5.4 Beta 7  
This did not get included in the help item for Identity (NBI Structure ID)  
Be sure to include - the text to be searched in this field is case sensitive.

FROM:hlee DATE:4/12/2006 8:59:00 AM  
Updated Virtis/Opis Help for Beta 8. I tested the serach, the field is not case sensitive.

FROM:hlee DATE:4/12/2006 2:59:42 PM  
Updated Virtis/Opis Help for Beta 8.  
Added the following to Attribute Text help:  
"For Sybase Adaptive Server Anywhere and MSDE/Microsoft SQL Server databases, the attribute texts you entered to filter the list of bridges are case insensitive. For Oracle database, the attribute texts you entered to filter the list of bridges are case sensitive."

FROM:dteal DATE:Monday, April 17, 2006 11:19:07 AM  
Neither the help for the data entry nor the search for the NBI state that they are case sensitive - should the user be informed?

FROM:mordoobadi DATE:4/20/2006 8:53:01 AM  
Herman, please investigate this.

FROM:jihnmat DATE:4/21/2006 8:13:56 AM  
The mention of case sensitivity is at the top of the Find help page, not under NBI.

FROM:dteal DATE:Saturday, April 22, 2006 6:38:42 AM  
Thanks  
Accepted 5.4 beta 8

FROM:jihnmat DATE:4/24/2006 7:11:59 AM

FROM:hlee DATE:7/10/2006 3:18:25 PM  
Changed Status to Resolved.

FROM:dteal DATE:Monday, February 26, 2007 11:45:46 AM  
Marked as Accepted back in Sept of '06

|                                |
|--------------------------------|
| Issue ID: 3955                 |
| Subject: Recent Rating Results |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ordoobadi, Mehrdad   |                        |
| Submitted By: Teal, Dean              | 10/25/2002 12:54:00 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:18 PM |
| Priority: Urgent           |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Bug         |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Resolved           |          |             |
|                 | Resubmit           |          |             |
|                 | Information Needed |          |             |
|                 | Closed             |          |             |
| Goodrich, Brian | Closed             | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MLL.zip             |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 3962.11393 | Closed        | Compact or Non- Compact |

### Description

FROM:dteal DATE:Friday, October 25, 2002 8:54:00 AM

I have a structure that was created on Oct. 16, 2002 , and rated. When I look at Recent Rating Results from the toolbar menu it indicates that the last rating was on Sept 29, 1999 at 8:39 with me as being the rater, I wasn't.

I checked a good sampling in our database and found this date of Sept 29, 1999 at 8:39 with me as the rater to be on every bridge I checked, including the sample bridges provided?

FROM:dteal DATE:Friday, October 25, 2002 8:54:35 AM

The bad thing is - any current rating history dates are gone!

4/19/2016 3:03:06 PM

HRS AASHTO

268

Complete Issue Information

FROM:mordoobadi DATE:11/5/2002 10:22:40 AM

This option shows the latest rating results regardless of selected bridges in the grid. If you have rating results in memory they will be displayed, if not the saved rating results in the database will be displayed.

This means that last time you saved rating results (and did not delete them) on your database was Sept 29, 1999 at 8:39.

FROM:mordoobadi DATE:11/5/2002 10:30:54 AM

Krishna, maybe we need to describe in the help different ways the bridge rating results window is opened and what is displayed for each option.

I noticed there is no help for the checkbox "Show the most recent results only".

FROM:dteal DATE:Tuesday, November 05, 2002 2:28:14 PM

The database is giving rating results for bridges that where NEVER rated?? It has also overwritten current rating results with this date. If I ran a rating on a bridge today, it will give me a rating results history from 1999 for that bridge?? It didn't exist in 1999??

FROM:jduray DATE:11/8/02 11:58:06 AM

Mehrdad - please check into this immediately.

FROM:mordoobadi DATE:11/15/2002 9:39:14 AM

Dean could you please send me your database?

FROM:dteal DATE:Friday, November 15, 2002 12:06:11 PM

Database is attached

FROM:dteal DATE:Friday, November 15, 2002 2:38:55 PM

I couldn't attach the 5 meg zip file so I sent it by email to mordoobadi@mbakercorp.com

FROM:mordoobadi DATE:11/18/2002 2:55:11 PM

This is related to incident 3572. As indicted in the incident 3572 if there are bridges that have names with lengths greater than 24 characters the "Rating Results", "Recent Rating Results" Do Not work properly.

I imported Dean's database into an Oracle database and made all bridge names shorter than 25 characters. The recent rating results now returns this:

|                     |                         |       |       |     |     |   |   |                       |
|---------------------|-------------------------|-------|-------|-----|-----|---|---|-----------------------|
| 061-098<br>15:44:49 | 3 K HS 20-44<br>Bridge6 | 0.916 | 1.352 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |
| 061-098<br>15:44:49 | 1 K H 20-44<br>Bridge6  | 0.959 | 1.595 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |
| 061-098<br>15:44:49 | 7 Type T170<br>Bridge6  | 0.386 | 0.636 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |
| 061-098<br>15:44:49 | 6 Type T130<br>Bridge6  | 0.432 | 0.738 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |
| 061-098<br>15:44:49 | 5 K Type 3-3<br>Bridge6 | 0.648 | 1.160 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |
| 061-098             | 4 K Type 3S2            | 0.626 | 1.123 | LFD | LFD | 0 | 1 | Friday, July 19, 2002 |

4/19/2016 3:03:06 PM

HRS AASHTO

269



Complete Issue Information

15:44:49 Bridge6  
061-098 2 K Type 3 1.329 1.887 LFD LFD 0 1 Friday, July 19, 2002  
15:44:49 Bridge6

which seems right.

You have two options:

(1) Wait until you move to version 4.2.0

(2) Make bridge names in the database shorter by executing the following command in SQL\*Plus:

```
UPDATE abw_overflow SET STRUCNAME = SUBSTR(STRUCNAME,1, 24) ;
```

After doing this there is still an issue with bridges that have Single Quote character ' in their BRIDGE\_ID. When you open "Manage Analysis Events" window for such bridges no results would show up in the window although there are results stored in the database. This issue is not addressed in version 4.2 yet. If you want to fix it you can replace all occurrences of single quote in BRIDGE\_ID with another character by executing a SQL script like this:

```
UPDATE abw_overflow SET BRIDGE_ID = REPLACE(BRIDGE_ID, "'", '_');
```

The above command replaces the single quotes with underscore "\_" characters.

FROM:mordoobadi DATE:11/18/2002 4:32:32 PM

FROM:dteal DATE:Tuesday, November 19, 2002 10:01:49 AM

If I read this right, when migrating to version 4.2 this problem will go away. Is that correct?

We are very close to moving to 4.2 - it's been an internal (KDOT) thing with our computer services that has held us up.

FROM:jduray DATE:11/19/02 12:48:54 PM

Yes, except for the single quotes in the bridge id which is causing a problem with viewing events in the "Manage Analysis Events" window.

Email from Dean:

The best solution for all is to live with it for now. I have already fixed the one bridge with the single quotes. So it appears that migrating to 4.2 will solve the rest of our problems.

-----end of Dean's email-----

FROM:mordoobadi DATE:11/19/2002 3:09:57 PM

The problem with single quotes in BRIDGE\_ID is resolved in version 5.0. (Alpha 3)

Issue ID: 3962  
Subject: Compact or Non- Compact

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 10/31/2002 12:55:37 PM  
Modified By: administrator 6/19/2008 4:05:18 PM

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | composite.zip       |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 3965.11390 | Closed        | Composite/non-Composite Coded Wrong |

### Description

FROM:dteal DATE:Thursday, October 31, 2002 8:55:37 AM  
For Michell LaRoche, P.E.

With the attached .bbd, member 2, member Alt 1600 mm web, Stage III, LL 1.

In the BRASS output Line 4913 the member is listed as "COMPACT" and on Line 5974 the same member is listed as "NON-COMPACT". I don't think we can have it both ways?? The BRASS output has been included with the .bbd file.

FROM:bgoodrich DATE:Friday, November 01, 2002 10:32:45 AM  
I reviewed the output and noted the following. The section is compact for positive flexure and non-compact for negative flexure.

Complete Issue Information

FROM:dteal DATE:Friday, November 01, 2002 3:09:44 PM

In the BRASS Output where compact or non-compact is determined I am assuming that Maximum Actions means Positive Flexure and Minimum Actions means Negative Flexure. So in my example output I understand that for Positive Flexure it is compact and for Negative Flexure it is non-compact.

My question has to do with when BRASS does the calculations for Shear Resistance. Under Max Actions (Pos. Flex) the question "Is Section Compact" is answered correctly with YES. When I look at Min. Actions (Neg. Flex) the question "Is Section Compact" is answered with a YES which I thought should be answered NO since the previous calculations determined the section to be non-compact for Min Actions (Neg. Flex).

FROM:bgoodrich DATE:Friday, November 01, 2002 4:53:25 PM

BRASS determines compactness for the shear computations by determining the factored moment (from maximum and minimum actions) with greatest magnitude. The compactness code corresponding to the factored moment with the greater magnitude is utilized and reported. This is why the compactness is shown as compact for both maximum and minimum shear computations, which is separate from maximum and minimum moment computations. What do you think BRASS should be using for the compactness codes in question?

FROM:dteal DATE:Monday, November 04, 2002 1:39:03 PM

Thank you for your explanation of how BRASS determines compactness for the shear computations. I understand that by determining the factored moment with the greatest magnitude defines the positive and negative moment areas which in turn defines the compactness requirements for the shear calculations by using the controlling section. I just got confused comparing the Maximum and Minimum (Positive and Negative) Actions from the moment to the shear computations. I think what BRASS does makes sense.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:40:56 PM

Marked as Accepted on 11/4/02.

|                                              |
|----------------------------------------------|
| Issue ID: 3965                               |
| Subject: Composite/non-Composite Coded Wrong |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 11/1/2002 6:39:20 PM |
| Modified By: administrator            | 6/19/2008 4:05:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 3966.11389 | Discard       | BRASS messages should reference command/chapters rather than manual pages |

### Description

FROM:dteal DATE:Friday, November 01, 2002 2:39:20 PM

See the attached .bbd, Member #2 and BRASS Output line #80. The Virtis Opis input doesn't have a deck on it (non-composite). The BRASS input on line #80 shows parameter #4 for composite instead of parameter #3 for non-composite. Can this be explained?

FROM:bgoodrich DATE:Tuesday, November 05, 2002 9:26:01 AM

On the Generic tab of the Structure Typical Section window, there are railings assigned to the DC2 load case, which is applied to the composite (long-term) stage. Therefore, the export generates the ANALYSIS command with the sequence type of 4, rather than 3. This sequence (4) only indicates that the structure will be analyzed by BRASS in three stages rather than one. The sequence code itself does not make the steel beam composite. A slab or rebar must be present on the XSECT-C or XSECT-G commands, respectively, to be considered composite.

For this structure, I think the way you have defined it in Virtis is fine because the deck is applied to the girder by the tributary area method and the railings are uniformly distributed to all girders, as specified in the DL Distribution tab of the Superstructure Loads window.

FROM:bgoodrich DATE:Friday, January 24, 2003 5:40:56 PM

Tracking field marked as "Accepted". Incident closed.

Issue ID: 3966

Subject: BRASS messages should reference command/chapters rather than manual pages

Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Goodrich, Brian                    |
| Submitted By: McCaffrey, Brian 11/1/2002 8:32:13 PM |
| Modified By: administrator 6/19/2008 4:05:18 PM     |
| Priority: High                                      |
| Category: Enhance BRASS                             |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Enhancement   |
| Goodrich, Brian | Suspended |          | Enhance BRASS |
|                 | Discard   |          |               |
| Goodrich, Brian | Discard   | High     | Enhance BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 3967.11388 | Discard       | Global Defaults for ASD Factors |

Description

FROM:bgoodrich DATE:Friday, November 01, 2002 4:32:13 PM  
E-mail from Brian McCaffrey:

Do you happen to have page 13.6 of the BRASS manual??? I am having some problems entering a P/S box beam w/tapered loads and the error I get says to see page 13.6. I assume it means the BRASS manual. We do not have the latest BRASS software or manuals. See below:

=====

Fatal Error Encountered - Unexpected Termination  
Data File: rior\_beam\BRASS\_LFD\typical\_interior\_beam.DAT

4/19/2016 3:03:07 PM

HRS AASHTO

274

Complete Issue Information

-----  
-----

Error No.: 1308  
Type : Input Error  
Location : uwmain.for

\*\*\*\*ERROR\*\*\*\* A tapered load was input that does not start or stop at a node point.  
See page 13.6. Program stopped

=====

E-mail from Brian Goodrich:

You may need to place a point of interest or cross section change point at the locations where the tapered load starts and stops. I printed the corresponding help command to a PDF file, which is attached. This topic is identical to the manual page in content.

E-mail from Brian McCaffrey:

Thanks for the help file - I found it under the BRASS help file also that came with Virtis. Maybe the error message should refer to the help file not the manual. Anyway, I had POI's at all the points as the help file says but I still got the error. It turns out that one of my POI's was within .1' of a 10th point - the error message never said that. After moving the POI's around a few inches it worked fine.

E-mail from Brian Goodrich:

Brian McCaffrey makes a point of how error messages that refer to a specific BRASS command manual page are difficult to find in the command help file. Should the programs be referencing commands or chapters rather than manual pages specifically? This would help users who only have access to the on-line help, specifically Virtis users.

FROM:jduray DATE:11/4/02 1:27:12 PM  
Sounds like a good idea to me.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:43:18 PM  
WYDOT assigned this issue to BRASS Problem Log 379.

FROM:bgoodrich DATE:Monday, November 11, 2002 10:27:26 AM  
The tapered load message issue from above has been addressed for Virtis Version 5.0. There are other messages within the BRASS engine that should be addressed in a similar manner. However, WYDOT has not authorized this work. The incident status has been set to Suspended for this reason.

FROM:hlee DATE:4/30/2008 2:30:35 PM  
Discarded by TAG 12/07.

|                |
|----------------|
| Issue ID: 3967 |
|----------------|

### Complete Issue Information

|                                          |                      |
|------------------------------------------|----------------------|
| Subject: Global Defaults for ASD Factors |                      |
| Folder: /Virtis/Support Center/Virtis    |                      |
| Primary Contact: Goodrich, Brian         |                      |
| Submitted By: Pierce, Ron                | 11/1/2002 9:30:54 PM |
| Modified By: administrator               | 6/19/2008 4:05:18 PM |
| Priority: High                           |                      |
| Category: Enhance BRASS                  |                      |

### History

| Primary Contact    | Status     | Priority | Category    |
|--------------------|------------|----------|-------------|
| Duray, Jim         | New        | Medium   | Bug         |
| Ordoobadi, Mehrdad | Assigned   | High     | Bug - GUI 2 |
|                    | Patch Test |          |             |
|                    | Closed     |          |             |
| Ordoobadi, Mehrdad | Closed     | High     | Bug - GUI 2 |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 3968.11387 | Closed        | Access privileges |

### Description

FROM:bgoodrich DATE:Friday, November 01, 2002 5:30:54 PM  
 Entered for Ron Pierce:

Ron was not aware that the stress limits and corresponding schedule input in Virtis are not utilized by BRASS-GIRDER. The ASD stress limits must be set using the ASD Factors section of the Factors tab of the Member Alternative Description window. Ron would like some way to set some global defaults for these factors. Arizona DOT uses 3\*SQRT(f\*c) for the tensile stress limit rather than the BRASS

4/19/2016 3:03:08 PM

HRS AASHTO

276

Complete Issue Information

default of 6\*SQRT(f\*c). They have 500+ bridges that they may have to change. Could these be added to the System Defaults window (Bridge Workspace tab - PS Values section)?

A more elegant solution might be to enhance BRASS-GIRDER to utilize the stress limit schedule as specified in Virtis.

FROM:jduray DATE:11/4/02 1:24:46 PM

It seems to me that BRASS should be enhanced if the factors are already available within Virtis.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:44:17 PM

Jim - Even if the P/S stress limits were implemented in BRASS, the overall issue of ASD factor defaults still remains for steel and R/C structures.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:44:17 PM

FYI WYDOT: The ASD factors are utilized by BRASS in the service level ratings as part of an LFD rating. Within Virtis, the concrete stress limits are set as stresses, not ratios. Each group of stress limits is then assigned to one or more regions along the length of the girder. This method was implemented in BRASS-GIRDER(LRFD). See the CONC-STLIM-GROUP and CONC-STLIM-SCHEDULE commands.

FROM:hlee DATE:4/30/2008 2:30:49 PM

Discarded by TAG 12/07.

|                            |
|----------------------------|
| Issue ID: 3968             |
| Subject: Access privileges |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Thompson, Todd          | 11/5/2002 2:18:57 PM |
| Modified By: administrator            | 6/19/2008 4:05:18 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



Complete Issue Information

Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3990.11365 | Discard       | bar vs virtis |

Description

FROM:ttompson DATE:Tuesday, November 05, 2002 9:18:58 AM

I'm having trouble getting my "Design Engineers" group members to be able to use the FIND feature. It's always greyed out in the FIND. I can't seem to find in the help where FIND can be turned on/off in the access privileges.

FROM:jduray DATE:11/6/02 4:51:03 PM

Please call Todd to help him.

FROM:mordoobadi DATE:11/20/2002 3:10:20 PM

Design Engineers group has Read Privilege for Public and Private Bridge Folders. The Find Window should let them find bridges

FROM:mordoobadi DATE:12/3/2002 1:43:24 PM

Fixed.

FROM:mordoobadi DATE:12/4/2002 9:07:37 AM

Fixed for Alpha 4.

|                        |
|------------------------|
| Issue ID: 3990         |
| Subject: bar vs virtis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Shah, Shyam             | 11/14/2002 6:20:23 PM |
| Modified By: administrator            | 6/19/2008 4:05:17 PM  |
| Priority: High                        |                       |

### Complete Issue Information

Category: Enhance BRASS

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Bug      |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Open               |          |          |
|                  | Information Needed |          |          |
|                  | Open               |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |
|                  | Closed             |          |          |
| Kennelly, Krisha | Closed             | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BRASS Error.bbd     |             |
|      | Incident 2991.bbd   |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 3991.11364 | Closed        | Unknown System Error |

### Description

FROM:snshah DATE:Thursday, November 14, 2002 1:20:23 PM

Dear Mr. Shah

Can this be confirmed or denied

William j. Metcalf

I have researched the discrepancy in serviceability ratings between BARS and VIRTIS. Specifically, for structure #048172, based on the BARS and VIRTIS program documentations and manual

4/19/2016 3:03:08 PM

HRS AASHTO

279

## Complete Issue Information

verification of the relevant computer outputs. It is evident that each program implements different design approach in computation and application of the section properties in conjunction with the stress computations. The differences are:

### 1) Noncomposite Section Properties:

Bars --> Section properties are based on the "transformed" section that takes into account a difference in a modulus of elasticity (E) between steel and concrete.

Virtis --> Section properties are based on the beam's shape, exclusively.

### 2) Composite Section Properties:

Bars -> Composite section properties based on "n" and "3n" are used in stress calculations for the live load and superimposed dead load, respectively.

Virtis -> Composite section properties based on "n" are used in stress calculations for both, live load and superimposed dead load.

The program differences described above amount to 3.4 tons discrepancy in inventory ratings for HS vehicle (32.1 tons per BARS vs 28.7 tons per Virtis).

It is evident that several of our structures are falling into this category and this is the explanation for the lower ratings on those structures.

If you have any questions please call me.

Emmanuel D. Plakotos E.I.  
Civil Engineer  
Buchart Horn, Inc.  
3330 West Esplanade Ave. Suite 201  
Metairie, LA 70002  
504-831-2251  
fax 504-831-2981  
email: eplakotos@bh-ba.com

FROM: bgoodrich DATE: Thursday, January 23, 2003 3:40:21 PM

I spoke with Mr. Plakotos on the phone and established that the structure in question is a prestress concrete bridge, not steel as originally thought. Therefore, both his statements are correct regarding BRASS. 1) BRASS uses gross section properties for the non-composite stage. 2) BRASS uses the "1n" section properties for both superimposed dead load and live load, i.e., BRASS does not consider a "3n" or "2n" stage for prestress structures.

Mr. Plakotos indicated that this issue is of concern because the ratings for some of the bridges he is rating are on the border between success and failure depending on how the dead load stresses are computed.

I have changed the Category from a bug to an enhancement. Considering an additional composite stage in BRASS would require a fair amount of work. This issue has been forwarded to WYDOT.

4/19/2016 3:03:08 PM

HRS AASHTO

280

Complete Issue Information

FROM: bgoodrich DATE: Friday, February 27, 2004 11:28:02 AM  
 WYDOT added this issue to the BRASS enhancement list. Status set to Suspended.

FROM: hlee DATE: 4/30/2008 2:31:05 PM  
 Discarded by TAG 12/07.

|                               |
|-------------------------------|
| Issue ID: 3991                |
| Subject: Unknown System Error |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krishna    |                       |
| Submitted By: Teal, Dean              | 11/14/2002 7:08:36 PM |
| Modified By: administrator            | 6/19/2008 4:05:17 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: Thursday, November 14, 2002 2:08:36 PM  
 When trying to do a LRF design review on Member #2 of the attached .bbd file I get the following error.

Error converting Virtis/Opis steel cross sections or schedules to 'general' cross sections!  
 01:08:13 PM - Line 3578 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Unknown exception in the Analysis Module.  
 01:08:13 PM - Line 3577 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Complete Issue Information

What does it mean and how do I correct it?

FROM:dteal DATE:Thursday, November 14, 2002 3:03:45 PM

As near as I can tell, Member 1 and Member 2 have the same steel beams. Member one runs and member 2 doesn't?

FROM:kkennelly DATE:11/15/2002 12:53:42 PM

Member 1 and Member 2 are different due to the different deck reinforcement schedules. There is a problem in the way the domain generates the cross sections for BRASS. Since BRASS is limited in the number of cross sections a user can input, the domain looks for duplicate cross sections and deletes the duplicates so BRASS gets a smaller number of cross sections. The domain is having a problem deleting these duplicates and the problem involves the cross sections starting at 2.55 and ending at 4.55 m.

I tried migrating your bridge to 4.2 and that doesn't solve the problem.

You can try this workaround to get this member to run while we fix this problem:

Trick the program into thinking the range between 2.55 and 4.55 is unique. Do this by:

1. Create a copy of your concrete material (Grade 30...). Make sure the copy material has a different name than your original concrete material.

2. In the Deck Profile window for member G2, create 3 ranges for your deck concrete as follows:

| Concrete Material | Start | Length |
|-------------------|-------|--------|
| Grade 30          | 0.0   | 2.55   |
| Copy of Grade 30  | 2.55  | 2.00   |
| Grade 30          | 4.55  | 56.95  |

FROM:dteal DATE:Monday, November 18, 2002 8:30:25 AM

I tried the suggested workaround - it made no difference. I get the same error.

FROM:kkennelly DATE:11/18/2002 2:23:18 PM

Can you attach the bbd file of the bridge after you made the change?

FROM:dteal DATE:Tuesday, November 19, 2002 9:58:55 AM

I attached the file as Incident 3991.bbd.

I don't need a workaround, I changed the bar pattern instead. I guess we just need a fix hopefully for the next release.

FROM:kkennelly DATE:1/21/2003 9:05:05 AM

Fixed for Version 5, beta 4.

FROM:dteal DATE:Friday, February 21, 2003 11:56:01 AM

Issue ID: 3994

Subject: negative moment of plate girder

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

4/19/2016 3:03:09 PM

HRS AASHTO

282

### Complete Issue Information

|                            |                        |
|----------------------------|------------------------|
| Submitted By: Shah, Shyam  | 11/14/2002 10:19:32 PM |
| Modified By: administrator | 6/19/2008 4:05:17 PM   |
| Priority: High             |                        |
| Category: Bug - BRASS      |                        |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          | Bug - BRASS |
|                 | Resubmit |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 3998.11357 | Closed        | Spec Check – Not Satisfied |

### Description

FROM:snshah DATE:Thursday, November 14, 2002 5:19:33 PM

This structure has two problems

1. shear at free, this has been determined to be a design error

2. Low rating in negative moment region. the following is from a consultant report to us. "... problem with the Virtis computations in the negative moment region. For some reason, Virtis used a stiffened web in evaluating the hs20 truck load, but an unstiffened web in evaluating the lane load. We believe Virtis is incorrect. Our hanc calculations (sheet 26/26 in Appendix C of the report) show that the web is

4/19/2016 3:03:09 PM

HRS AASHTO

283

Complete Issue Information

stiffened. This appears to be a "bug" in Virtis.

I have attached the .bbd file it is in version 4.0.4

FROM:snsah DATE:Thursday, November 14, 2002 5:27:19 PM

FROM:bgoodrich DATE:Monday, January 27, 2003 7:10:12 PM

We need some additional information so we can continue our investigation. Please indicate which structure definition, member, and member alternative contained the problem for both questions 1 and 2. Also indicate which point of interest that is of concern for each.

Additionally, please elaborate on item 1: "shear at free, this has been determined to be a design error". It is unclear what this is referring to.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:06:28 PM

I uploaded BBD files for Version 5.0 Beta 3 (Current and Final).

FROM:bgoodrich DATE:Thursday, February 06, 2003 11:09:32 AM

E-mail from William J. Metcalf:

please disregard question #1 for now it may be an under design problem.

for question #2

We are referring to structure definition CNTWEL, member G2, member alternative (there is only one).

FROM:bgoodrich DATE:Thursday, February 06, 2003 12:01:47 PM

This issue had already been addressed in the BRASS-GIRDER 5.8.6, which will be released with Virtis 5.0. For the structure in question, a stiffened web is now used for both the HS20 truck and lane.

|                                     |
|-------------------------------------|
| Issue ID: 3998                      |
| Subject: Spec Check – Not Satisfied |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Teal, Dean              | 11/15/2002 7:36:38 PM |
| Modified By: administrator            | 6/19/2008 4:05:16 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 4018.13327 | Closed        | Low Virtual Memory |

### Description

FROM:dteal DATE:Friday, November 15, 2002 2:36:38 PM

Can you provide a definition that explains the difference between Failed and Not Satisfied in the Spec Checker?

FROM:bgoodrich DATE:Wednesday, November 20, 2002 1:46:55 PM

From the Output Syntax topic of the BRASS-GIRDER(LRFD) Technical Manual:

#### Not Satisfied (NSAT)

The specification check is not satisfied. This term is used only for compactness checks for steel structures. This term implies that the specific specification check is not satisfied, but an alternative specification check may be used to satisfy the requirement.

#### Failed (FAIL)

The specification check is not satisfied and therefore fails.

The failed code is issued when there are no other alternatives for satisfying the specification.

FROM:dteal DATE:Thursday, November 21, 2002 9:50:01 AM

Below is a spec check from a PS girder run. Notice the last line states "Not Satisfied". The answer you gave me said that "Not Satisfied" ONLY comes up for compactness checks for steel structures???

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 5.8.3.5 Longitudinal Reinforcement

Point of Interest : 100.00

Construction Stage: 1

#### Input Parameters:

Mu = 0.000E+6 mm-N dv = 838.142 mm

Nu = 0.000 N phi f = 1.000

Vu = 172486.422 N phi a = 1.000

Vs = 4591476.000 N phi v = 0.900

Vp = 7012.677 N theta = 22.139 deg

4/19/2016 3:03:09 PM

HRS AASHTO

285



Complete Issue Information

Summary:

Mu Nu / Vu \

T = ----- + 0.5 ----- + | ----- - 0.5 Vs - Vp | cot(theta) [AASHTO LRFD 5.8.3.5-1]  
dv\*phi f phi a \ phi v /

Calculated Value: T = 218293.344 N

AASHTO Limit : T(Cap) = 213323.047 N (See Flexural Resistance)

Result Code: NSAT

Notes:

=> Vs exceeded Vu / phi v, so Vs = Vu / phi v was used to compute T.

=> A Result Code of NSAT indicates that this POI is within the distance to the critical section for shear and this check was Not Satisfied (probably due to partially developed reinforcement).

The Spec Check says "!5.8.3.5 Longitudinal Reinforcement Strength-IV N/A Not Satisfied"

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:31:02 PM

Track field marked as "Resubmit 11/21/02".

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:58:25 PM

From the note in the output:

"A Result Code of NSAT indicates that this POI is within the distance to the critical section for shear and this check was Not Satisfied (probably due to partially developed reinforcement)."

BRASS assumes that any longitudinal rebar is fully developed if input. So within the shear distance from a support, there may actually be more rebar that was not input. Therefore, this check is set to NSAT and it is left up to the engineer to determine if this check truly fails at a POI within the shear distance. This check is set to FAIL when the tensile force is not adequate and the POI is located outside the shear distance.

FROM:dteal DATE:Thursday, March 06, 2003 12:21:08 PM

FROM:bgoodrich DATE:Wednesday, May 07, 2003 1:54:28 PM

Track field marked with "Accepted". Incident Closed.

Issue ID: 4018  
Subject: Low Virtual Memory

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 11/19/2002 6:08:16 PM  
Modified By: administrator 6/19/2008 4:11:14 PM  
Priority: High  
Category: Bug - GUI 2

## Complete Issue Information

### History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Bug         |
| Goodrich, Brian | Assigned    |          | Bug - BRASS |
|                 | System Test |          |             |
|                 | Closed      |          |             |
| Goodrich, Brian | Closed      | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Incident 4022.bbd   |             |

### Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 4022.13323 | Closed        | Zero Resistance |

### Description

FROM:dteal DATE:Tuesday, November 19, 2002 1:08:16 PM

After repeated analysis runs we are getting warnings for low virtual memory. It appears that opis on an XP operating system is not freeing up the memory. I don't recall getting these warnings when KDOT was using NT 4.0. After the Low Virtual Memory warning, exiting opis takes a very long time. This is not an isolated case, I have several other designers experiencing the same thing.

My pc is a 2.4 Ghz with 512 Ram on Windows XP

FROM:jduray DATE:11/22/02 9:27:19 AM

We will investigate this when we support XP.

FROM:dteal DATE:Friday, November 22, 2002 11:50:07 AM

I was wrong above when I said we didn't have any NT problems.

Please look at Incident 3705 - this one was for NT. Will we be carrying over the memory problem from NT to XP?

FROM:dteal DATE:Tuesday, October 26, 2004 10:22:16 AM

4/19/2016 3:03:10 PM

HRS AASHTO

287

Complete Issue Information

This hasn't happened anymore as of 5.1.1 - I tink we can close this incident

FROM:jihnat DATE:10/26/2004 3:09:43 PM  
Deleted "Please Close" from Track field and changed Status to Closed.

|                          |
|--------------------------|
| Issue ID: 4022           |
| Subject: Zero Resistance |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Teal, Dean 11/19/2002 7:19:22 PM  |
| Modified By: administrator 6/19/2008 4:11:14 PM |
| Priority: High                                  |
| Category: Bug - BRASS                           |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Tuesday, November 19, 2002 2:19:22 PM  
In the attached 3 span welded plate – member 2 – HL-93 Design Review

At Pier #2 Rating Factor and Design Ratio computations indicate that the resistance was zero. Looking at AASHTO computations for 6.10.3.1.3 (Plastic Moment (Composite) Stage 3 says "WARNING: The iteration procedure failed to find a solution, so Mp was set to zero!".

What is the explanation for this?

FROM:dteal DATE:Thursday, January 16, 2003 10:05:37 AM  
Not fixed in 5.0.0 Beta 2

FROM:bgoodrich DATE:Monday, January 20, 2003 5:12:05 PM

4/19/2016 3:03:10 PM

HRS AASHTO

288

Complete Issue Information

The plastic moment iteration procedure failed to find a solution because the plastic neutral axis is near the bottom row of reinforcement when there are two rows. When the PNA is below the bottom rebar row, there is too much compressive force in the section. When the PNA is above the bottom rebar row, there is too much tensile force in the section. Therefore, when this condition is encountered, the rebar will be combined into a single equivalent row, for this procedure only. The output will show the original summary that failed followed by a successful summary. Fixed for Version 5.0 Beta 4.

FROM:dteal DATE:Friday, February 21, 2003 11:57:10 AM

FROM:bgoodrich DATE:Friday, February 28, 2003 10:34:53 PM  
Track field marked as Accepted, so status set to Closed.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 4026                                         |
| Subject: Schematics - Internal Diaphragms of Box Beams |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Ordoobadi, Mehrdad      | 11/21/2002 2:07:42 PM |
| Modified By: administrator            | 6/19/2008 4:11:14 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 2                 |                       |

History

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Unknown     |
|                 | On Hold         |          | Bug - GUI 2 |
|                 | Rejected by TAG |          |             |
| Duray, Jim      | Rejected by TAG | High     | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:03:10 PM

HRS AASHTO

289

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4027.13318 | Closed        | PS Shear Reinf Definition – Horizontal GUI |

Description

FROM:mordoobadi DATE:11/21/2002 9:03:33 AM

Reported by Mr. Walid Najjar from Charles Sells.

Schematics shows an extra internal diaphragm at internal supports of a multi-span PS Box Beam.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4027                                      |
| Subject: PS Shear Reinf Definition – Horizontal GUI |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Teal, Dean              | 11/21/2002 2:52:02 PM |
| Modified By: administrator            | 6/19/2008 4:11:14 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 2                 |                       |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug - BRASS |
| Goodrich, Brian | Assigned  |          |             |
|                 | Duplicate |          |             |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Georgia-Chase.bbd       |             |
|      | Top strand debonded.doc |             |

### Tasks

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 4029.13316 | Duplicate     | rating values drop when add rebars in deck for prestressed concrete |

### Description

FROM:dteal DATE:Thursday, November 21, 2002 9:52:02 AM

The Shear Reinforcement Definition – Horizontal GUI is misleading. The help file for this GUI clearly shows Set 1 and Set 2 extending into the deck. The GUI only shows one set extending into the deck. I have several questions from designers about this GUI. For clarity the GUI should show the same image as the help file.

FROM:jduray DATE:4/8/2005 11:32:55 AM

Change the bitmap to show two like the help topic.

FROM:jihnat DATE:8/2/2005 10:57:15 AM

Done for 5.4.0

FROM:jihnat DATE:12/8/2005 7:15:37 AM

Track field Accepted.

### Complete Issue Information

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 4029                                                               |
| Subject: rating values drop when add rebars in deck for prestressed concrete |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Hart, Erich             | 11/21/2002 4:57:39 PM |
| Modified By: administrator            | 6/19/2008 4:11:13 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Open     |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2736.bbd            |             |

### Tasks

| Name       | Current State | Summary                                                                         |
|------------|---------------|---------------------------------------------------------------------------------|
| 4032.13313 | Resolved      | fpe calculation for shear is not zero, but should be for negative moment region |

### Description

FROM:bgoodrich DATE:Thursday, November 21, 2002 11:57:39 AM  
E-mail from Ken Teng (11/21/02):

Got a similar question about reinforcement in the bridge deck. Rating values will be lower if add the

4/19/2016 3:03:11 PM

HRS AASHTO

292

Complete Issue Information

rebar in the slab (deck).

I found out this problem for steel bridge last year and you and Dan fixed it. Now it happens in prestressed bridges. Could you guys fix it quickly using the same way as fixed in steel bridges before?

Besides, I have debonding strands on the top and I know there is no way to do this kind of debonding in VIRTIS now. Do you have any better suggestions?

Please see attached files.

FROM:bgoodrich DATE:Friday, November 22, 2002 11:51:56 AM  
This issue is the same as Incident 3849, which has already been addressed.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 4032                                                                           |
| Subject: fpe calculation for shear is not zero, but should be for negative moment region |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Generated, pyang        | 11/21/2002 7:52:30 PM |
| Modified By: administrator            | 6/19/2008 4:11:13 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Thursday, November 21, 2002 2:52:31 PM  
E-mail from Seung-yeol Lee (Arizona DOT) (11/21/02):  
During the rating of a continuous prestress multi-box beam, I found that the fpe calculation for shear is

4/19/2016 3:03:11 PM

HRS AASHTO

293



Complete Issue Information

not zero (in ver 4.2), which suppose to be and used to be zero for negative moment region. It seems to give low rating for shear than it suold be.

I set the Requested field to "pyang" because he is also with ADOT.

FROM:bgoodrich DATE:Thursday, November 21, 2002 5:15:31 PM  
E-mail from Brian Goodrich (11/21/02) to S. Lee:

I investigated your prestress issue (Incident 4032) some more. I analyzed PCITrainingBridge5 from the Virtis sample database. For this bridge fpe is reported as zero for some points of interest. I placed points of interest at 0.5 ft intervals from the end of the beam. The export generated BRASS POIs at 109.86, 109.91, and 109.95. Only the 109.86 POI reports an fpe. The others compute the shear capacity as a reinforced concrete section. Points of interest from Span 2 reported both zero and non-zero fpe values. More investigation is necessary to determine what BRASS is doing for your bridge. WYDOT must review and approve the investigation of your request before any BRASS engine work can be performed.

FROM:jduray DATE:11/22/02 10:16:38 AM  
Are you going to discuss this with WyDOT?

FROM:bgoodrich DATE:Friday, November 22, 2002 12:41:28 PM  
I forwarded this issue to WYDOT yesterday and they assigned it to BRASS Problem Log 381.

FROM:bgoodrich DATE:Monday, January 20, 2003 5:01:41 PM  
Several improvements were made to the intermediate output, which helped. However, Seung-Yeol Lee is still questioning the process. Therefore, the dialogue with Mr. Lee is continuing.

FROM:bgoodrich DATE:Tuesday, March 25, 2003 8:56:02 AM  
This BRASS problem log was marked as "complete", so setting status to Resolved. Fixed for Version 5.0 release.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 4052                                            |
| Subject: Incorrect Service Rating for P/S box beam bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Generated, pyang        | 12/2/2002 3:56:13 PM |
| Modified By: administrator            | 6/19/2008 4:11:12 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | High     | Bug - BRASS |

Complete Issue Information

|                 |                    |        |             |
|-----------------|--------------------|--------|-------------|
| Goodrich, Brian | Assigned           | Urgent |             |
|                 | Resolved           |        |             |
| Duray, Jim      | New                | Medium | Bug         |
| Obeidat, Khalid | Information Needed |        | Bug - BRASS |
| Goodrich, Brian | Assigned           |        |             |
|                 |                    | Urgent |             |
|                 | Open               |        |             |
|                 | Resolved           |        |             |
|                 | Open               |        |             |
|                 | System Test        |        |             |
|                 | Closed             |        |             |
|                 | System Test        |        |             |
| Goodrich, Brian | System Test        | Urgent | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 27v38.bbd           |             |

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 4054.13291 | System Test   | incorrect calculation of yield moment My |

Description

FROM:bgoodrich DATE:Monday, December 02, 2002 10:56:14 AM  
 Entered for Seung-Yeol Lee (Arizona DOT) (contact is P. Yang):

I got an another problem in PS multi- and spread box type beam bridges.

The ASD rating for compression seems not to be correct according to the stresses Brass generating.

Could you check this out and get back to me.

4/19/2016 3:03:11 PM

HRS AASHTO

295

Complete Issue Information

I attached a bbd file and a statement of the problem (MathCAD).

FROM:bgoodrich DATE:Monday, December 02, 2002 11:01:33 AM  
I converted the MathCAD file to an RTF and attached it to this incident.

The AASHTO 9.15.2.2(b) rating seems to be incorrect.

FROM:bgoodrich DATE:Monday, January 20, 2003 5:04:18 PM  
Changes were made to the intermediate output and to the service load rating report to clarify the process. The modified output was reviewed by Seung-Yeol Lee, and he was satisfied.

|                                                   |
|---------------------------------------------------|
| Issue ID: 4054                                    |
| Subject: incorrect calculation of yield moment My |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Obeidat, Khalid         | 12/4/2002 1:14:40 PM |
| Modified By: administrator            | 6/19/2008 4:11:12 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kobeidat DATE:Wednesday, December 04, 2002 8:14:41 AM

Hi

The program gives a value of My=0 incorrectly. It seems that the program assumes a value of zero for My if the section has yielded in the previous stage. My value shouldn't be affected by yielding of the section and should be based only on section properties. Let me know if you need more information or a copy of the input and output files.

Thanks

4/19/2016 3:03:12 PM

HRS AASHTO

296

Complete Issue Information

FROM:kkennelly DATE:12/4/2002 2:33:15 PM  
 Please export your bridge to a \*.bbd file and attach the \*.bbd file to this incident.

FROM:kkennelly DATE:12/6/2002 10:53:09 AM  
 Email from Khalid:  
 Attached is the file you've requested. Also following are part of the output file referenced in my report of this error:

Nominal Flexural Resistance:  $D' < D_p \leq 5D'$   
 $M_y = 0.000 \text{ ft-k}$   
 $M_p = 40096.559 \text{ ft-k}$

$$M_n = \frac{5.0 * M_p - 0.85 * M_y}{4} + \frac{0.85 * M_y - M_p}{4} * D'$$

$M_n = 34479.426 \text{ ft-k}$  [AASHTO LRFD 6.10.4.2.2a-2]

Thanx

FROM:bgoodrich DATE:Tuesday, January 28, 2003 10:57:13 AM  
 WYDOT has assigned this issue to BRASS Problem Log 396.

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:55:12 PM  
 This issue has been fixed in BRASS-GIRDER(LRFD) 1.5.2, which will be released with Opis 5.0.

Issue ID: 4055  
 Subject: Moment Capacity of PS Concrete

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Najjar, Walid 12/4/2002 6:39:09 PM  
 Modified By: administrator 6/19/2008 4:11:12 PM  
 Priority: High  
 Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Goodrich, Brian | Resolved  | High | Bug - BRASS |
| Duray, Jim      | New       | High | Bug         |
| Goodrich, Brian | Assigned  |      | Bug - BRASS |
|                 | Suspended |      |             |
| Goodrich, Brian | Suspended | High | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | P-10-021(0E1).bbd   |             |

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 4067.13278 | Suspended     | Longitudinal Slab Rating Results |

Description

FROM:wnajjar DATE:Wednesday, December 04, 2002 1:39:09 PM

We would appreciate your review of the attached export file G56-4.bbd by Virtis 4.4.1, specifically in regard to calculations of positive moment capacity of a three-span, pre-stressed concrete box girder, made continuous for live load.

At analysis point 202 the positive moment capacity is 0.1E-04 ft-kips, from page 77 of the output file for the attached file. At nearby analysis points 201 and 203, the positive moment capacities are 0.342345E+4 ft-kips and 0.113490E+4 ft-kips, respectively. The capacity at analysis point 202 should not be zero, because the girder section in that region is the same, except for some debonding of tendons. We assume that this problem has nothing to do with the location of inflection points.

FROM:bgoodrich DATE:Friday, January 24, 2003 6:15:26 PM

The version of BRASS-GIRDER (version 5.8.6) to be released with Virtis 5.0 does not give zero moment capacity at the 202 POI. It is now showing a capacity of 1134.9 ft-kips.

|                                           |
|-------------------------------------------|
| Issue ID: 4067                            |
| Subject: Longitudinal Slab Rating Results |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                                  |                       |
|----------------------------------|-----------------------|
| Primary Contact: Goodrich, Brian |                       |
| Submitted By: Carney, John       | 12/10/2002 4:45:57 PM |
| Modified By: administrator       | 6/19/2008 4:11:11 PM  |
| Priority: High                   |                       |
| Category: Bug - BRASS            |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name       | Company        | Email 1                         | Phone 1      |
|------------|----------------|---------------------------------|--------------|
| Shyam Shah | Louisiana DOTD | sshah@dotdmail.dotd.state.la.us | 225-379-1329 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | #623080a.dat        |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 4089.13256 | Resolved      | P/S transfer ratio for bars import |

### Description

FROM:jcarney DATE:Tuesday, December 10, 2002 11:45:58 AM

The rating results that I am getting from Virtis are a bit lower at inventory stress level and a bit higher at operating stress level as compared to manual calculations. In reviewing the Virtis output, I noted that the DL and LL moments checked exactly with the hand calculations. However Virtis indicates that the inventory rating is governed by the concrete compressive stress at the top of the beam. Our manual calculations indicate tension in the bottom rebar governing at both inventory and operating stress levels with the concrete stress well within allowable stress (564psi<800psi) when the tension steel reaches its allowable stress of 18 ksi. Can you please review and let me know if there is a problem in the way Virtis is calculating the stresses or if there is a problem with the input. I am e-mailing the bdd file to Krisha.

FROM:bgoodrich DATE:Saturday, January 25, 2003 10:56:16 AM

4/19/2016 3:03:12 PM

HRS AASHTO

299

Complete Issue Information

All the ASD factors are filled out and exported to BRASS, so I don't see anything wrong with the input. Therefore, I have forwarded this issue to WYDOT.

FROM: bgoodrich DATE: Tuesday, January 28, 2003 11:24:43 AM  
E-mail from Mike Watters (WYDOT):  
He is rating an ASD girder and we are not expending funds to resolve these types.

|                                             |
|---------------------------------------------|
| Issue ID: 4089                              |
| Subject: P/S transfer ratio for bars import |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Shah, Shyam             | 12/16/2002 4:25:40 PM |
| Modified By: administrator            | 6/19/2008 4:11:09 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: snsah DATE: Monday, December 16, 2002 11:25:40 AM

I noticed a problem with P/S structures when they import from bars. On the prestressed properties screen there is a field jacking stress ratio this should be .70 for SR strands and .75 for LR strands. There is another field for P/S transfer stress ratio this should be .63 for SR strands and .69 for LR strands. However I've noticed that on many structures that Virtis has put the jacking stress ratio value for both of these. This effects the rating approximately 2 tons. Is this due to an error in our bar data or and error in the import utility? I have include the bars file.

Complete Issue Information

FROM:hlee DATE:12/27/2002 11:21:36 AM

This is an error in the BarsImport utility. BarsImport has been revised according to AASHTO Standard Spec 9.16.2.1.2.

Fixed for 5.0 release.

FROM:hlee DATE:12/27/2002 2:05:35 PM

OK in BrassImport utility.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 4115                                               |
| Subject: Program Error may be related to contraflexure point |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Best, Richard           | 12/18/2002 1:58:21 PM |
| Modified By: administrator            | 6/19/2008 4:11:07 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |



## Complete Issue Information

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4126.13219 | Closed        | Expired License/Registration Message |

### Description

FROM:rmbest DATE:Wednesday, December 18, 2002 8:58:21 AM

The attached example is a 3 span WF composite bridge. We are running two cases, one with and one without future wearing surface. When we analyze without the FWS (by not assigning to load case) we are getting an inventory rating of zero, which is a program error. When we run the analysis with future wearing surface assigned to load case FWS then the result is reasonable. The problem seems to be related to the positioning of the point of contraflexure as we can also get a reasonable answers for both cases by moving the contraflexure point a few feet. There is obviously a bug in the VIRTIS/BRASS programs. We are using Virtis 4.1.1 and the LFD analysis was run on girder G2.

FROM:bgoodrich DATE:Tuesday, January 28, 2003 1:32:50 AM

I ran the bridge with the version of the BRASS-GIRDER engine that will be released with Version 5.0. BRASS now provides a non-zero rating that appears reasonable.

Issue ID: 4126

Subject: Expired License/Registration Message

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ilnat, Joseph

Submitted By: Thompson, Todd

12/20/2002 7:31:13 PM

Modified By: administrator

6/19/2008 4:11:06 PM

Priority: High

4/19/2016 3:03:13 PM

HRS AASHTO

302

### Complete Issue Information

Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |
|                 | Closed |          |          |
| Duray, Jim      | Closed | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 4127.13218 | Closed        | Explorer Window Odd Behavior |

### Description

FROM:tthompson DATE:Friday, December 20, 2002 2:31:13 PM

I have a user that keeps getting an expired license - please notify AASHTO message when he attempts to log on. We have the unlimited Virtis/Opis license and have only installed that version.

It gave these 2 numbers:

258131707

8505372

Then it asks for 2 key values.

How can we get him going again? Or do we need to uninstall - reinstall.

FROM:jihnat DATE:12/20/2002 3:57:45 PM

I called Todd with new Registration Keys.

Not sure what caused this to expire prematurely, though.

FROM:tthompson DATE:Friday, December 20, 2002 4:15:04 PM

Those keys didn't work.

It's now showing:

4/19/2016 3:03:13 PM

HRS AASHTO

303

Complete Issue Information

249746560  
8505372

FROM:ttompson DATE:Friday, December 20, 2002 5:03:26 PM  
2nd attempt with different values didn't work.  
Will have designer and jihnat resolve on Monday 23rd.

This license expiration shouldn't be so difficult.

FROM:jihnat DATE:1/6/2003 11:19:45 AM  
I spoke with Kolbe today. The problem is resolved.

|                                       |
|---------------------------------------|
| Issue ID: 4127                        |
| Subject: Explorer Window Odd Behavior |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Teal, Dean              | 12/20/2002 7:55:59 PM |
| Modified By: administrator            | 6/19/2008 4:11:06 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Friday, December 20, 2002 2:56:00 PM  
When I view all bridges in my explorer window, I pull the side scroll bar to the very bottom. It displays BID #574 as the last bridge in the database. Now if I click on the down arrow below the scroll bar, the

Complete Issue Information

scroll bar jumps up and bit and I can now scroll down to BID #624, which is the last bridge in the database. Every time I refresh the explorer window this odd behavior can be duplicated.

FROM:dteal DATE:Tuesday, January 07, 2003 9:56:29 AM

Does this have to do with the Bridge Explorer tab of the Preferences window being set to 500 for the "Number of bridges to retrieve (for Next Group)"?

FROM:dteal DATE:Tuesday, January 07, 2003 2:14:25 PM

It appears that our preferences setting controls this - please close this incident.

|                                                     |                      |
|-----------------------------------------------------|----------------------|
| Issue ID: 4175                                      |                      |
| Subject: Migration Problem with Folders in Explorer |                      |
| Folder: /Virtis/Support Center/Virtis               |                      |
| Primary Contact: Ordoobadi, Mehrdad                 |                      |
| Submitted By: Teal, Dean                            | 1/7/2003 3:37:17 PM  |
| Modified By: administrator                          | 6/19/2008 4:11:02 PM |
| Priority: High                                      |                      |
| Category: Bug - Database 2                          |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |

4/19/2016 3:03:14 PM

HRS AASHTO

305

### Complete Issue Information

|            |                        |      |                  |
|------------|------------------------|------|------------------|
|            |                        |      | Bug - Database 2 |
| Duray, Jim | Resolved<br>New        | High | Bug              |
| Duray, Jim | Duplicate<br>Duplicate | High | Bug              |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Folder Properties.JPG |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4177.13168 | Duplicate     | New Folder Properties – Attribute Text Tab |

### Description

FROM:dteal DATE:Tuesday, January 07, 2003 10:37:17 AM

When we migrated to 4.2 on our test server (before making it our production server) we had a problem. I had 2 folders in the explorer that where RED (BID's are placed in these folders automatically by the filtering/sorting criteria), we where not able to view the contents of these two folders.

The fix our DBA received from you deleted the folders???

Below is the line of communication our DBA has had with you up to the morning of 1/7/03.

Dean,

The problem with the folders in Virtis/Opis 4.2 on dt00mh41 has been corrected as per the instructions from Mehrdad at Michael Baker Jr., Inc. Let me know if there are any other problems. Thanks, Brian.

-----Original Message-----

From: "Mehrdad Ordoobadi" <MORDOOBADI@mbakercorp.com>

Sent: Monday, January 06, 2003 5:29 PM

To: JDURAY@mbakercorp.com; Brian Briggs

Subject: Re: Fwd: FW: Upgrade to version 4.2

4/19/2016 3:03:14 PM

HRS AASHTO

306

## Complete Issue Information

Brian,

Please do the following:

- 1- Login to the SQL Plus as the owner of Virtis/Opis database tables.
- 2- at the prompt type the following commands:  
set linesize 800;  
set pagesize 800;  
select GROUP\_ID, NAME, USE\_SQL\_IND, SQL\_TEXT from ABW\_GROUP WHERE ITEM\_TYPE = 22501 AND LOWER(SQL\_TEXT) LIKE '%design\_ind%';
- 3- If it returns any rows. The bridge folders with names returned by the above SELECT statement have problem. If step 3 returns any rows you need to delete the Bridge Folders corresponding to those rows (Bridge Folders with names that match the names returned by the SELECT statement above).

There are two ways you can do this (You might prefer to use the second approach)

(1) Using Virtis/Opis application:

Delete folders one by one:

- 1-a Select the folder that you want to delete
- 1-b Select Menu item Edit/Delete

(2) Using SQL code:

run the following SQL command.

```
DELETE FROM abw_group AG1 WHERE AG1.group_id IN (select AG2.GROUP_ID from ABW_GROUP AG2 WHERE AG2.ITEM_TYPE = 22501 AND LOWER(AG2.SQL_TEXT) LIKE '%design_ind%')
```

Regards,

>>> Jim Duray 01/06/03 04:50PM >>>  
Mehrdad

Call Brian regarding this problem after you have the deck rating stuff done.

>>> "Brian Briggs" <Briggs@ksdot.org> 01/06/03 04:49PM >>>

Jim,

I posed the question of waiting till next week to Dean Teal (our Virtis/Opis administrator) and it looks like he would really appreciate it if we could get this fixed and running in production before he leaves on the 12th (see below)!!

Thanks, Brian.

-----Original Message-----

From: Dean Teal

Sent: Monday, January 06, 2003 3:33 PM

To: Brian Briggs

Cc: Ron Shurtz

4/19/2016 3:03:14 PM

HRS AASHTO

307

Complete Issue Information

Subject: RE: Upgrade to version 4.2

Brian,

We are using version 4.1.1 on the production server until we get version 4.2 to run properly on the test server. As soon as version 4.2 is running properly and tested on the test server it will be moved to the production server. If it is not fixed this week (and verified) we can not begin using version 4.2 until after Jan. 17th or 20th at the earliest. I would like to get this up and running before I leave on Jan 12th.

Dean

-----Original Message-----

From: Brian Briggs  
Sent: Monday, January 06, 2003 3:13 PM  
To: Dean Teal  
Cc: Ron Shurtz  
Subject: FW: Upgrade to version 4.2

Dean,

How important is it to get this worked out this week? Please read Jim's note below!! Thanks, Brian.

-----Original Message-----

From: "Jim Duray" <JDURAY@mbakercorp.com>  
Sent: Monday, January 06, 2003 2:44 PM  
To: Brian Briggs  
Cc: MORDOOBADI@mbakercorp.com  
Subject: Re: Upgrade to version 4.2

Brian

How urgent is it that we investigate this problem? If possible I would like to check into this later this week or early next week. We are busy preparing for the start of beta testing for our next release. The testing begins next week and the person who would help you with this problem is very busy preparing for that testing. If you need help sooner I will try to work it in but since it is not a problem with a production database I suspect you can wait a few days.

Unless I hear otherwise from you we will wait until later this week or early next week to investigate.

Thanks  
Jim

Jim Duray, PE  
Michael Baker Jr., Inc.  
Airport Office Park, Bldg 3  
420 Rouser Road  
Coraopolis, PA 15108

4/19/2016 3:03:14 PM

HRS AASHTO

308

Complete Issue Information

Phone: (412) 269-6410  
FAX: (412) 269-7901  
mail to: jduray@mbakercorp.com

>>> "Brian Briggs" <Briggs@ksdot.org> 01/06/03 02:08PM >>>  
Jim,

Hello, I'm one of our DBA's here at KDOT and am in need of your assistance. We have migrated to Virtis Opis version 4.2.0 in our test environment and we are receiving the following error messages when trying to open 2 of our folders ('2 PE - Design Phase' and '3 Template Bridges' - see attached). I'm confused since the source file DmBridgeList.cpp is not on my PC and the error message doesn't provide the table and column name in question.

Unable to open m\_pDbBridgeListSet in CDmBridgeList::OpenRecordset! 12:51:00 PM - Line 597 in source file D:\Virtis\data management\ABMSYS\DmBridgeList.cpp.

Error opening database record set.  
12:51:00 PM - Line 594 in source file D:\Virtis\data management\ABMSYS\DmBridgeList.cpp.  
State:S0022,Native:904,Origin:[Microsoft][ODBC driver for Oracle][Oracle]  
ORA-00904: invalid column name

Please help, thanks, Brian.

Brian Briggs  
Database Administrator  
Kansas Department of Transportation  
217 S.E. 4th Street  
Topeka, Kansas 66603

FROM:dteal DATE:Tuesday, January 07, 2003 10:51:27 AM  
Below is the message our DBA sent to me after talking with you.

Dean,

I've got bad news. Mehrdad says you need to recreate those deleted folders (see below). I'm not sure if that will get the data back or not? I guess at this point it might be better if you take over the communication with them. You know the application and what you need out of it.

It seems to me that something didn't go right with the migration and they should look into it. Hopefully you can explain what's going on better than I can. In any case, I'm here and ready to help with any database stuff that might come up. Good luck, Brian.

FROM:dteal DATE:Tuesday, January 07, 2003 2:13:39 PM  
We have been able to re-enter the folders that got removed for in the migration to 4.2. At this point we are getting our test server up and running before we do our production server. I assume we will also loose these folders when we migrate our production server to 4.2.

Will there be a fix for this migration error?

4/19/2016 3:03:14 PM

HRS AASHTO

309



Complete Issue Information

FROM:dteal DATE:Tuesday, January 07, 2003 2:16:39 PM

The folders that got eliminated - is it possible that the problem has to do with the sorting selection. These folders sorted on the check boxes "Design and Template". The design checkbox got removed in version 4.2.

FROM:jduray DATE:1/22/03 9:40:49 AM

Mehrdad - we need a script or utility that searches the folder where clause and corrects it.

FROM:mordoobadi DATE:7/1/2003 1:43:07 PM

SQL scripts created to fix the problem. Fixed for 5.0.1.

FROM:dteal DATE:Friday, September 05, 2003 10:30:50 AM

FROM:mordoobadi DATE:9/24/2003 1:52:47 PM

Accepted by Dean Teal on 9/5/2003.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4177                                      |
| Subject: New Folder Properties – Attribute Text Tab |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 1/7/2003 7:15:31 PM  |
| Modified By: administrator            | 6/19/2008 4:11:02 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:03:14 PM

HRS AASHTO

310

Complete Issue Information

FROM:dteal DATE:Tuesday, January 07, 2003 2:15:32 PM

Version 4.1 had 3 options, "Design, Template and Completely Defined". In version 4.2 the Design check box has been eliminated. In Version 4.2, in the Status Area of the New Folders Properties – Attribute Text Tab what is the purpose of the Design pulldown? (See Attached jpg)

FROM:jduray DATE:1/22/03 9:43:48 AM  
Duplicate of 4175.

FROM:dteal DATE:Friday, February 21, 2003 2:30:36 PM  
I don't see this being a duplicate of 4175 - this incident is a question??????

|                                             |
|---------------------------------------------|
| Issue ID: 4179                              |
| Subject: Bridge Description Help File Wrong |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Teal, Dean              | 1/7/2003 8:25:12 PM  |
| Modified By: administrator            | 6/19/2008 4:11:02 PM |
| Priority: High                        |                      |
| Category: Help                        |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:03:15 PM

HRS AASHTO

311

### Complete Issue Information

|                  |          |      |                            |
|------------------|----------|------|----------------------------|
| Duray, Jim       | New      | High | Bug                        |
| Kennelly, Krisha | Assigned |      | Help                       |
| Duray, Jim       | New      | High | Bug                        |
| Lee, Herman      | Assigned |      | Bug - GUI 1<br>Bug - GUI 2 |
|                  | Resolved |      |                            |
| Lee, Herman      | Resolved | High | Bug - GUI 2                |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | AdjacentPSBeams.bbd |             |
|      | lldf.bmp            |             |
|      | 1074960.bbd         |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 4285.13060 | Resolved      | Automatic LLDF for adjacent P/S boxes and slabs |

### Description

FROM:dteal DATE:Tuesday, January 07, 2003 3:25:13 PM

When you view the help file for the Bridge Description window, under Template. You will find a reference to the "Design Only" box. This box no longer exists in version 4.2.

FROM:kkennelly DATE:1/8/2003 8:05:59 AM

Fixed for Version 5.0

FROM:dteal DATE:Tuesday, January 14, 2003 9:55:55 AM

Accepted in 5.0.0 Beta 1

|                                                          |
|----------------------------------------------------------|
| Issue ID: 4285                                           |
| Subject: Automatic LLDF for adjacent P/S boxes and slabs |

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McCaffrey, Brian        | 1/23/2003 1:20:07 PM |
| Modified By: administrator            | 6/19/2008 4:10:53 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
| Kennelly, Krisha   |          |          | Bug - GUI 1 |
|                    | Resolved |          |             |
| Kennelly, Krisha   | Resolved | High     | Bug - GUI 1 |

Contacts

| Name         | Company                 | Email 1                   | Phone 1        |
|--------------|-------------------------|---------------------------|----------------|
| David Koenig | Missouri DOT            | david.koenig@modot.mo.gov | (573) 526-0556 |
| Jim Duray    | Michael Baker Jr., Inc. | jduray@mbakercorp.com     |                |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Repaired L07815.bbd |             |
|      | L07815.bbd          |             |

Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4310.13035 | Resolved      | Appurtenance ID Problem |

Description

FROM:bmccaffrey DATE:Thursday, January 23, 2003 8:20:07 AM

I have a simple span P/S box beam bridge with a mix of adjacent 3' and 4' sections. When I hit the 'Compute from typical section' button in the live load distribution window I get the attached warning

4/19/2016 3:03:15 PM

HRS AASHTO

313

Complete Issue Information

(lIdf.bmp). The LLDF should be calculated using section 3.23.4, but Virtis thinks its a spread box and uses the equations in section 3.28 and generates the warning. This is happening in members G3, G5 and G7 (all 3' sections) - the .bbd file is attached.

FROM:kkennelly DATE:1/23/2003 12:48:08 PM

The logic we use to determine if the structure def has spread or adjacent box beams doesn't work if the box shapes have different widths.

Herman,

Change the code in abgtools LfdLiveLoadDistributionFactorCalcs:: PSBeamAdjacent() to call DoGirderSystemStructDef::IsPsBoxGirderSystemAdjacent().

Then in DoGirderSystemStructDef::IsPsBoxBeamAdjacent(short iGirderNo), change the code to check the gap between beams taking into account the width of the beams adjacent to "iGirderNo". (Right now the code only uses the box width of "iGirderNo".)

Thanks. (Maintenance since this exists in 4.2) "AdjacentPSBeams.bbd" is 5.0 version resembling the bridge Brian attached.

FROM:hlee DATE:2/5/2003 9:33:37 AM

Fixed for 5.0 Beta Build 4.

|                                  |
|----------------------------------|
| Issue ID: 4310                   |
| Subject: Appurtenance ID Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Koenig, David           | 1/31/2003 8:02:26 PM |
| Modified By: administrator            | 6/19/2008 4:10:51 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 1                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:03:15 PM

HRS AASHTO

314

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Friday, January 31, 2003 3:02:26 PM

We are getting a message whenever we validate a structure. The message is a warning and states that no appurtenance ID was assigned to appurtenance location. This message appears multiple times. Whenever we try to run the bridge, it gives the error messages as shown below. Please review the attached file and advise. We are running version 4.1 with all of the service packs.

Error generating LFD/ASD deck commands!

01:58:11 PM - Line 227 in source file D:\Virtis\GUI\abxbrass\BrassStdDeck.cpp.

No. of line loads = 10 (Maximum = 9)

01:58:11 PM - Line 298 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

The number of deck line loads exceeds the maximum allowed by BRASS!

01:58:11 PM - Line 298 in source file D:\Virtis\GUI\abxbrass\EngineExport.cpp.

Error generating LFD/ASD deck commands!

01:58:11 PM - Line 1023 in source file D:\Virtis\GUI\abxbrass\BrassStdDeck.cpp.

FROM:dkoenig DATE:Friday, January 31, 2003 3:07:38 PM

FROM:jduray DATE:Tuesday, February 04, 2003 10:46:52 AM

FROM:mordoobadi DATE:2/19/2003 4:17:45 PM

I do not think the validation warning and the analysis error are related.

FROM:mordoobadi DATE:2/20/2003 10:35:33 AM

There are several concrete railing location objects present in the list that do not show-up in the typical section window because the concrete railing id is null (See below). The warnings are because of this.

CDmConcRailingLoc

```

27 NotModified: 1 3 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE <null>
FALSE
NotModified: 1 4 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>
FALSE
NotModified: 1 5 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE <null>
FALSE
NotModified: 1 6 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>
FALSE
NotModified: 1 7 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE <null>
FALSE
NotModified: 1 8 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>
FALSE
NotModified: 1 9 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE <null>

```

Complete Issue Information

FALSE  
NotModified: 1 10 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 11 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 12 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 13 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 14 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 15 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 16 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 17 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 18 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 19 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 20 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 21 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 22 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 25 4 20201 <null> <null> <null> 0.000000 0.000000 <null> <null> FALSE  
<null> FALSE  
NotModified: 1 26 4 20202 <null> <null> <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 27 4 20201 <null> 2 <null> 0.000000 0.000000 <null> <null> FALSE <null>  
FALSE  
NotModified: 1 28 4 20202 <null> 2 <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 29 4 20201 <null> 1 <null> 0.000000 0.000000 <null> <null> FALSE <null>  
FALSE  
NotModified: 1 30 4 20202 <null> 1 <null> 0.000000 0.000000 <null> <null> TRUE <null>  
FALSE  
NotModified: 1 31 2 20201 <null> 1 <null> <null> <null> <null> <null> TRUE <null> TRUE

Krishna could you please investigate this.

FROM:kkennelly DATE:2/21/2003 2:59:57 PM

I removed the rows with null railing ids from the bridge and sent a repaired bbd file to David via email. Incident 3187 appears to be the same problem. The source of the problem for 3187 was never found.

FROM:kkennelly DATE:2/21/2003 3:13:20 PM

|                |
|----------------|
| Issue ID: 4328 |
|----------------|

### Complete Issue Information

|                                        |                      |
|----------------------------------------|----------------------|
| Subject: Allowable stresses for rebar  |                      |
| Folder: /Virtis/Support Center/Virtis  |                      |
| Primary Contact: Generated, task force |                      |
| Submitted By: McCaffrey, Brian         | 2/7/2003 3:37:18 PM  |
| Modified By: administrator             | 6/19/2008 4:10:49 PM |
| Priority: High                         |                      |
| Category: Bug                          |                      |

### History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Bug         |
| Goodrich, Brian | Assigned    |          | Education   |
|                 | System Test |          | Bug - BRASS |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sw stage 2 dl.txt   |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 4372.12973 | System Test   | Extra dead load added for sidewalks |

### Description

FROM:bmccaffrey DATE:Friday, February 07, 2003 10:37:18 AM

I'm assuming this also applies to 5.0 beta 3 - this was caught in 4.2:

The allowable stress for reinforcement in Virtis is computed based on 0.4 and 0.6 Fy for the inventory and operating levels respectively. The MCEB 2nd edition article 6.6.2.3 bases the allowables on 0.55 and 0.75 Fy. I know that the ASD specs are not being supported anymore but this worked in previous versions of Virtis. See the attached .bbd file from 4.2.

4/19/2016 3:03:16 PM

HRS AASHTO

317



Complete Issue Information

FROM:bmccaffrey DATE:Friday, February 07, 2003 10:55:32 AM

FROM:jduray DATE:Thursday, February 13, 2003 11:25:42 AM

FROM:bgoodrich DATE:Tuesday, February 25, 2003 4:54:36 PM

The BRASS defaults for the allowable stress of rebar are 0.4 and 0.6 for inventory and operating, respectively. These defaults have not changed within the BRASS engine for as long as I've worked with it. The BRASS defaults are fixed and they do not change with the year of construction as allowed in the MCEB. The philosophy in the export so far, is that if the user leaves a field blank in Virtis, the BRASS default will be used. The work-around is to enter the allowable stress ratio. One suggestion is to add a "Compute" button to the Factors tab or revise the export to compute the allowable stress ratio, where both suggestions would be based on the MCEB.

FROM:bgoodrich DATE: Thursday, May 08, 2003 11:48 AM

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]

Sent: Thursday, May 08, 2003 11:48 AM

To: Jim Duray (jduray@mbakercorp.com)

Subject: Incidents 4315 and 4328

Jim,

Please review incidents 4315 and 4328 and let me know how to proceed.

Thanks,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Tuesday, March 16, 2004 12:44:22 PM

Jim - I am assigning this to you to decide what to do.

Issue ID: 4372

Subject: Extra dead load added for sidewalks

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: McCaffrey, Brian 2/19/2003 5:27:16 PM

Modified By: administrator 6/19/2008 4:10:46 PM

Priority: High

Category: Bug - BRASS

4/19/2016 3:03:16 PM

HRS AASHTO

318

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Goodrich, Brian | Assigned | Medium   | Education |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | Medium   | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1061400.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 4410.12935 | Resolved      | Questions regarding BRASS-GIRDER Interaction check (10.48.8.2) |

### Description

FROM:bmccaffrey DATE:Wednesday, February 19, 2003 12:27:16 PM

I've found that either Virtis or BRASS is adding an additional 5% dead load to the sidewalk comps. Is anyone aware of this, and if so, why???

You can check this on any bridge that has a sidewalk. I've attached a file that contains portions of two output files with a summary of the extra 5% below each one.

Both sidewalks are 80" x 10" and on one side of the bridge only. One uses a unit weight of concrete of = 150 lb/ft<sup>3</sup> and one uses 105 lb/ft<sup>3</sup>. Both have 7 girders and have been set to stage 2 loading.

FROM:kkennelly DATE:2/21/2003 2:09:46 PM

I took a quick look at this and I think the portion of the output you are looking at isn't the load per girder, it is the load of the sidewalk on the deck (it's part of the BRASS deck geometry summary).

80" x 10" x 0.150 kcf /144 = 0.833 k for a 1' long strip along the length of the bridge for the 80" sidewalk.

Spread this force over the width of the sidewalk = 0.833 k/ft / (80"/12"perft) = 0.125 k/ft

Further below in the output you should see this load distributed to each of the girders.

4/19/2016 3:03:16 PM

HRS AASHTO

319

Complete Issue Information

That's what I think is happening but I'll let Brian have the final say.

FROM:bgoodrich DATE:Friday, February 21, 2003 5:18:58 PM

Krisha is correct. However, the uniform loads are incorrectly reported in k/ft and should be reported as k/ft^2, which correspond the the Uniform Load input parameter on the DECK-LOAD-UNIFORM command.

WYDOT assigned this issue to BRASS Problem Log 403. I have corrected the units accordingly. Fixed for Beta 5.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 4410                                                          |
| Subject: Questions regarding BRASS-GIRDER Interaction check (10.48.8.2) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 2/28/2003 9:55:31 PM |
| Modified By: administrator            | 6/19/2008 4:10:43 PM |
| Priority: Medium                      |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Friday, February 28, 2003 4:55:31 PM

Submitted for Brian McCaffrey:

Can you tell me where the 'CLV' term comes from in the following intermediate BRASS output:

Checking AASHTO 10.48.8.2 - Interaction - Combined shear & Bending Moment  
Strength Rating Factor - Flexure (Negative Action) - TOP OF SECTION

4/19/2016 3:03:16 PM

HRS AASHTO

320

Complete Issue Information

Applied Actions:

Dead Load Moment (DLM) = -2558.94 (ft-kips)  
 Live Load Moment (LLM) = -828.27 (ft-kips)  
 Dead Load Shear (DLV) = 103.15 (kips)  
 Live Load Shear Concurrent  
 w/ Critical Moment (CLV) = 52.14 (kips)

What is the 'Critical Moment'???

I've attached the Virtis 4.2 .bbd file.

FROM:bgoodrich DATE:Friday, February 28, 2003 4:58:18 PM  
WYDOT has assigned this issue to BRASS Problem Log 412.

FROM:bgoodrich DATE:Monday, March 10, 2003 2:06:50 PM  
Dan Glandt wrote the following response:

"The critical moment is the maximum live load moment (either positive or negative) at the point of interest. CLV is the shear that occurs with that moment. I.e., it is the shear caused by the truck sitting in the position that causes the maximum moment). We refer to it as the concurrent shear with the max moment.

Concurrent actions can be output by coding a 3 or 4 in parameter 1 of the DEAD-LOAD command."

FROM:bgoodrich DATE:Monday, March 10, 2003 2:09:22 PM  
In Virtis, the concurrent actions are controlled by the engine properties for the analysis event. See the Action Output Level drop-down box on the Output tab of the BRASS-Standard Analysis Event Properties window.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 4437                                                             |
| Subject: Madero/Timber issues (option to consider as simple or continuous) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Jones, Daniel           | 3/4/2003 3:59:32 PM  |
| Modified By: administrator            | 6/19/2008 4:10:41 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Assigned  | High     | Enhancement |
|                 | Suspended |          |             |

4/19/2016 3:03:17 PM

HRS AASHTO

321

Complete Issue Information

|            |           |      |             |  |
|------------|-----------|------|-------------|--|
|            | Resolved  |      |             |  |
| Duray, Jim | Resolved  | High | Enhancement |  |
| Duray, Jim | Assigned  | High | Enhancement |  |
|            | Suspended |      |             |  |
| Duray, Jim | Suspended | High | Enhancement |  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 4438.12907 | Suspended     | Madero/Timber issues (include runners and multiple layer decks) |

Description

FROM:hlee DATE:3/4/2003 10:55:44 AM

Item 3 in VI 4368:

3. reduces moment by 20% to include continuous effects. Our policy is to consider timber as simply supported. Should have option to consider as simple or continuous. (will need a key in Virtis)

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 4438                                                           |
| Subject: Madero/Timber issues (include runners and multiple layer decks) |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Jones, Daniel | 3/4/2003 4:02:40 PM  |
| Modified By: administrator  | 6/19/2008 4:10:41 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Unknown     |
|                  | Assigned           |          | Bug         |
| Kennelly, Krisha |                    |          |             |
| Duray, Jim       |                    |          |             |
| Kennelly, Krisha | Information Needed |          |             |
|                  | Suspended          |          | Enhancement |
| Kennelly, Krisha | Suspended          | High     | Enhancement |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4460.12885 | Suspended     | Timber Stability Factor |

### Description

FROM:hlee DATE:3/4/2003 10:59:36 AM

Item 4 in VI 4368:

4. Need to have capability to include runners and multiple layer decks. runners effect deck rating and multiple layer deck effects deck rating and stringer dist. factors. Both will double deck ratings because you consider the load distributed over 2 planks. (will require modifications to virtis as well as Madero)

4/19/2016 3:03:17 PM

HRS AASHTO

323

Complete Issue Information

|                                  |
|----------------------------------|
| Issue ID: 4460                   |
| Subject: Timber Stability Factor |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Jensen, Paul            | 3/13/2003 12:51:39 PM |
| Modified By: administrator            | 6/19/2008 4:10:39 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:3/13/2003 8:51:04 AM  
(From incident 4457. See that incident for attachments, bbd files, etc.)

The stability factor for beam is not available for input. The value is used in the calculation and it shows up on the factor summary sheet.

Analysis Point: 105

Complete Issue Information

Section Dimensions (in)

Depth 17.500 Width 7.750

Load Dur.

or

| Design Stresses (ksi)     | Unfact. Stress | Moist. Factor | Size Factor | Stab. Factor | Shear Factor | Percent Fact. Stress |
|---------------------------|----------------|---------------|-------------|--------------|--------------|----------------------|
| Flexure, ten zone in ten  | 1.550          | 1.00          | 0.96        | 1.00         | 1.15         | 1.00 1.712           |
| Flexure, comp zone in ten | 1.550          | 1.00          | 0.96        | 1.00         | 1.15         | 1.00 1.712           |
| Horizontal Shear          | 0.085          | 1.00          | N/A         | N/A          | 1.00         | 1.00 0.098           |
| Comp. Perp. to Grain      | 0.730          | 0.67          | N/A         | N/A          | N/A          | 1.00 0.489           |

Stability factor shares the calculation with the flat factor. Both values should be exposed for edit and use in Madaro.

FROM:kkennelly DATE:3/13/2003 8:59:16 AM

FROM:jduray DATE:3/13/03 2:25:06 PM  
Kirsha - Is this with regard to timber decks?

FROM:jduray DATE:3/13/03 2:26:45 PM

FROM:kkennelly DATE:3/13/2003 3:39:56 PM  
It's just for beams, not decks. We use to have this attribute but removed it. See Incident 2878. (I'm not sure what Paul means when he says "Stability factor shares the calculation with the flat factor". They seem to be 2 distinct items to me. Beam stability factor from AASHTO 13.6.4.4 and flat use factor from Table 13.5.1A)

FROM:pjensen DATE:Friday, March 14, 2003 10:49:58 AM  
in the output of the Madaro, the column for stability and flat are the same with different headings. in the timber girder and the decks the flat attribute is in both screens. We are questioning why is the stability factor is not showing up in the grider screen and the flat removed?

FROM:jduray DATE:3/14/03 3:18:48 PM

FROM:kkennelly DATE:3/14/2003 3:51:30 PM  
As incident 2878 explains, Virtis has never had the Beam Stability Factor. The stability factor should be entered on a per span basis but Madero does not accept the stability factor on a per span basis. So a decision was made in the development of Virtis Version 4.0 to not have that attribute. I guess it's an enhancement if you want to add it to Virtis. Madero will also need enhanced to use this factor properly if Madero still doesn't accept it on a per span basis.

I'm still not sure what you are asking about the flat factor. Are you saying we should remove the flat factor from the Beam Details window?

FROM:pjensen DATE:Thursday, March 27, 2003 6:26:06 PM

Issue ID: 4468



### Complete Issue Information

Subject: Bridge Routing Results and Pontis Rating windows

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Generated, task force  
Submitted By: Ordoobadi, Mehrdad 3/14/2003 1:32:23 PM  
Modified By: administrator 6/19/2008 4:10:38 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact                     | Status    | Priority | Category     |
|-------------------------------------|-----------|----------|--------------|
| Duray, Jim                          | New       | High     | Bug          |
| Kennelly, Krisha<br>Goodrich, Brian | Assigned  |          | Bug - Madero |
|                                     | Open      |          |              |
| Ordoobadi, Mehrdad                  | Suspended |          | Enhancement  |
| Ordoobadi, Mehrdad                  | Suspended | High     | Enhancement  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 4480.12865 | Suspended     | Incorrect span calculation for deck |

### Description

FROM:mordoobadi DATE:3/14/2003 9:30:21 AM

Bridge Routing Results and Pontis Rating windows do not consider deck rating results in their report.

4/19/2016 3:03:17 PM

HRS AASHTO

326

Complete Issue Information

FROM:jduray DATE:3/20/03 9:46:43 AM  
We will have to determine if they should.

|                                              |
|----------------------------------------------|
| Issue ID: 4480                               |
| Subject: Incorrect span calculation for deck |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Jensen, Paul            | 3/17/2003 10:49:45 PM |
| Modified By: administrator            | 6/19/2008 4:10:38 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:pjensen DATE:Monday, March 17, 2003 6:49:46 PM  
Well we are getting better- the calculation for the non-overhang (and probably the overhang) is not using the correct value for the span. It looks like it is using the actual span distance instead of the value in 3.25.1.2 (clear span + one stringer not to exceed clear span + depth of flooring).

4/19/2016 3:03:18 PM

HRS AASHTO

327

Complete Issue Information

FROM:jduray DATE:3/18/03 2:45:31 PM

Krishna - is there enough info here for you to know what Paul is referring to?

FROM:kkennelly DATE:3/18/2003 4:01:31 PM

AASHTO 3.25.1.2 regards the distribution of wheel loads on transverse timber flooring. This problem must be with the span length either the Madero export or Madero uses to compute the bending moment in the deck for rating the deck.

FROM:bgoodrich DATE:Wednesday, March 19, 2003 11:30:04 AM

Madero follows AASHTO 3.25.1.2 for the main deck span and reports the Effective Deck Span in the output file.

For the overhang, Madero computes the effective span length as:

$$L(\text{eff}) = \text{Overhang} - b/2 + b/4 = \text{Overhang} - b/4$$

where b = Stringer Width

The overhang distance is reported in the output file, but not the effective overhang span, which is used to calculate the dead load moments.

The new Madero DLL and OCX files posted on the FTP server correct the tire width problem, which was causing high live load moments.

Please send specific information that illustrates where Madero may be wrong with respect to this incident.

FROM:pjensen DATE:Wednesday, March 19, 2003 12:04:54 PM

using the timber/timber definition from 4457, the span is 32", the girder width is 7.75 wide, deck is 2.75 thick. The clear span (span from edge of girder to edge of girder) is  $32 - 7.75 = 24.25$ . Now for the span def from the code it is:

$24.25 + 7.75$  (2-1/2 girder widths) NOT TO EXCEED  $24.25 + 2.75$  (depth of the deck)  
 $32 > 27$  so the span width is 27".

FROM:bgoodrich DATE:Wednesday, March 19, 2003 12:40:17 PM

Here is what I get when running Madero (see => below):

WHEEL LOAD DISTRIBUTION WIDTH CALCULATIONS (per AASHTO 16th ed. 3.25)

Input Data:

Number of Lanes = 1  
Deck Type = Plank Deck  
Deck Thickness = 2.750 (in)  
Deck Member Width = 10.000 (in)  
Stringer Spacing = 2.670 (ft)  
Stringer Width = 7.750 (in)

Output data:

=> Effective Deck Span = 2.253 (ft)  
Distribution Width Perpendicular to Deck Span = 11.500 (in)  
Distribution Widths in Direction of Deck Span:

4/19/2016 3:03:18 PM

HRS AASHTO

328

Complete Issue Information

|           |            |        |             |
|-----------|------------|--------|-------------|
| CUSTOM I  | Load Group | HS Trk | 20.000 (in) |
| CUSTOM II | Load Group | HS Trk | 20.000 (in) |

$$L(\text{eff}) = 2.67 - 7.75/12 + 2.75/12 = 2.253 \text{ ft} = 27.04 \text{ in}$$

Do you get these same results?

FROM:bgoodrich DATE:Wednesday, March 19, 2003 2:15:03 PM

E-mail from Paul:

that is what the output says but when the non-factored LL moment is calculated it appears to be using 32".

I get:

32" => 5.5 ft-kips (Madero 5.65)

27" => 4.25 ft-kips

I am using  $R(a+r/(2w))$  for the moment calc.

FROM:bgoodrich DATE:Wednesday, March 19, 2003 2:15:41 PM

I am getting the following HS20 live load moments from Madero:

| Live Load | one  | multiple |
|-----------|------|----------|
|           | lane | lanes    |
| HS Trck   | 4.26 | 0.00     |

For the H20 truck, Madero gives 5.68 ft-kips.

FROM:bgoodrich DATE:Wednesday, March 19, 2003 2:57:15 PM

E-mail from Paul:

that is after the .8 reduction for continuous- I am saying is that the 5.68 value is too high- the 5.68 is based on what values for load,span, wheel width and moment equation?

FROM:bgoodrich DATE:Wednesday, March 19, 2003 2:59:14 PM

Madero determines the moment for the H20 truck using the following:

Wheel Load (P) = 16 kips

Effective Span Length (L) = 2.253 ft = 27.04 in

Tire Width (T) = 20 in

The moment calculation considers the wheel load to be distributed over the tire width and applied to the effective span length, which yields the following equation for the reaction and moment:

$$R = P/2$$

$$M = R(L/2 - T/4)$$

Plugging the terms into the equations yield:

$$R = 16 / 2 = 8 \text{ kips}$$

$$M = 8 (27.04/2 - 20/4) = 68.16 \text{ in-kips} = 5.68 \text{ ft-kips}$$

Madero does NOT consider the footnote in AASHTO Figure 3.7.6A for the H type trucks. However,

4/19/2016 3:03:18 PM

HRS AASHTO

329

## Complete Issue Information

Madero does consider the 24-kip axle part of the footnote in MCEB Figure 6.7.2.1, which applies to HS type trucks. Could this be the source of the difference?

Also, note that the 0.8 factor is only applied if you check the "Deck continuous over more than 2 spans" box on the Deck window.

FROM:bgoodrich DATE:Wednesday, March 19, 2003 3:36:02 PM  
E-mail from Paul:

'looking closer to your input file the problem is in the input file- HS 20 truck on timber has a load of 24 kips. The note on the bottom of Figure 3.7.7a says:  
"In design of timber floors and orthographic steel decks (excluding transverse beams) for H 20 loading, on axle load of 24,000 pounds or two axle loads 16,000 pounds each, spaced 4 feet apart may be used, whichever produces the greater stress instead of the 32,000-pound axle shown."

We are using that as the controlling value for the axle loads for an HS 20 truck.'

this will cause a problem with our ratings- What is the workaround solution?

FROM:bgoodrich DATE:Thursday, March 20, 2003 5:23:29 PM

I think we are narrowing down the issue. It appears you would like Madero to consider the "In the design of timber floors..." footnotes associated with AASHTO Figures 3.7.6A and 3.7.7A with respect to the H20 and HS20 trucks, respectively. Madero already uses the 24 kip axle part of the footnote for an HS20 truck instead of the actual 32 kips. However, Madero uses the actual 32 kip axle for an H20 truck. The export could detect the H20 truck and modify the axle weights for the deck rating only. However, what if a user does not wish to exercise the footnotes? Robert Fulton does not want Madero to reduce the HS20 axle weight for the deck rating, so it looks like the user need to have control over which axle weight is used. Am I correct in stating what you want Madero to do?

I cannot come up with any work-around that would affect the deck rating only. If the axle weights are modified to correct the deck ratings, all the girder ratings would then be in error.

FROM:bgoodrich DATE:Thursday, March 20, 2003 5:24:07 PM  
E-mail from Paul (3/19/03):  
yep-

FROM:bgoodrich DATE:Thursday, March 20, 2003 5:24:54 PM

We have one user that wants Madero to take the H20/HS20 axle weight reduction for deck rating and another who does not. Therefore, the user must be able to control the H20/HS20 axle weight reduction for deck rating. The most likely solution to this is adding an option to the engine properties. I suggest using the structure definition engine properties and just adding a Deck group box to the engine properties dialog that is displayed. The export would then generate a command that Madero would interpret to determine if the full or reduced axle weight should be used. I will prepare an estimate on what it will take to implement this.

FROM:bgoodrich DATE:Tuesday, March 25, 2003 1:58:04 PM

The following discussion outlines the technical issues related to implementing control over the footnotes of AASHTO Figures 3.7.6A and 3.7.7A.

4/19/2016 3:03:18 PM

HRS AASHTO

330

Complete Issue Information

1. Modify the Madero engine to consider the footnote for the H20 truck. This would be controlled by a new parameter on the CONTROL command. Madero would have to detect the H20 truck as one of the three special trucks permitted in Madero.
2. Modify the Madero engine properties with a field for specifying if AASHTO Figures 3.7.6A and 3.7.7A are to be exercised when appropriate. This would include modifications to the AboMadero and AbxMadero2 projects.
3. Modify the Madero export to write the new parameter to the CONTROL command.

I estimate 16 hours to implement this capability.

Assumptions: Only the "one axle load 24,000 pounds" portion of the footnote will be considered in this implementation. The "two axle loads of 16,000 pounds each" will NOT be.

FROM: bgoodrich DATE: Tuesday, March 25, 2003 3:24:51 PM

For the version 5.0 release, the footnotes of Figures 3.7.6A and 3.7.7A will not be considered. The full axle weight will be utilized by Madero in the deck ratings. The work-around is to specify an H or HS type truck with reduced axle weights as defined in the library or the temporary vehicles.

I spoke with Jim and he has decided to make the footnote options an attribute of the deck in Virtis. This will probably not be available in the initial Virtis 5.0 release, but may be available in the first service pack. Due to this decision, my estimate for the engine and export work will be about 4 hours.

Mehrdad - Jim will be discussing this incident with you regarding the attribute. The attribute could be named "Axle Weight Reduction" for deck rating. It pertains to the figures discussed above.

FROM: jduray DATE: 3/25/03 3:45:29 PM

Mehrdad - can we get this into the db for future use? If it is a big deal to do now then we should add it for the Sept release after 5.0 is finished.

FROM: pjensen DATE: Thursday, March 27, 2003 6:21:37 PM

Issue ID: 4493  
 Subject: ASD - Negative Liveload analysis in deadload positive region

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Barnhill, Gale 3/20/2003 9:22:24 PM  
 Modified By: administrator 6/19/2008 4:10:37 PM  
 Priority: High  
 Category: Bug - BRASS

History

4/19/2016 3:03:18 PM

HRS AASHTO

331

Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          | Bug      |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SCREEN-0003.jpg     |             |
|      | SCREEN-0000.jpg     |             |
|      | SCREEN-0005.jpg     |             |
|      | SCREEN-0004.jpg     |             |

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 4536.12810 | Resolved      | Cannot save vehicle to Access databases. |

Description

FROM:gbarnhill DATE:Thursday, March 20, 2003 5:22:24 PM

I received the attached file from LA County (Ken Ho).

Look at Member G2, Mem Alt Interior I Beam.

This is a 6 span composite steel with 2 hinges in span 2 and span 5.

Ken gets a very low ASD Inv rating at 4/10 span 6.

It appears BRASS is checking stresses for Negative Liveload at that point. In this case, the Negative HS20 Truck Liveload is -307.42 kf. The total stage1 and stage2 deadload is +306.86 kf.

Virtis reports an ASD Inv RF of 0.518

I copied the MemAlt and increased the Haunch Z1 and Z2 dimensions by 1/2 inch in span 6. This increased the total deadload moment to +314.9 kf. Virtis now reports an Inv RF of 1.626

The bbd attached is 5.0.0 beta 6.

FROM:bgoodrich DATE:Friday, May 09, 2003 6:05:41 PM

WYDOT will assign this issue to BRASS Problem Log 433.

FROM:bgoodrich DATE:Friday, June 27, 2003 5:29:17 PM

4/19/2016 3:03:18 PM

HRS AASHTO

332

## Complete Issue Information

BRASS-GIRDER™ was using the sign of the total moment to determine if the rating factors for positive and negative bending should be calculated for steel sections. By using the total moment, a critical rating factor was not being calculated. When calculating rating factors, the sign of only the live load moment should be considered. This issue was corrected. Now increasing the dead load reduces the rating factor at the interior support, which is the expected result. This issue has been addressed in BRASS-GIRDER 5.8.7, which is to be released with Virtis 5.0.1.

FROM:gbarnhill DATE:Thursday, July 10, 2003 2:12:27 PM

In 5.0.1 Beta - 7 July - I now see the same RF (0.518) even if I increase the haunch dimensions to increase the DL to more than neg LL.

I tried a different approach. I changed the Counterflexure location in Span 6 to .41 instead of .30 (Engine Prop of Member Alt). Now I get a very high RF (3.295) at 4/10 span 6. The neg LL moment is still more than the total DL pos moment.

FROM:jduray DATE:7/10/03 2:58:59 PM

Changed status to Resubmit for Gale.

FROM:bgoodrich DATE:Monday, July 14, 2003 12:50:01 PM

When the dead load contraflexure location is changed from 30% to 41%, the section at 4/10 of span 6 changes from one that includes the slab+beam to one that only includes the rebar+beam. Additionally, section codes generated for the STEEL-GIRDER-CONTROL commands change for the range that includes the 604 POI, i.e., section code 4 (positive flexure check) changes to 5 (negative flexure check). There are shear connectors defined over the entire 6th span, so it seems like the composite section (slab+beam) should be considered. The bottom line is how you want BRASS to analyze the 604 POI, i.e., for positive flexure or negative flexure.

FROM:bgoodrich DATE:Tuesday, July 15, 2003 2:39:45 PM

The original issue has been addressed. The new issue will require more investigation and possibly modifications to BRASS. I moved this new issue to Incident 4687.

FROM:gbarnhill DATE:Tuesday, July 15, 2003 3:59:02 PM

The original issue report is OK in 5.0.1 July 7 beta

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:21:32 PM

Track field marked with "gale OK 5.0.1 July 7 beta".

FROM:bgoodrich DATE:Tuesday, July 29, 2003 1:21:44 PM

Closed.

FROM:bgoodrich DATE:Monday, October 13, 2003 10:04:40 AM

The correction to the BRASS engine that addressed this incident has been removed as directed by WYDOT in the following e-mail:

Begin e-mail -----

Please undo the fix which was performed for Problem Log #433 and create a new BRASS-GIRDER DLL using version 5.8.7.1. If work is done on ASD in BRASS-GIRDER, Problem Log #433 will be reinstated and the bugs it created will be fixed. This also pertains to Virtis Incidents 4687, 4772, and 4794. Problem Log #433 will remain open.

4/19/2016 3:03:18 PM

HRS AASHTO

333



Complete Issue Information

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager  
End e-mail -----

By addressing this incident, a section of the BRASS engine was being executed that gave incorrect ASD ratings, i.e., rating the deck slab for compression when it was in tension.

This incident will be suspended until WYDOT authorizes its correction again.

FROM:gbarhill DATE:Thursday, October 23, 2003 8:45:19 AM  
I've called Ken Ho at LA County and advised him of the "unfix". He understands the situation.

FROM:gbarhill DATE:Monday, January 12, 2004 11:21:44 AM  
Verified that the "FIX" is undone in v5.1.1. I get the original results.

Issue ID: 4536  
Subject: Cannot save vehicle to Access databases.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 4/1/2003 6:16:07 PM  
Modified By: administrator 6/19/2008 4:10:33 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:hlee DATE:4/1/2003 2:01:17 PM

Submitted on behalf of Osiris Quintana (oquintana@triangleassociates.cc):

User cannot save new vehicle to Access databases (Sample and Production) in Virtis 4.1 Demo.  
Please see attached bitmaps.

I got the same error message for Access, but Sybase databases are OK.

FROM:jduray DATE:4/8/2005 11:59:00 AM

Access DB is no longer supported, therefore, change status to Resolved.

Issue ID: 4549

Subject: RC Tee girder - low shear capacity

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Barnhill, Gale

4/10/2003 3:34:03 PM

Modified By: administrator

6/19/2008 4:10:32 PM

Priority: Urgent

Category: Bug - BRASS

History

4/19/2016 3:03:19 PM

HRS AASHTO

335

### Complete Issue Information

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Duray, Jim      | New      | High     | Bug            |
| Lee, Herman     | Assigned |          |                |
|                 | Resolved |          | Bug - Warranty |
| Lee, Herman     | Resolved | High     | Bug - Warranty |

### Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 4555.12791 | Resolved      | distribution factors for tmb stringers with concrete deck |

### Description

FROM:gbarnhill DATE:Thursday, April 10, 2003 11:34:03 AM

This bridge came from Ken Ho in LA County.

It's a two span RC Tee constant 48 inch deep section.

In an HS20 LFD analysis (member G2), shear at 0.7 governs.

The "d" value used at C.P. 0.6, 0.7 and 0.8 is 24.956.

At 0.9 and 2.0 the "d" is 45.650.

FROM:bgoodrich DATE:Friday, May 09, 2003 5:58:27 PM

WYDOT will assign this issue to BRASS Problem Log 428.

FROM:bgoodrich DATE:Friday, November 28, 2003 8:16:47 PM

This issue has been moved to BRASS Problem Log 447.

FROM:bgoodrich DATE:Monday, January 12, 2004 11:39:35 AM

This issue is currently being worked on in the BRASS engine. Incident 4950 was submitted and pertains to the same issue as this incident.

FROM:bgoodrich DATE:Friday, January 30, 2004 3:58:22 PM

Anthony Gugino reported this issue with several of Caltrans R/C bridges. Jim Duray requested the BBD files for those bridges.

FROM:bgoodrich DATE:Wednesday, February 04, 2004 11:32:59 AM

4/19/2016 3:03:19 PM

HRS AASHTO

336

Complete Issue Information

E-mail from Vinacs (2/4/04):

Brian

I am sending four models with this e-mail. Please use these to check the latest version of the Virtis. I am going over every bridge that our engineers identified as problem bridges prior to send you.

As we mentioned earlier to Jeff, we are trying to analyze the bent caps for a SUPER LOAD. We used our Caltrans' standard software to rate the superstructure. Since our software will not rate the sub structure, we use the Virtis/BRASS program.

For the bent cap analysis, we created a fictitious truck that has the gage width of the Actual SUPER LOAD truck as the rating truck. See the word document. The wheel load is kept as 100 kips for simplicity.

(See attached file: BridgeDescription.doc)(See attached file: 54-0772RCal.bbd)(See attached file: 54-0780RCal.bbd)(See attached file: 55 0524Cal.bbd)(See attached file: 56-0175LCal.bbd)

If you have any questions, please feel free to call me at 916-227-8657 or e-mail to me.

I will send other files as soon as I checked them

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: Monday, February 09, 2004 11:47:11 AM

The calculation of the shear depth in BRASS-GIRDER has been revised to be taken as the distance from the compression fiber to the centroid of the reinforcement in the opposite face. I'm not sure when this version of BRASS-GIRDER will be released. I will add v5.2.0 to the tracking field for now.

Issue ID: 4555  
Subject: distribution factors for tmb stringers with concrete deck

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Jones, Daniel 4/16/2003 9:32:29 PM  
Modified By: administrator 6/19/2008 4:10:32 PM  
Priority: High  
Category: Bug - Warranty

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:03:19 PM

HRS AASHTO

337

## Complete Issue Information

### Contacts

| Name          | Company        | Email 1                                                                              | Phone 1       |
|---------------|----------------|--------------------------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech     | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>                 | (402)363-9515 |
| Shyam Shah    | Louisiana DOTD | <a href="mailto:sshah@dotdmail.dotd.state.la.us">sshah@dotdmail.dotd.state.la.us</a> | 225-379-1329  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 012990.bbd          |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4556.12790 | Accepted      | distribution factors |

### Description

FROM:rfulton DATE:Wednesday, April 16, 2003 5:32:29 PM

Input timber stringer span with concrete deck. When I hit the calculate distribution factors for the stringers nothing happened, the fields were blank.

FROM:hlee DATE:4/21/2003 10:52:47 AM

Code fixed for Version 5.0 Service Pack 1.

Issue ID: 4556

Subject: distribution factors

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Shah, Shyam             | 4/17/2003 3:32:25 PM |
| Modified By: administrator            | 6/19/2008 4:10:32 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Education |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          |           |
|                 | Closed   |          |           |
| Goodrich, Brian | Closed   | Medium   | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 4560.12786 | Closed        | How does BRASS calculate the top and bottom flange stresses? |

### Description

FROM:snshah DATE:Thursday, April 17, 2003 11:32:26 AM

This is a R/C concrete deck girder bridge. The Girder spacing is 12'. According to AASHTO table 3.23.1 (footnote f) the distribution factor should be the reaction at the girder from treating the deck like a simple beam between the girders. The value for "multi-Lane" Virtis computes from the typical section is not correct. Not only is it not correct but also it is less than the single lane distribution factor Virtis calculates (Virtis single lane distribution factor is correct). I think Virtis may be doing some thing wrong in calculating the multi lane distribution factor when the aforementioned footnote f applies. If not then I have something set wrong, could you please look into it for me. Thank you.

4/19/2016 3:03:19 PM

HRS AASHTO

339

Complete Issue Information

P.S. We are still using 4.1.1

William J. Metcalf Jr.  
Louisiana Department of Transportation and Development  
Bridge Design - Bridge Rating Unit  
1201 Capitol Access Rd.  
Baton Rouge, La. 70804  
Ph (225)-379-1741  
Fax (225)-379-1786

FROM:kkennelly DATE:4/18/2003 9:55:14 AM

A work around to your problem is to input only one travelway on the StructureTypical Section: Lane Position tab instead of the 3 you have defined. The 1 travelway's left distance should be -18 and the right distance is +18.

I'll try to figure out why the 3 travelways doesn't work right.

FROM:kkennelly DATE:4/18/2003 10:08:41 AM

Code is not checking for adjacent travelways. It assumes that if there is more than 1 travelway, it is because there is something like a median separating the travelways so it only searches for the travelway directly above the member. The way the travelways are defined for this bridge causes there to be only 1 12' lane considered.

FROM:kkennelly DATE:4/18/2003 11:32:21 AM

Code fixed for Version 5.0 Service Pack 1.

FROM:gbarnhill DATE:Tuesday, June 24, 2003 5:39:54 PM

I created a girder system with 4 girders at 15 ft spacing and defined 3-12 ft travelways centered over the girders.

In 5.0.0, the multilane DF computed at 1.533 for Girder 2 (Virtis used only the one 12 ft lane over that girder).

In 5.0.1, the multilane DF computed at 2.667 (the original lane over the girder plus the lane in between Girders 2 and 3).

If this is a test of the situation described, then this incident is fixed in 5.0.1.

Issue ID: 4560

Subject: How does BRASS calculate the top and bottom flange stresses?

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Hart, Erich

4/23/2003 3:26:47 PM

Modified By: administrator

6/19/2008 4:10:31 PM

Priority: Medium

Category: Education

4/19/2016 3:03:20 PM

HRS AASHTO

340

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | Medium   | Help     |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | Medium   | Help     |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0162040.bbd         |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 4579.12767 | Resolved      | Compactness at the Pier check off option |

### Description

FROM:bgoodrich DATE:Wednesday, April 23, 2003 11:26:47 AM  
Entered for Ken Teng:

Could you tell me how the BRASS calculates the ftop and fbot? Attached is the file I investigate.  
Below is some of data from attachment.

This begins the analysis for moment capacity for truck no. 1, Load Level No. 1

Stage No. 3 Analysis point number 305.000

This begins the analysis for positive moment capacity

PERFORMING AASHTO SPECIFICATION CHECKS - 10.50(b) Depth of Web in Compression Dc

Input Parameters:

Depth = 35.850 in    Distance to Web Bot = 0.940 in    f bot = 9.949 ksi

Distance to Web Top = 34.910 in    f top = -1.045 ksi

4/19/2016 3:03:20 PM

HRS AASHTO

341



Complete Issue Information

My approach: ftop

Stage 1:  $M=1.3*24.4$  (T)

Stage 2:  $M=1.3*4.3$  (T)

Stage 3:  $M=1.3*1.67*286.6$  (C)

Using  $f$  (stress) =  $M*c/l$  where  $l$  &  $c$  are different for each stage.

$f_{top} = f_1 + f_2 + f_3$

Thank you,

Regards,

Ken Teng  
RQAW Corp.  
(317) 255-6060 X 260

FROM: bgoodrich DATE: Wednesday, April 23, 2003 11:28:42 AM  
From Dan Glandt:

BRASS calculates the stress at the top and bottom of the steel girder for each stage using the factored loads and the  $I$  and  $c$  for each stage.

Note that in this case the moments in stage one and stage 2 are negative but for the situation questioned, the positive live load moment is used.

Therefore in stage 2, since the moment is negative, the section is considered non composite as the deck does not have rebar and is ineffective for negative moment. This is a limitation of BRASS in that a cross section must either be considered as composite for positive moment or composite for negative moment. The cross section at the 3.5 is coded without rebar. The moment of inertia used for stage 1 and stage 2 is 9040 in<sub>4</sub>.

I think this may explain the question.

Note that running the data set and using an HS20 truck from our library and a rolled section WN36x150 from our library, the following results were obtained on version 5.8.6.

This begins the analysis for moment capacity for truck no. 1, Load Level No. 1

Stage No. 3 Analysis point number 305.000

This begins the analysis for positive moment capacity

PERFORMING AASHTO SPECIFICATION CHECKS - 10.50(b) Depth of Web in Compression Dc

Input Parameters:

4/19/2016 3:03:20 PM

HRS AASHTO

342

Complete Issue Information

Depth = 35.850 in Distance to Web Bot = 0.940 in f bot = 9.964 ksi

Distance to Web Top = 34.910 in f top = -1.042 ksi

x-bar Computation: (Similar Triangles)

x-bar = Depth \* f bot / (f bot - f top) = 32.456 in

If this does not answer the concern, please advise and we will investigate further.

FROM:bgoodrich DATE:Wednesday, April 23, 2003 11:30:44 AM  
From Ken Teng:

Thanks for the help. Dan has completely answered my concern.

|                                                   |
|---------------------------------------------------|
| Issue ID: 4579                                    |
| Subject: Compactness at the Pier check off option |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Best, Richard           | 5/2/2003 4:43:25 PM  |
| Modified By: administrator            | 6/19/2008 4:10:30 PM |
| Priority: Medium                      |                      |
| Category: Help                        |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Friday, May 02, 2003 12:43:25 PM

4/19/2016 3:03:20 PM

HRS AASHTO

343

Complete Issue Information

E-mail from Richard Best (5/2/03):

I was wondering if someone can explain the "Compactness at the Pier" check off option which is found in the Engine properties for LFD. The short paragraph on the F1 - Help screen isn't too explanatory. We have a new bridge that was designed having plastic section in the positive moment region. VIRTIS is giving a low rating and the output suggests that  $M_p$  was not used in the determination of  $\mu$ . When I check off the Compactness at Pier option then the analysis does seem to give us the correct rating and  $M_p$  was used in the output as prescribed by AASHTO equation 10-129c.

Should we assume that we need to check off this option whenever we want the analysis to consider 10-129a and 10-129c? Attached is a copy of the bridge in question (VIRTIS / OPIS 5.0).

FROM: bgoodrich DATE: Friday, May 02, 2003 12:44:39 PM

The answer to your question is yes. You must check the compact checkbox for each span in which the pier sections are compact, so BRASS will utilize equations 10-129b and 10-129c. If you don't check these, then the non-compact moment capacity will be determined. The link to the STEEL-GIRDER-CONTROL command is helpful if you review the Section Type parameter description.

Update the "Member Alternative Properties: Analysis - Compactness at the Pier" help topic for the BRASS LFD engine help to be more descriptive.

FROM: bgoodrich DATE: Thursday, July 10, 2003 1:29:20 PM

I updated the help topic with the following:

"By default, the piers are considered to be non-compact in the engine properties, which causes BRASS to analyze the section at this point as non-compact. If however, the section at this point is compact and the adjacent pier sections are selected as compact, BRASS will utilize AASHTO Equations 10-129b and 10-129c to achieve a capacity somewhere between the yield and plastic moments."

I forwarded the new "GIRDER(LFD) PROPERTIES.HLP" help file to Baker (dated 7/10/03). Fixed for version 5.0.1.

Issue ID: 4588

Subject: Conversion of Virtis 4.2 to 5.0 Problem for Prestress Girders

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Lutgen, Ed

5/7/2003 4:05:29 PM

Modified By: administrator

6/19/2008 4:10:29 PM

Priority: Urgent

Category: Bug - BRASS

4/19/2016 3:03:20 PM

HRS AASHTO

344

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Lee, Herman        | Assigned |          | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resubmit |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 4620.12726 | Resolved      | Low rating in TrainingBridge3 using BRASS LFD |

### Description

FROM:bgoodrich DATE:Wednesday, May 07, 2003 12:05:29 PM  
E-mail from Ed Lutgen (5/5/03):

Hello Brian,

Kevin Western just came back from a Virtis/Opis TAG meeting and mentioned to give you a buzz on some problems we are having validating the upgrade from 4.2 to 5.0. From my initial comparisons it appears steel bridges compare quite well but prestressed beam bridges seem to generally rate lower. About 35% of prestressed bridges rate lower by atleast 5%. Some of the reductions I have traced to improvements like AASHTO equation 9-27 for prestressed girder shear. Causes for other reductions I have not been able to track due to lack of output calculations. I have attached identical Virtis files that the inventory rating factor reduces in the upgrade from 0.916 to 0.763. In this example the moment due to prestressing reduced from 2039k' to 1938k'. Also the compression stress at the bottom of beam due to prestressing reduced from 3265 psi to 3103 psi. This would lead me to believe there is less effective prestressing due from more losses since the input is the same. I talked to Dan Glandt on his last day before retirement and he said the stage 2 creep prestress loss affects have been fixed. This adjustment would only increase the rating (decrease creep thus increase prestress). Also according to your release notes Bridgetech fixed several errors in prestressing bridges based on New Mexico SHTD testing. Dan thought that this was Fcr in the Elastic shortening formula. I

4/19/2016 3:03:20 PM

HRS AASHTO

345

Complete Issue Information

have included an export file from virtis for version 4.2 and 5.0. Could you take a look at the two attached files and tell me what calculations changed from the versions? If you want I can run a mathcadd program or conspan that calculates the prestress losses. Hopefully there is an explanation that makes sense for the reduction that I can correct.

Thanks in advance for your time and effort.

Ed Lutgen  
MnDOT Asst Rating Engineer  
651-747-2124

FROM:bgoodrich DATE:Wednesday, May 07, 2003 12:07:39 PM  
I have reviewed the bridges and there is nothing really different with the data files generated by the export of each version. The difference in the ratings is definitely with the actions due to prestress. The dead and live load actions are the same.

FROM:bgoodrich DATE:Friday, May 09, 2003 5:35:29 PM  
WYDOT has assigned this issue to BRASS Problem Log 427. I suspect there was a bug induced in the loss calculations between the 5.8.5 and 5.8.6 releases of BRASS-GIRDER.

FROM:bgoodrich DATE:Monday, June 23, 2003 3:18:47 PM  
BRASS-GIRDER has been corrected to include all the applicable dead load moments, which corrects the stress used to determine the creep loss. Fixed for version 5.0.1.

FROM:hlee DATE:7/24/2003 10:00:11 AM  
Patch test ok.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 4620                                         |
| Subject: Low rating in TrainingBridge3 using BRASS LFD |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Goodrich, Brian         | 5/28/2003 6:03:56 PM |
| Modified By: administrator            | 6/19/2008 4:10:27 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 4621.12725 | Resolved      | Incorrect ratings for floorbeams in FLine GF TrainingBridge3 |

### Description

FROM:bgoodrich DATE:Wednesday, May 28, 2003 2:03:56 PM

Jay Puckett noticed a zero critical rating factor for TrainingBridge3, in which bearing stiffeners are controlling. The bearing stiffeners in the example are the same as the transverse stiffeners. The corresponding AISI example doesn't appear to list the bearing stiffener dimensions, so the bearing stiffener dimensions should be revised so this limit state does not control the rating.

FROM:hlee DATE:6/11/2003 3:42:14 PM

Increased bearing stiffener thickness to 1".  
In 5.1.0.

FROM:hlee DATE:1/3/2006 9:35:13 AM

Mehrdad, please update the 5.4 database.

FROM:mordoobadi DATE:1/3/2006 2:18:18 PM

Sourcesafe database fixed in 5.4 Beta 4.

Issue ID: 4621

Subject: Incorrect ratings for floorbeams in FLine GF TrainingBridge3

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Goodrich, Brian

5/28/2003 6:09:16 PM

4/19/2016 3:03:21 PM

HRS AASHTO

347

## Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:27 PM |
| Priority: High             |                      |
| Category: Bug - Warranty   |                      |

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | Urgent   | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | Urgent   | Education |

## Contacts

| Name           | Company                 | Email 1                   | Phone 1      |
|----------------|-------------------------|---------------------------|--------------|
| Jordi Parisian | Wilbur Smith Associates | jparisian@wilbursmith.com | 518-783-1887 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 4623.12723 | Resolved      | non-composite/composite action |

## Description

FROM:bgoodrich DATE:Wednesday, May 28, 2003 2:09:16 PM

The critical ratings for the floorbeams in FLine GF TrainingBridge3 are high (99.0). I found that there are two identical travelways specified for each floorbeam. This causes BRASS to incorrectly determine the live load actions. BRASS considers every truck position to be invalid due to the identical travelways. Two things need to be done.

1. Correct the training bridge in the GUI by deleting one of the travelways. Then, users will at least get a valid rating.
2. Enhance the engines to detect travelways that overlap, so both BRASS and Virtis/Opis users can benefit.

FROM:jduray DATE:6/5/03 4:43:45 PM

I would like to implement number 2 above within Virtis or the export if possible.

FROM:hlee DATE:6/11/2003 3:46:16 PM

Deleted duplicate travelways for all floorbeams.

In 5.1.0.

FROM:hlee DATE:6/13/2003 12:10:31 PM

4/19/2016 3:03:21 PM

HRS AASHTO

348

Complete Issue Information

Export will detect travelways that overlap.

Warning message will be issued and overlapped travelway will not be exported.  
In 5.1.0.

|                                         |
|-----------------------------------------|
| Issue ID: 4623                          |
| Subject: non-composite/composite action |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Parisian, Jordi         | 6/2/2003 7:15:26 PM  |
| Modified By: administrator            | 6/19/2008 4:10:27 PM |
| Priority: Urgent                      |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jparisian DATE:Monday, June 02, 2003 3:15:26 PM

Using the Wizard:

1. Steel Multi-Girders are only options for composite are "Partially composite" or "Fully composite". There is no option for "Non composite". How do I work through this?

2. Concrete Box Beams: where do I select the type of composite action? it does NOT ask for Shear Connectors anywhere that I can see.

FROM:kkennelly DATE:6/3/2003 9:19:37 AM

1. After you use the wizard to create your structure definition, you can visit the "Deck Profile" window for each member alternative and delete the ranges on the Shear Connectors tab. That will remove the



Complete Issue Information

composite action created by the wizard.

2. The Wizard does not create the composite regions for you for concrete members. After you use the wizard, you must create either a Vertical or Horizontal Shear Reinforcement Definition and then visit the "Shear Reinforcement" ranges window for each member alternative and either create Vertical Shear Reinf ranges that extend into the deck (and thereby create composite action) or create Horizontal Shear Reinf ranges that cause composite action.

Issue ID: 4626  
Subject: Brass analysis of Bearing Stiffeners - consider multiple lines of stiffeners

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Yannoni, Paul 6/6/2003 7:21:41 PM  
Modified By: administrator 6/19/2008 4:10:26 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status             | Priority | Category      |
|-----------------|--------------------|----------|---------------|
| Duray, Jim      | New                | High     | Bug           |
| Goodrich, Brian | Assigned           |          | Bug - BRASS   |
|                 | Information Needed |          | Enhance BRASS |
|                 | Suspended          |          |               |
|                 | On Hold            |          |               |
|                 | Suspended          |          |               |

Complete Issue Information

|                    |          |        |                |
|--------------------|----------|--------|----------------|
|                    | Discard  |        |                |
| Goodrich, Brian    | Discard  | High   | Enhance BRASS  |
| Duray, Jim         | New      | Urgent | Bug            |
| Ordoobadi, Mehrdad | Accepted |        |                |
|                    | Assigned |        | Bug - Warranty |
|                    | Resolved |        |                |
| Ordoobadi, Mehrdad | Resolved | Urgent | Bug - Warranty |

Contacts

| Name         | Company                       | Email 1                       | Phone 1        |
|--------------|-------------------------------|-------------------------------|----------------|
| David Koenig | Missouri DOT                  | david.koenig@modot.mo.gov     | (573) 526-0556 |
| Bobie Hoover | Missouri Highway & Trans Dept | hooveb@mail.modot.state.mo.us |                |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                                        |
|------------|---------------|------------------------------------------------------------------------------------------------|
| 4642.12704 | Resolved      | Adding Prestressed double tee shape in Library results in unique constraint violation (Oracle) |

Description

FROM:pyannoni DATE:Friday, June 06, 2003 3:21:41 PM

I am trying to perform a rating on a two span continuous steel stringer (plate girders) bridge using the Virtis Program (version 5.0). This bridge has a set of bearing stiffeners at the center pier. When we run the program we get a zero rating which is controlled by the stiffeners at the pier. By looking at the Brass output file it appears the calculated stresses in the bearing stiffeners are greater than the allowable, but when we performed a quick hand calc we found the stresses in the bearing stiffeners to be considerably less than the allowable. We are wondering how the Brass program computes the stresses in the Bearing stiffeners and if it is being done correctly. I have attached the .bbd file named "newbury.bbd"

FROM:pyannoni DATE:Friday, June 06, 2003 3:29:33 PM

FROM:bgoodrich DATE:Wednesday, June 11, 2003 1:47:21 PM

BRASS calculates the following for the interior pier of the G1 member alternative:

4/19/2016 3:03:22 PM

HRS AASHTO

351

Complete Issue Information

ALLOWABLE STRESSES, PSI

|                         | INVENTORY | OPERATING |
|-------------------------|-----------|-----------|
| 1. BRG STIF COLUMN      | 16907.    | 21084.    |
| 2. BRG STIF BEARING     | 28800.    | 32400.    |
| 3. BRG STIF-COMPRESSION | 19800.    | 27000.    |

ACTUAL STRESSES, PSI

1. BEARING STIFFENERS, COMP.(AS COLUMN) = 20465.
2. BEARING = 24782.
3. COMPRESSION (STIFFENERS ONLY) = 24782.

The allowable stresses for each case above are calculated as follows (respectively):

1. Fa equation in MCEB Table 6.6.2.1-1
2.  $0.80F_y$
3.  $0.55F_y$

The actual stresses for each case above are calculated by dividing the bearing by the following (respectively):

1. Area of bearing stiffeners and web strip
2. Area of bearing stiffeners minus any clip
3. Area of bearing stiffeners

The actual stresses are greater than the inventory allowables for Case 1 and 3, thereby resulting in a zero rating. Please submit your hand calculations, so we can further investigate this issue.

FROM:pyannoni DATE:Monday, June 16, 2003 10:41:07 AM

We arrive at similar values for the allowable and actual stresses for the exterior girder G1 at the center pier. We were wondering, even though the inventory allowables for Case 1 and 3 are less than the actual stresses, shouldn't the program give some rating, even if it is less than 1 ? Wouldn't the rating factor for member G1 be  $16907/20465 = .826$  ?

FROM:bgoodrich DATE:Monday, June 16, 2003 1:17:20 PM

I investigated the incident this morning and offer the following on how BRASS is calculating the rating factors.

BRASS calculates the reactions at the interior pier as:

- Stage 1 DL Reaction = 181.8 kips
- Stage 2 DL Reaction = 82.8 kips
- Stage 3 LL Reaction = 32.8 kips

The area of the bearing stiffeners and web strip are:

$$\text{Area} = 0.75 * 8 * 2 + 0.375 * (18 * 0.375) = 14.53 \text{ in}^2$$

Therefore, the stress in the bearing stiffeners + web strip is:

$$f_{DL} = (181.8 + 82.8) \text{ kips} / 14.53 \text{ in}^2 = 18.21 \text{ ksi}$$

$$f_{LL} = 32.8 \text{ kips} / 14.53 \text{ in}^2 = 2.26 \text{ ksi}$$

The resulting rating factor is then:

4/19/2016 3:03:22 PM

HRS AASHTO

352

## Complete Issue Information

$$\begin{aligned} \text{RF} &= (\text{Allowable} - \text{DL}) / \text{LL} \\ &= (16.907 - 18.21) / 2.26 \\ &= -0.58 \text{ (negative ratings are set to 0.0)} \end{aligned}$$

As you can see, the dead load stress is greater than the allowable which leaves no additional capacity for live load, hence the zero rating.

Now, there should be no reason why the bearing stiffeners should rate at zero for a bridge built in 1976. Therefore, I reviewed the Virtis input some more and noticed that there are actually four bearing stiffeners present at the interior pier. BRASS does not consider multiple lines of bearing stiffeners, so the BRASS export merged the stiffeners into one line and issued a warning (see the .LOG file). By considering the web between the stiffeners in addition to the 18\*tw web strip, the area used to calculate stresses increases to 18.14 in<sup>2</sup>. Then, the stress in the bearing stiffeners + web strip is:

$$\begin{aligned} f_{DL} &= (181.8 + 82.8) \text{ kips} / 18.14 \text{ in}^2 = 14.59 \text{ ksi} \\ f_{LL} &= 32.8 \text{ kips} / 18.14 \text{ in}^2 = 1.81 \text{ ksi} \end{aligned}$$

The resulting rating factor is then:

$$\begin{aligned} \text{RF} &= (\text{Allowable} - \text{DL}) / \text{LL} \\ &= (16.907 - 14.59) / 1.81 \\ &= 1.28 \end{aligned}$$

How would you like to proceed from here? If you would like BRASS to be enhanced to consider multiple lines of bearing stiffeners, please update the incident. I hope this helps.

FROM:bgoodrich DATE:Thursday, July 10, 2003 10:52:48 AM  
Stacy Weaver [SWeaver@fstinc.com] is the engineer that actually submitted this incident. Paul Yannoni is the point of contact for their agency.

Category changed from "Bug - BRASS" to "Enhance BRASS".

FROM:bgoodrich DATE:Thursday, July 10, 2003 10:58:53 AM  
I have forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Thursday, July 17, 2003 1:44:20 PM  
WYDOT has added this issue to the BRASS enhancement list, which will be voted on at the Users' Group Meeting in August 2003.

FROM:bgoodrich DATE:Monday, September 08, 2003 3:34:05 PM  
Ute Ganjanathavat (OK DOT) submitted the following:

I ran a bridge data and got moments and shears but all ratings are zeros.  
Would you please look at the attached file. Thanks. (See attached file: virtis.bbd)

FROM:bgoodrich DATE:Monday, September 08, 2003 3:36:08 PM  
I did an LFD rating of Member 1 and bearing stiffeners are controlling. The output shows the bearing stiffener rating as:

$$\begin{aligned} \text{Bearing Strength 10-132 (BS)} &= 394.42 \text{ (kips)} \\ \text{Dead Load Reaction (DLR)} &= 643.13 \text{ (kips)} \end{aligned}$$

4/19/2016 3:03:22 PM

HRS AASHTO

353

Complete Issue Information

Live Load Reaction (LLR) = 68.55 (kips)

$$R.F. = \frac{[BS] - DLR}{(LLR)}$$

\*\*R.F. = -3.6280

As you can see, the resistance is less than the applied dead load. BRASS-GIRDER calculates the rating as negative and then sets the rating to zero. The bearing stiffeners at the first interior support are 18 inches apart. One of the limitations of BRASS-GIRDER is that it only supports ONE line of bearing stiffeners, so the export merges multiple lines into one, thereby causing the area of the web between the stiffener lines to be neglected. This results in a lower bearing resistance. Even if BRASS-GIRDER calculated the resistance correctly (686 kips), this still would not be enough to get a bearing stiffener rating greater than 1.0. This issue is the same as Incident 4626.

This issue could also pertain to Incident 2513, which requests that the rating of bearing stiffeners be ignored.

The virtis.bbd file is for Virtis 5.0.1.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:06:45 AM  
Suspending incident until BRASS modifications authorized by WYDOT.

FROM:bmccaffrey DATE:Thursday, December 14, 2006 3:54:35 PM

FROM:hlee DATE:4/30/2008 2:32:28 PM  
Discarded by TAG 12/07.

Issue ID: 4642  
Subject: Adding Prestressed double tee shape in Library results in unique constraint violation (Oracle)

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Hoover, Bobie 6/12/2003 6:45:32 PM  
Modified By: administrator 6/19/2008 4:10:25 PM  
Priority: Urgent  
Category: Bug - Warranty

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:03:22 PM

HRS AASHTO

354

## Complete Issue Information

---

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 4644.12702 | Discard       | PCITrainingBridge5 rates low for shear due to BRASS limitation |

### Description

FROM:bhoover DATE:Thursday, June 12, 2003 2:45:32 PM

Hello,

I'm using Bobie's account to enter this ticket. Please call me at 573-526-8957 or email me at winkid1@modot.net to contact me.

Now to the problem:

Whenever the users try to enter the PS double tee shapes in the library, they get a unique constraint violation (XPKABW\_LIB\_PS\_TEE\_BEAM). There are currently six shapes in the table ABW\_LIB\_PS\_TEE\_BEAM, and I guess it is conflicting with these. The user said that he had entered six shapes, and was trying to enter a seventh when he got the first error. He was able to enter them correctly in another database. He tried deleting them all and then readding them, but he cannot add one at all now, he continually gets the constraint violation. It looks like maybe the delete in the application doesn't clean up the database.

We need to resolve this issue so they can enter the Prestressed double tee shapes. We've thought about deleting the rows from the database table manually, but don't know what other tables there could be remnants of these shapes in, and the users are leery of testing this until they hear what you have to say.

Let me know if you need an export of our database so you can see the error yourself. We've worked with Mehrdad in the past in this manner, and he does an excellent job with the database errors.

Thanks,  
Dennis Winkie  
573-526-8957  
winkid1@modot.net

FROM:bhoover DATE:Thursday, June 12, 2003 4:53:05 PM

Dennis will be out of the office on Friday, please email me at baucoj1@modot.net if you are in need of anything or my # is 573-526-2746.

Thanks,  
John

4/19/2016 3:03:22 PM

HRS AASHTO

355

Complete Issue Information

FROM:bhoover DATE:Tuesday, June 17, 2003 9:08:40 AM  
Back in the office....any progress on this?? Thanks, Dennis

FROM:bhoover DATE:Tuesday, June 17, 2003 1:59:57 PM  
Hey Mehrdad, welcome to the mix :) Do you want me to ftp up an export?

Thanks,  
Dennis

FROM:mordoobadi DATE:6/19/2003 9:32:47 AM  
Could you please send me the complete error description. Please copy it from the System Error window and paste it here. Thanks.

FROM:dkoenig DATE:Thursday, June 19, 2003 2:27:00 PM

I have been working with Dennis on this. The complete error message is as shown below.

Save operation failed: Prestressing Strand  
01:32:37 PM - Line 350 in source file D:\Virtis\GUI\abglib\UiLibPsTeeShapeView.cpp.

Error updating database record set.  
01:32:37 PM - Line 356 in source file D:\Virtis\data management\abmlib\DmLibPsTeeBeam.cpp.  
State:23000,Native:1,Origin:[Oracle][ODBC][Ora]  
ORA-00001: unique constraint (VIRTISADM.XPKABW\_LIB\_PS\_TEE\_BEAM) violated

FROM:bhoover DATE:Wednesday, June 25, 2003 7:42:31 AM  
How is this going?? Do you need us to ftp an export of the database up?  
Thanks,  
Dennis

FROM:mordoobadi DATE:6/25/2003 12:28:22 PM  
It looks like the referential integrity constraints for the ABW\_LIB\_PS\_TEE\_BEAM table are not in place. Please execute the following SQL command in SQL Plus and send me the results:

```
SELECT TEE.ps_shape_id FROM abw_lib_ps_tee_beam TEE WHERE TEE.ps_shape_id NOT IN  
(SELECT SH.ps_shape_id FROM abw_lib_ps_shape SH);
```

If this returns any rows. That's the cause of your problem. In that case you should run  
DELETE FROM abw\_lib\_ps\_tee\_beam TEE2 WHERE TEE2.ps\_shape\_id IN (SELECT  
TEE.ps\_shape\_id FROM abw\_lib\_ps\_tee\_beam TEE WHERE TEE.ps\_shape\_id NOT IN (SELECT  
SH.ps\_shape\_id FROM abw\_lib\_ps\_shape SH));  
to delete the orphan rows.

4/19/2016 3:03:22 PM

HRS AASHTO

356

Complete Issue Information

Then you should establish the needed referential integrity constraint. by executing the following command.

```
ALTER TABLE abw_lib_ps_tee_beam
ADD ( FOREIGN KEY (ps_shape_id)
REFERENCES abw_lib_ps_shape
ON DELETE CASCADE ) ;
```

FROM:mordoobadi DATE:6/30/2003 9:14:10 AM

FROM:mordoobadi DATE:7/1/2003 9:05:56 AM

I found out that the Database Compare Utility is not able to detect and create Subtype Foreign Keys (for an ORACLE database) which has caused this problem.

I examined databases that were originally of versions 2.0, 2.1, 3.0, 4.0, 4.1, 4.2 and were migrated to version 5.0.0 to find out the missing sub-type FKs. Here is the results:

| Original version | number of missing sub-type FKs |
|------------------|--------------------------------|
| 2.0              | 94                             |
| 2.1              | 94                             |
| 3.0              | 65                             |
| 4.0              | 50                             |
| 4.1              | 32                             |
| 4.2              | 31                             |

I created a PL/SQL script to create the missing sub-type FKs if they don't exist.

FROM:mordoobadi DATE:7/1/2003 9:25:15 AM

Fixed for 5.0.1.

Issue ID: 4644  
Subject: PCITrainingBridge5 rates low for shear due to BRASS limitation

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Goodrich, Brian 6/13/2003 5:15:36 PM  
Modified By: administrator 6/19/2008 4:10:25 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Enhance BRASS |
|                 | Suspended |          |               |



Complete Issue Information

|                  |          |      |               |
|------------------|----------|------|---------------|
|                  | Discard  |      |               |
| Duray, Jim       | Discard  | High | Enhance BRASS |
| Duray, Jim       | New      | High | Bug           |
| Kennelly, Krisha | Assigned |      |               |
|                  | Resolved |      | Education     |
| Kennelly, Krisha | Resolved | High | Education     |

Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | A5826LengthProblems.bbd |             |
|      | VI4646.pdf              |             |

Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4646.12700 | Resolved      | Updating Length Problem |

Description

FROM:bgoodrich DATE:Friday, June 13, 2003 1:15:37 PM

When PCITrainingBridge5 is rated, a low rating for shear controls. This does not look very good in the example/sample problems. The POI at the first interior support controlled because BRASS considers the section at this location is as reinforced concrete and the shear directly at the support is the highest. The support POI is set to "ignore shear", but that field is not exported to BRASS. First, there is no corresponding POI command on which to put it. The BRASS-GIRDER point of interest commands for prestress need to be enhanced to include parameters similar to those on the CONCRETE-1 and CONCRETE-2 commands. Second, the export does not permit the point of interest data to override the schedules (this is already an incident).

FROM:hlee DATE:4/30/2008 2:32:59 PM

Discarded by TAG 12/07.

|                                  |
|----------------------------------|
| Issue ID: 4646                   |
| Subject: Updating Length Problem |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                                    |                      |
|------------------------------------|----------------------|
| Primary Contact: Kennelly, Krishna |                      |
| Submitted By: Koenig, David        | 6/18/2003 1:13:38 PM |
| Modified By: administrator         | 6/19/2008 4:10:25 PM |
| Priority: High                     |                      |
| Category: Education                |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | A00533MaterialProblem.bbd |             |

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4647.12699 | Resolved      | Disappearing Material Problem |

### Description

FROM:dkoenig DATE:Wednesday, June 18, 2003 9:13:38 AM

We have encountered problems with the lengths updating on structures. On the attached bridge, the lengths on the structure definition window are not the same as the lengths on the member window. This structure was either copied from an existing one and had the lengths updated, or it was entered from scratch with the wrong lengths and the user went back and updated the lengths. When the lengths are updated on the structure definition window, they are not updating on the member window. We have seen this on some other structures, but they always seemed to eventually update. The bbd file is attached.

FROM:kkennelly DATE:6/23/2003 8:40:30 AM

The girders in the attached bridge are not parallel to the structure definition reference line so the span lengths of the members don't match the span lengths of the structure. The girders are not parallel to the structure definition reference line because the start and end left overhang is different on the

4/19/2016 3:03:23 PM

HRS AASHTO

359

Complete Issue Information  
 Structure Typical Section window.

FROM:kkennelly DATE:6/23/2003 9:02:22 AM  
 See attached pdf for sketch of your bridge.

|                                        |
|----------------------------------------|
| Issue ID: 4647                         |
| Subject: Disappearing Material Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Koenig, David           | 6/18/2003 1:21:34 PM |
| Modified By: administrator            | 6/19/2008 4:10:25 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Wednesday, June 18, 2003 9:21:34 AM  
 We have noticed on the girder profile window that when we select a material, save it, and exit the window, the material is not being saved for the structure. When you come back into the window, the material that was previously selected shows up as blank. Based on some experimenting with this, it appears to be isolated to one material on this structure. The material is ASTM A709 Grade 36. This will happen for all elements on the Girder Profile window. We had noticed this in the past, but it would always correct itself if we deleted the element and then reentered it. On this structure, this does not seem to correct it. The bbd file is attached.

Complete Issue Information

FROM:jihnata DATE:6/19/2003 1:41:56 PM

The material that you mention has an extra space character at the end of its name. Edit the material and remove the space, then the girder profile window works OK.

|                       |
|-----------------------|
| Issue ID: 4649        |
| Subject: Zero Ratings |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 6/18/2003 1:34:06 PM |
| Modified By: administrator            | 6/19/2008 4:10:25 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact   | Status             | Priority | Category    |
|-------------------|--------------------|----------|-------------|
| Duray, Jim        | New                | High     | Bug         |
| Kennelly, Krishna | Assigned           |          |             |
| Goodrich, Brian   |                    |          | Bug - BRASS |
|                   | Information Needed |          |             |
|                   | Accepted           |          |             |

### Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
|                  | Closed   |      |             |
| Goodrich, Brian  | Closed   | High | Bug - BRASS |
| Duray, Jim       | New      | High | Bug         |
| Kennelly, Krisha | Assigned |      |             |
|                  | Resolved |      | Education   |
| Kennelly, Krisha | Resolved | High | Education   |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A6658Effective.bbd  |             |
|      | DoubleTee.bbd       |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 4650.12696 | Resolved      | P/S Effective Width Calculations (LFD) |

### Description

FROM:dkoenig DATE:Wednesday, June 18, 2003 9:34:06 AM

We had previously sent in a structure with zero ratings (Incident 3893). This problem was supposed to have been corrected with Version 5.0. I reran this structure after we updated to Version 5.0, and I am still getting zero ratings on this structure. A copy of the bbd file for Version 5.0 is attached.

FROM:kkennelly DATE:6/19/2003 3:15:42 PM

Member G1 shows 0 rating at 4.5'. I added a point of interest there and in the BRASS output see the yield moment for positive moment is computed as -96.37 kft.

FROM:bgoodrich DATE:Thursday, June 19, 2003 4:29:02 PM

I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, July 02, 2003 11:46:23 AM

The same negative yield moment issue was submitted in Incident 4672.

FROM:bgoodrich DATE:Monday, October 27, 2003 12:44:08 PM

WYDOT assigned this issue to BRASS Problem Log 459.

FROM:bgoodrich DATE:Friday, November 28, 2003 7:41:01 PM

4/19/2016 3:03:23 PM

HRS AASHTO

362

Complete Issue Information

Hi David,

I'm working on addressing Incident 4649 and would like to get some more information from you. I imported the R01041ZeroRatingProblem.bbd file with Virtis 5.0, added the Span 1: 1/10 point of interest, and analyzed the G1 alternative as Krisha had done. I was able to get the same negative moment capacity as she reported in the incident. The moment capacity is set to the yield moment, which was calculated incorrectly as a negative value. The sample of the rating factor output follows:

Strength Rating Factor - Flexure (Positive Action) - BOTTOM OF SECTION

Dead Load Moment = 48.16 (ft-kips)

Live Load Moment = 158.18 (ft-kips)

Nominal Capacity = -96.37 (ft-kips)

$$\text{R.F.} = \frac{[(\text{Phi}(\text{flexure}) * \text{Mn}) - (\text{Gamma} * \text{Beta}(\text{DL}) * \text{DLM})]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

\*\*R.F. = -0.4630

Next, I did the same thing with the development version of Virtis and BRASS-GIRDER. The negative yield moment (capacity) has been addressed, but the capacity is still less than the factored dead load moment. Therefore, the rating factor at the 101 POI is still negative (and later set to zero) as shown the following output:

Strength Rating Factor - Flexure (Positive Action) - BOTTOM OF SECTION

Dead Load Moment = 45.14 (ft-kips)

Live Load Moment = 132.45 (ft-kips)

Nominal Capacity = 31.73 (ft-kips)

$$\text{R.F.} = \frac{[(\text{Phi}(\text{flexure}) * \text{Mn}) - (\text{Gamma} * \text{Beta}(\text{DL}) * \text{DLM})]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

\*\*R.F. = -0.0937

Please verify that the dead loads are correct for this structure and submit your calculation of the moment capacity at this location.

FROM:bgoodrich DATE:Monday, December 01, 2003 11:34:11 AM

E-mail from David Koenig (12/1/03):

I will have someone start working on this and get back with you as soon as we have something.

FROM:bgoodrich DATE:Thursday, December 04, 2003 1:23:46 PM

E-mail from David Koenig (12/4/03):

We have looked at the point of interest calculations for this structure. While looking at the point of interest calculations, we noticed that the stage 1 dead load stress was 37000+ psi which was above the yield of the girder. Because it was stage 1 loadings, we went back and looked at the girder properties for the wide flange girder. We found that the moment of inertia was incorrect for the girder at this cross section. The moment of inertia was 110 in<sup>4</sup> which was off by a factor of 10. My assumption

4/19/2016 3:03:23 PM

HRS AASHTO

363

Complete Issue Information

all along was that we had copied the girders from the library. After finding this mistake, it appears that this girder was actually input by the user. I apologize for not having found this earlier. After making this correction, we are now able to get decent results on this structure. Go ahead and mark this incident as resolved. Thanks for your efforts on this matter.

FROM: bgoodrich DATE: Thursday, December 04, 2003 1:24:12 PM  
Closed.

|                                                 |
|-------------------------------------------------|
| Issue ID: 4650                                  |
| Subject: P/S Effective Width Calculations (LFD) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Koenig, David           | 6/18/2003 7:55:20 PM |
| Modified By: administrator            | 6/19/2008 4:10:25 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dkoenig DATE: Wednesday, June 18, 2003 3:55:20 PM

We have discovered what appears to be a problem in the effective width calculations for prestressed I-girders. On the first bbd file, the bridge has 9.75' girder spacing and an 8.5" slab. Using AASHTO 8.10.1.1 on the interior girder, the controlling value would be the web width plus 6\*(Slab Thickness) on each side. This results in a value of 108". Virtis shows 102". On the exterior girder, we get 100" and Virtis gets 97". It appears that it is not adding in the width of the web of the prestressed member whenever it is doing this calculation. The web of the prestressed member is 6".

On the second bbd file, we have been trying to match what Virtis is doing for the effective width on some prestressed double tee girders. We can get close, but are not able to match it. We were looking

4/19/2016 3:03:23 PM

HRS AASHTO

364

## Complete Issue Information

for an explanation on how Virtis is doing this calculation on double tees. We were using AASHTO 8.10.1.1.

FROM:kkennelly DATE:6/23/2003 9:47:55 AM

For your PS I beam question, Virtis does not interpret the second sentence of AASHTO 8.10.1.1 to mean that the thickness of the web is added to the 6\*slab thickness. The 6\* slab thickness is taken from the CL of the beam.

In response to a previous user's request, we are developing an example problem to illustrate the interpretations of AASHTO that this Compute button uses. AASHTO is not completely clear or consistent in the specs for effective flange width and it appears that users have varying interpretations also. So this example problem should clear up any questions as to how Virtis computes the effective flange width.

FROM:kkennelly DATE:6/23/2003 10:20:27 AM

For double tee girders, the "clear distance to the next web" in AASHTO 8.10.1.1 is computed by Virtis as the clear distance between the tops of the webs. So for G2, the clear distance to the left beam's web is 27.5" and the clear distance to the right beam's web is 36".

The eff. flange width for G2 is computed as follows:

Check 1:  $1/4$  span length = 123.75"

Check 2: 6\*slab thickness = 36" on each side of web

Check 3:  $1/2$  clear distance to next web = 13.75" to left. The actual flange width to left of tee = 21.5" -  $1/2$  web = 16.5".  $13.75" < 16.5"$  so use 13.75"

$1/2$  clear distance to next web = 18" to right. The actual flange width to right of tee = 21.5" -  $1/2$  web = 16.5".  $18" > 16.5"$  so use 16.5".

For portion to left of left tee:  $\min(36", 13.75", 16.5") = 13.75" + 1/2$  left web = 18.75"

for portion between the tees = 48"

for portion to right of right tee:  $\min(36", 18", 16.5") = 16.5" + 1/2$  right web = 21.5"

Sum up to get effective flange width =  $18.75 + 48 + 21.5 = 88.25"$

FROM:dkoenig DATE:Monday, June 23, 2003 11:45:45 AM

The way AASHTO 8.10.1.1 seems to be pretty clear to me that you would add the web width into the calculations for the 6\*ts as well as the  $1/2$  the clear distance on each side of the web. I checked my textbook from college, and it shows it being done the way we have described on I-girders. It is an interesting issue that you would probably not get agreement on from various people. This might be something to put out to the users to see what everyone is doing. If a large amount of them are doing it a certain way, then I would suggest that consideration be given to making Virtis do it that way. Thanks for you time on this matter.

Issue ID: 4652

Subject: Manipulating Results



Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: xu, han                 | 6/18/2003 8:53:36 PM |
| Modified By: administrator            | 6/19/2008 4:10:25 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | High     | Bug            |
| Ordoobadi, Mehrdad | Assigned |          | Bug - Warranty |
|                    | Resolved |          |                |
| Ordoobadi, Mehrdad | Resolved | High     | Bug - Warranty |

Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 4656.12690 | Resolved      | ASSOC WITH ADMIN AREA IS MISS READING AND CHANGING THE PONTIS DATA |

Description

FROM:hxu DATE:Wednesday, June 18, 2003 4:53:36 PM

We need to put the rating results in summary tables as required by Mass Highway. Is there any way of extracting the results to excel or some other program so we don't have to manually enter each value?

FROM:hlee DATE:6/19/2003 8:37:25 AM

You can highlight the rows in the Rating Results Summary table and copy and paste to Excel.

Complete Issue Information

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 4656                                                              |
| Subject: ASSOC WITH ADMIN AREA IS MISS READING AND CHANGING THE PONTIS DATA |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Jensen, Paul            | 6/19/2003 10:54:22 PM |
| Modified By: administrator            | 6/19/2008 4:10:24 PM  |
| Priority: High                        |                       |
| Category: Bug - Warranty              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:pjensen DATE:Thursday, June 19, 2003 6:54:23 PM  
ON THE 5.0.0 RELEASE WE ARE HAVING PROBLEMS WITH THE ASSOCIATION. WHEN WE CREATE A BRIDGE IN V/O AND ASSOC IT WITH PONTIS, THE ADMIN AREA FIELD IS ALLWAYS UNKNOWN (THERE IS A VALID VALUE IN THE BRIDGE TABLE). WHEN WE SAVE THE BRIDGE IN V/O, IT CHANGES THE VALUE IN THE BRIDGE TABLE. WHEN WE GO INTO PONTIS AND CHANGE THE VALUE BACK, AND REOPEN V/O, IT DISPLAYS THE CORRECT VALUE. WE HAD THIS ISSUE IN TESTING AND WAS FIXED ONCE BEFORE.

4/19/2016 3:03:24 PM

HRS AASHTO

367

Complete Issue Information

FROM:mordoobadi DATE:6/27/2003 11:04:31 AM  
Paul could you please send me a dump file for tables bridge and paramtrs (Hopefully you have a copy without the above changes that were made by Virtis or through Pontis). I also need to know which bridges you had trouble with (Give me the bridge\_id).

FROM:mordoobadi DATE:6/27/2003 11:15:50 AM

FROM:mordoobadi DATE:7/2/2003 2:05:08 PM  
I found the problem. This has always been like this.  
Fixed for 5.0.1.

Issue ID: 4657  
Subject: USING CHANNEL ROLLED SECTIONS FOR A BEAM

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Jensen, Paul 6/19/2003 11:00:12 PM  
Modified By: administrator 6/19/2008 4:10:24 PM  
Priority: High  
Category: Education

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          | Education |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | High     | Education |

Complete Issue Information

Contacts

| Name          | Company    | Email 1                                                              | Phone 1       |
|---------------|------------|----------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a> | (402)363-9515 |

Documents

| Name | Resource Identifier                                              | Description |
|------|------------------------------------------------------------------|-------------|
|      | rc tee from LA county_zero<br>shear_53c0261.bbd<br>53 01393R.bbd |             |

Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 4678.12668 | Investigation | 5.0.0 - RC tee beam gets zero rating for shear at support |

Description

FROM:pjensen DATE:Thursday, June 19, 2003 7:00:12 PM  
HOW DO I GET THE CHANNEL ROLLED SECTION THAT I PICKED IN THE STEEL SECTION TO THE GIRDER ALT?

FROM:kkennelly DATE:6/23/2003 7:58:35 AM  
Right now Virtis only lets you use rolled I shapes as member alternatives.

FROM:kkennelly DATE:6/23/2003 8:02:40 AM  
Incident 3864 is a previous enhancement request to allow channels to be used for the member alts.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 4678                                                     |
| Subject: 5.0.0 - RC tee beam gets zero rating for shear at support |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Barnhill, Gale          | 7/2/2003 4:11:38 PM  |
| Modified By: administrator            | 6/19/2008 4:10:23 PM |

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | High     | Bug            |
| Goodrich, Brian | Assigned   |          | Bug - Export 1 |
|                 | Patch Test |          |                |
|                 | Resolved   |          |                |
|                 | Accepted   |          |                |
|                 | Closed     |          |                |
| Goodrich, Brian | Closed     | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Rating fail.bbd     |             |
|      | Rate Fail 2.bbd     |             |
|      | System Error.JPG    |             |

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 4680.12666 | Closed        | P/S System Errors |

### Description

FROM:gbarhill DATE:Wednesday, July 02, 2003 12:11:38 PM  
I got this from LA County. They input a 6 span RC tee section. Shear stirrups are defined for each span. The analysis shows zero rating for shear at CP 210.  
The analysis shows zero shear capacity at 210 and 510, all other CP show N/A for shear ratings. 210 and 510 are the only two locations that show zero for stirrup spacing.

Use Member G1.

## Complete Issue Information

FROM:gbarnhill DATE:Wednesday, July 02, 2003 5:16:50 PM

This is a dimension/tolerance issue. Because of the stirrup spacing entries in inches, the export must miss the last stirrup space in span 2 and 5. I made an adjustment in the 43.75' start distance in span 2 (changed from 43.749167 to exactly 43.75). The analysis now finds all ranges and gets a critical rating for moment.

The clue here is that the last start distance entry for span 2 looks like 44.00 ft (the span length) while it's actual value is 43.999167. Normal Virtis nomenclature would show that line as distance 0.0 for span 3.

The tolerance for ft is at 0.001 which reports a critical zero rating at cp 210.  
If I change the tolerance to 0.01 ft, then the critical zero rating reports at cp 200.

I don't think there is any solution to this other than user experience. By the time I figured this one out, the LA county user had already made the adjustments in start distances and got the results he needed.

FROM:gbarnhill DATE:Thursday, July 03, 2003 8:51:52 AM

The only suggestion I have for this situation is a preference setting to view entries in cells at more than 2 decimals without having to put focus on the individual cell. It may get a user's attention to see an entry like 43.999167 instead of 44.00.

Probably a good topic for discussion at the Users Group Meeting.

FROM:jduray DATE:7/3/03 10:30:36 AM

Krishna - let's discuss this.

FROM:gbarnhill DATE:Thursday, July 03, 2003 12:30:25 PM  
NEW INFORMATION

In looking deeper into this, I find the following.

With tolerance for ft at 0.001

Export sees a start distance of 43.749167 in span 2 with range of 0.25 gives an end distance of 43.999167 which is within tolerance of 44.000 span length.

Export stops with this as the last stirrup schedule for span 2.

BRASS evidently doesn't like having any gap in the schedule, so BRASS assumes no stirrup spacing for that last 0.000833 and therefore fails the shear rating.

If I set the tolerance to 0.0001 ft, then this bbd runs with a critical rating for moment. Export now creates an additional schedule with space of 0.01, start dist 43.9992 and range 0.0008. BRASS is happy.

FROM:jduray DATE:7/3/03 1:24:48 PM

It seems that the export should control the precision of the values written to the BRASS input file based on the tolerance. I'm not sure how to do this since the tolerance can be user-defined. One possibility is for the number of decimal digits to be one greater than the number of zeros to the right of the decimal between the decimal and the first non-zero digit. For example if the tolerance is .00123 then the number of decimal digits written by the export should be 2+1=3.

4/19/2016 3:03:25 PM

HRS AASHTO

371



Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 4680             |
| Subject: P/S System Errors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 7/2/2003 7:49:07 PM  |
| Modified By: administrator            | 6/19/2008 4:10:22 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status                | Priority | Category           |
|-----------------|-----------------------|----------|--------------------|
| Duray, Jim      | New                   | High     | Bug<br>Bug - BRASS |
| Goodrich, Brian | Assigned<br>Suspended |          |                    |
| Goodrich, Brian | Suspended             | High     | Bug - BRASS        |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier                                 | Description |
|------|-----------------------------------------------------|-------------|
|      | L-02-023.bbd                                        |             |
|      | RESULTS - VER5.0.1.xls                              |             |
|      | h-12-040.bbd                                        |             |
|      | beta6 steel_neg live load in pos<br>moment area.bbd |             |
|      | s-25-025.bbd                                        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



Complete Issue Information

|            |           |                                                                               |
|------------|-----------|-------------------------------------------------------------------------------|
| 4687.12659 | Suspended | ASD - Rating factor changes significantly when contraflexure location changed |
|------------|-----------|-------------------------------------------------------------------------------|

Description

FROM:dteal DATE:Wednesday, July 02, 2003 3:49:07 PM

In the attached files we received the following errors that we didn't get with previous versions. The error is listed as file system error.jpg.

I generated this error from 2 existing PS structures. The first being Rating Fail.bbd using girder 2. The second from Rate Fail 2,bbd using girder 1.

What has changed that created these errors? The first was created in version 4.0 I think. The second in version 5.0.

FROM:dteal DATE:Thursday, July 03, 2003 8:48:35 AM

I get the same errors in 5.0 SP1

FROM:bgoodrich DATE:Thursday, July 10, 2003 9:50:03 AM

The error checks were added to address Incident 3618. The error should only have been issued if no continuity steel was present. I have corrected the problem for the service pack 1. Fixed for 5.0.1.

Dean - This change will only be in the beta version of the service pack dated after July 10.

FROM:hlee DATE:7/24/2003 10:53:03 AM

Patch test ok.

FROM:dteal DATE:Thursday, July 24, 2003 12:32:46 PM

FROM:bgoodrich DATE:Wednesday, July 30, 2003 4:37:29 PM

Closed.

Issue ID: 4687

Subject: ASD - Rating factor changes significantly when contraflexure location changed

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Barnhill, Gale

7/15/2003 6:35:39 PM

Modified By: administrator

6/19/2008 4:10:22 PM

Priority: High

Category: Bug - BRASS

History

4/19/2016 3:03:25 PM

HRS AASHTO

374

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 4688.12658 | Resolved      | ASD for RCDG Override factors no longer there. |

## Description

FROM:bgoodrich DATE:Tuesday, July 15, 2003 2:35:39 PM  
This incident is from an issue noted in Incident 4493.

Comments from the other incident include:

FROM:gbarnhill DATE:Thursday, July 10, 2003 2:12:27 PM  
I tried a different approach. I changed the Counterflexure location in Span 6 to .41 instead of .30 (Engine Prop of Member Alt). Now I get a very high RF (3.295) at 4/10 span 6. The neg LL moment is still more than the total DL pos moment.

FROM:bgoodrich DATE:Monday, July 14, 2003 12:50:01 PM  
When the dead load contraflexure location is changed from 30% to 41%, the section at 4/10 of span 6 changes from one that includes the slab+beam to one that only includes the rebar+beam. Additionally, section codes generated for the STEEL-GIRDER-CONTROL commands change for the range that includes the 604 POI, i.e., section code 4 (positive flexure check) changes to 5 (negative flexure check). There are shear connectors defined over the entire 6th span, so it seems like the composite section (slab+beam) should be considered. The bottom line is how you want BRASS to analyze the 604 POI, i.e., for positive flexure or negative flexure.

FROM:bgoodrich DATE:Tuesday, July 15, 2003 2:42:22 PM  
Gale also noted that the slab dead load stress is compressive, so it should be added to the allowable compressive stress of 1000 psi. It is currently being subtracted.

The contraflexure locations entered in the engine properties control when the slab or rebar is exported with the steel beam. When the slab is not present, the allowable rebar stress of 16 ksi (0.4 \* 40 ksi) and associated rebar stresses are used to calculate the rating factor. When the slab is present, the allowable compressive stress of 1000 psi and the associated slab stresses are used to calculate the rating factor.

FROM:bgoodrich DATE:Wednesday, July 16, 2003 10:54:24 AM

4/19/2016 3:03:25 PM

HRS AASHTO

375

## Complete Issue Information

When a slab is present in this structure, the allowable concrete stress is a COMPRESSIVE stress of 1000 psi (0.4 \* 2500 psi). The only time a rating factor should be calculated is when the live load stress is compressive. In the case of this structure, the rating factor for negative live load moment is being calculated as 0.52. However, the live load moment is negative, which causes a tensile stress in the deck, for which a rating factor for compressive slab stress should NOT be calculated. This is a bug. For the structure in question, a rating for the deck rebar should be calculated at the 604 POI. However, BRASS-GIRDER only allows the slab OR rebar to be input, but not both. Therefore, it is currently impossible to get the deck rebar rating when a slab is present. Similarly is not possible to get the slab stress rating when only the deck rebar is present.

FROM:bgoodrich DATE:Wednesday, August 06, 2003 4:24:50 PM

I discussed this incident with WYDOT. Because it pertains to ASD, no funds will be expended to investigate or address this issue. WYDOT indicated they would add this issue to the list of ASD requests. I am therefore changing the status of this incident to suspended.

FROM:bgoodrich DATE:Thursday, August 28, 2003 12:45:51 PM

Binh Ha (MassHighway-Bridge Section) reported this same issue. His e-mail follows:

Hi,

Due to the technical problem of our network I am not able to use Visual Intercept to report the incident which is very urgent. For continuous steel girder, from Virtis version 5.0 and older versions the control elements used to be top or bottom flange flexure, but for new version 5.0.1 the control elements are mostly "Flexure-compos slab or rebar" category. The new analysis results have ruined every continuous span steel bridge rated before.

Attached are some bridges were rated form older versions: (For HS20 Truck)

1. L-02-023: 3-continuous span steel bridge - G2: the control element at location 50% of span 2 (limit state: Bottom Flange Flexure - Inventory) - Analysis results under version 5.0.1 - the control element at location 70% of span 2 (limit state: Flexure-compos slab or rebar - Rating Results Summary enclosed).
2. S-25-025: 3-continuous span steel bridge - G2: the control element at location 90% of span 2 (limit state: Vertical Shear - Inventory) - Analysis results under version 5.0.1 - the control element at location 50% of span 3 (limit state: Flexure-compos slab or rebar - Rating Results Summary enclosed).
3. H-12-040: 5-continuous span steel bridge - G30: the control element at location 50% of span 2 (limit state: Bottom Flange Flexure - Inventory) - Analysis results under version 5.0.1 - the control element at location 27.5% of span 3 (limit state: Flexure-compos slab or rebar - Rating Results Summary enclosed).

Please use the enclosed .bbd files (exported under ver 5.0.1) to run under new version and reproduce them to run with older versions for comparison. Please have a quick response for this problem.

Thanks,

<<RESULTS - VER5.0.1.xls>> <<h-12-040.bbd>> <<L-02-023.bbd>>  
<<s-25-025.bbd>>

4/19/2016 3:03:25 PM

HRS AASHTO

376

Complete Issue Information

Binh Ha, P.E.  
MassHighway-Bridge Section  
10 Park Plaza, Room 6430  
Boston, Ma 02116  
binh.ha@mhd.state.ma.us  
617-973-7561 (T), 617-973-7575 (F)

FROM:bgoodrich DATE:Thursday, September 18, 2003 12:32:05 PM  
On 9/18/03, WYDOT again denied this request as it pertains to ASD.

FROM:bgoodrich DATE:Monday, October 13, 2003 12:35:32 PM  
The correction that addressed Incident 4493 was undone, which prevents the incorrect ASD ratings from this incident. This incident will remain suspended.

Issue ID: 4688  
Subject: ASD for RCDG Override factors no longer there.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Jones, Daniel 7/15/2003 8:50:47 PM  
Modified By: administrator 6/19/2008 4:10:22 PM  
Priority: High  
Category: Education

History

| Primary Contact  | Status             | Priority | Category  |
|------------------|--------------------|----------|-----------|
| Duray, Jim       | New                | High     | Bug       |
| Kennelly, Krisha | Information Needed |          |           |
|                  | Resolved           |          | Education |
| Kennelly, Krisha | Resolved           | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:rfulton DATE:Tuesday, July 15, 2003 4:50:47 PM

Previous versions of virtis allowed user to override default percentages of brass which is defaulted to grade 60 steel. different grade steels have different percentages due to fatigue considerations. Why was it removed?

FROM:kkennelly DATE:7/16/2003 1:41:37 PM

Robert, Can you tell me in which window you were previously able to enter these override factors? It sounds like something that should have been entered on an Engine tab in Virtis but I don't see any differences in Version 4.2 and 5.0 Engine tabs in Virtis for BRASS ASD.

FROM:rfulton DATE:Tuesday, August 26, 2003 5:55:04 PM

It was under the Girder Superstructure Definition on the analysis tab on the right side. You could put in override factors to multiply by f'c to get fc (INV = .4 & oper = .6) and override factors to multiply by Fy to get fs (for both shear and flexural reinforcement). There were some other overrides for ASD but I do not know if we ever used the others. Our bridge inventory has a large percentage of bridges with RCDG spans built prior to 1954. This may be the only type bridge where ASD rates higher than LF.

FROM:rfulton DATE:Tuesday, September 02, 2003 9:27:53 AM

FROM:kkennelly DATE:9/2/2003 3:03:15 PM

We have such data values on the Factors tab of the Member Alternative window. Can you use those values? I don't recall such values ever being on the Structure Definition window.

Issue ID: 4689  
Subject: Indicate in Rating Results window if the rating analysis did not run to completion for a mbr alt

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Kennelly, Krisha 7/16/2003 5:23:51 PM  
Modified By: administrator 6/19/2008 4:10:22 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned  |          | Enhancement |
|                    | Suspended |          |             |

4/19/2016 3:03:26 PM

HRS AASHTO

378



Complete Issue Information

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 4691                                                       |
| Subject: BRASS reports transverse stiffener warnings for rolled beam |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                                                |
| Primary Contact: Goodrich, Brian                                                     |
| Submitted By: vinayagamoorthy, vinacs                      7/17/2003 5:13:49 PM      |
| Modified By: administrator                                      6/19/2008 4:10:22 PM |
| Priority: High                                                                       |
| Category: Bug - Export 2                                                             |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Thursday, July 17, 2003 1:13:50 PM  
E-mail from Vinacs (7/16/03):

I am getting the following error message within BRASS output file when I rated the member using ASD methodology.

In this particular model, we have rolled beam and therefore, there is no transverse stiffeners specified.

```
0      *** WARNING ***
      TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK
# 1 DOES NOT SATISFY CURRENT
      AASHTO CRITERIA. ENGINEER SHOULD REVIEW.
```

Although several similar messages popped up, Should I need to worry about this?

When I reviewed rest of the BRASS file, it appears that slenderness of the web satisfy the AASHTO requirement. I am at a loss here.

4/19/2016 3:03:26 PM

HRS AASHTO

380

Complete Issue Information

You may have this bridge already, however, I attach the bbd file for your infor.

(See attached file: 09C0006.bbd)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: Thursday, July 17, 2003 1:16:51 PM  
BRASS is reporting the transverse stiffener warnings because the input file was missing a parameter for indicating that the beam was rolled. A default value for the missing parameter is for a plate girder. I have corrected the export to generate the missing parameter. Fixed for Version 5.0.1.

Programming note: Parameter 10 on the STEEL-GIRDER-CONTROL command was not being generated.

FROM: hlee DATE: 7/24/2003 11:11:10 AM  
Patch test ok.

|                                        |
|----------------------------------------|
| Issue ID: 4692                         |
| Subject: Live Load Distribution Factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Hasan, Mac              | 7/18/2003 8:29:04 PM |
| Modified By: administrator            | 6/19/2008 4:10:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Bug       |
| Lee, Herman     | Assigned | High     |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

Contacts

| Name      | Company      | Email 1                       | Phone 1      |
|-----------|--------------|-------------------------------|--------------|
| Mac Hasan | Colorado DOT | mahmood.hasan@dot.state.co.us | 303-757-9064 |



Complete Issue Information

---

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 4693.12653 | Resolved      | Batch Analysis |

Description

FROM:mhasan DATE:Friday, July 18, 2003 4:29:04 PM

When using BARS import utility in Virtis, data files consisting of multi-lane LL DF's, Virtis incorrectly populates the assigned single lane DF area with the multi-lane LL distribution factor.

This is a minor bug in the program and it needs to be fixed.

FROM:jduray DATE:7/25/2003 10:29:16 AM

Herman - please confirm what Mac is reporting. As I recall we populate both single and multi-lane with the value we find in the BARS file because we don't know which it is.

FROM:hlee DATE:7/28/2003 1:20:01 PM

BARS import utility populates both single and multi-lane load distribution factors with the same value in the BARS file (Card Type 08, Columns: 61-65).

|                         |
|-------------------------|
| Issue ID: 4693          |
| Subject: Batch Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Hasan, Mac              | 7/18/2003 8:50:52 PM |
| Modified By: administrator            | 6/19/2008 4:10:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

## Complete Issue Information

### History

| Primary Contact | Status      | Priority | Category       |
|-----------------|-------------|----------|----------------|
| Duray, Jim      | New         | High     | Bug            |
| Goodrich, Brian | Assigned    | Urgent   | Bug - Export 1 |
| Goodrich, Brian | System Test | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | Composite.zip<br>sdl loads.txt<br>sdl check.bbd |             |

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4695.12651 | System Test   | Stage 2 railing/barrier loads |

### Description

FROM:mhasan DATE:Friday, July 18, 2003 4:50:53 PM

Virtis allows the use of a single analysis engine per analysis event. When analyzing different structure types (i.e., steel, concrete, timber & prestressed concrete structures) in a batch mode, the availability of multiple engine in Virtis would be of benefit to many State Permit agencies.

FROM:jduray DATE:7/25/2003 10:31:34 AM

The analysis engine is selected at the member alt level not the analysis event. If, within an analysis event, members using different engines are selected Virtis will process them using the appropriate engine.

### Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 4695                         |
| Subject: Stage 2 railing/barrier loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 7/24/2003 7:41:13 PM |
| Modified By: administrator            | 6/19/2008 4:10:21 PM |
| Priority: Urgent                      |                      |
| Category: Bug - Export 1              |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Urgent   | Bug - BRASS |
|                 | Assigned  |          |             |
| Goodrich, Brian | Suspended |          |             |
| Goodrich, Brian | Suspended | Urgent   | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 09C0006.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 4697.12649 | Suspended     | ASD - Allowables stress does not account for unbraced length |

### Description

FROM:bmccaffrey DATE:Thursday, July 24, 2003 3:41:13 PM

Why are stage 2 loads now only being applied to fascia members in v/5.0? They were being distributed to all members equally (in every previous version) no matter what you specified in the 'DL Distribution' window, but now we're not getting any railing/barrier loads distributed to the interior beams.

4/19/2016 3:03:27 PM

HRS AASHTO

384

Complete Issue Information

We've checked about 10 bridges and this is the case in all of them.

Every bridge we rate with 5.0 has different results than 4.2 now.

FROM:bgoodrich DATE:Friday, July 25, 2003 11:43:45 AM  
Please send me the 4.2 and 5.0 BBD files for a few of the bridges in question, so I can confirm your findings.

FROM:bgoodrich DATE:Friday, July 25, 2003 11:44:36 AM  
E-mail from Brian McCaffrey (7/25/03):

Here's one in Virtis v/5.0. We're getting a few more together right now. The text file is part of the output. You'll see that the load due to the 0.052 k/ft railing is only applied to G1 and G5.

I don't have any 4.2 .bbd's handy but SDL was always divided up equally among the girders no matter what you specified on the 'DL Dstribution' window. I'll get some 4.2 files together for you as well.

FROM:bgoodrich DATE:Friday, July 25, 2003 11:45:34 AM  
I imported your BBD file and confirmed that the railing is applied only to the exterior girders. I then reviewed the Structure Typical Section window and found that the railing is assigned to the DC1 load case, which is for stage 1. This is why the railing is applied only to the exterior girders. If the railings were assigned to the DC2 load case (stage 2) in version 4.2, then there may be a problem in the migration utility. I should know more when you send me the 4.2 BBD files.

FROM:bgoodrich DATE:Friday, August 08, 2003 12:12:07 PM  
Brian M. sent me the BBD files I requested. See attached Composite.zip file for version 4.2 and 5.0.

FROM:bgoodrich DATE:Friday, August 08, 2003 12:47:37 PM  
For version 5.0, the export was modified so only one stage was exported for non-composite steel structures. However, this prevented the dead loads from being distributed differently, i.e., uniformly for long-term loads. The export (BrassEngineProperties.cpp) has been revised to utilize the method employed prior to version 5.0. Fixed for version 5.1.

FROM:bgoodrich DATE:Thursday, August 14, 2003 1:29:56 PM  
The work-around is to specify a 3-stage loading sequence in the engine properties for the member alternative.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 4697<br>Subject: ASD - Allowables stress does not account for unbraced length |
|-----------------------------------------------------------------------------------------|

|                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Goodrich, Brian<br>Submitted By: vinayagamoorthy, vinacs                      7/25/2003 2:12:02 PM |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:21 PM |
| Priority: Urgent           |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status             | Priority | Category                      |
|-----------------|--------------------|----------|-------------------------------|
| Duray, Jim      | New                | High     | Bug                           |
| Ihnat, Joseph   | Assigned           | Urgent   | Bug - GUI 1<br>Bug - Warranty |
|                 | Information Needed |          |                               |
|                 | Assigned           |          |                               |
|                 | Resolved           |          |                               |
| Ihnat, Joseph   | Resolved           | Urgent   | Bug - Warranty                |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1042210 Error 2.zip |             |
|      | 1042210.bbd         |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 4708.12638 | Resolved      | Composite floorbeams |

### Description

FROM:bgoodrich DATE:Friday, July 25, 2003 10:12:02 AM  
E-mail from Vinacs (7/17/03):  
Brian

When I rated girders of this bridge [structural definition (Span 1 MDL1 Sp 4), G2, Interior Girder], the allowable inventory and operating stress at the extreme fiber for a section at midspan was estimated (by BRASS) as 18.15 and 24.75 ksi.

Lateral supports are provided at the supports only. Therefore, unsupported girder length for this girder will be 30.20 feet. Hand calculations based on equation given in Table 10.32.1A yields an allowable

4/19/2016 3:03:27 PM

HRS AASHTO

386

Complete Issue Information

inventory stress of 9.9ksi. (Much lower than that was reported by BRASS)

Could you please check the BRASS output and let me know whether I made any error in the modelling?

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:bgoodrich DATE:Friday, July 25, 2003 10:14:00 AM  
Virtis and BRASS do not obtain the allowable stress from Table 10.32.1A. Instead, the user is responsible for entering the fraction of the yield stress to use for the allowable, i.e., 0.3 in your case. These can be entered in the ASD Factors fields on the Factors tab of the Member Alternative Description window. When any of these factors are left blank, the BRASS default is used, which is 0.55 and 0.75 for structural steel inventory and operating, respectively.

FROM:bgoodrich DATE:Friday, July 25, 2003 10:14:42 AM  
Jay indicated that BRASS should be decreasing the stress automatically for the unbraced length. I reviewed the BRASS code and found the reduction he mentioned. This part of the code is not being exercised because the STEEL-2 command is not generated. Although the unbraced lengths are being exported to the BRASS schedule commands, the POI arrays are not being populated with this data (within BRASS). Only the arrays associated with LFD are being populated. This looks like a definite BRASS bug in the conversion of the schedules to POI data.

FROM:bgoodrich DATE:Friday, July 25, 2003 10:43:03 AM  
I have forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Wednesday, August 06, 2003 4:29:10 PM  
I discussed this incident with WYDOT. Because it pertains to ASD, no funds will be expended to investigate or address this issue. WYDOT indicated they would add this issue to the list of ASD requests. I am therefore changing the status of this incident to suspended.

Issue ID: 4708  
Subject: Composite floorbeams

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: McCaffrey, Brian 7/29/2003 3:20:57 PM  
Modified By: administrator 6/19/2008 4:10:20 PM  
Priority: Urgent  
Category: Bug - Warranty

History

4/19/2016 3:03:28 PM

HRS AASHTO

387

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 53c1621 501 ps shear.bbd |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 4713.12633 | System Test   | 5.0.1 - low rating for ps shear |

### Description

FROM:bmccaffrey DATE:Tuesday, July 29, 2003 11:41:54 AM

I'm getting the attached errors (crash) when adding shear connectors to a built up floorbeam.

FROM:jihnmat DATE:8/7/2003 11:08:25 AM

I haven't been able to reproduce this. Can you reproduce this? Which version of Windows are you running? What type of database?

FROM:jihnmat DATE:8/7/2003 11:12:46 AM

FROM:jihnmat DATE:8/7/2003 2:51:04 PM

Krishna noticed that Apply, then OK, will cause the crash.

FROM:jihnmat DATE:8/7/2003 3:56:46 PM

Fixed for version 5.1.0

## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 4713                           |
| Subject: 5.0.1 - low rating for ps shear |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Barnhill, Gale          | 8/1/2003 9:40:30 PM  |
| Modified By: administrator            | 6/19/2008 4:10:20 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status           | Priority | Category  |
|-----------------|------------------|----------|-----------|
| Duray, Jim      | New              | High     | Bug       |
| Goodrich, Brian | Assigned         |          |           |
|                 | Not Reproducible |          |           |
|                 | Closed           |          |           |
| Goodrich, Brian | Closed           | High     | Education |
|                 |                  |          | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | st2.bmp                     |             |
|      | st1.bmp                     |             |
|      | 1032690 - stirrup error.bbd |             |

## Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 4720.12626 | Closed        | Stirrup schedule error |

## Description

4/19/2016 3:03:28 PM

HRS AASHTO

389



Complete Issue Information

FROM:gbarnhill DATE:Friday, August 01, 2003 5:40:30 PM

This is a two span PS lbeam from LA County.

They noticed a low rating at 8/10 span 1.

In the original Super Def, analyze Mem 2 alt for HS20 LFD.

I've set POI for 8/10 span 1 and 2/10 span 2.

The Vp value in span 1 reports -62.5 kips. This results in a Vcw value of +80.6 kip.

For the span 2 POI, Vp reports as +62.5 and therefore Vcw is +205.7 kip.

The Span data for the beam is given as CG and force.

I copied the Super Def and changed the beam to strands in rows (tried to simulate the CG's, close at midspan, not close at ends).

Now analyze and the Vp at 8/10 span 1 reports as a positive number.

FROM:bgoodrich DATE:Tuesday, September 09, 2003 3:14:25 PM

I forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Monday, October 13, 2003 10:29:03 PM

WYDOT has assigned this issue to BRASS Problem Log 455.

FROM:bgoodrich DATE:Friday, November 28, 2003 8:04:06 PM

The incorrect mapping of an argument between two prestressed concrete subroutine caused one subroutine to incorrectly determine the sign of the prestress shear component. The correct variable was used and the shear components became symmetrical. This issue was corrected in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

|                                 |
|---------------------------------|
| Issue ID: 4720                  |
| Subject: Stirrup schedule error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 8/8/2003 12:53:55 PM |
| Modified By: administrator            | 6/19/2008 4:10:20 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:03:28 PM

HRS AASHTO

390

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 4722.12624 | Resolved      | Framing Plan and Structure Typical Section Windows Won't Open |

Description

FROM:bmccaffrey DATE:Friday, August 08, 2003 8:53:56 AM

See attached errors and .bbd file. This is a P/S simple span slab bridge that ran fine in 4.2 and now generates the attached errors in 5.0.

Stirrup error, not stippup.

FROM:bmccaffrey DATE:Friday, August 08, 2003 8:59:30 AM

FROM:bgoodrich DATE:Tuesday, August 12, 2003 3:35:59 PM

I was unable to duplicate the problem with both 5.0 and 5.0.1.

I tried adjusting the system tolerances, but this did not seem to hinder the export. I asked Herman Lee at Baker to try to duplicate the problem.

FROM:bgoodrich DATE:Wednesday, August 13, 2003 11:16:31 AM

E-mail from Herman Lee (8/12/03):

I tried on 5.0 and rated all member alts. I cannot duplicate the problem. From the bitmaps on the incident, the bbd seems to be the correct one.

Herman

FROM:bgoodrich DATE:Thursday, August 14, 2003 10:04:23 AM

E-mail from Brian Goodrich (8/13/03):

I was unable to duplicate the problem with both 5.0 and 5.0.1. I tried adjusting the system tolerances, but this did not seem to hinder the export. I asked Herman Lee at Baker to try to duplicate the problem. He was able to rate all the member alternatives too. Please check that we have the correct BBD file, etc. for the incident. Also, let me know what your tolerances settings are and I will try to duplicate the problem again.

FROM:bgoodrich DATE:Thursday, August 14, 2003 10:05:47 AM

E-mail from Brian McCaffrey (8/14/03):

I think our tolerances got reset (0.1' and 1.0") when we went to v/5.0 (I'm not 100% sure). Once I reset them to what it should be (0.01' and 0.1") it worked fine. I didn't even think of checking the tolerances (they've been set to the same values for years).

4/19/2016 3:03:28 PM

HRS AASHTO

391

Complete Issue Information

Thanks, Brian

FROM: bgoodrich DATE: Thursday, August 14, 2003 10:06:14 AM  
Based on Brian M. e-mail, the source of the problem was tolerances. Although I was still unable to reproduce the errors after resetting my tolerances in 5.0 and 5.0.1, I am closing this incident.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 4722                                                         |
| Subject: Framing Plan and Structure Typical Section Windows Won't Open |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Koenig, David           | 8/12/2003 6:38:18 PM |
| Modified By: administrator            | 6/19/2008 4:10:19 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  | ReOpen   |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | On Hold  |          |          |
|                  | Resolved |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A6554 (531).bbd     |             |
|      | Fixed A6554.bbd     |             |

## Complete Issue Information

A6554.bbd  
HS20Truck.xml  
result&error.xls  
w-44-107-edit.bbd

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 4726.12620 | Resolved      | Crash on print Rating Results Summary. |

## Description

FROM:dkoenig DATE:Tuesday, August 12, 2003 2:38:18 PM

I tried typing this incident in earlier, but it does not appear that it saved.

We have a structure that will not allow us to open up the framing plan and the structure typical section windows. The structure was previously working fine. The user was editing the structure to make some changes. He made some updates on the deck profile window with no problems. He then went to the framing plan window and copied Bay 1 to Bay 3 with no problems. He later came back and tried to open up the framing plan window and it will not open. The structure typical section window will not open either. If you select either one and try to open them, Virtis does nothing. Also, I noticed that the schematic button will not do anything for the structure typical section.

The bridge does have an error when you try to analyze it. The error is shown below.

Splayed girders and/or tapered overhangs are not allowed!  
01:41:45 PM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error generating deck commands!  
01:41:45 PM - Line 244 in source file D:\Virtis\gui\AbxBrass\BrassDeck.cpp.

I believe that the user probably has the cantilever lengths varying down the bridge, which would be an error. However, you should still be able to open these windows up. The bbd file is attached.

FROM:dkoenig DATE:Tuesday, August 12, 2003 2:45:10 PM

FROM:kkennelly DATE:8/13/2003 8:59:10 AM

You are unable to open these windows because some bad data has been saved in your database. In a girder system in Virtis, each girder has a reference line that locates the position and direction of the girder (as seen in the framing plan). In the Framing Plan Details window, your structure has been specified to have a "Girder Spacing Orientation" that is "perpendicular to the girder". That means that all girders must be parallel for this type of girder spacing to be valid. Somehow the data in your database has been saved such that girder 1 is not parallel to the rest of the girders. So the Framing Plan and Structure Typical Section windows are returning an error because they think the girder spacing should be perpendicular to the girder but the girders aren't parallel so they won't open.

I've attached a bbd file that has the correct data so that all of your girders are parallel and these windows can be opened. I don't know what could have caused the data for girder 1 to be saved slightly

4/19/2016 3:03:29 PM

HRS AASHTO

393

### Complete Issue Information

different from the other girders such that they aren't parallel. The user can enter their data in so many different ways (and the significant digits entered in the data can also have an effect) so I don't think we have a realistic way to prevent this bad data from being saved.

I think a way to solve this problem of being unable to open these windows when the girder spacing is perpendicular but the girders aren't parallel is for Virtis to issue a message to the user that Virtis is going to change the girder spacing orientation for the structure to "Along Support" so these windows can be opened and user must check the data on these windows after they open them.

I've marked this incident as resolved so you can get the revised bbd file and can continue your work. I'll reopen this incident later and make the above changes.

FROM:kkennelly DATE:8/27/2003 4:16:29 PM  
Fixed for Version 5.1

FROM:hlee DATE:2/9/2004 3:42:50 PM  
For a database that has checkin/checkout enabled, Virtis should also check whether the bridge or structure def has been checked out by the user. The bridge or structure def will not get saved if not checked out first.

FROM:jihnat DATE:8/31/2005 3:24:07 PM  
Added check for checkout for version 5.4.0  
For testing, I've attached a copy of the BBD file migrated to version 5.3.1

|                                                 |
|-------------------------------------------------|
| Issue ID: 4726                                  |
| Subject: Crash on print Rating Results Summary. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Lee, Herman             | 8/14/2003 3:09:52 PM |
| Modified By: administrator            | 6/19/2008 4:10:19 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

### Contacts

4/19/2016 3:03:29 PM

HRS AASHTO

394

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | w-44-107-edit.bbd   |             |
|      | result&error.xls    |             |
|      | HS20Truck.xml       |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 4727.12619 | Suspended     | ASD - Zero ratings for floorbeam analysis when analyzed in one stage |

### Description

FROM:hlee DATE:8/14/2003 10:55:12 AM  
Submitted on behalf of Binh Ha, MassHighway-Bridge Section.

Attached bbd, Excel file with screen captures, and rating vehicle.  
This incident is for Virtis/Opis 5.0.1.

1. Change "in" tolerance to 0.01
2. Rate (LFD) Alt #1 in Floorbeam 1 with the attached vehicle
3. Open Rating Results Summary
4. Select File/Print

FROM:mordoobadi DATE:2/23/2004 1:43:19 PM  
The crash is not related to the changing of tolerance.

This incident is related to incidents 4865 and 4939.

The crash is fixed in 5.1.1.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 4727                                                                |
| Subject: ASD - Zero ratings for floorbeam analysis when analyzed in one stage |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Ha, Binh                | 8/14/2003 7:20:52 PM |
| Modified By: administrator            | 6/19/2008 4:10:19 PM |
| Priority: High                        |                      |

4/19/2016 3:03:29 PM

HRS AASHTO

395

## Complete Issue Information

Category: Bug - BRASS

## History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Enhance BRASS |
| Goodrich, Brian | Assigned  |          |               |
|                 | Suspended |          |               |
|                 | Discard   |          |               |
| Goodrich, Brian | Discard   | High     | Enhance BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 4728.12618 | Discard       | Floorbeam analysis takes extremely long time |

## Description

FROM:bgoodrich DATE:Thursday, August 14, 2003 3:20:52 PM  
Submitted on behalf of Binh Ha, MassHighway-Bridge Section.

Attached bbd, Excel file with screen captures, and rating vehicle.  
This incident is for Virtis/Opis 5.0.1.

E-mail from Binh Ha:

"I have set wheel advancement denominator = 15 and lane advancement Increment = 4' and run with one vehicle (HS20 - with truck load and no lane load) for FB1 (floorbeam 1), time for completed analysis approximate 6 minutes (Rating Result Summary enclosed for both ASD and LFD).

Through Rating Result Summary for ASD the control element is Vertical Shear at location 0.18' (very weir location for shear! - from output at that location: ALLOWABLE WEB SHEAR STRESS = 0. BASED ON INPUT SPACING???)..."

FROM:bgoodrich DATE:Thursday, August 14, 2003 3:23:57 PM  
The version 5.0.1 work-around for this particular structure is to specify a 3-stage load sequence in the

4/19/2016 3:03:29 PM

HRS AASHTO

396

Complete Issue Information

engine properties for the floorbeam definition. This forces BRASS to exercise certain sections of the code that are not exercised for a 1-stage structure. This is a non-composite floorbeam in which the dead loads are fixed regardless of the number of stages. Therefore, the ratings should be the same. The export in Version 5.1 will determine load sequence as three stages, so Mr. Ha's floorbeam can be analyzed.

The main issue now is the bug that exists when only one stage is specified. Because this problem is in the BRASS ASD module, WYDOT will not authorize any work on it.

FROM:bgoodrich DATE:Tuesday, September 09, 2003 4:08:03 PM  
I forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Wednesday, September 24, 2003 11:21:37 AM  
I am suspending this issue until WYDOT decides to address ASD issues.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4728                                        |
| Subject: Floorbeam analysis takes extremely long time |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Ha, Binh                | 8/14/2003 7:44:32 PM  |
| Modified By: jwalsh                   | 12/10/2009 7:47:34 PM |
| Priority: High                        |                       |
| Category: Enhance BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Thursday, August 14, 2003 3:44:33 PM  
Submitted on behalf of Binh Ha, MassHighway-Bridge Section.

4/19/2016 3:03:30 PM

HRS AASHTO

397



Complete Issue Information

Attached bbd. This incident is for Virtis/Opis 5.0.1.

If I set 4 vehicles (HS20, H20, TYPE 3, TYPE 3S2) for analysis: 25 minutes needed (with WAD = 15 - LAI = 4'), if we need more accurate with WAD = 50 and LAI = 1' I do not know how long it takes (maybe it takes several hours).

It is really not convenient for time consuming like that for a single analysis.

FROM:bgoodrich DATE:Thursday, August 14, 2003 3:46:59 PM  
This is a fairly wide floorbeam. Up to four lanes can fit within each of the two travelways, so there are numerous combinations of positions that must be checked. The user controls this with the advancement increment (LAI) setting. When there are several lanes involved, the floorbeam analysis becomes more computationally intensive, hence the time of analysis increases. It may be possible to enhance BRASS to speed up this process.

FROM:bgoodrich DATE:Tuesday, September 09, 2003 4:17:51 PM  
I have forwarded this issue to WYDOT to be added to the BRASS enhancement list.

FROM:bgoodrich DATE:Monday, October 27, 2003 10:54:12 PM  
Suspending incident until issue authorized by WYDOT.

FROM:bgoodrich DATE:Monday, September 19, 2005 12:22:32 PM  
Incident 6690 is a duplicate of this issue.

FROM:kkennelly DATE:2/16/2007 1:31:38 PM  
Incident 7839 is a duplicate of this issue.

FROM:hlee DATE:4/30/2008 2:33:10 PM  
Discarded by TAG 12/07.

|                                 |
|---------------------------------|
| Issue ID: 4734                  |
| Subject: Floorbeam Length Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 8/22/2003 1:14:28 PM |
| Modified By: administrator            | 6/19/2008 4:10:18 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|                  |          |      |                |
|------------------|----------|------|----------------|
| Goodrich, Brian  | Assigned |      | Bug - Export 1 |
| Duray, Jim       | New      | High | Bug            |
| Kennelly, Krisha | Resolved |      | Education      |
| Kennelly, Krisha | Resolved | High | Education      |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                           |
|------------|---------------|-----------------------------------------------------------------------------------|
| 4735.12611 | Resolved      | Defining Floorbeams that don't span the whole structure- (fbs frame into end fbs) |

### Description

FROM:dkoenig DATE:Friday, August 22, 2003 9:14:28 AM

We are getting an error that we can't figure out on a continuous three span girder floorbeam structure. The structure we have has the end floorbeams skewed along the support like what would typically be done. The interior floorbeams are perpendicular to the main girders as would typically be done. When you try to analyze an interior floorbeam, Virtis gives an error saying it can't determine the span length range. The program is checking the length of the floorbeam as 29'-4". The input length is 22'-0". The plan view and typical section schematics show the structure correctly. The text of the error is shown below and the bbd file is attached.

Error generating LFD/ASD load commands!

08:17:40 AM - Line 237 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error generating distributed load commands!

Review input for items included in Load Case: DLW - Wearing Surface

This would include uniform or distributed dead loads or the section dimensions used to generate dead loads (slab, haunch, etc.).

08:17:40 AM - Line 1066 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error getting start distance and range for distributed dead load!

08:17:40 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error preparing distributed load for BRASS commands!

08:17:40 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Complete Issue Information

Unable to determine the span a range is within!  
08:17:40 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error determining start distance and range!  
08:17:40 AM - Line 10459 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error in DoBeamDef::FindSpanByDistance()!  
Distance is 352.000008000 in!  
Stringer Definition length is 264.000000000 in!  
Current tolerance for in is 0.125000000.  
08:17:40 AM - Line 2752 in source file D:\Virtis\domain\abognr\DoBeamDef.cpp.

The text of the error is shown below.

FROM:kkennelly DATE:8/25/2003 11:16:33 AM  
A DistributedLoad in the export that starts at distance 20" and has a length of 332" is causing this problem. I've attached a version 5.0.1 file to this incident.

FROM:bgoodrich DATE:Wednesday, August 27, 2003 1:23:38 PM  
I corrected the export (BrassLoadControl.cpp) to correct the wearing surface load so it referenced the start of the floorbeam instead of the start of the deck. Fixed for Version 5.1.0.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 4735                                                                             |
| Subject: Defining Floorbeams that don't span the whole structure- (fbs frame into end fbs) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Koenig, David           | 8/22/2003 1:30:09 PM |
| Modified By: administrator            | 6/19/2008 4:10:18 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 4736.12610 | Discard       | Increase Maximum Number Spans on Floorsystem Structure |

### Description

FROM:dkoenig DATE:Friday, August 22, 2003 9:30:09 AM

We have encountered a situation on a highly skewed structure where we can't define an interior floorbeam. The first interior floorbeam on this structure starts at the main left girder and actually frames into the exterior floorbeam near the center of the structure. Is this a scenario that was thought of when the floorsystem models were developed?

FROM:kkennelly DATE:8/25/2003 9:12:48 AM

This type of structure was considered during development of the floor system module. Review of the system by the Task Force and contractor resulted in the decision that floorbeams framing into end floorbeams did not fall into the 80% of bridges rule and must be defined using the line approach. The system approach can be used to define any interior portions of the structure where the floorbeams frame into the girders but the skewed end panels in this type of structure require a separate superstructure definition using the line approach.

Issue ID: 4736

Subject: Increase Maximum Number Spans on Floorsystem Structure

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Koenig, David

8/22/2003 1:41:50 PM

Modified By: bschiller

11/13/2009 11:33:03 PM

4/19/2016 3:03:30 PM

HRS AASHTO

401

### Complete Issue Information

|                         |
|-------------------------|
| Priority: High          |
| Category: Enhance BRASS |

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug         |
| Goodrich, Brian | Assigned   |          | Bug - BRASS |
|                 | Patch Test |          |             |
| Goodrich, Brian | Patch Test | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 501 Reaction Error.bbd |             |
|      | Reaction Error.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 4737.12609 | Patch Test    | Error Generating Stringer Reactions on Some Floorbeams |

### Description

FROM:dkoenig DATE:Friday, August 22, 2003 9:41:51 AM

We have encountered an error with exceeding the maximum number of spans. We have a two span continuous slab/floorbeam/girder structure. The slab portion of this structure is continuous across the floorbeams and ends up with sixteen spans. Brass has the limitation of 13 spans. This is an issue that is going to have to be addressed for floorsystem bridges. On continuous span floorsystems, you will frequently encounter this error because there will routinely be more than 14 floorbeams on a structure which will mean that the slab or stringers will exceed the span limitations of Brass. The program information indicates that Virtis will rate simple and continuous floorsystems. The reality is that this is not true. There will frequently be continuous floorsystems that Virtis won't rate because of the limitations of Brass. We need to get WYDOT to enhance Brass to allow more spans. It would be nice if it matched Virtis's maximum number of spans of 50. I would think that this would be a fairly simple thing to do.

FROM:bgoodrich DATE:Thursday, October 23, 2003 4:55:01 PM

I forwarded this issue to WYDOT for consideration.

4/19/2016 3:03:31 PM

HRS AASHTO

402

Complete Issue Information

FROM:bgoodrich DATE:Monday, October 27, 2003 10:52:00 PM

E-mail from Mike Watters:

This is already on the enhancement list as item #52. BRASS Users ranked it #28 in priority.

Micheal J. Watters, P.E.

Bridge Engineering Systems Manager

FROM:hlee DATE:4/30/2008 2:33:18 PM

Discarded by TAG 12/07.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 4737                                                  |
| Subject: Error Generating Stringer Reactions on Some Floorbeams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 8/22/2003 1:59:47 PM |
| Modified By: administrator            | 6/19/2008 4:10:18 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Friday, August 22, 2003 9:59:47 AM

We have a structure that is getting an error on the last two floorbeams when we analyze it. The summary of the error is shown below.

\*\*\*\*\*

Error generating LFD/ASD load commands!

4/19/2016 3:03:31 PM

HRS AASHTO

403

Complete Issue Information

Error occurred for BRASS live load: HS\_20-44\_\_~1  
 Error generating FLOORBEAM-MPT command!  
 One or more live load reactions are not available!  
 Error getting live load reactions from results object!  
   No minimum reaction is available!  
 Error getting live load reactions from results object!  
   No maximum reaction is available!  
 Error getting live load reactions from results object!  
 Error occurred for BRASS live load: HS\_20-44\_\_~1  
 Error generating FLOORBEAM-TRUCK command!  
 One or more live load reactions are not available!  
 Error getting live load reactions from results object!  
   No minimum reaction is available!  
 Error getting live load reactions from results object!  
   No maximum reaction is available!  
 Error getting live load reactions from results object!  
 Error generating load group commands!  
 Error in the loads utility!  
   Error getting stringer dead load reaction!  
 Error preparing stringer dead load reactions!

\*\*\*\*\*

The debug version of the error is shown below.

\*\*\*\*\*

Error generating LFD/ASD load commands!  
 09:05:49 AM - Line 237 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error occurred for BRASS live load: HS\_20-44\_\_~1  
 09:05:49 AM - Line 1756 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error generating FLOORBEAM-MPT command!  
 09:05:49 AM - Line 1755 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

One or more live load reactions are not available!  
 09:05:49 AM - Line 2929 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error getting live load reactions from results object!  
 09:05:49 AM - Line 2928 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

  No minimum reaction is available!  
 09:05:49 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error getting live load reactions from results object!  
 09:05:49 AM - Line 2903 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

  No maximum reaction is available!  
 09:05:49 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Complete Issue Information

Error getting live load reactions from results object!  
09:05:49 AM - Line 2892 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error occurred for BRASS live load: HS\_20-44\_\_~1  
09:05:49 AM - Line 1614 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

Error generating FLOORBEAM-TRUCK command!  
09:05:49 AM - Line 1613 in source file D:\Virtis\gui\AbxBrass\BrassStdLoadControl.cpp.

One or more live load reactions are not available!  
09:05:49 AM - Line 2929 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error getting live load reactions from results object!  
09:05:49 AM - Line 2928 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

No minimum reaction is available!  
09:05:49 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error getting live load reactions from results object!  
09:05:49 AM - Line 2903 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

No maximum reaction is available!  
09:05:49 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error getting live load reactions from results object!  
09:05:49 AM - Line 2892 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error generating load group commands!  
09:05:49 AM - Line 385 in source file D:\Virtis\gui\AbxBrass\BrassLoadControl.cpp.

Error in the loads utility!  
09:05:49 AM - Line 681 in source file D:\Virtis\gui\AbxBrass\LoadsUtility.cpp.

Error getting stringer dead load reaction!  
09:05:49 AM - Line 1013 in source file D:\Virtis\gui\AbxBrass\EngineExport.cpp.

Error preparing stringer dead load reactions!  
09:05:49 AM - Line 3378 in source file D:\Virtis\gui\AbxBrass\LoadsUtility.cpp.

\*\*\*\*\*

We know that this error has something to do with the maximum number of spans allowed on a floorsystem structure. The attached bbd file has stringers that span 12 spans. If we rework the structure to where the stringers spans 10 spans, everything works fine. Brass's limitation on spans is supposed to be 13. Why does it kick out on 12 spans here? Also, we noticed that the last two floorbeams do not show any computed stringer reactions on the window that these are displayed on. There seems to be a bug in the program somewhere.

FROM:kkennelly DATE:8/25/2003 11:26:30 AM  
I've attached a version 5.0.1 file to this incident.

4/19/2016 3:03:31 PM

HRS AASHTO

405



Complete Issue Information

The virtual stringer analysis runs for 12 spans but when I look in the BRASS output file for the dead and live loads, the reactions are blank for Span 11 right end and both ends of Span 12. So these last 2 reactions aren't being passed back to Virtis.

FROM:bgoodrich DATE:Wednesday, August 27, 2003 1:29:18 PM  
I have confirmed Krishna's findings that BRASS is not passing some of the reactions back to Virtis. I examined the BRASS engines and found a bug in the loop that writes out the reactions. This bug is present in both BRASS-GIRDER and BRASS-GIRDER(LRFD). I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Thursday, September 04, 2003 11:25:12 AM

FROM:bgoodrich DATE:Wednesday, October 08, 2003 3:51:46 PM  
WYDOT assigned this issue to BRASS Problem Log 448, but authorization to begin work is still pending.

FROM:bgoodrich DATE:Monday, November 03, 2003 5:39:10 PM  
This issue has been addressed for BRASS-GIRDER Version 5.8.8. It is not clear when this version will be released. Possible for version 5.2.

|                                          |
|------------------------------------------|
| Issue ID: 4738                           |
| Subject: Floorsystem Stage 2 Loads Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 8/25/2003 2:25:35 PM |
| Modified By: administrator            | 6/19/2008 4:10:18 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status      | Priority | Category       |
|-----------------|-------------|----------|----------------|
| Duray, Jim      | New         | High     | Bug            |
| Goodrich, Brian | Assigned    |          | Bug - Export 1 |
|                 | System Test |          |                |
| Goodrich, Brian | System Test | High     | Bug - Export 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | license expired.zip |             |

Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 4755.12591 | Resolved      | License problems |

Description

FROM:dcoenig DATE:Monday, August 25, 2003 10:25:36 AM

We have encountered an interesting error on floorsystem structures. We were looking at the deadload moment diagrams on the attached 2-span continuous floor system structure. All of the diagrams look okay except for the two load cases: Barrier & Curbs and Railings. On these two load cases, the second span moment diagram is a straight line. We went back and redefined these two loadings as member loads and the moment diagrams are correct. Based on our experimenting with this, we believe that on the case of continuous floorsystem structures, the export program for BRASS is not exporting these two loadings beyond the first span. This problem is happening on the main girders. The bbd file is attached.

FROM:kkennelly DATE:8/25/2003 11:42:09 AM

I see the same problem when I run BID13, left plate girder. The BRASS input file contains 2 lines for DC2, UNIFORM-DL1 but both are for span 1, there is no span 2 DC2 load applied.

FROM:bgoodrich DATE:Wednesday, August 27, 2003 2:39:51 PM

I modified the export (LoadsUtility.cpp) to apply the distributed load to the entire length of the girder member. Fixed for Version 5.1.0.

|                           |
|---------------------------|
| Issue ID: 4755            |
| Subject: License problems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 8/27/2003 3:19:17 PM |
| Modified By: administrator            | 6/19/2008 4:10:17 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:03:31 PM

HRS AASHTO

407

Complete Issue Information

| Primary Contact  | Status   | Priority | Category         |
|------------------|----------|----------|------------------|
| Duray, Jim       | New      | High     | Bug              |
| Duray, Jim       | New      | High     | Bug              |
| Goodrich, Brian  | Assigned |          | Bug - Export 1   |
| Kennelly, Krisha |          |          | Bug - Domain 1   |
| Duray, Jim       |          |          | Bug              |
| Lee, Herman      | Open     |          | Bug - Database 1 |
|                  |          | Urgent   |                  |
|                  | Resolved |          |                  |
| Lee, Herman      | Resolved | Urgent   | Bug - Database 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | FS5Example2.bbd                 |             |
|      | Adjust Angle Conversion Utility |             |
|      | Read Me.doc                     |             |
|      | FS5Example1.bbd                 |             |

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 4768.12578 | Resolved      | Error on Skewed End Panels of Floorsystem |

Description

FROM:bmccaffrey DATE:Wednesday, August 27, 2003 11:19:17 AM

See attached error. We license the full unlimited version.

This has only happened on one machine out of 50.

FROM:jihnat DATE:8/27/2003 12:13:27 PM

I spoke to Brian on the phone and generated new Registration Keys for this PC.  
Not sure what caused this, though.

Complete Issue Information

FROM:bmccaffrey DATE:Wednesday, August 27, 2003 12:20:18 PM

The new codes worked. You can resolve this incident.

|                                                    |
|----------------------------------------------------|
| Issue ID: 4768                                     |
| Subject: Error on Skewed End Panels of Floorsystem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Koenig, David           | 8/29/2003 5:13:03 PM |
| Modified By: administrator            | 6/19/2008 4:10:16 PM |
| Priority: Urgent                      |                      |
| Category: Bug - Database 1            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Friday, August 29, 2003 1:13:03 PM

We put in the example problem with the skewed end panels. When we finished and tried to rate the structure, we got the error shown below. The program basically will not rate the longest exterior stringers on the skewed end panels. We experimented with this some by adding more girders and modifying the skew. What we have found is that the structure has to have three or less stringers in the skewed end panels for the error not to occur. Also, if the structure is not skewed it will run. Attached are to bbd files. The first one has the skewed end panel with four stringers. The fourth or longest stringer does not run. The second bbd file has five stringers. This error shows up for the two longest stringers on the skewed end panels.

Based on our experimenting, the error has something to do with cross sections, the skew, and the number of stringers on the skewed end panels. Two errors actually show up with a run. The debug version of each error is shown below.

4/19/2016 3:03:32 PM

HRS AASHTO

409

Complete Issue Information

Error # 1

----- Contents of BRASS Error File -----

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

File: d:\AASHTOWARE\VirtisOpis50\FS5\_(Original)\Structure\_Definition\_1\Unit\_1\Unit1\_Stringer4  
\Stringer\_4\_At\BRASS\_LFD\Stringer\_4\_AtI.ERR

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Fatal Error Encountered - Unexpected Termination

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Data File: 4\Stringer\_4\_At\BRASS\_LFD\Stringer\_4\_AtI.DAT

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

-----  
12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Error No.: 1103

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Type : Input Error

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Location : prgen.for

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

\*\*\*\*ERROR\*\*\*\* A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN  
1 SPAN POINT = 20

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

RUN STOPPED.

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

----- End of Contents of BRASS Error File -----

12:14:20 PM - Line 1985 in source file D:\Virtis\gui\AbxBrass\AbxBrassEngine.cpp.

Error #2

Input Errors (1103) - Cross-section area less than or equal to zero

4/19/2016 3:03:32 PM

HRS AASHTO

410

Complete Issue Information

12:19:37 PM - Line 2349 in source file D:\Virtis\DOMAIN\laborslt\DoMemberResults.cpp.

FROM:dkoenig DATE:Friday, August 29, 2003 1:21:28 PM

FROM:kkennelly DATE:8/29/2003 3:43:00 PM

I suspect this is somehow related to tolerances. I ran Unit 1 Stringer 4 in FS5Example1.bbd and the following SPAN commands are generated:

COMMENT Span 1  
SPAN-A 1, 24.0000, 5  
SPAN-C 1, 23.9998, 1,

FROM:bgoodrich DATE:Tuesday, September 02, 2003 12:26:37 PM

The stringer member length along the reference line for "Stringer 4 AtI" in "Unit1 Stringer4" is computed by the domain as 23.999763061965 ft. The user has input all ranges as 24.0 ft, which is correct. When the ResetChangePointGeneration function is called, the domain member length is merged into the list of change points. How is the 23.999763061965 ft member length calculated?

FROM:kkennelly DATE:9/2/2003 2:57:42 PM

The domain is setting the member's reference line length to 23.999763 in DoFlrSystemUnitGeometryList->UpdateStringerMemberPositions() when it calls ComputeGroupDefMbrLength(). That function finds the coordinates of the intersections of the fb and stringer in the group def. It looks like the angle of the floorbeam is not exactly 45.0 degrees when it is converted to radians. That causes the start coordinate of the fb and stringer intersection to be slight off from what it should be to result in a stringer length of 24'. Requires more investigation as to best way to fix this problem.

FROM:kkennelly DATE:9/3/2003 10:07:38 AM

Conversion factor in db for radians is 0.017453. This factor needs more significant digits. Factor changed to 0.01745329252, Superstructure re-entered and reference lines are then stored correctly. We'll need to write a utility to re-compute the direction angles for the reference lines in table abw\_struct\_def\_ref\_line using the original conversion factor and the new, more precise conversion factor. We really need to test the effects of these changes.

FROM:kkennelly DATE:9/3/2003 10:27:10 AM

FROM:hlee DATE:9/24/2003 10:39:59 AM

This incident will be resolved in 5.1.0 SP1. The conversion factor stored in db for radians need to be changed in 5.1.0 SP1.

direction\_angle\_x, direction\_angle\_y, and direction\_angle\_z are allowed to be null.  
The direction angles pi, pi/2, and 0 are not affected by the conversion factor.

FROM:hlee DATE:9/24/2003 12:44:31 PM

Script for 5.1.0 SP1:

```
=====
UPDATE abw_struct_def_ref_line
SET direction_angle_x = (direction_angle_x / 0.017453) * 0.01745329252
```

4/19/2016 3:03:32 PM

HRS AASHTO

411

Complete Issue Information

```

WHERE (
(direction_angle_x IS NOT NULL) AND
(direction_angle_x != 0) AND
(direction_angle_x NOT BETWEEN 1.57079 AND 1.57080) AND
(direction_angle_x NOT BETWEEN 3.14159 AND 3.14160)
)
UPDATE abw_struct_def_ref_line
SET direction_angle_y = (direction_angle_y / 0.017453) * 0.01745329252
WHERE (
(direction_angle_y IS NOT NULL) AND
(direction_angle_y != 0) AND
(direction_angle_y NOT BETWEEN 1.57079 AND 1.57080) AND
(direction_angle_y NOT BETWEEN 3.14159 AND 3.14160)
)
UPDATE abw_struct_def_ref_line
SET direction_angle_z = (direction_angle_z / 0.017453) * 0.01745329252
WHERE (
(direction_angle_z IS NOT NULL) AND
(direction_angle_z != 0) AND
(direction_angle_z NOT BETWEEN 1.57079 AND 1.57080) AND
(direction_angle_z NOT BETWEEN 3.14159 AND 3.14160)
)

```

=====

FROM:jduray DATE:11/3/2003 8:52:11 AM

The above script is not correct and should not be used.. The problem is much more complicated and cannot be resolved by a script. A utility is being written to make the necessary adjustments.

FROM:hlee DATE:11/21/2003 8:25:15 AM

The utility is done. Please see the attached document for the details of the utility. It is scheduled to be released in 5.1.1.

FROM:gbarnhill DATE:Monday, January 12, 2004 11:16:21 AM

OK in v5.1.1 I see equal lengths for SPAN-A and SPAN-C commands in the export for skewed FB members and skewed supports for girder members. I've verified this in existing bridges in a database migrated to 5.1.1 and in a new superstructure created in 5.1.1.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| <p>Issue ID: 4772</p> <p>Subject: Flexure-compos slab or rebar controlling limit state</p> |
|--------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Folder: /Virtis/Support Center/Virtis</p> <p>Primary Contact: Goodrich, Brian</p> <p>Submitted By: Kennelly, Krisha 9/4/2003 6:00:13 PM</p> <p>Modified By: administrator 6/19/2008 4:38:36 PM</p> <p>Priority: High</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Complete Issue Information

Category: Bug - BRASS

## History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Stringers_510_1002.bbd |             |
|      | Stringers.bbd          |             |

## Tasks

| Name       | Current State | Summary                                                                                          |
|------------|---------------|--------------------------------------------------------------------------------------------------|
| 4774.12572 | Resolved      | Stringer Analysis for stringer in a through girder bridge is not using correct stringer spacings |

## Description

FROM:kkennelly DATE:9/4/2003 1:55:29 PM

Email from Aran Lessard, Bayside Engineering received 9/4/2003:

Here is the .bbd file for the bridge we spoke about on the phone.

As I had mentioned, the 5-span girder system produces rating results indicating a limit state of flexure-compos slab or rebar.

For instance in running the HS20 truck for Girder G31 (interior girder), the governing location is in a region of both negative and positive live load moment (27.5% of span 3).

As a guess, the inventory rating factor of 0.508 seems to be derived from taking the negative moment live load stress (not divided by modular ratio of 10) at the top of slab location (location one), and dividing by the allowable compressive stress in the concrete.

Like I said, it is just a guess but my hand calc indicates  $1200/2276 = 0.527$  (it is close to 0.508 but not

4/19/2016 3:03:32 PM

HRS AASHTO

413





## Complete Issue Information

Category: Bug - Export 1

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                             |
|------------|---------------|-------------------------------------------------------------------------------------|
| 4799.12548 | Suspended     | Add intermediate short floor beam in the end panel of a skewed GFS and GF structure |

## Description

FROM:kkennelly DATE:9/4/2003 3:41:09 PM

Submitted on behalf of Felton Suthon, Modjeski & Masters via email from Bridgewater email 9/2/2003:

I printed out the output for the stringers in question and located the problem, although a solution is not readily apparent.

The computer is correctly assigning the deck weights to the stringers.

The computer is correctly assigning the parapet loads to the external stringers.

The graphics from "Framing Plan Detail" and "Structure Typical Section" look exactly right.

But...

For some reason, the computer is disregarding the "left edge of deck to first stringer". Because this is a through girder, the distance from left edge of deck to the first main member is -0.75' (the graphics correctly read this as 9" left from edge of deck to Right Main Girder). I also input 1.67 feet as the distance from left edge of deck to first stringer. The graphics look perfect except that there is no distance from stringer to edge of deck. At the start of analysis, the warning "No left cantilever length was input. BRASS set to 1/2 supporting top girder width" and the stringer spacing, which appears throughout the input as 5 spaces at 5'-10" (again correctly on the "Typical Section" graphic) is suddenly 2'-5" and 4 spaces at 5'-10". Thus, the dead load for stringers 1, 2 and 6 is wrong:

Stringer 1 should be supporting 1'-8" (overhang) plus 2'-11" of deck plus the parapet. The computer has it supporting 1'-2 1/2" of deck plus the parapet.

4/19/2016 3:03:32 PM

HRS AASHTO

415

Complete Issue Information

Stringer 2 should be supporting 5'-10" of deck. The computer has it supporting 1'-2 1/2" plus 2'-11".

Stringer 6 should be supporting 2'-11" plus 1'-8" (overhang) of deck plus the parapet. The computer has it supporting 2'-11" of deck plus the parapet.

This seems particularly cruel of the computer. All inputs seem to be correct and yet the information shifts as the analysis runs. There is a warning stating "BRASS cannot apply the loads specified in the Structure Typical Section window, such as the concrete deck, appurtenances, sidewalks and wearing surface, to the load cases assigned to them. Instead, BRASS internally applies them to the appropriate Superstructure Dead Load case for the stage specified in the original Virtis load case."

Any assistance will be greatly appreciated.

Thank you,  
Felton Suthon

FROM:kkennelly DATE:9/4/2003 3:45:39 PM

FROM:bgoodrich DATE:Friday, September 05, 2003 3:13:45 PM  
Added BBD file saved in 5.1.0.1002 format.

FROM:bgoodrich DATE:Friday, September 05, 2003 3:14:22 PM  
I modified the export (BrassCmd.cpp and BrassDeck.cpp) to correctly generate the BRASS deck commands. The export was generating the commands using the bay spacing considering the main girders, instead of just considering the stringers. This caused both the deck cantilever lengths and the first bay spacing to be in correct. This issue has been corrected.

Jim - Please indicate the version in which this issue will be released.

FROM:hlee DATE:9/8/2003 4:10:00 PM  
Tested OK in 5.1 Beta 2.

Issue ID: 4799  
Subject: Add intermediate short floor beam in the end panel of a skewed GFS and GF structure

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: McCaffrey, Brian 9/17/2003 4:03:18 PM  
Modified By: administrator 6/19/2008 4:10:14 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:03:33 PM

HRS AASHTO

416

## Complete Issue Information

### Contacts

| Name    | Company                                | Email 1                 | Phone 1      |
|---------|----------------------------------------|-------------------------|--------------|
| Binh Ha | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us | 617-973-7561 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | directory.xls       |             |

### Tasks

| Name       | Current State    | Summary                                                            |
|------------|------------------|--------------------------------------------------------------------|
| 4801.12546 | Not Reproducible | Bridge Explorer not functioned as version 5.0 and earlier versions |

### Description

FROM:jduray DATE:9/17/2003 12:02:58 PM

Entered on behalf of Brian McCaffrey.

Brian is interested in modifying the floor system to handle an intermediate short floor beam in the end panel of a skewed GFS and GF structure .

Issue ID: 4801

Subject: Bridge Explorer not functioned as version 5.0 and earlier versions

## Complete Issue Information

|                  |                               |                      |  |
|------------------|-------------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Virtis |                      |  |
| Primary Contact: | Ihnat, Joseph                 |                      |  |
| Submitted By:    | Ha, Binh                      | 9/18/2003 5:43:39 PM |  |
| Modified By:     | administrator                 | 6/19/2008 4:10:13 PM |  |
| Priority:        | High                          |                      |  |
| Category:        | Bug - GUI 2                   |                      |  |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Urgent   | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | Urgent   | Education |

## Contacts

| Name           | Company                 | Email 1                   | Phone 1      |
|----------------|-------------------------|---------------------------|--------------|
| Jordi Parisian | Wilbur Smith Associates | jparisian@wilbursmith.com | 518-783-1887 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 4824.12523 | Resolved      | adding users to MSDE database |

## Description

FROM:bha DATE:Thursday, September 18, 2003 1:43:39 PM

When we open Virtis and go to the subdirectories (Bridge Explorer) to create the new bridge, after we complete the process of input and save, the file will appear at main directory (Bridge Explorer) automatically with Virtis 5.0 and earlier versions but not for version 5.0.1. I just do not know why. Can you help on that matter?

FROM:jihnat DATE:9/24/2003 1:19:06 PM

I'm not sure I understand. Which subdirectories and main directory in the Bridge Explorer are you referring to?

Do you have "All Bridges" selected in the tree on the left side of the Bridge Explorer?

4/19/2016 3:03:33 PM

HRS AASHTO

418

Complete Issue Information

FROM:bha DATE:Wednesday, September 24, 2003 3:58:29 PM

Enclosed is the screen captured from my PC, the main directory is 'All Bridges', the subdirectories are like I-93 NB (Northbound) or SB (Southbound)...so now you know what I mean

FROM:jihnat DATE:9/24/2003 4:17:27 PM

When I create a new bridge it appears immediately, whether I'm running 5.0.0 or 5.0.1.

I see that you have more than 500 bridges in your database. Does your new bridge appear if you Retrieve Next Group? (It's under Bridge on the menu bar.)

FROM:bha DATE:Thursday, September 25, 2003 7:58:07 AM

I went to I-495 (SB) and created a new bridge and save to that subdirectory (or subfolder), the bridge's name was still in that subdirectory (or subfolder)(SB) but its name was not automatically appear on main directory (or main folder) "All Bridges" like version 5.0 and earlier versions.

FROM:bha DATE:Thursday, September 25, 2003 8:08:18 AM

FROM:jihnat DATE:9/25/2003 9:35:30 AM

I haven't been able to reproduce that.

FROM:bha DATE:Thursday, September 25, 2003 9:55:04 AM

Let me simplify the incident: When you use Window Explorer to save a certain file to certain sub-folder, the filename is stored on that sub-folder but its name will not on main folder. But for Bridge Explorer of Virtis (version 5.0 and earlier versions) is different if the file is created and saved to certain sub-folder, its filename is stored on that folder and also on main folder "All Bridges". But for version 5.0.1 thing is the same to window explorer. I suggest you try to practice on your system: you open Virtis and go to certain sub-folder and open a new bridge and then you save the file on that sub-folder, then you open main folder "All Bridges" to see if the name of new bridge on main folder or not.

Issue ID: 4824

Subject: adding users to MSDE database

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Parisian, Jordi

9/29/2003 1:02:29 PM

Modified By: administrator

6/19/2008 4:10:11 PM

Priority: Urgent

Category: Education

4/19/2016 3:03:33 PM

HRS AASHTO

419

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Duray, Jim      | New       | High     | Bug            |
| Goodrich, Brian | Assigned  | Urgent   | Bug - BRASS    |
|                 | Duplicate |          | Bug - Export 1 |
| Goodrich, Brian | Duplicate | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | ProblemStructure.bbd |             |

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 4827.12520 | Duplicate     | Problems with Stage 2 Dead Load Distribution on Steel Bridges |

### Description

FROM:jparisian DATE:Monday, September 29, 2003 9:02:29 AM

I can't figure out how to add users to the MSDE database, Virtis50\_SQLServer. I've read the Virtis help, but I don't know how to start the OSQL program in a command prompt window. When I explore C:\MSSQL7\Binn\osql.exe, it prompts me for a password but won't let me enter anything. What am I doing wrong?

FROM:jihnat DATE:9/29/2003 10:14:41 AM

To start osql in a command prompt window, type "osql -U sa", then just hit return for the password.

FROM:jparisian DATE:Tuesday, October 14, 2003 5:38:14 PM

OK, but what's the password? I've tried "virtis", "bridgeware", and "virtisadmin".

FROM:jihnat DATE:10/15/2003 7:41:24 AM

There is no password. Just hit return.

FROM:jparisian DATE:Wednesday, October 15, 2003 11:39:08 AM

but then i get a message that the login failed and i can't complete the steps necessary to add the user

4/19/2016 3:03:34 PM

HRS AASHTO

420

## Complete Issue Information

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 4827                                                         |
| Subject: Problems with Stage 2 Dead Load Distribution on Steel Bridges |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 9/30/2003 5:55:32 PM |
| Modified By: administrator            | 6/19/2008 4:10:11 PM |
| Priority: Urgent                      |                      |
| Category: Bug - Export 1              |                      |

## History

| Primary Contact | Status     | Priority | Category                         |
|-----------------|------------|----------|----------------------------------|
| Duray, Jim      | New        | High     | Bug                              |
| Goodrich, Brian | Assigned   | Urgent   | Bug - Export 1<br>Bug - Export 2 |
|                 | Patch Test |          |                                  |
|                 | Accepted   |          |                                  |
|                 | Closed     |          |                                  |
| Goodrich, Brian | Closed     | Urgent   | Bug - Export 2                   |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | FloorbeamProblem.bbd |             |

## Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 4829.12518 | Closed        | Live Load DF on Girder/Floorbeam/Slab Systems |

## Description

FROM:dkoenig DATE:Tuesday, September 30, 2003 1:55:32 PM

4/19/2016 3:03:34 PM

HRS AASHTO

421



## Complete Issue Information

While working on inputting some floorsystem structures, we have discovered a problem with how Virtis is distributing stage 2 deadloads. On these floorsystem examples, we set the stage 2 deadload distribution to be equally to all members. When the program runs, all of the stage 2 deadloads are being moved to stage 1 deadloads and being distributed based on transverse continuous beam analysis, which is what we had set for stage 1 loads.

After seeing this on floorsystems, we went back and looked at some simple span steel girder bridges to see what was happening on them. What we found on these structures was that the program was inconsistent. On composite structures, the program will take the stage 2 loadings and distribute them according to what was entered on the dead load distribution tab. For noncomposite structures, the program will move all stage 2 loadings to stage 1 and distribute them based on continuous beam analysis regardless of what was entered for stage 2 loads on the DL distribution tab. We have entered a large number of noncomposite steel structures and were not aware that the program was doing this. We were aware that it was happening on RC deck girder bridges and that it has been fixed in the service pack for 5.0 for RC structures.

For steel structures, this is a serious problem that needs to be addressed quickly. It is fairly common for our structures to be a mixture of composite and noncomposite spans. This basically means that you could have one of these structures defined using multiple structure definitions and the dead load distribution will be different for each structure definition. I suspect that most people are not aware that this is happening. I have attached a bbd file for a structure that has a simple span composite and simple span noncomposite structure definition in it.

FROM:bgoodrich DATE:Monday, October 06, 2003 4:56:01 PM

I have begun investigating this issue. The slab selfweight may be getting applied twice, so I will be verifying this as well.

FROM:bgoodrich DATE:Tuesday, October 14, 2003 2:16:20 PM

The slab selfweight issue was submitted as Incident 4845.

FROM:bgoodrich DATE:Tuesday, October 14, 2003 2:29:19 PM

The DL distribution issue was addressed in Incident 4695, so this incident is a duplicate. For version 5.0, the export was modified so only one stage was exported for non-composite steel structures. However, this prevented the dead loads from being distributed differently, i.e., uniformly for long-term loads. The export (BrassEngineProperties.cpp) has been revised to utilize the method employed prior to version 5.0. Fixed for version 5.1. The work-around is to specify a 3-stage loading sequence in the engine properties for the member alternative.

Issue ID: 4829

Subject: Live Load DF on Girder/Floorbeam/Slab Systems

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Koenig, David

9/30/2003 8:53:35 PM

Modified By: administrator

6/19/2008 4:10:11 PM

Priority: Urgent

4/19/2016 3:03:34 PM

HRS AASHTO

422

## Complete Issue Information

Category: Bug - Export 2

## History

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Duray, Jim         | New      | High     | Bug              |
| Ordoobadi, Mehrdad | Assigned |          | Bug - Database 2 |
| Kennelly, Krisha   | Resolved |          |                  |
| Lee, Herman        | Resubmit |          |                  |
|                    | Assigned |          |                  |
|                    | Open     |          |                  |
|                    | Resolved |          |                  |
| Lee, Herman        | Resolved | High     | Bug - Database 2 |

## Contacts

| Name            | Company         | Email 1                   | Phone 1       |
|-----------------|-----------------|---------------------------|---------------|
| Gale Barnhill   | Earth Tech      | gale.barnhill@aecom.com   | (402)363-9515 |
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 4833.12514 | Resolved      | Old shapes library |

## Description

FROM:dkoenig DATE:Tuesday, September 30, 2003 4:53:36 PM

We have encountered an issue on girder/floorbeam/slab structures. We have entered one of these structures using the girder line definitions. The program requires that the live load distribution factors be entered for both the main girder and the floorbeam. We have entered a value for the floorbeam and it does not seem to do anything. We tried varying the value of this factor from .15 to 10 and no change in the rating was found for the floorbeam.

We also entered the same structure as a girder system definition. Whenever the compute button is used, it gives the warning message saying the distribution factor can't be computed because the

4/19/2016 3:03:34 PM

HRS AASHTO

423

## Complete Issue Information

spacing of the floorbeams is greater than 6 feet. We tried manually entering values and had the same result as for the girder line definition.

There appears to be two issues that need to be dealt with. First, if the values for a floorbeam distribution factor are going to be ignored, then why are we allowed to enter them? Secondly, exactly how is the analysis engine determining the factors when the spacing is greater than 6 feet?

A bbd file is attached.

FROM:kkennelly DATE:10/6/2003 3:35:16 PM

Your user entered distribution factors are not being used because the floorbeam spacing in your structure is > 6'. As per AASHTO Table 3.23.3.1, for a concrete deck on a floorbeam if the floorbeam spacing is greater than 6' ".. the load on the beam shall be the reaction of the wheels loads assuming the flooring between beams to act as a simple beam." When you analyze your floorbeam and open the "View latest analysis output" window for the fb, you will see two BRASS files listed with the text "(Virtual Analysis)". These are the BRASS input and output files for the "virtual" analysis that determines the LL reaction on your floorbeam assuming the deck to act as simple beams between the floorbeams. The actual BRASS input file for the floorbeam analysis will use this reaction in the " FLOORBEAM-TRUCK-AXLE" command.

Virtis typically tries not to prevent users from entering data. In this case, the usage of the distribution factor is dependent on the AASHTO spec saying don't use it if the spacing is greater than 6'. If the spec changes to say don't use the distribution factor if the spacing is greater than 7', we would have to maintain the user interface based on what spec the user is going to use to analyze the floorbeam and we don't do that.

The export should issue a warning that the user entered distribution factors will not be used (since the export knows it is creating an input file for the current AASHTO spec and the 6' spacing is critical) and a "virtual" analysis will be run to determine the wheel reaction due to simple beam distribution between fb's.

FROM:bgoodrich DATE:Friday, October 10, 2003 2:39:25 PM

The export (BrassStdLoadControl.cpp) was revised to issue the following warning message:

"Distribution factors input for the floorbeam will not be used when the floorbeam spacing is greater than 6 ft. A 'virtual' analysis will be performed to determine the wheel reaction due to simple beam distribution between floorbeams. See AASHTO Table 3.23.3.1."

FROM:gbarnhill DATE:Tuesday, January 13, 2004 11:24:40 AM

OK in 5.1.1 -- I see the new message issued for FB spacing greater than 6 ft and DF calculated by Virtis. For FB spacing 6 ft and less, the DF entered in the LiveLoad Dist dialog is used.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:04:20 AM

Track field marked with "gale OK". Accepted.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:04:29 AM

Closed.

Issue ID: 4833

Subject: Old shapes library

4/19/2016 3:03:34 PM

HRS AASHTO

424

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McCaffrey, Brian        | 10/6/2003 1:18:15 PM |
| Modified By: administrator            | 6/19/2008 4:10:10 PM |
| Priority: High                        |                      |
| Category: Bug - Database 2            |                      |

## History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | Assigned |          |                |
| Goodrich, Brian  |          |          | Bug - Export 1 |
|                  |          | Urgent   |                |
|                  | Resolved |          |                |
| Goodrich, Brian  | Resolved | Urgent   | Bug - Export 1 |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | ny_stifferer_error.ZIP |             |

## Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 4837.12510 | Resolved      | Virtis LFD Stiffener issue in 5.1 |

## Description

FROM:bmccaffrey DATE:Monday, October 06, 2003 9:18:16 AM

One more typo:

Shape "27WF94" - ly value is 109.00, should be 115.1

FROM:jduray DATE:11/7/2003 7:41:05 AM

4/19/2016 3:03:34 PM

HRS AASHTO

425

Complete Issue Information

Fix this in our dbs. Also in the xml file. For the next migration we should also look fo it in the db and change ly from 109 to 115.1.

FROM:jduray DATE:11/10/2003 10:40:34 AM

FROM:jduray DATE:11/11/2003 2:02:42 PM

Instead of fixing the users' databases post a Technical Note and send an eNotification. Keep the TN current and send eNotification when it changes. We can't completely fix the db because we don't know if the user renamed them. Also, to use them they copy them to the bridge. Difficult to deal with. Better to inform them and let them deal with it.

FROM:kkennelly DATE:11/11/2003 3:10:28 PM  
TN0009 issued.

FROM:gbarnhill DATE:Monday, January 12, 2004 11:57:23 AM

v5.1.1 -- I imported the shapes listed in the TN into the library from the XML file. The data is still the old properties, not the revised ones. I don't think the XML was patched or updated.

FROM:kkennelly DATE:1/12/2004 2:17:30 PM  
Herman, can you fix these values in the XML file?

FROM:kkennelly DATE:1/12/2004 2:19:39 PM  
See for Technical Note#9 for the values to be changed in the XML file.

FROM:hlee DATE:1/13/2004 10:50:16 AM

Jim Duray decided not to include the xml file in Service Pack 1. I will update the xml file and put it in sourcesafe for future release.

FROM:hlee DATE:1/13/2004 3:06:43 PM

Updated the xml file according to Technical Note #9. The xml file is in \$/virtis/gui/abglib folder.

|                                            |
|--------------------------------------------|
| Issue ID: 4837                             |
| Subject: Virtis LFD Stiffener issue in 5.1 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 10/8/2003 6:17:00 PM |
| Modified By: administrator            | 6/19/2008 4:10:10 PM |
| Priority: Urgent                      |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name          | Company       | Email 1                                                              | Phone 1       |
|---------------|---------------|----------------------------------------------------------------------|---------------|
| Gale Barnhill | Earth Tech    | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a> | (402)363-9515 |
| Xinmei Li     | Michael Baker | <a href="mailto:xli@mbakercorp.com">xli@mbakercorp.com</a>           |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4842.12505 | Resolved      | Empty Floorbeam in Floor Line System |

### Description

This is a steel plate girder w/ stiffeners that gets drastically different results if I change the spacing of the last range of stiffeners by 0.003". 1.bbd has a spacing of 46.243" and was generated by the stiffener wizards (see 1.bmp) and generates HS ratings of 23.38T INV and 39.04T OP. 2.bbd has a spacing of 46.24" (see 2.bmp) and generates HS ratings of 60.22T INV and 100.57T OP. If I change the spacing to 46.25" I get HS ratings of 60.22T and 100.57T as well. Shear controls for the low ratings, servicability for the higher values. All are attached in a zipped file.

In summary, here are my results:

| spacing | IN     | OP      | control/location       |
|---------|--------|---------|------------------------|
| 46.240" | 60.22T | 100.57T | servicability/mid-span |
| 46.243" | 23.38T | 39.04T  | shear/end              |
| 46.250" | 60.22T | 100.57T | servicability/mid-span |

I set the tolerances to 0.01'/0.1", 0.001'/0.01", and 0.0001'/0.001" all with the same results.

FROM:bmccaffrey DATE:Wednesday, October 08, 2003 2:22:40 PM

FROM:kkennelly DATE:10/9/2003 8:26:00 AM

Member G4, LFD rating. I found the following differences in the BRASS input file generated by the export:

If the last stiffener spacing is 46.243" the following is the last Stif-Tran-Schedule command generated:  
STIF-TRAN-SCHEDULE 1, 1, 46.2430, 70.2837, 23.1215 This results in the last range ending at 70.2837+23.1215 = 93.4052'

If the last stiffener spacing is 46.24" the following are the last 2 Stif-Tran-Schedule commands:  
STIF-TRAN-SCHEDULE 1, 1, 46.2400, 70.2837, 19.2667  
STIF-TRAN-SCHEDULE 1, 1, 46.2652, 89.5504, 3.8554 This results in the last range

4/19/2016 3:03:35 PM

HRS AASHTO

427

Complete Issue Information

ending at 89.5504+3.8554 = 93.4058'

The span length in the SPAN-A command is 93.4058' for both cases. So I think that BRASS thinks the right end is unstiffened in the first case cause its range ends at 93.4052' not 93.4058'. The logic applied in the export to create the Stif-Tran-Schedule command with the 46.2652" spacing (which was not input by the user) should also get triggered when the spacing is 46.243". I think the export should check that the end of the last range in case 1 exactly matches the span length in the SPAN-A command to the 4th digit required by BRASS.

FROM:bgoodrich DATE:Tuesday, January 06, 2004 1:58:45 PM

I modified BrassCmd.cpp to adjust schedule ranges to coincide with the end of the span. Fixed for version 5.1.1.

|                                               |
|-----------------------------------------------|
| Issue ID: 4842                                |
| Subject: Empty Floorbeam in Floor Line System |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Li, Xinmei              | 10/13/2003 1:23:01 PM |
| Modified By: administrator            | 6/19/2008 4:10:09 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 2                 |                       |

History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Duray, Jim      | New              | High     | Unknown     |
| Ihnat, Joseph   | Assigned         |          | Bug - GUI 2 |
|                 | Not Reproducible |          |             |
|                 | Resolved         |          |             |
| Ihnat, Joseph   | Resolved         | High     | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:xli DATE:10/13/2003 9:14:55 AM

In Floor Line System (Training Sample FS2 FloorbeamStringer Line Example) double click "Floorbeam" to create a new Floorbeam and then "Cancel", there will be an empty floorbeam created.

FROM:jduray DATE:10/13/2003 10:27:06 AM

FROM:jihnat DATE:10/27/2003 8:10:02 AM

I don't see "Floorbeam", only "floorbeam members" and "Floorbeam member alternatives". Not able to reproduce this with either one of those.

FROM:xli DATE:Thursday, November 06, 2003 10:46:40 AM

If you refresh the tree, you can see the empty floorbeam. This makes the file not be able to save.

FROM:jihnat DATE:11/7/2003 10:41:43 AM

Floorbeam Member.  
Fixed for 6.0, 5.2 and 5.1

FROM:gbarhill DATE:Tuesday, January 13, 2004 2:27:11 PM

OK in 5.1.1 -- I can't reproduce this in 5.1.0 either.

Issue ID: 4845  
Subject: Slab selfweight applied twice by BRASS

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Goodrich, Brian 10/14/2003 6:13:46 PM  
Modified By: administrator 6/19/2008 4:10:09 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status      | Priority | Category    |
|-----------------|-------------|----------|-------------|
| Duray, Jim      | New         | High     | Bug - BRASS |
| Goodrich, Brian | Assigned    |          |             |
|                 | System Test |          |             |
| Goodrich, Brian | System Test | High     | Bug - BRASS |

4/19/2016 3:03:35 PM

HRS AASHTO

429



## Complete Issue Information

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A6619.bbd           |             |
|      | L06242.bbd          |             |

### Tasks

| Name       | Current State    | Summary                    |
|------------|------------------|----------------------------|
| 4853.12494 | Not Reproducible | Problem Deleting P/S Shape |

### Description

FROM:bgoodrich DATE:Tuesday, October 14, 2003 2:13:46 PM

This issue was discovered while investigating Incident 4827. When the transverse continuous beam method is specified for stage 1, the slab selfweight is applied. Then, the slab selfweight is applied again to stage 1 using the uniformly distributed method due to an internal error in BRASS.

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, October 15, 2003 1:36:14 PM

WYDOT assigned this issue to BRASS Problem Log 457.

FROM:bgoodrich DATE:Friday, November 28, 2003 7:47:16 PM

This issue was corrected in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

Issue ID: 4853

Subject: Problem Deleting P/S Shape

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Koenig, David

10/22/2003 6:04:22 PM

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:08 PM |
| Priority: High             |                      |
| Category: Bug - Domain 2   |                      |

### History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Bug         |
| Ordoobadi, Mehrdad | Suspended |          | Enhancement |
| Ordoobadi, Mehrdad | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 4854.12493 | Suspended     | PS Value System Defaults |

### Description

FROM:dkoenig DATE:Wednesday, October 22, 2003 2:04:22 PM

We have a structure that will not allow us to delete a P/S shape. This is a bridge that we copied from another one and then updated. The copied bridge had a narrow flange girder and the new one had a wide top flange. We copied a wide top flange from our library and then updated all of the beam details windows to pick the newly copied library item. We then tried to delete the other shape that we did not want and it will not allow us to do it. It tells us that the object is in use by another thing in the workspace. We have checked the windows, and this shape is not being referenced in any other windows. The bbd file is attached.

FROM:mordoobadi DATE:11/10/2003 10:12:59 AM

David, could you please export the bridge and send it to me. My e-mail address is mordoobadi@mbakercorp.com.

FROM:mordoobadi DATE:12/3/2003 4:06:38 PM

e-mail from David Koenig:  
BBD File L06242.BBD attached.

>>> <koenid@mail.modot.state.mo.us> 12/3/2003 11:27:11 AM >>>

4/19/2016 3:03:36 PM

HRS AASHTO

431

Complete Issue Information

We have come across another bridge that has the same problem as Incident 4853. On this structure we can't delete a steel shape that has been added. The steel shape is a W36x170. Also, we have a material, and bearing stiffeners that we can't delete. The material is ASTM (18,000 Allowable) A-7. The bearing stiffeners are Bearing Stiffener Bent #1 & #5, and Bearing Stiffener Bent 2, 3 & 4. This seems to be a more general problem within the system. Also, note that this structure was copied from another bridge. The bbd file is attached below.

The problem with not being able to delete a material has occurred before. We submitted that one as Incident 2943 which has previously been resolved.

Thanks.  
<<<<<<<<

FROM:mordoobadi DATE:3/11/2004 1:28:30 PM  
There is an OLD beam definition that is hanging around although it is not connected to a member alternative.  
I am not sure how this has happened.  
It might be because of some problem in a previous version of Virtis/Opis.

I am not able to duplicate this. (making a beam def left behind)

|                                   |
|-----------------------------------|
| Issue ID: 4854                    |
| Subject: PS Value System Defaults |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Teal, Dean              | 10/22/2003 6:40:48 PM |
| Modified By: administrator            | 6/19/2008 4:10:08 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 4855.12492 | Discard       | Final Allowable Tension, LFD Rating |

### Description

FROM:dteal DATE:Wednesday, October 22, 2003 2:40:48 PM

In the System Defaults we set the value for the Stress Limit Coef. This value is then used to calculate the Allowable tension in the stress limits for both LFD and LRFD. Our state, like others, uses a different allowable tension stress limit for design and rating. So after using the wizard to create your bridge you will have to edit the allowable tension in the stress limit for either the LRFD or the LFD column along with entering the value for the allowable slab compression.

To solve this problem we would like to have a PS Value System Default for each. One for LFD and one for LRFD.

We currently use Zero tension for LFD and  $3 \times \text{SQRT}(f'c)$  for LRFD

Issue ID: 4855

Subject: Final Allowable Tension, LFD Rating

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

10/22/2003 6:41:27 PM

Modified By: administrator

6/19/2008 4:10:08 PM

Priority: High

4/19/2016 3:03:36 PM

HRS AASHTO

433

### Complete Issue Information

Category: Enhance BRASS

### History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug - BRASS |
| Goodrich, Brian | Assigned   |          |             |
|                 | Patch Test |          |             |
| Goodrich, Brian | Patch Test | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1944_V510.bbd       |             |
|      | tolerances.doc      |             |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 4856.12491 | Patch Test    | BRASS-GIRDER reports error with bracing schedule command |

### Description

FROM:dteal DATE:Wednesday, October 22, 2003 2:41:27 PM

Currently we have one value for Final Allowable Tension for and LFD Rating. This value is used for both Inventory and Operating. Through the software implementation process I have been informed that we use different values for Inv. And Operating. In order to rate a PS structure the engineer will have to make 2 runs. One with Zero Allowable Tension for Inventory and then run it again with  $6 \cdot \text{SQRT}(f'c)$  Allowable Tension for Operating. This switching back and forth causes problems and errors. By errors I mean making runs and not knowing which value is being used – "Is this an Inventory run or and Operating run"?

According to our bridge ratings engineer this is not a unique thing for Kansas only. Other states change the allowables also.

To solve this problem we would like to have a 2 Final Allowable Tension Value Fields, one for inventory and one for operating.

Do you have any suggestions for a work-a-round?

4/19/2016 3:03:36 PM

HRS AASHTO

434

Complete Issue Information

FROM:jduray DATE:10/23/2003 5:49:03 PM  
Krisha - do you have any suggestions?

FROM:kkennelly DATE:10/24/2003 8:06:20 AM  
I can't think of any work around. There is one important fact though, BRASS does not use any of the allowable stresses the user inputs in the Stress Limits window in Virtis so adding a new Final Allowable Tension field will not help. Maybe Brian has some suggestions.

FROM:bgoodrich DATE:Friday, October 24, 2003 1:42:43 PM  
BRASS uses the ASD Factors from the Factors tab of the Member Alternative Description window to set the allowable stress for concrete tension. There are fields for both inventory and operating, however, BRASS only supports the inventory field. This is not documented in the engine help, so this needs to be done.

More importantly, the Manual for Condition Evaluation of Bridges only specifies concrete tension under the inventory rating section. Therefore, BRASS does not calculate an operating rating for concrete tension. It is obvious from your comments that KDOT is doing this, so this is a valid concern. I will forward this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Monday, October 27, 2003 10:42:46 PM  
E-mail from Mike Watters:  
I will add this to the enhancement list for consideration and prioritization by the BRASS users.

Micheal J. Watters, P.E.

E-mail from Jay Puckett:  
I agree that Dean's approach/request is traditional among several DOTs. Jay

FROM:bgoodrich DATE:Monday, October 27, 2003 10:44:34 PM  
Changed Category to 'Enhance BRASS' and status to 'Suspended'.

FROM:smample DATE:Thursday, July 21, 2005 11:21:27 AM  
This incident is the basic problem that propted incident 3862, that I submitted at the meeting in New Mexico.  
Idaho uses  $3 \cdot \text{SQRT}(f'c)$  for Inv rating and  $7.5 \cdot \text{SQRT}(f'c)$  FOR Opr rating. Therefore, at this time I can not use Virtis is load rate any of Idaho's prestressed concrete girder bridges, or efficiently use Virtis for over legal truck permits.

FROM:hlee DATE:4/30/2008 2:33:52 PM  
Discarded by TAG 12/07.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 4856<br>Subject: BRASS-GIRDER reports error with bracing schedule command |
|-------------------------------------------------------------------------------------|

|                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Goodrich, Brian<br>Submitted By: Pierce, Ron<br>10/22/2003 6:32:14 PM |
|---------------------------------------------------------------------------------------------------------------------------------|

4/19/2016 3:03:36 PM

HRS AASHTO

435

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:08 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Enhance BRASS |
| Goodrich, Brian | Assigned  |          |               |
|                 | Duplicate |          |               |
| Goodrich, Brian | Duplicate | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | SteelCapacity.doc<br>pic16857.pcx |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 4860.12487 | Duplicate     | Error due to Contraflexure Points |

### Description

FROM:bgoodrich DATE:Wednesday, October 22, 2003 2:32:14 PM  
Submitted for Ron Pierce (ADOT):

Ron is trying to analyze a steel bridge, but is getting an error. He indicated that this bridge used to run fine and he is only now getting this error. The following error occurs once BRASS-GIRDER begins its analysis:

**\*\*ERROR\*\*** On the BRACING-SCHEDULE command, the Spacing must be evenly divisible into the Range Length +/- 0.01 ft.

The bracing commands generated by the export are:

BRACING-SCHEDULE 1, 23.8200, 0.0000, 166.7500  
BRACING-SCHEDULE 2, 23.5700, 0.0000, 164.9800

4/19/2016 3:03:37 PM

HRS AASHTO

436

Complete Issue Information

BRACING-SCHEDULE 3, 23.3100, 0.0000, 139.8600  
BRACING-SCHEDULE 3, 23.2800, 139.8600, 23.2800

The second command does not conform to a requirement in BRASS that the range must be evenly divisible by the spacing (within a tolerance). BRASS calculates the following:

Spaces(integer) = (164.98+0.01)/23.57 = 7, however due to floating point accuracy, BRASS calculates 6.

Difference = Spaces \* 23.57 - 164.98 = -23.56

The absolute value of the difference is compared to a tolerance of 0.011, and in this case the difference is obviously greater. Hence, an error message is triggered and BRASS halts the analysis. If I change the spacing to 23.569, BRASS is able to perform the analysis, but this is only a work-around.

I reviewed the BRASS engine and export source and cannot find any modifications that would have led to this problem. I recommend modifying the BRASS tolerance so the correct number of spaces is determined. I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, October 22, 2003 3:24:37 PM  
I added Ron's bridge as a 5.1 BBD file and added a screenshot of his tolerances.

FROM:bgoodrich DATE:Thursday, October 30, 2003 1:46:48 PM  
WYDOT assigned this issue to BRASS Problem Log 464.

FROM:bgoodrich DATE:Monday, November 03, 2003 5:47:01 PM  
This issue has been addressed for BRASS-GIRDER Version 5.8.8. It is not clear when this version will be released. Possibly for version 5.2.

|                                            |
|--------------------------------------------|
| Issue ID: 4860                             |
| Subject: Error due to Contraflexure Points |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: vinayagamoorthy, vinacs | 10/28/2003 4:51:57 PM |
| Modified By: administrator            | 6/19/2008 4:10:08 PM  |
| Priority: High                        |                       |
| Category: Enhance BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | VI4843 28 0140L.bbd     |             |
|      | SteelUnbracedLength.doc |             |

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 4861.12486 | Resolved      | Unbraced Length used to estimate moment capacity is not correct |

### Description

FROM:bgoodrich DATE:Tuesday, October 28, 2003 12:51:57 PM  
E-mail from Vinacs (10/9/03):

Problem Statement: Entering contraflexure points for continuous composite steel girder bridge which is required by the BRASS Engine is somewhat confusing. If the user fails to enter correct contraflexure points, the rating results reported may be erroneous and the user wouldn't know about his mistake.

We have experienced this problems in one 11 span continuous steel girder bridge, where every 3rd span has a drop in span (or two hinges). Our engineers did not enter the contraflexure points correctly and got very low rating factor. We spent about 2 days worth of our time in investigating it. Here, in order to illustrate the problem, I am considering a two span continuous structure here and give the methodology used by the BRASS. (If the methodology used by the BRASS is different, please let us know). For the discussion purposes, please assume there is no deck rebars over the bents.

I believe that the methodology used by BRASS is as follows:

1. User enters the contraflexure points based on dead load moment diagram. If the user forgets to enter the actual contraflexure point, BRASS takes the default values (typically 0.3rd and 0.7th point of a span). In many cases, especially if there are hinges in the span, the contraflexure points will be at the hinge location, not at the default locations.

Average user may not aware that the contraflexure points needs to be entered since it is at a hidden data entry location. Sure enough, our engineers did no know the implications of not correcting the default numbers listed by the BRASS.

2. Based on the contraflexure points described by the user, BRASS creates a mathematical model for the analysis. When creating the section properties over the bents, Brass ignores the deck concrete between the contraflexure points over the bent and uses the steel section alone (includes the rebars, if they are included within the deck). To illustrate this, I show the moment diagram of two span bridge below and corresponding BRASS model.

Typical mathematical model created for the BRASS analysis is shown here. Concrete deck is shown in gray color.

## Complete Issue Information

(Embedded image moved to file: pic16857.pcx)

3. Once the mathematical model is created, BRASS uses the sections described in the mathematical model to rate the bridge. This is where the error occurs.
  - Note that BRASS program rates the bridge at every point (of interest) using positive and negative moment demand. The section described in the mathematical (BRASS) model is used to estimate the positive and negative moment capacity at a point.

IS THIS A CORRECT? Answer is NO. We believe the program should use composite section property when it evaluates the girder for positive moment and use the non-composite section property when it evaluates the girder for negative moment.
  - For example, It rates the girder using non-composite steel section over the bent regardless whether positive or negative moment demand is used to rate the girder. To be correct, it should use non-composite section when it rates the girder using negative moment demand, and use the composite section when it rates the girder using positive moment demand.

However, since the positive moment demand is very low at the bent, rating based on positive moment may not control and therefore, using non-composite section for both positive and negative demand IS ACCEPTABLE.
  - On the other hand, if the BRASS program rates the bridge at 0.3rd point, positive moment demand might be high enough, where using non-composite girder property might yield the controlling rating. In our opinion, it should use appropriate girder section that is applicable for the load demand that is used for rating. If the BRASS rate it using positive moment demand, it should use the composite girder.

In the above example, if you notice, the positive and negative moment demand for permit truck at the actual contraflexure point (0.746th point) is approximately equal (856 and -840 kip-ft respectively)

Instead of using exact contraflexure point, if a user assumed the inflection point is at 0.7th point (JUST 0.046th point away and many users may think it is acceptable), the positive moment demand (1140 kip-ft) is much higher than the negative moment demand (-784 kip-ft). In this case, if we use the non-composite girder section capacity to rate the bridge for positive moment, we may get lower than the actual rating factor.
- It is our opinion that BRASS needs to be modified so that it rates the girder using appropriate sections for the load demand it is checking/rating. This may require modification to the BRASS program. Until the bug is fixed, a work around the problem should be put in place. A few suggestions are:
  1. Once the analysis is performed, BRASS program would know the exact location of the contraflexure points, and if the assumed/entered contraflexure points are different, export program should spell out the difference once the analysis is completed. User will then be able to modify the contraflexure points and rerun the analysis.
  2. Whenever hinges are placed in a span, export program automatically places the contraflexure points at the hinge location and over-write users initial values.

Complete Issue Information

Vinacs M Vinayagamoorthy  
916-227-8657

PS: I attach the same message in a word document here, if you are unable to read/see the text and graph. (See attached file: SteelCapacity.doc)

FROM:bgoodrich DATE:Tuesday, October 28, 2003 1:12:47 PM  
This issue appears to be the same that described in Incidents 3059 and 4440. This issue was placed on the BRASS Enhancement List as part of those two incidents. I have forwarded this request to WYDOT.

FROM:bgoodrich DATE:Friday, February 27, 2004 11:12:42 AM  
Set status to Duplicate.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 4861                                                           |
| Subject: Unbraced Length used to estimate moment capacity is not correct |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                                                |
| Primary Contact: Goodrich, Brian                                                     |
| Submitted By: vinayagamoorthy, vinacs                      10/28/2003 5:28:07 PM     |
| Modified By: administrator                                      6/19/2008 4:10:08 PM |
| Priority: High                                                                       |
| Category: Bug - BRASS                                                                |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

4/19/2016 3:03:37 PM

HRS AASHTO

440

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 4869.12478 | Closed        | Questions regarding live load distribution to floorbeams |

Description

FROM:bgoodrich DATE:Tuesday, October 28, 2003 1:28:07 PM

E-mail from Vinacs (10/15/03):

The Negative Moment Capacities at the bent locations are probably wrong as well. In many cases, the unbraced length used to estimate the capacity is incorrect. This needs to be resolved. Furthermore, I noticed that numbers used to estimate Cb values are incorrect as well.

I am attaching a word document where I have copied the BRASS output file to highlight the problems encountered.

(See attached file: SteelUnbracedLength.doc)

Brian is already reviewing this bridge because of the problem found in the positive moment region (28-0140L).

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:bgoodrich DATE:Tuesday, October 28, 2003 1:30:57 PM

The same bridge as Incident 4843 is used.

FROM:bgoodrich DATE:Monday, November 03, 2003 12:38:35 PM

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, December 01, 2003 11:36:36 AM

WYDOT has assigned this issue to BRASS Problem Log 471.

FROM:bgoodrich DATE:Saturday, January 03, 2004 12:36:07 PM

This issue has been addressed in BRASS-GIRDER 5.8.8. Fixed for version 5.2.0.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 4869                                                    |
| Subject: Questions regarding live load distribution to floorbeams |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Koenig, David           | 10/31/2003 12:53:48 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:07 PM |
| Priority: High             |                      |
| Category: Bug - Export 2   |                      |

### History

| Primary Contact  | Status          | Priority | Category    |
|------------------|-----------------|----------|-------------|
| Duray, Jim       | New             | High     | Unknown     |
| Kennelly, Krisha | On Hold         |          | Bug - GUI 2 |
|                  | Rejected by TAG |          |             |
| Kennelly, Krisha | Rejected by TAG | High     | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 53c1369-ErrRLE.bbd  |             |

### Tasks

| Name       | Current State   | Summary                                                               |
|------------|-----------------|-----------------------------------------------------------------------|
| 4875.12472 | Rejected by TAG | Diaphragms not properly generated for bridge with large skew and wide |

### Description

FROM:kkennelly DATE:10/31/2003 8:51:03 AM  
Submitted on behalf of David Koenig, Missouri DOT via email:

We have been working on setting up slab/girder/floorbeam type structures in our system. As part of that process, we have been looking at the calculation of distribution factors for the floorbeams. AASHTO indicates that when the floorbeam spacing is greater than 6', you compute the distribution factor by determining the wheel load reaction assuming simple spans between floorbeams. My understanding is that Virtis is doing this by using a virtual analysis. We have been trying to match the reactions that Virtis is coming up with and have not been able to do it. We did notice that the virtual file is placing hinges on the floorbeams in some cases. The hinges are apparently placed at .11 feet from the support. The person that has been looking into this is Jose Garcia. He has made up a word document to indicate how we are doing it and what Virtis is coming up with. I have attached that document as well as the bbd file for the example structure. We were wondering if you could explain to us exactly how the program is coming up with the reactions and what it is doing with the hinges?

FROM:kkennelly DATE:10/31/2003 8:54:32 AM  
For the interior floorbeams, the Virtual analysis models the 2 floorbeam spans on either side of the

4/19/2016 3:03:37 PM

HRS AASHTO

442

## Complete Issue Information

floorbeam that is being analyzed. The hinge is being placed adjacent to the middle floorbeam so that the wheel loads will be distributed using a simple beam analysis. If the hinge did not exist, the BRASS model would be composed of a 2 span continuous beam and the wheel loads would be distributed using the continuous beam. The hinge introduces a zero moment constraint so that the wheel loads are distributed using simple beam analysis as per the AASHTO spec.

Brian will have to explain why the export is placing the hinge at 0.11' as opposed to the 12' specified in the BRASS Help manual.

I cannot explain the differences in the wheel load reactions between your hand calcs and the BRASS output. I suspect it has to do with the number of significant digits being carried through by BRASS but Brian should be able to answer your question more definitively.

FROM:kkennelly DATE:10/31/2003 9:08:24 AM

FROM:bgoodrich DATE:Friday, November 07, 2003 12:36:04 PM  
The location of the hinge should have been 0.12 ft, so I modified the export accordingly.

I investigated the differences in the wheel line reaction (WLR) for each structure. I did find an error with the user computations for the 16 ft and 18 ft simple-span structures - the lead 5 kip axle was not included. Therefore the WLRs for them should be:

Structure 3, Ext Floorbeam: 13.875 kips (was 13.5625 kips)  
Structure 4, Ext Floorbeam: 14.611 kips (was 13.7778 kips)

This brought the two highest percent differences down. The largest difference is now 1.2%. The reason for these differences is that BRASS does not position axles directly on the peaks of the influence line. It moves the truck across the structure in increments controlled by the wheel advancement denominator. The wheel advancement denominator is set at 100 for this type of analysis and is sufficient to prevent problems interpolating between influence ordinates. Additionally, when a hinge is present, the influence ordinates are affected slightly, as the hinge is not located directly at the support.

FROM:bgoodrich DATE:Monday, November 10, 2003 2:22:12 PM  
Comments from David Koenig (11/7/03):

I think that should answer the questions we had. We did not have much experience in this area and were looking at it more in depth to have a better understanding of what is being done. It seems like the floorsystem area of the program has been a lot more buggy than other parts of Virtis. We have found quite a few problems in doing some of our research, hopefully we have about got it debugged. I know that a lot of this is because the complexity of the analysis increases tremendously when you have to worry about load transfer between the stringers, floorbeams, and main girders.

FROM:bgoodrich DATE:Monday, November 10, 2003 2:24:18 PM  
Comments accepted by David Koenig. Issue regarding distance to hinge must be patch tested for Version 5.1.1.

FROM:gbarnhill DATE:Tuesday, January 13, 2004 12:24:13 PM

4/19/2016 3:03:38 PM

HRS AASHTO

443

Complete Issue Information

I see the Hinge location of 0.12 for the Virtual analysis of an interior floorbeam.

HOWEVER, see the following clips from log files.

```
FB spaced at 5.5 ft, DF entered as 1.0
FLOORBEAM-CONTROL 1.000, 100, 100.00, , 0
FLOORBEAM-TRAVELWAY 1, 0.000, 20.000
COMMENT Reactions computed using AASHTO Table 3.23.3.1
FLOORBEAM-TRUCK 1, TYPE_3____~1, , 10.000, 10.000,/
, 1, 25.000,/
Truck: AASHTO Type 3
FLOORBEAM-TRUCK-AXLE 1, 8.500, 6.000, 8.500
FLOORBEAM-MPT 1, 10.000, 10.000, 8.500, 6.000, 8.500
```

FB spaced at 5.5 ft, DF entered as 2.0

```
FLOORBEAM-CONTROL 1.000, 100, 100.00, , 0
FLOORBEAM-TRAVELWAY 1, 0.000, 20.000
COMMENT Reactions computed using AASHTO Table 3.23.3.1
FLOORBEAM-TRUCK 1, TYPE_3____~1, , 10.000, 10.000,/
, 1, 25.000,/
Truck: AASHTO Type 3
FLOORBEAM-TRUCK-AXLE 1, 17.000, 6.000, 17.000
FLOORBEAM-MPT 1, 10.000, 10.000, 17.000, 6.000, 17.000
```

My question is: based on the COMMENT, shouldn't the Distribution of the truck be based on S/6 ??  
Virtis apparently uses the input DF since the results of these ratings give a RF of 3.44 for DF=1 and 1.72 for DF=2.

I've attached a BBD for V5.1.1

FROM:bgoodrich DATE:Thursday, January 15, 2004 4:06:32 PM  
The lane reactions are calculated either by the simple-beam method (spacing > 6 ft) or by AASHTO Table 3.23.3.1 (spacing <= 6 ft). The distribution factors entered for the floorbeam member alternative (i.e., the 1.0 or 2.0 entered for shear and moment) are applied to the reactions. Note that the weights on the FLOORBEAM-TRUCK-AXLE and FLOORBEAM-MPT commands are factored by the distribution factors, i.e., lane reaction / 2 wheels \* DF. The user is required to enter the distribution factor, which could be S/6 or the 1.0 or 2.0 entered. In short, the export doesn't automatically calculate the distribution factor.

FROM:gbarnhill DATE:Friday, January 16, 2004 4:35:33 PM  
OK in 5.1.1 - I understand the situation based on Brian's comments.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:07:08 AM  
Track field marked with "gale OK". Accepted.

FROM:bgoodrich DATE:Thursday, September 23, 2004 11:07:21 AM

4/19/2016 3:03:38 PM

HRS AASHTO

444

## Complete Issue Information

Closed.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 4875                                                                 |
| Subject: Diaphragms not properly generated for bridge with large skew and wide |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: vinayagamoorthy, vinacs | 11/3/2003 8:37:55 PM |
| Modified By: administrator            | 6/19/2008 4:10:06 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:kkennelly DATE:11/3/2003 3:35:58 PM  
Submitted on behalf of Vinacs via email:

Virtis did not create the diaphragms as we expected.

Virtis created diaphragms for first three bays. All other bays are not generated! Please check this bridge.

(See attached file: 53c1369-ErrRLE.bbd)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:jduray DATE:4/13/2005 3:51:39 PM  
We think this is the wizard.

4/19/2016 3:03:38 PM

HRS AASHTO

445



## Complete Issue Information

Issue ID: 4879  
Subject: BARS Import and E57PSC.PRN

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Murgoitio, Shanon 11/5/2003 9:27:32 PM  
Modified By: administrator 6/19/2008 4:10:06 PM  
Priority: High  
Category: Bug - BARS Import

### History

| Primary Contact | Status           | Priority | Category          |
|-----------------|------------------|----------|-------------------|
| Duray, Jim      | New              | High     | Bug               |
|                 | On Hold          |          | Bug - BARS Import |
| Lee, Herman     | Not Reproducible |          |                   |
| Lee, Herman     | Not Reproducible | High     | Bug - BARS Import |

### Contacts

| Name                                     | Company           | Email 1                            | Phone 1      |
|------------------------------------------|-------------------|------------------------------------|--------------|
| Michael LeBeau                           | Bryant Associates | unknown@unknown.com                |              |
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT         | Shanon.Murgoitio@itd.idaho.<br>gov | 208-334-8547 |

4/19/2016 3:03:38 PM

HRS AASHTO

446

## Complete Issue Information

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | D22C-V510.bbd          |             |
|      | D22C-Support-Files.zip |             |
|      | D22C.bbd               |             |
|      | D22C-V501.bbd          |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 4882.12465 | Closed        | Rating Results Summary Report in Madero ASD |

### Description

FROM:smample DATE:Wednesday, November 05, 2003 4:27:33 PM

I am receiving an error that the prestressed concrete section I am trying to import into Virtis cannot be found in the E57PSC.PRN file. I have the E57PSC.PRN file located in the c:\Program Files\AASHTOWARE\Virtis51 directory.

I have attached a copy of the file I am trying to import and my E57PSC.PRN file.

|                                                      |
|------------------------------------------------------|
| Issue ID: 4882                                       |
| Subject: Rating Results Summary Report in Madero ASD |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Hasan, Mac              | 11/6/2003 5:19:35 PM |
| Modified By: administrator            | 6/19/2008 4:10:06 PM |
| Priority: Urgent                      |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:03:38 PM

HRS AASHTO

447

### Complete Issue Information

|                    |                    |        |             |
|--------------------|--------------------|--------|-------------|
| Ordoobadi, Mehrdad | Assigned           | Urgent | Bug - GUI 1 |
|                    | Information Needed |        |             |
| Duray, Jim         | New                | High   | Unknown     |
| Kennelly, Krisha   | Resolved           |        | Education   |
|                    | Closed             |        |             |
| Kennelly, Krisha   | Closed             | High   | Education   |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Q-01-009(399).bbd   |             |

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 4884.12463 | Closed        | Question about PS Transfer Length error message given by BRASS LFD |

### Description

FROM:mhasan DATE:Thursday, November 06, 2003 12:19:35 PM

When horiz. shear controls the rating at a desired POI, the Rating Result Summary Report does not report rating values correctly. This is not a problem when flexure controls rating.

FROM:bgoodrich DATE:Friday, November 07, 2003 3:06:14 PM

Mac Hasan sent me some a screen shot of the rating summary window and the Madero input and output files. They are attached.

FROM:bgoodrich DATE:Monday, November 10, 2003 12:32:31 PM

E-mail from Mac Hasan (11/10/03):

Brian,

Here are the files.

For timber structures, Vertical shear does not control since the allowable stress is many times higher than the horizontal shear stress. Note the following for structure D-22-C:

For the Modified Tandem vehicle, summary report lists critical RF at the abutment(Code does not require this check) and not at the POI (Used lesser of 3d or L/4). The correct RF should be 1.10 due to flexure at 105 point.

For the Colorado Permit vehicle, flexure controls rating and listing on the summary report is okay.

4/19/2016 3:03:39 PM

HRS AASHTO

448

Complete Issue Information

For the HS20-44 vehicle, summary report for the INV level is okay. For the OPR level, the correct RF should be 1.20 due to flexure at 105 point.

Thanks,

Mac

FROM:bgoodrich DATE:Monday, November 10, 2003 12:34:42 PM  
Thanks for the files. They were useful and clearly identified the issue.

I reviewed the specification and the Madero engine. I found that Madero determines the shear at the critical live load shear distance (lesser of 3d or L/4 as stated in AASHTO 13.6.5). Madero then sets the live load shear at points of interest between the support to this critical shear. A similar adjustment is made for the dead load shear. These adjustments are documented in the output files you sent. Search for the header:

STRINGER SHEAR ENVELOPE ADJUSTMENT CALCULATIONS  
(per AASHTO 16th ed. 13.6.5)

Therefore, the shear ratings near the supports are valid. Please let me know if this addresses your concern.

FROM:mordoobadi DATE:11/24/2003 1:28:56 PM  
Since Brian is responding to this incident I assign it to him.

FROM:bgoodrich DATE:Monday, December 01, 2003 11:32:50 AM  
E-mail from Mac:  
Brian,

Your November 10, 2003 reply was very satisfactory.

Thanks,

Mac Hasan,  
CDOT Bridge Branch

FROM:bgoodrich DATE:Monday, December 01, 2003 11:33:15 AM  
Closed.

Issue ID: 4884

Subject: Question about PS Transfer Length error message given by BRASS LFD

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krishna

4/19/2016 3:03:39 PM

HRS AASHTO

449

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Kennelly, Krisha | 11/10/2003 1:13:50 PM |
| Modified By: administrator     | 6/19/2008 4:10:06 PM  |
| Priority: High                 |                       |
| Category: Education            |                       |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Lee, Herman     | On Hold  |          | Bug - GUI 2 |
| Ihnat, Joseph   | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 4892.12456 | Closed        | Report Tool missing NBI ID attribute |

### Description

FROM:kkennelly DATE:11/10/2003 8:12:46 AM

Submitted on behalf of Francisca Karyadi, Edwards & Kelcey via email:

Ms. Kennelly,

Currently I am rating a 4 simple span prestressed butted beams (box beams and deck beams). My input was okay for spans 1,2,3 (built in 1969), but when I ran any beams (BM 1 and BM 2) of span 4 (built in 1994), the following error showed up:

-----  
Error No.: 1889  
Type : Input Error  
Location : Input Data File

4/19/2016 3:03:39 PM

HRS AASHTO

450

Complete Issue Information

**\*\*ERROR\*\*** In all cases, the debond length + development/transfer length must be greater than the overhang length.  
Check input.  
-----

I checked my input for span 4 several times, but I could not find anything. Please help me check my input for span 4. Thank you Ms. Kennelly for your help.

<<Q-01-009(399).bbd>>

Francisca Karyadi  
Edwards and Kelcey

FROM:kkennelly DATE:11/10/2003 8:19:30 AM  
Reply email sent:

Hi Francisca,

I've entered your question as Incident 4884 on the Virtis Technical Support website.

The PS strand you are using in Span 4 is the ½" (7W-270) LR strand. It has a transfer length of 25" (this is defined on the Prestress Strand material window). The right end of your beam has an overhang of 25.62" as input on the Beam Details: Span Detail tab. The BRASS Help for the STRAND-ST2 command indicates that the transfer length + debond length(which is zero since your strands are not debonded) must be greater than the overhang length. 25" is less than 25.62" so BRASS issues the error message.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

FROM:kkennelly DATE:11/10/2003 8:46:25 AM  
Email received:

Ms Kennelly,  
Thank you very much for your speedy response. I will probably will change the overhang from 25.62" to 25".

Have a great day, and thank you for your help.

Francisca

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 4892<br>Subject: Report Tool missing NBI ID attribute |
|-----------------------------------------------------------------|

4/19/2016 3:03:39 PM

HRS AASHTO

451

## Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Koenig, David           | 11/20/2003 5:01:16 PM |
| Modified By: administrator            | 6/19/2008 4:10:05 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 2                 |                       |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | Urgent   | Bug         |
| Ihnat, Joseph   | Assigned | High     | Bug - GUI 2 |
|                 | On Hold  |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 4904.12444 | Closed        | System crash when defining frame connection data |

## Description

FROM:dkoenig DATE:Thursday, November 20, 2003 12:01:16 PM

We were trying to run the report tool for the bridge explorer. When you run it, you get the list of attributes that can be selected from the bridge description. This listing does not include the NBI ID. Since this is one of the fields that you can fill out on the first description tab, it should also be available to select in the standard bridge report for the bridge explorer. I suspect that it was intended for this to be available, but that it was overlooked. Please add this as one of the attributes that can be selected.

4/19/2016 3:03:39 PM

HRS AASHTO

452

Complete Issue Information

FROM:jihnat DATE:7/1/2005 12:59:40 PM  
Done for 5.4.0

FROM:xli DATE:9/20/2005 2:08:43 PM  
Structure number is added.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 4904                                            |
| Subject: System crash when defining frame connection data |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ihnat, Joseph        |                        |
| Submitted By: Goodrich, Brian         | 12/10/2003 10:18:35 PM |
| Modified By: administrator            | 6/19/2008 4:10:04 PM   |
| Priority: High                        |                        |
| Category: Bug - GUI 2                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Wednesday, December 10, 2003 5:18:36 PM  
A runtime error was encountered in TrainingBridge1 at the Virtis training for the city of LA. The steps to duplicate the error follow:

1. Open the Girder System Superstructure Definition window.



Complete Issue Information

2. Check the Frame Structure Simplified Definition box.
3. Check the Frame Connection boxes for the either or both supports.
4. Leave the window without clicking OK/Apply or closing the window.
5. Open the Structure Framing Plan window.
6. Go back to the Girder System Superstructure Definition window.
7. Click OK or Apply to get runtime error.

This error was duplicated several times on several different PCs.

FROM:jihnat DATE:8/31/2005 11:09:42 AM  
Fixed for 5.4.0

|                                                  |
|--------------------------------------------------|
| Issue ID: 4905                                   |
| Subject: Deck templates in structure def wizard. |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Duray, Jim           |                        |
| Submitted By: Lee, Herman             | 12/10/2003 10:37:25 PM |
| Modified By: administrator            | 6/19/2008 4:10:04 PM   |
| Priority: High                        |                        |
| Category: Enhancement                 |                        |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |

Complete Issue Information

|            |         |      |             |
|------------|---------|------|-------------|
| Duray, Jim | Discard | High | Enhancement |
|------------|---------|------|-------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4907.12441 | Resolved      | Incorrect bitmap in training manual (PS1). |

Description

FROM:hlee DATE:Wednesday, December 10, 2003 5:37:25 PM

From LA Virtis training, entered for Shirish Mistry:

All the deck templates in the wizard have the sidewalks on the outside of the parapets. Usually the sidewalks are located within the parapets.

FROM:hlee DATE:4/30/2008 2:34:02 PM

Discarded by TAG 12/07.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4907                                      |
| Subject: Incorrect bitmap in training manual (PS1). |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Lee, Herman             | 12/11/2003 3:50:54 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:04 PM |
| Priority: High             |                      |
| Category: Documentation    |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | On Hold  |          | Bug - GUI 2 |
|                 | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 4908.12440 | Resolved      | Concrete material cannot be selected when the name ends with a space. |

### Description

FROM:hlee DATE:12/11/2003 10:39:18 AM

From LA Virtis training:

The Deck Profile window on "PS1 - Simple Span Prestressed I Beam Example" (pg. PS1 - 31) should have a "Compute from Typical Section" button since it is a system based input.

FROM:hlee DATE:3/9/2007 10:49:13 AM

Please see whether you have this already resolved for the Michigan DOT training.

FROM:xli DATE:3/9/2007 3:05:36 PM

Resolved. It's on page33 now.

4/19/2016 3:03:40 PM

HRS AASHTO

456

Complete Issue Information

Issue ID: 4908  
Subject: Concrete material cannot be selected when the name ends with a space.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Lee, Herman 12/11/2003 4:07:33 PM  
Modified By: administrator 6/19/2008 4:10:04 PM  
Priority: High  
Category: Bug - GUI 2

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:12/11/2003 10:52:47 AM

From LA Virtis training:

1. Create a concrete material with a space at the end of the name.
2. Select the concrete material in the Deck Profile window and click OK.
3. The selection is gone when you open the window again.

FROM:dkoenig DATE:Friday, December 12, 2003 9:24:26 AM

We had the same problem. It was incident 4647. This can be fixed by removing the blank space at the end. It probably would make sense to setup Virtis so that it ignored spaces at the end of a name on a library member.

4/19/2016 3:03:40 PM

HRS AASHTO

457

Complete Issue Information

FROM:jihnna DATE:12/12/2003 10:27:38 AM  
Also 4830, 3890, 3522.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 4914                                                |
| Subject: Continuing errors with skewed floorsystem structures |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: McCaffrey, Brian        | 12/22/2003 4:20:03 PM |
| Modified By: administrator            | 6/19/2008 4:10:03 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

Complete Issue Information

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | sht 11 of 37crop.tif  |             |
|      | F-04-012 (20M).bbd    |             |
|      | sht 22 of 37 crop.tif |             |

Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 4916.12432 | Resolved      | Question regarding modeling floor system superstructure in Virtis |

Description

FROM:bmccaffrey DATE:Monday, December 22, 2003 11:20:03 AM

I am still getting the same errors on skewed girder-floorsystem bridges that I got when beta testing. The attached bridge with the attached tolerance settings (0.001 ft) will work fine. Change the tolerance to 0.01' and it will not. We have to keep the tolerance settings at 0.01 ft or other things in Virtis will not work.

You only have to try the first stringer group.

FROM:hlee DATE:1/8/2004 8:43:06 AM

For the attached bridge, the Stringer Member Alt "U1 S1: 13.04" in Stringer Unit 1 Layout will generate the following rating error message when the tolerance for ft is 0.01. No rating error message will be generated when the ft tolerance is 0.001.

```

-----
-----
Fatal Error Encountered - Unexpected Termination
Data File: er1\U1_S1__13_04\BRASS_LFD\U1_S1__13_04'.DAT

Error No.: 1103
Type   : Input Error
Location : prgen.for
      ****ERROR**** A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN
1 SPAN POINT = 20
      RUN STOPPED.
      REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.
-----
-----

```

The distance from the superstructure definition reference line to "U1 S1: 13.04" defined in the Structure Framing Plan Details window is 8.685 ft (5.79 + 5.79/2). In the Structural Typical Section window, this distance is 8.6775 ft (14.49 - 5.8125). If the value "Left edge of deck to first stringer" is changed from 5.8125 to 5.805, this distance will agree with the one in the framing plan. No rating error message will be generated for both ft tolerances.

Complete Issue Information

FROM:hlee DATE:1/8/2004 11:28:12 AM

As a result of the investigation, four incidents are submitted (VI 4940, VI 4941, VI 4942, and VI 4943).

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 4916                                                             |
| Subject: Question regarding modeling floor system superstructure in Virtis |

|                                                      |
|------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                |
| Primary Contact: Kennelly, Krisha                    |
| Submitted By: Kennelly, Krisha 12/29/2003 7:55:15 PM |
| Modified By: administrator 6/19/2008 4:10:03 PM      |
| Priority: High                                       |
| Category: Education                                  |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Kennelly, Krisha | Assigned | High     | Education |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:12/29/2003 2:52:53 PM

Received via email from Aran Lessard, Bayside Engineering 12/29:

I am in the process of trying to build a Floorbeam-Stringer Floor System and am running into all kinds of problems. Essentially what I have is a stringer-floorbeam-truss bridge that I am trying to model in Virtis. The actual bridge has a few oddities, and I am trying to figure out how to make it work for the program. Only 4 out of 17 of the floorbeam bays contain interior simply-supported stringers and both ends of each floorbeam are cantilevered 5.71 ft over the supports at the truss locations. The cantilevered portions of the floorbeams support stringers that are each non-composite and continuous over 4 spans. I am sending you a scan of the framing plan and deck section sheets (via separate

4/19/2016 3:03:41 PM

HRS AASHTO

460

Complete Issue Information

emails) so you may have a better understanding of what I am talking about.

Is it possible to model this bridge in the Floorbeam-Stringer Floor System configuration that Virtis offers? I have already rated the truss and all associated components under separate program (Brass-Truss, etc.), and would therefore only need to rate the unique floorbeams and stringers with Virtis.

If it is not possible with the Floorbeam-Stringer Floor System, is it possible to model each individual floorbeam and stringer as Floorlines and Girderlines?

I am attaching the .bbd file for the model that I have already created.

Please give me a call when you have had a chance to review the information 617-625-4696.

Thank you,

Aran Lessard

FROM:kkennelly DATE:12/29/2003 2:56:46 PM  
Reply sent via email 12/29:

Virtis requires that the number of stringers in the Structure Typical Section of a floor system superstructure be constant along the length of the superstructure. (See the Virtis "Limitations" help topic.) It looks like your bridge has some sections that have stringers and some that do not contain stringers. You cannot use the Floor System Superstructure approach in Virtis but you can use the Floor Line Superstructure approach to define your stringers and floorbeams.

Issue ID: 4917  
Subject: Questions regarding floorline floorbeam models

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 12/30/2003 7:41:10 PM  
Modified By: administrator 6/19/2008 4:10:03 PM  
Priority: High  
Category: Education

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |



## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | FB2 input scan.tif<br>F-04-012 (20M).bbd |             |

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 4918.12430 | Resolved      | Concrete modular ratio used when ratio varies along length of floorbeam |

### Description

FROM:kkennelly DATE:12/30/2003 2:38:36 PM

Portions of email received from Aran Lessard, Bayside Engineering 12/30/03: (see incidents 4918, 4919 for other portions of email).

2. The allowable compressive stress (Operating) for 5000 psi concrete is given as 2750 psi in the Brass Output file. AASHTO Maintenance Manual allows a compressive stress of 3000 psi. Is there another provision in AASHTO that Virtis is using for allowable stress?

4. How is the live load calculated for the floorbeam analysis? For example, is the number of vehicles (lanes) based on the travel way width?

i.e. : travel way width = 26 ft  
width of 3 vehicles = (6 + 4 + 6 + 4 + 6) = 26 ft  
since travel way width is  $\geq$  3 vehicle width, use 3 vehicles in live load

analysis

5. My hand calculations show the live load moment indicated in Brass Output file to be adequate, yet the live load Shear at the support seems to be a little off for the 3 vehicles.

i.e. : for HS20 Loading :  
shear at support =  $1/2 \times (3 \times 32k) \times 1.30 \times 1.00 = 62.4k$   
Virtis indicates a LL shear of 53.34k.

Am I incorrect in my assumptions?

FROM:kkennelly DATE:12/30/2003 2:45:15 PM

Replies sent to 12/30/03 via email:

2. When I run your floorbeam, my BRASS output file shows the allowable compressive stress does = 3000 psi. This value is computed using the concrete inventory and operating ASD factors you enter on the Floorbeam Mbr Alt: Factors tab. If you had not entered any values for these factors, the BRASS default of  $0.55 \times f_c$  (=2750 psi) would have been used.

4/19/2016 3:03:41 PM

HRS AASHTO

462

Complete Issue Information

4. The number of lanes is computed based on the travelway width and the lane width. A lane is 12' wide and the truck is assumed to occupy 10' of this lane. So a 26' travelway only contains 2 lanes.

5. I did not investigate this as it appears to be related to your assumption concerning the incorrect number of lanes.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 4918                                                                   |
| Subject: Concrete modular ratio used when ratio varies along length of floorbeam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 12/30/2003 7:43:17 PM |
| Modified By: administrator            | 6/19/2008 4:10:03 PM  |
| Priority: High                        |                       |
| Category: Export 1                    |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Export 1 |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Export 1 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:12/30/2003 2:41:49 PM  
 Portion of email received from Aran Lessard 12/30/03:

1. The design strength of the concrete (f'c) is 5000 psi, but a modular ratio of n = 8 is indicated in the Brass Output file. AASHTO Maintenance Manual allows a modular ratio of n = 6 for this concrete.

4/19/2016 3:03:41 PM

HRS AASHTO

463

Complete Issue Information

Is there another input parameter that I am missing somewhere? This problem does not seem to occur with the stringer analyses that are associated with this floorbeam.

FROM:kkennelly DATE:12/30/2003 2:46:31 PM  
Reply sent 12/30/03 via email:

- 1. I see the following warning in the log file created by the BRASS export:  
"WARNING (Low):  
The slab rebar modular ratio is different between sections!"

You are getting that message because the cantilever sections of the fb don't have any deck on them so the n value in the cantilevers doesn't match the n value of the floorbeam main span. BRASS requires the n value to be constant along the length of the beam.

I think the BRASS export then creates the PROPERTIES-ST2 command using the BRASS default value of n = 8 instead of trying to use the n=6 you input. Our web server is currently down for maintenance but when it comes back on line I will submit this as a bug in the BRASS export.

In the meantime, if you enter concrete deck ranges for your floorbeam in the cantilever portions using slab thicknesses and widths = 0 and n = 6, the floorbeam will then be analyzed using the n=6 you entered. This should not affect your dead load results.

FROM:bgoodrich DATE:Wednesday, January 07, 2004 2:57:01 PM

Through version 5.1.1, the export found the first modular ratio along the member. I have modified the export to determine the modular ratio as the first user-entered or export-computed modular ratio encountered. The export-computed modular ratio is computed if the user leaves the modular ratio field blank in the UI and there is a slab and rebar defined over a particular range. Note that the export-default modular ratio of 8.0 will be used as a last resort. Fixed for version 5.1.2.

Issue ID: 4919  
Subject: Question regarding dead load moment produced by BRASS at fb support

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Kennelly, Krisha 12/30/2003 7:44:27 PM  
 Modified By: administrator 6/19/2008 4:10:03 PM  
 Priority: High  
 Category: Unknown

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |

4/19/2016 3:03:41 PM

HRS AASHTO

464

### Complete Issue Information

|                    |                    |      |         |
|--------------------|--------------------|------|---------|
| Kennelly, Krisha   | Closed             |      |         |
| Kennelly, Krisha   | Closed             | High | Unknown |
| Duray, Jim         | New                | High | Bug     |
| Kennelly, Krisha   | Information Needed |      |         |
| Ordoobadi, Mehrdad |                    |      |         |
| Kennelly, Krisha   |                    |      |         |
|                    | Closed             |      |         |
| Kennelly, Krisha   | Closed             | High | Bug     |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1.bmp               |             |
|      | b1.bbd              |             |
|      | 1000220T.txt        |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 4921.12427 | Closed        | Import/Export problems |

### Description

FROM:kkennelly DATE:12/30/2003 2:43:22 PM

Portion of email received from Aran Lessard, Bayside Engineering 12/30/03:

3. The dead load shear at the first support (POI 2.00) is given as 6.32k in the Brass Output file. My hand calculations add up to around 10.5k. { 5.02 + 4.99 + (cant. bm wt) = 10.5k } Am I missing something? There is no composite slab on the cantilever portion of the beam either. The dead load moment at this location (-33.13 ft-k) seems to check out fine.

FROM:kkennelly DATE:12/30/2003 2:47:41 PM

Reply sent 12/30/03 via email:

3. I did not investigate this as it appears to be an internal BRASS issue. I will enter this as an incident on the Virtis Technical Support website once it comes back on line.

FROM:kkennelly DATE:12/31/2003 9:00:58 AM

Email received from Aran Lessard 12/31/03:

4/19/2016 3:03:42 PM

HRS AASHTO

465

Complete Issue Information

I just realized that I made an error in my hand calculation. I was looking at the shear on the left side of the support while Brass is computing the shear on the right side of support. I do agree with the 6.32k of shear on the right side of support. Sorry about the mix-up.

|                                 |
|---------------------------------|
| Issue ID: 4921                  |
| Subject: Import/Export problems |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: McCaffrey, Brian        | 12/31/2003 4:09:05 PM |
| Modified By: administrator            | 6/19/2008 4:10:03 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Wednesday, December 31, 2003 11:09:05 AM

I'm having problems importing the attached .bbd. The error is attached also. I exported it from our Oracle database and I'm just trying to reimport it. It runs fine.

FROM:kkennelly DATE:12/31/2003 12:14:18 PM

Brian, Can you export this bridge into a text file instead of a bbd file? Choose File/Export and then change the Save As Type selection to Text File. And how did you migrate this database to Version 5.1? Thanks.

FROM:kkennelly DATE:12/31/2003 12:47:42 PM

FROM:kkennelly DATE:12/31/2003 1:00:14 PM

4/19/2016 3:03:42 PM

HRS AASHTO

466

Complete Issue Information

A script was provided in Version 5.0 Service Pack 1 that should have set the SteelCrossSection deck type. I suspect this script was never run.

FROM:bmccaffrey DATE:Friday, January 02, 2004 8:42:30 AM

The database was migrated by our DBA's using the scripts that came on the installation CD. The text file is attached.

FROM:kkennelly DATE:1/5/2004 9:51:55 AM

Do you know when this bridge was first input into Virtis? Was it before or after version 5.01?

FROM:kkennelly DATE:1/7/2004 1:49:28 PM

Mehrdad, Is there anyway to tell if the script MigrateOracle\_Inc\_4551\_500 to 501.sql was run on the database?

FROM:mordoobadi DATE:1/12/2004 10:31:36 AM

Krishna,

Yes, a record is added to table abw\_sys\_db\_maintenance when the SQL Script file is executed.

The following query will show whether the script MigrateOracle\_Inc\_4551\_500 to 501.sql is applied or not:

```
SELECT * from abw_sys_db_maintenance where maintenance_keyword = 'DB_MIG_500_TO_501_INC_4551';
```

If it return a row it indicates that the script is applied.

FROM:bmccaffrey DATE:Tuesday, October 05, 2004 2:24:29 PM

You can close this incident.

|                                       |                      |
|---------------------------------------|----------------------|
| Issue ID: 4939                        |                      |
| Subject: RUN TIME ERROR               |                      |
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Boucher, Brian          | 1/8/2004 2:08:44 PM  |
| Modified By: administrator            | 6/19/2008 4:10:01 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

4/19/2016 3:03:42 PM

HRS AASHTO

467

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | Assigned |          | Bug - Domain 2 |
|                  | Resolved |          |                |
| Kennelly, Krisha | Resolved | High     | Bug - Domain 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4940.12408 | Resolved      | Use user entered value instead of Virtis calculated value. |

### Description

FROM:bboucher DATE:Thursday, January 08, 2004 9:08:45 AM

After running File F-04-012(20M) and try to print the output summary table for the purpose of rating the following error message encountered.

Runtime Error!

Program:c:\programFiles\ashtoware\virtis51\virtisw.exe  
abnormal Program termination

FROM:bboucher DATE:Thursday, January 08, 2004 9:26:01 AM

FROM:bha DATE:Thursday, January 08, 2004 9:56:07 AM  
MassHighway also had the same problem. More information:

<<<<<<<

Microsoft Visual C++ Runtime Library

Runtime Error!

4/19/2016 3:03:42 PM

HRS AASHTO

468





Complete Issue Information

should use the user entered distance.

The following code is part of ResetBmDefChangePointGeneration() in DoSuperStructSpngMbrAlt.cpp:

```
// first check that user wanted sections to end of beam
if( IsEqualTo(dMbrLength, dEndDistance, CSysUnits::GetTolerance(iUnit)) )
{
    dTemp1 = m_ChangePtArray.GetAt( m_ChangePtArray.GetUpperBound() );

    if( IsEqualTo(dTemp1, dMbrLength, CSysUnits::GetTolerance(iUnit)) )
    {
        // if last point in array = MbrLength with tolerance, always
        // replace last point with MbrLength to be sure last point is real
        // end of beam.
        m_ChangePtArray.RemoveAt(m_ChangePtArray.GetUpperBound(), 1);
        m_ChangePtArray.Add(dMbrLength); <----- Should use dEndDistance
    }
}
```

FROM:kkennelly DATE:10/11/2004 1:52:14 PM  
Fixed for Version 5.2, Beta 4.

Issue ID: 4941  
Subject: Improve floor system framing plan schematic.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 1/8/2004 4:04:13 PM  
Modified By: administrator 6/19/2008 4:10:01 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

4/19/2016 3:03:43 PM

HRS AASHTO

470

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 4942.12406 | Suspended     | Enhance Stringer Member window with span lengths info. |

### Description

FROM:hlee DATE:1/8/2004 10:58:29 AM

This incident is submitted as a result of VI 4914.

Improve framing plan schematic to show span lengths and spacings and/or a table to display framing plan layout.

FROM:jduray DATE:1/8/2004 11:40:59 AM

I think we should add to the domain a class that computes member offsets from the structure reference line and span lengths. The Report Tool should be enhanced to use this object.

Issue ID: 4942

Subject: Enhance Stringer Member window with span lengths info.

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:03:43 PM

HRS AASHTO

471

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Lee, Herman  | 1/8/2004 4:09:39 PM  |
| Modified By: administrator | 6/19/2008 4:10:01 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                      |
|------------|---------------|----------------------------------------------------------------------------------------------|
| 4943.12405 | Suspended     | Validate stringer span lengths info in definition to agree with stringer member alternative. |

### Description

FROM:hlee DATE:1/8/2004 11:06:32 AM  
This incident is submitted as a result of VI 4914.

Display span lengths info in Stringer Member window, just like those in Girder Member window.

## Complete Issue Information

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 4943                                                                                        |
| Subject: Validate stringer span lengths info in definition to agree with stringer member alternative. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lee, Herman             | 1/8/2004 4:18:04 PM  |
| Modified By: administrator            | 6/19/2008 4:10:01 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:1/8/2004 11:11:58 AM  
This incident is submitted as a result of VI 4914.

Virtis should validate stringer span lengths info in Stringer Definition window if the definition has been assigned to a stringer member alternative.

Complete Issue Information

|                       |
|-----------------------|
| Issue ID: 4944        |
| Subject: Deleting POI |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Boucher, Brian          | 1/8/2004 7:55:39 PM  |
| Modified By: administrator            | 6/19/2008 4:10:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

Contacts

4/19/2016 3:03:43 PM

HRS AASHTO

474

### Complete Issue Information

| Name           | Company          | Email 1                                                                                   | Phone 1       |
|----------------|------------------|-------------------------------------------------------------------------------------------|---------------|
| Gale Barnhill  | Earth Tech       | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>                      | (402)363-9515 |
| Brian Goodrich | BridgeTech, Inc. | <a href="mailto:Goodrich@BridgeTech-Laramie.com">Goodrich@<br/>BridgeTech-Laramie.com</a> | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 56-0175L-Vinacs.bbd |             |

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 4947.12401 | Resolved      | BRASS output for reinforced concrete girder rating factors is misleading |

### Description

FROM:bboucher DATE:Thursday, January 08, 2004 2:55:39 PM

For the particular file F-04-012(20M)the program doesn't let us delete POI generated previously to analyze differnt points.

The error message encountered was

"BWS View Delete function not implemented"

FROM:jihnata DATE:1/12/2004 11:01:28 AM  
Fixed for version 5.1 Service Pack 1.

FROM:gbarnhill DATE:Monday, January 26, 2004 10:11:54 AM  
5.1.1 - with 23 jan updates - I still get the error message with Floorbeam Member Def and Stringer Member Def.

FROM:jihnata DATE:2/10/2004 8:55:55 AM  
This fix wasn't in the 1/23/04 update. Should be fixed in the 2/2/04 build, though.

FROM:gbarnhill DATE:Thursday, February 26, 2004 4:15:02 PM  
OK with 20 feb exe - 5.1.1

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 4947                                                                    |
| Subject: BRASS output for reinforced concrete girder rating factors is misleading |

4/19/2016 3:03:44 PM

HRS AASHTO

475

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                     |
| Primary Contact: Goodrich, Brian                          |
| Submitted By: vinayagamoorthy, vinacs 1/9/2004 8:44:46 PM |
| Modified By: administrator 6/19/2008 4:10:00 PM           |
| Priority: High                                            |
| Category: Bug - BRASS                                     |

History

| Primary Contact | Status                | Priority | Category            |
|-----------------|-----------------------|----------|---------------------|
| Duray, Jim      | New                   | High     | Unknown<br>Export 1 |
| Goodrich, Brian | On Hold<br>Patch Test |          |                     |
| Goodrich, Brian | Patch Test            | High     | Export 1            |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 4948.12400 | Patch Test    | Distribution of Stage 2 Wearing Surface on a reinforced concrete girder bridge |

Description

FROM:kkennelly DATE:1/9/2004 3:37:01 PM  
Submitted on behalf of Vinacs, Caltrans via email.

Structure def "Full Bridge" , girder 2 of attached bbd file. Rate for HS20. Summary printed out at end of BRASS output file shows the following:

ANALYSIS POINT: 108.00

SECTION CAPACITY

Phi \* Mn (Pos.): 0.53068677E+03 (ft-kips)

Complete Issue Information

Phi \* Mn (Neg.): -.10774891E+04 (ft-kips)  
 Phi \* Vn : -.70975395E+02 (kips)

SUMMARY OF FACTORED ACTIONS: (ft-kips), (kips)

DEAD LOADS                      LOAD LEVEL 1 ----- LOAD LEVEL 2 ----- LOAD LEVEL 3 ----- LOAD LEVEL 4

|        |        |        |     |     |
|--------|--------|--------|-----|-----|
| Moment | -16.65 | -16.65 | N/A | N/A |
| Shear  | -44.96 | -44.96 | N/A | N/A |

LIVE LOADS                      LOAD LEVEL 1 ----- LOAD LEVEL 2 ----- LOAD LEVEL 3 ----- LOAD LEVEL 4

| ACTION                         | (pos) | (neg)   | (pos) | (neg)   | (pos) | (neg) | (pos) | (neg) |
|--------------------------------|-------|---------|-------|---------|-------|-------|-------|-------|
| MOMENT AVAILABLE FOR LIVE LOAD | 547.3 | -1060.8 | 547.3 | -1060.8 | N/A   | N/A   | N/A   | N/A   |
| SHEAR AVAILABLE FOR LIVE LOAD  | -26.0 | -26.0   | N/A   | N/A     | N/A   | N/A   | N/A   | N/A   |

| TRUCK NO. | 1     |        | 2     |        | 3   |     | 4   |     |
|-----------|-------|--------|-------|--------|-----|-----|-----|-----|
| 1: Moment | 386.7 | -515.4 | 231.6 | -308.6 | N/A | N/A | N/A | N/A |
| Shear     | 5.9   | -99.0  | 3.5   | -59.3  | N/A | N/A | N/A | N/A |
| 2: Moment | 372.8 | -361.0 | 223.3 | -216.1 | N/A | N/A | N/A | N/A |
| Shear     | 10.3  | -74.2  | 6.2   | -44.4  | N/A | N/A | N/A | N/A |

Controlling shear rating factor later output as 0.20 for Truck 1 and 0.35 for Truck 2.

The shear capacity and shear available for live load are dependent on the vehicle because AASHTO Eq 8-48 was used but only 1 value is shown in the summary output.

Following response sent to Vinacs:  
 Since the shear capacity is found using AASHTO equation 8-48 which includes the Mu of the live load, the capacity varies for each vehicle.

The following is true when you run just the HS20 truck:  
 BRASS is printing out the section capacity as -.70975395E+02 (kips) in the summary you sent me. If you look inside the detailed BRASS output, this capacity is for truck 2. So the rating factor for this truck2 is (70.97 - 44.96 (DL))/74.2 = 0.35.

For truck1, the shear capacity is Phi \* Vn = -64.91 (kips) which is found inside the detailed BRASS output.  
 The rating factor for truck1 is (64.91-44.96)/99 = 0.20. <- controls

I will enter an incident on the Virtis/Opis Technical Support website that the BRASS summary output is misleading since the shear capacity varies for each vehicle but the different capacities are not printed out there.

FROM:bgoodrich DATE:Friday, January 09, 2004 6:47:43 PM  
 This issue was already addressed as part of BRASS Problem Log 445. The revised output follows:

4/19/2016 3:03:44 PM

HRS AASHTO

477



Complete Issue Information

ANALYSIS POINT: 108.00

SECTION CAPACITY

Phi \* Mn (Pos.): 0.53068677E+03 (ft-kips)

Phi \* Mn (Neg.): -.10774891E+04 (ft-kips)

| Phi * Vn (kips) | LOAD LEVEL 1 | LOAD LEVEL 2 | LOAD LEVEL 3 | LOAD LEVEL 4 |
|-----------------|--------------|--------------|--------------|--------------|
| Truck No. 1     | -60.3        | -62.8        | N/A          | N/A          |
| Truck No. 2     | -64.7        | -64.7        | N/A          | N/A          |

SUMMARY OF FACTORED ACTIONS: (ft-kips), (kips)

| DEAD LOADS | LOAD LEVEL 1 | LOAD LEVEL 2 | LOAD LEVEL 3 | LOAD LEVEL 4 |
|------------|--------------|--------------|--------------|--------------|
| Moment     | -16.65       | -16.65       | N/A          | N/A          |
| Shear      | -44.96       | -44.96       | N/A          | N/A          |

LIVE LOADS

| ACTION                         | (pos) | (neg)   | (pos) | (neg)   | (pos) | (neg) | (pos) | (neg) |
|--------------------------------|-------|---------|-------|---------|-------|-------|-------|-------|
| MOMENT AVAILABLE FOR LIVE LOAD | 547.3 | -1060.8 | 547.3 | -1060.8 | N/A   | N/A   | N/A   | N/A   |
| SHEAR AVAILABLE FOR LIVE LOAD  |       |         |       |         |       |       |       |       |
| Truck No. 1                    | -15.3 | -17.8   | N/A   | N/A     | N/A   | N/A   | N/A   | N/A   |
| Truck No. 2                    | -19.7 | -19.7   | N/A   | N/A     | N/A   | N/A   | N/A   | N/A   |

TRUCK NO.

|           |       |        |       |        |     |     |     |     |
|-----------|-------|--------|-------|--------|-----|-----|-----|-----|
| 1: Moment | 386.7 | -515.4 | 231.6 | -308.6 | N/A | N/A | N/A | N/A |
| Shear     | 5.9   | -99.0  | 3.5   | -59.3  | N/A | N/A | N/A | N/A |
| 2: Moment | 372.8 | -361.0 | 223.3 | -216.1 | N/A | N/A | N/A | N/A |
| Shear     | 10.3  | -74.2  | 6.2   | -44.4  | N/A | N/A | N/A | N/A |

RATING FACTOR REPORT

ANALYSIS POINT NO. 1: 108.00

LOAD LEVELS

1: 1.30( 1.00 \* D + 1.67 \* L )

2: 1.30( 1.00 \* D + 1.00 \* L )

TRUCK DESCRIPTION

1. Truck: AASHTO H 20-S 16 Loading, 1944 Ed

2. Lane: AASHTO H 20-S 16 Loading, 1944 Edi

LOAD LEVEL 1 ---- LOAD LEVEL 2 ---- LOAD LEVEL 3 ---- LOAD LEVEL 4

POS. MOMENT

|          |      |      |     |     |
|----------|------|------|-----|-----|
| TRUCK 1  | 1.42 | 2.36 | N/A | N/A |
| TRUCK 2  | 1.47 | 2.45 | N/A | N/A |
| CRITICAL | 1.42 | 2.36 | N/A | N/A |

Complete Issue Information

|             |      |      |     |     |
|-------------|------|------|-----|-----|
| NEG. MOMENT |      |      |     |     |
| TRUCK 1     | 2.06 | 3.44 | N/A | N/A |
| TRUCK 2     | 2.94 | 4.91 | N/A | N/A |
| CRITICAL    | 2.06 | 3.44 | N/A | N/A |
| POS. SHEAR  |      |      |     |     |
| TRUCK 1     | N/A  | N/A  | N/A | N/A |
| TRUCK 2     | N/A  | N/A  | N/A | N/A |
| CRITICAL    | N/A  | N/A  | N/A | N/A |
| NEG. SHEAR  |      |      |     |     |
| TRUCK 1     | 0.15 | 0.30 | N/A | N/A |
| TRUCK 2     | 0.27 | 0.44 | N/A | N/A |
| CRITICAL    | 0.15 | 0.30 | N/A | N/A |

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 4948                                                                          |
| Subject: Distribution of Stage 2 Wearing Surface on a reinforced concrete girder bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 1/9/2004 9:10:23 PM  |
| Modified By: administrator            | 6/19/2008 4:10:00 PM |
| Priority: High                        |                      |
| Category: Export 1                    |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kennelly DATE:1/9/2004 4:08:22 PM  
 Submitted on behalf of Vinacs via email:

Refer to structure def "Full Bridge" in "56-0175L-Vinacs.bbd" attached to incident 4947.

4/19/2016 3:03:44 PM

HRS AASHTO

479

Complete Issue Information

1. I chose load case DC2 for wearing surface, however, program dumped that with Load case DC1.

FROM:kkennelly DATE:1/9/2004 4:14:36 PM

Reply sent to Vinacs via email:

1.BRASS does not have a stage 2 for reinforced concrete girder structures so work must be done in the export to produce BRASS commands to model this load. It appears that the export was modified to distribute Stage 2 railing dead loads to all girders for rc bridges but a similar change was not made for the wearing surface.

FROM:bgoodrich DATE:Friday, January 16, 2004 11:17:01 AM

I started on the export modifications the day I received the above e-mail from Krisha and finished most of them by Jan. 12, prior to this incident being put on hold.

I modified the export to uniformly distribute the wearing surface load equally to all girders in a R/C girder system. Fixed for Version 5.1.1.

Issue ID: 4949  
Subject: Distribution of Stage2 Barriers on reinforced concrete girder bridge - only on first span

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 1/9/2004 9:18:20 PM  
Modified By: administrator 6/19/2008 4:10:00 PM  
Priority: High  
Category: Bug - Export 1

History

| Primary Contact | Status     | Priority | Category       |
|-----------------|------------|----------|----------------|
| Duray, Jim      | New        | High     | Unknown        |
| Goodrich, Brian | Assigned   |          | Bug - Export 1 |
|                 | Patch Test |          |                |

4/19/2016 3:03:44 PM

HRS AASHTO

480

Complete Issue Information

|                 |            |      |                |
|-----------------|------------|------|----------------|
| Goodrich, Brian | Patch Test | High | Bug - Export 1 |
|-----------------|------------|------|----------------|

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4950.12398 | Duplicate     | Question as to how BRASS LFD computes d for shear capacity |

Description

FROM:kkennelly DATE:1/9/2004 4:16:08 PM  
Submitted on behalf of Vinacs via email:

Refer to structure def "Full Bridge" in "56-0175L-Vinacs.bbd" attached to incident 4947.

2. I chose load case DC2 for Barriers. It is supposed to distribute the girders equally. However, it placed the load on the 1st span only

Here is the BRASS input (pertinent to DC2)

```
# 20 COMMENT      DC2
# 840 LOAD-DESCR   2, 1, 0.00, DC2
# 20 COMMENT      Uniformly Distributed Deck Loads
# 850 UNIFORM-DL1  1, 0.0000, 0.0880, 48.0000, 0.0880
```

Other 3 spans are not included here.

FROM:kkennelly DATE:1/9/2004 4:18:55 PM  
Reply sent to Vinacs via email:

2. This appears to be a bug.

FROM:bgoodrich DATE:Friday, January 16, 2004 11:21:40 AM

I modified the export to export the appurtenance loads on all spans instead of just the first. Fixed for Version 5.1.1.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4950                                                      |
| Subject: Question as to how BRASS LFD computes d for shear capacity |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: vinayagamoorthy, vinacs | 1/12/2004 3:26:22 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned |          | Bug - GUI 2 |
| Goodrich, Brian    | Resolved |          |             |
| Goodrich, Brian    | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | gfb missing ratings.bbd |             |

### Tasks

| Name       | Current State | Summary                                                                                |
|------------|---------------|----------------------------------------------------------------------------------------|
| 4957.12391 | Resolved      | 5.1.1 -- Rating a FB structure in Explorer - Analysis results does not report all FB's |

### Description

FROM:kkennelly DATE:1/12/2004 10:25:25 AM

Submitted on behalf of Vinacs via email: Refer to "56-0175L-Vinacs.bbd" attached to Incident 4947.

I am still puzzled with the shear capacity calculation, especially "d" distance reported in the detailed calculation.

The location I am considering for the discussion purpose is point 108. According the input, RC Section 6 is used at this location.

4/19/2016 3:03:45 PM

HRS AASHTO

482

## Complete Issue Information

We have top rebars (2# 5 + 4# 11 bars) are placed 2.3 inches from top surface.  $A_{st} = 6.86$  inches  
We have bottom rebars (2#11 bars) are placed 2.3 inches from bottom fiber  
 $A_{sb} = 3.12$  inches  
Total depth of the section 57 inches

Since the location I am considering in the negative moment region,  $d$  is from bottom fiber to centroid of the tension rebar. thus  $d = 57 - 2.3 = 54.7$  inches. Unfortunately the BRASS considers  $d_a$  as 21.57 inches. How did they come up with this number? Am I missing something here?

### BRASS Output:

PERFORMING AASHTO SPECIFICATION CHECKS - 8.16.6 Concrete Shear  
CONSTRUCTION STAGE: 1  
ANALYSIS POINT : 108.00

#### Input Parameters:

$b_w = 13.000$  (in)      $d = 21.577$  (in)  
 $A_v = 0.620$  (in<sup>2</sup>)      $s = 18.000$  (in)  
 $f'_c = 3000.$  (psi)      $f_y = 40000.$  (psi)

Stirrup Angle = 1.57 (rad)  
% of Concrete to be used in Vertical Shear = 100.00 (%)  
Lightweight Concrete Factor = 1.00  
Phi(shear) = 0.85

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

Shear calculated according to AASHTO 8-48

$\rho_w = 0.0356$   
 $b_w = 13.0000$  in  
 $d = 21.5768$  in  
 $V_u = 143.9613$  kips  
 $M_u = 370.0812$  kip ft

#### Calculated Values:

$V_c = 46.64$  (kips)     [AASHTO (8-48)]  
 $V_s = 29.73$  (kips)     [AASHTO (8-53)]

#### Ultimate Shear Capacity :

$\Phi * V_n = -64.91$  (kips)     [AASHTO (8-46)]

FROM:kkennelly    DATE:1/12/2004 10:26:59 AM

Response sent via email:

I'm not able to determine how BRASS computes the  $d$  value as 21.577" since I can't step through the BRASS code as it executes. I've entered your question as Incident 4950 and assigned it to Brian Goodrich so he can help you determine how BRASS computes the  $d$  value.

4/19/2016 3:03:45 PM

HRS AASHTO

483

Complete Issue Information

FROM: bgoodrich DATE: Monday, January 12, 2004 11:41:29 AM

This issue is the same as Incident 4549. Therefore, this incident will be marked as a duplicate.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 4957                                                                                  |
| Subject: 5.1.1 -- Rating a FB structure in Explorer - Analysis results does not report all FB's |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Barnhill, Gale          | 1/13/2004 4:27:07 PM |
| Modified By: administrator            | 6/19/2008 4:09:59 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gbarnhill DATE: Tuesday, January 13, 2004 11:27:07 AM

In testing Inc 4829, I created a bridge with multiple FB with girderline input. I entered enough data so the bridge would analyze in the Explorer. When the Analysis Results report comes up, FB with spacings 6 feet or less are not reported and the overall bridge rating results does not show the lowest RF.

The attached BBD is V5.1.1

FROM: mordoobadi DATE: 3/11/2004 2:40:27 PM

It appears that for floor beams with distances to adjacent floorbeams greater than 6' we get results but if the distance is less than 6' the BRASS does not populate the results.

I do not think anything in the results object could casue this. I think BRASS is not reporting the results.

4/19/2016 3:03:45 PM

HRS AASHTO

484

Complete Issue Information

FROM:mordoobadi DATE:3/11/2004 2:45:46 PM  
Brian, could you please investigate this.

FROM:bgoodrich DATE:Thursday, March 11, 2004 5:40:37 PM  
The problem appears to be in the BRASS export process. I corrected the export (AbxBrassEngine.cpp). Fixed for version 5.1.1.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 4958                                                                        |
| Subject: Two questions - deleting structure def and error message when trying to rate |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Murgoitio, Shanon       | 1/13/2004 6:25:42 PM |
| Modified By: administrator            | 6/19/2008 4:09:59 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 18165.bbd           |             |





### Complete Issue Information

"BARS Structure Alt". If you open that Structure Alternative window and change the Superstructure Definition assigned to that alt to "None", you will be able to delete the "Girder 1" structure definition.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 4959                                             |
| Subject: Questions re:dead load distribution on rc girders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Murgoitio, Shanon       | 1/14/2004 1:44:40 PM |
| Modified By: administrator            | 6/19/2008 4:09:59 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:1/14/2004 8:43:12 AM

Submitted on behalf of SMample via email: (see 18165.bbd attached to V14958)

I have been going over the analysis reports, and analysis charts for this bridge. When I view the results for a superstructure member (say G01) under the Report Type drop down menu - "Dead load Actions", under the Stage drop down menu, only "Non Composite Stage 1" is available. Under the Dead Load Case menu there are three available choices; "Girder Weight", "Superimposed Uniform Dead Load", and "DC 2". In the report and graph, there is output for all three dead load conditions. There should be no dead loads acting on a non composite section, this type of bridge does not have a non composite stage. The only superimposed dead loads are the bridge rail and wearing surface, the

4/19/2016 3:03:45 PM

HRS AASHTO

487

## Complete Issue Information

dead load of both are entered as Load Case "DC 2" on the Structure Typical Section window. No other dead loads are entered separately on the Member Loads window. Is the analysis report correct?

I modified the analysis by going to the Superstructure Loads window, DL Distribution tab, under Stage 1 Dead Load Distribution, clicked off "By tributary area", clicked on " User-defined dead load". The result was that "Non Composite Stage 1" was still the only stage available but the "Superimposed Uniform Dead Load" had been eliminated.

The results seem suspicious to me. But again I may be overlooking something very basic and simple.

Any information you can give me on viewing these results would be most appreciated.

FROM:kkennelly DATE:1/14/2004 8:45:24 AM  
Response sent via email:

BRASS only considers 1 stage for reinforced concrete girder bridges. The stage is called non-composite only because the deck is not combined with the girder using  $n$  and  $3n$  like it is for a deck and a steel girder. (The deck is considered in the section properties in Stage1.) It's just a naming convention that makes more sense for steel and ps girders than for reinforced concrete girders.

The log file produced by the export from Virtis data to BRASS input file contains the following warning:

### WARNING (High):

A load is being applied to Stage 2, which does not exist in BRASS for this structure type! The load(s) will be applied to the last allowable stage (Stage 1).

In the analysis output, the Superimposed Uniform Dead Load is due to the wearing surface and the DC2 is your railing load. You specified the railing and wearing surface to be applied to Stage 2 but that stage doesn't exist for rc girders so the loads were applied to Stage 1.

You specified the Stage 2 dead loads to be uniformly distributed to all girders and the export log produced the following warning:

### WARNING (Low):

Stage 2 deck loads were chosen to be uniformly distributed, however, BRASS only supports one stage for reinforced concrete. Therefore, stage 2 deck loads will be uniformly distributed by the BRASS Export and applied as member loads.

So the DC2 load you see is the load on the girder due to the railing loads being uniformly distributed to all girders.

If you switch Stage 1 DL distribution to "User defined load" that means you will enter any additional deck loads yourself in the Member Loads windows. The export log produces the following warning:

### WARNING (Low):

For stage 1 dead load distribution, the 'User input results...' was selected. Therefore, any deck loads applied to stage 1 in the Structure Typical Section window will be neglected.

4/19/2016 3:03:45 PM

HRS AASHTO

488

## Complete Issue Information

Please let me know if you need additional information.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 4961                                        |
| Subject: Floorbeam dead load moment computed by BRASS |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 1/14/2004 3:28:37 PM |
| Modified By: administrator            | 6/19/2008 4:09:59 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | VI4961 F-04-012(20M).bbd |             |

## Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 4961.12387 | Closed        | Floorbeam dead load moment computed by BRASS |

## Description

FROM:kkennelly DATE:1/14/2004 10:27:05 AM

4/19/2016 3:03:46 PM

HRS AASHTO

489

Complete Issue Information

Submitted on behalf of Elizabeth Balcha via email:

We are doing a rating analysis for a stringer and floorbeam system . The bending moment diagram of (FB1) for Noncomposite dead load doesn't seem right at the middle support it is ( 3kip-ft ) which we expect it to be (0.0kip-ft).

Could you look at the file please ? I have attached the BBD file the file name is F-04-012 (20M).

FROM:kkennelly DATE:1/14/2004 10:32:48 AM  
Response sent via email:

I've entered your question as Incident 4961 on the Virtis/Opis Technical Support website. Do you agree with the negative NCDL moment at the exterior supports (-16.3 kft)?

FROM:kkennelly DATE:1/14/2004 12:12:36 PM  
email received from Elizabeth:

I agree with the negative moment at that support. On the previous email that I send you it seems odd to get a positive moment over a support.

FROM:bgoodrich DATE:Wednesday, January 14, 2004 10:59:25 PM  
While reviewing the Virtis input, I noticed that there are two concentrated loads (in the NCDL load case) applied to each of the cantilevers. These concentrated loads result in a positive moment at the middle support of the floorbeam. While the distributed load applied to the two middle spans causes a negative moment at the middle support, the superposition of the two loadings give an overall positive moment. Please let me know if you come to the same conclusion.

FROM:bgoodrich DATE:Thursday, January 15, 2004 12:54:44 PM  
Hi Brian

I agree with the conclusion .

Thanks for your time

Elizabeth

FROM:bgoodrich DATE:Thursday, January 15, 2004 12:55:58 PM  
Closed.

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 4963                                                                                     |
| Subject: The procedure of live load calculations on floorbeam and how to compute eff. flange width |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Ha, Binh                | 1/15/2004 3:10:45 PM |
| Modified By: administrator            | 6/19/2008 4:09:59 PM |
| Priority: High                        |                      |

## Complete Issue Information

Category: Education

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Duplicate |          |             |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 18215.bbd           |             |

## Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 4968.12380 | Duplicate     | Tapered load must begin/end at internal BRASS node |

## Description

FROM:bha DATE:Thursday, January 15, 2004 10:10:45 AM

We would like to ask you to give us the procedure of live load calculation on floorbeam of all cases except the case which uses DF from table 3.23.3.1 AASHTO (Standard) and how to compute effective flange width of the deck composited to floorbeam.

Thanks,

FROM:kkennelly DATE:1/16/2004 1:51:02 PM

As per AASHTO Table 3.23.3.1, for a concrete deck on a floorbeam if the floorbeam spacing is greater than 6', "... the load on the beam shall be the reaction of the wheels loads assuming the flooring between beams to act as a simple beam."

The BRASS export generates a "virtual" stringer data file (for a longitudinal analysis) in order to get the reaction at the floorbeam due to one lane of live load (without impact and without distribution factors). The resulting reaction is then divided by the number of wheel lines (currently two) and used to generate the BRASS data file for the floorbeam analysis.

When you analyze your floorbeam and open the "View latest analysis output" window for the fb, you will see two BRASS files listed with the text "(Virtual Analysis)". These are the BRASS input and

4/19/2016 3:03:46 PM

HRS AASHTO

491

Complete Issue Information

output files for the "virtual" analysis that determines the LL reaction on your floorbeam assuming the deck to act as simple beams between the floorbeams. The actual BRASS input file for the floorbeam analysis will use this reaction in the "FLOORBEAM-TRUCK-AXLE" command.

The effective flange width of the floorbeam can be computed using the same procedure as for computing it for a longitudinal girder but substitute the floorbeam spacing for the girder spacing and the floorbeam length for the span length.

FROM:kkennelly DATE:1/16/2004 4:07:27 PM  
Email received from Binh:

I am not agree with you about your explanation for incident 4963, the article 3.23.3.2: "If longitudinal stringers are omitted and the floor is supported directly on floorbeams, the beams shall be designed for loads determined in accordance with Table 3.23.3.1", that means the table just applied for through girder floorbeam system but not for floorbeam-stringer or girder-floorbeam-stringer systems. Second, we can not find the explanation of effective flange width is satisfied.

Please give us the right explanation.  
Thanks,

FROM:kkennelly DATE:1/16/2004 4:08:11 PM  
Email response sent to Binh:

For structures that contain stringers and floorbeams, the live load reaction at the floorbeam is obtained using a virtual stringer analysis. This virtual stringer analysis uses the stringer span lengths to determine the reaction at the floorbeam to be analyzed.

The effective flange width is computed as per AASHTO 10.38.3. Substitute the span length of the floorbeam for the girder span length in 10.38.3.1(1) and substitute the floorbeam spacing for the girder spacing in 10.38.3.1(2).

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 4968                                              |
| Subject: Tapered load must begin/end at internal BRASS node |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 1/21/2004 4:18:49 PM |
| Modified By: administrator            | 6/19/2008 4:09:58 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name         | Company      | Email 1                   | Phone 1        |
|--------------|--------------|---------------------------|----------------|
| David Koenig | Missouri DOT | david.koenig@modot.mo.gov | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N0254.bbd           |             |
|      | Fixed N0254.bbd     |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4971.12377 | Resolved      | Appurtenance ID Problem |

### Description

FROM:kkennelly DATE:1/21/2004 11:16:48 AM  
Submitted on behalf of Steve Mample, Idaho via email:

I have attempted to use the Virtis Frame analysis to rate a one span reinforced box culvert. On the Member Load window - "Distributed Load tab", I have tried to input a negative distributed load to model the moment due to soil pressure on the culvert legs. I get the following error message; "A tapered load was input that does not start or stop at a node point." The error message says to adjust the node points. Is the error message correct, or am I trying to something that is not possible with Virtis? With a simple span reinforced concrete beam bridge, I shouldn't think you should have to adjust the node points to accommodate a distributed load. I appreciate your help.

FROM:kkennelly DATE:1/21/2004 11:25:02 AM  
Response sent via email:

When I analyze your member I see the following message in the export log file created when the Virtis data is exported to BRASS:

#### WARNING (High):

A tapered load was detected. Tapered loads must start and stop at node points of the BRASS structural analysis model. This analysis will be halted if the load(s) do not conform to these restrictions.

The location of the node points of the BRASS structural analysis model cannot be controlled from Virtis. I don't think there is any way for you to even see where these internal BRASS nodes are.

As a workaround, I changed the length of your first distributed load to start at 0' and have a length of 6.92' (as opposed to the 6.907608' you input as the length.) This small difference in length should not affect your analysis and the BRASS program will run with this length.

I've entered your problem as Incident 4968 on the Virtis Technical Support website so we can determine if we can change anything in BRASS to solve this problem. Please let me know if you need

4/19/2016 3:03:47 PM

HRS AASHTO

493



Complete Issue Information

additional information.

FROM: bgoodrich DATE: Wednesday, January 21, 2004 7:30:02 PM

This issue was already submitted as Incident 2361. A decision was made to force the user to conform to the BRASS requirement that distributed load start and end locations must coincide with node points. The user must add a cross section change at the start and/or end of the distributed load or slightly change the distributed load distances. I have marked this issue as a duplicate.

|                                  |
|----------------------------------|
| Issue ID: 4971                   |
| Subject: Appurtenance ID Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Koenig, David           | 1/27/2004 9:31:15 PM |
| Modified By: administrator            | 6/19/2008 4:09:58 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Bug         |
| Kennelly, Krisha | Assigned |          |             |
|                  | Resolved |          | Bug - GUI 2 |
| Kennelly, Krisha | Resolved | High     | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dkoenig DATE: Tuesday, January 27, 2004 4:31:16 PM

We are having a problem with appurtenance ID's again. The warning is happening on the first structure definition on the attached file. The warning is: No appurtenance id assigned to the appurtenance location. The other structure definitions do not get this message. The first time we had this message,

4/19/2016 3:03:47 PM

HRS AASHTO

494

Complete Issue Information

it was only showing up one time. We tried adding a new parapet and reassigning the new parapet as the parapet for the first structure definition. After making this change, the warning message shows up four times. There are other structure definitions on this bridge that do not get this warning message. If we change back to the previous parapet definition, we still get these same four warning messages. This appears to be the same problem as what we had on Incident 4310. The source of that problem was never found. This bridge was copied from another structure, but the other structure did not have this warning message. The bbd file is attached.

FROM:dkoenig DATE:Tuesday, January 27, 2004 4:39:56 PM

FROM:dkoenig DATE:Tuesday, January 27, 2004 4:47:01 PM

Since this is only showing up as a warning when a structure is validated, it is possible that this is happening on other structures in our database and we have not noticed it. We may want to run a script against our database to check for other instances of this. I know that this same problem happened in another state, so if we find it in other areas of our database, then we may want to have other Oracle users check for this situation happening in their databases.

FROM:kkennelly DATE:1/28/2004 9:17:48 AM

The only way I am able to reproduce such a problem is to assign an appurtenance name with trailing blank spaces in the Structure Typical Section window. The appurtenances in your bridge do not currently have trailing blank spaces at the end of the name but they could have had trailing blank spaces when they were first entered and assigned and then the user removed these blank spaces.

I've attached a bbd file for your bridge that has these invalid database rows removed.

You can use the following script to check for null appurtenance ids:

```
SELECT DISTINCT bridge_id, struct_def_id FROM abw_conc_railing_loc WHERE conc_railing_id IS NULL;
```

I've created incident 4972 to address the trailing blank spaces at the end of names in Virtis.

FROM:mordoobadi DATE:3/12/2004 12:12:29 PM

I sent Dennis Winki an SQL script file to trim the trailing spaces at the end of concrete railing names and to remove duplicate/unnecessary rows in the abw\_conc\_railing\_location table. I asked him to advise their Virtis/Opis users not to use extra spaces at the end of concrete appurtenance names. This issue is addressed in Virtis/Opis 5.1 service pack 1 (software) which is going to be released soon.

Issue ID: 4973

Subject: Questions regarding splayed girders

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha

1/28/2004 4:46:32 PM

Modified By: administrator

6/19/2008 4:09:58 PM

4/19/2016 3:03:47 PM

HRS AASHTO

495

### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 13875.bbd           |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4982.12366 | Resolved      | Question regarding tolerance error message |

### Description

FROM:kkennelly DATE:1/28/2004 11:44:39 AM  
Submitted on behalf of Pankaj Saharia, Fay & Spofford:

Per our phone conversation this morning, I am attaching herewith the export file for the Weston Bridge with flared girders (exterior ones). I can be reached at 781-221-1108 if you have any questions.

FROM:kkennelly DATE:1/28/2004 11:47:05 AM  
Responses sent via email:

I suspect your problem has something to do with bad data entered on your Structure Typical Section window. The computed right overhangs on that window show negative values which means the rightmost girder is located to the right of where your deck ends.

On the Structure Typical Section window you entered 17.0938' from superstructure def ref line to left edge of deck and 18.443' from superstructure def ref line to right edge of deck. That adds up to 35.5368' total deck width at the start of structure as measured perpendicular to the superstructure def ref line. Your girder spacing entered on the Framing Plan Details window are measured along the support. If I use the skew angle to compute the girder spacing measured perpendicular to the support line, the perpendicular distance between girder 1 and girder 6 adds up to 36.3317'. The distance between the exterior girders should not be less than the out-out deck width.

4/19/2016 3:03:47 PM

HRS AASHTO

496

Complete Issue Information

Try to re-enter the data on the Structure Typical Section window and see if that straightens out your bridge. Also be careful to always use the same number of significant digits when you enter data in Virtis.

As I mentioned on the phone, you will not be able to rate the girders in your structure since the structure contains splayed girders and tapered overhangs. Please refer to the "Limitations" topic in the Virtis help file. Select the "Engine Related Help" link on that window to see what limitations BRASS has.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4982                                      |
| Subject: Question regarding tolerance error message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Murgoitio, Shanon       | 2/4/2004 1:17:52 PM  |
| Modified By: administrator            | 6/19/2008 4:09:56 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:2/4/2004 8:18:59 AM  
Email received from Steve Mample, Idaho DOT:

Hello, Krisha.  
Attached is the BBD file for a composite steel girder bridge. I don't usually have any trouble with steel girder bridges, but this one has me stumped. I thought it would be easier to just send you the file, rather than trying to describe the error message. If you have the time, I would appreciate it if you could take a look at it.  
Thank you, Steve.

Complete Issue Information

<<13875.bbd>>

FROM:kkennelly DATE:2/4/2004 8:20:48 AM

Response sent via email:

When I analyze G01 I get the following error message. I assume you get a similar one:

Unable to convert steel beam to BRASS cross sections!  
 Error generating BRASS cross section commands!  
 Unable to get cross section dimensions!  
 Invalid or unsupported cross section!  
 Error filling BRASS cross section!  
 Error retrieving data for generated cross section at 2346.00 in  
 Unable to DoSteelFlangePlateRangeSetPtr->MoveDistance in FillCrossSectionData!  
 Error getting flange plate from steel flange plate ranges to left of 2346.000000000 in!  
 Current tolerance for in is 0.001000000.

The export that takes the Virtis data and creates the BRASS input file is unable to get the flange plate information to the left of the point at 2346" (=195.5'). Your top flange data in the girder profile window has the last flange plate ending at 156.4166' + 39.0833' = 195.4999'. The span length for this member is 195.5' so there is a tiny gap where your flange plate ends and the span ends.

You can fix this problem in one of two ways:

1. Be consistent with the number of significant digits you use when entering data in Virtis so that your ranges always add up to the span length. (The data you entered for the bottom flange has the flange plate correctly ending right at 195.5'.)
2. Adjust the tolerances on the System Defaults window so Virtis and the export to BRASS will ignore tiny gaps such as the one in your top flange plate description. If your inches tolerance is set to 0.01, this tiny gap will be ignored. (The inches tolerance is used because export to BRASS uses inches)

You will also need to adjust the length of your SIP Forms member load to get your beams to run. The SIP Forms member load is currently 195.538058' long, the beam length is only 195.5'. (Adjust that length before you change the tolerances.)

|                                                 |
|-------------------------------------------------|
| Issue ID: 4985                                  |
| Subject: Questions about BRASS RC shear ratings |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: vinayagamoorthy, vinacs | 2/5/2004 3:54:35 PM  |
| Modified By: administrator            | 6/19/2008 4:09:56 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

4/19/2016 3:03:48 PM

HRS AASHTO

498

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          | Bug - BRASS |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1007320.bbd         |             |

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 4990.12358 | Resolved      | Shear errors: R/C |

### Description

FROM:kkennelly DATE:2/5/2004 10:51:42 AM  
Email received from Vinacs, Caltrans:

Krishna

Could you please check the following bridge for me.

Another question: Does BRASS rate the bridge points that are within d distance from the support. Specification states that the girder shear needs to be checked at a distance d distance away from the support. In this bridge "substructure", the span length is very small (max 20 feet) and girder depth is 4 to 5 feet. That means we do not rate for shear at 0.00, 0.1 and 0.2 (sometimes) points. Unfortunately, when we specify to rate the bridge at every 10th point, it does the rating at these points. In many instances, controlling location falls at these points.

Thanks

Vinacs M Vinayagamoorthy  
916-227-8657

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 02/05/04  
06:38 AM -----  
Murugesu Vinayagamoorthy To: <Goodrich@BridgeTech-Laramie.com>

4/19/2016 3:03:48 PM

HRS AASHTO

499

Complete Issue Information

cc:

Subject: Could you please check this for me!(Document link: Murugesu Vinayagamoorthy) 02/04/04 11:59 AM Brian,

In this model, we are trying to analyze the bent cap.

When I rated this bridge at the user defined point only, the controlling location came about to be 302.77. At location 302.77, the d for shear is taken as 38.011 inches (instead of about 66.9 inches). Structure Alternative: BENT 3 Member Alternative: Vinacs BENT 3 FOR 100k-DbIWd-585G-45d

When I rated this bridge using every 10th point, rating for shear became to ZERO and the controlling point came about to be 100.00. This is the tip of the cantilever end of the structure. When I review the output, BRASS reported a large dead load at the point, when it rated the bridge. (Note that The analysis results shows a ZERO shear at that point.)

PERFORMING AASHTO SPECIFICATION CHECKS - 8.16.6 Concrete Shear

CONSTRUCTION STAGE: 1

ANALYSIS POINT : 100.00

Input Parameters:

bw = 54.000 (in) d = 38.606 (in)  
Av = 0.620 (in^2) s = 18.000 (in)  
f'c = 3000. (psi) fy = 40000. (psi)

Stirrup Angle = 1.57 (rad)  
% of Concrete to be used in Vertical Shear = 100.00 (%)  
Lightweight Concrete Factor = 1.00  
Phi(shear) = 0.85

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

Shear calculated according to AASHTO 8-48

rho w = 0.0082  
bw = 54.0000 in  
d = 38.6060 in  
Vu = 819.5294 kips  
Mu = 214.6800 kip ft

\*\* WARNING: At Analysis Point: 100.00

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944

Ed

The area of shear stirrups required by AASHTO 8.19.1.2 (8-64)

for a

spacing of 18.0 (in) has not been provided. The calculated

section

capacity for shear has been based on the Av provided. See

AASHTO 8.19.1.3.

4/19/2016 3:03:48 PM

HRS AASHTO

500

Complete Issue Information

Calculated Values:

Vc = 259.85 (kips) [AASHTO (8-48)]  
Vs = 53.19 (kips) [AASHTO (8-53)]

Ultimate Shear Capacity :

Phi \* Vn = 266.09 (kips) [AASHTO (8-46)]

Rating equation factors

Vu = 266.09 (kips)  
ALDF = 1.30  
BETAD = 1.00  
Dead Ld V = 551.76 (kips)  
BETAL = 1.67  
Live Ld V = 47.09 (kips)  
Shear sign = 1 (1 = positive, 2 = negative)  
Rating fctr= 0.00

(See attached file: 55-0274Cal.bbd)

Please get back to me ASAP, if you find an error in our input

Thanks

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:2/5/2004 11:05:31 AM  
Email response sent back to Vinacs:

I ran member alt Vinacs BENT 3 FOR 100k-DbIWd-585G-45d and I get the same results as you. Unfortunately, I am unable to determine why BRASS computes the d at point 302.77 as 38". I am also unable to determine why the rating factor calcs at point 100 have a dead and live load shear value when the tabular listing of the results shows the shears to be zero as expected. I have entered your problem as incident 4985 on the Virtis Technical Support website. Brian should be able to answer your questions.

As for your question regarding rating at a distance d away from the support, I believe that BRASS does not follow this spec when you have picked the Generate tenth points options (Options 1 or 3) on the Member Alternative:Engine tab. If you select Option 5 - Generate user defined points of interest only, BRASS will only rate at the point of interest locations you've added. To check the rating at a distance d from the support, you should add a point of interest at that distance d from the support.

FROM:kkennelly DATE:2/5/2004 11:29:12 AM  
Response received from Vinacs:

With regards to the rating at points within d distance from the support, I have the following comment.

When the girders are continuous over a support, user needs to rate the girder at 0.0, 0.1 and 0.2 points for negative moment. At the same time, user need not rate the girder for shear at these locations (if these falls within d distance from the support). It is a problem for us.

4/19/2016 3:03:48 PM

HRS AASHTO

501



## Complete Issue Information

In order to work around this problem, we are creating two alternatives - one for Moment rating (where we tell the program to ignore shear - luckily we have this option within Virtis) and the other where the analysis points are picked by the user to make sure the program does rate for shear at appropriate locations only.

FROM:bgoodrich DATE:Thursday, February 05, 2004 12:00:05 PM  
My response to Vinacs:

I investigated the shear issue at the 100.0 point of interest. By default, BRASS is obtaining the dead and live load shear at "d" away from the support. The problem is that this is 6 ft, which is longer than the actual length of span 1 (5 ft). Therefore, BRASS is getting the shears on a completely different span. I believe the deep beam and short span (due to the structure being a pier cap) are a unique situation. I will forward this issue to WYDOT for approval.

You have found a good work-around, so at least your not stopped cold.

FROM:bgoodrich DATE:Friday, February 06, 2004 10:39:48 AM  
My e-mail to Vinacs (2/5/04):

I would like to get some more information from you on the zero shear rating problem, which Krishna entered as Incident 4985. How many structures do you have that are exhibiting this problem? They appear to be the same structures that are exhibiting the reduced shear depth problem (Incident 4549). If the number of these structures is large, performing the work-around in Virtis for each of these structures will be time consuming and you will have to maintain two alternatives with different points of interest.

Jay and I meet with WYDOT management next week. I have formulated a plan to correct this issue in the BRASS-GIRDER engine, but I will need to discuss it with WYDOT and get their approval. Hopefully, we can get this issue resolved quickly.

FROM:bgoodrich DATE:Friday, February 06, 2004 10:40:33 AM  
E-mail from Vinacs (2/6/04):

This is somewhat a long story, however, to make you understand, I will try to give brief history and the dilemma that we are in.

In the past, we rated bridge superstructures for heavier loads prior to allow them to go over the bridges. These heavier permit trucks used to resemble the Caltrans design permit truck. As a result, we typically assumed the bent caps are OK. Total weight of these typical heavier permit trucks + loads ranges from 130,000 to 400,000 lbs.

After the power crisis hit our state, power companies has started to build several new power plants. The transformers are being built in Europe and Japan. These are huge Transformers (Total weight Transformer + transport Vehicles ranges from 800,000 lbs to 1.1 million pounds). These will be brought to our port very soon and needs to be transported to various locations in California. When we compare the load demand from these Permit trucks to our design trucks, these permit trucks places very large negative moment (over the bents) and large reaction at the bent. The ratio of the Permit demand to our design demand ranges from 0.7 to 1.78. Higher

4/19/2016 3:03:48 PM

HRS AASHTO

502

## Complete Issue Information

reaction to the bent means, higher demand on the bent cap.

Checking the superstructure (negative moment demand) has been done in the past and therefore, that is not a problem, other than a huge task. Checking the bent cap is totally a different story. We haven't done any rating on the substructure (bent cap and columns) in the past and do not have a good, reliable and tested tool. The best suitable tool at our disposal is the Virtis/BRASS.

because, VIRTIS/BRASS allow us to rate a member using any user defined vehicle at any specified location. Many of the bridges were designed in the past (prior to 1972) using allowable stress method using HS20 truck only. During that time, many of the rebars were terminated using HS20+DL envelop demand chart. The permit demand may have different moment envelop and therefore the sections closer the bar cut off points need to be checked. Again BRASS can rate a bridge any specified location. As we press on using the Virtis/BRASS model, we found many problems: 1. BRASS incorrectly report the shear capacity 2. Difficulties in modelling the members (skewed bents and rebar layout) 3. Different skewed bents needs different factious trucks (gage of the fictitious truck is different for different skewed bents). and so on.

Overall BRASS handles the situation well.

Rating factors for some bridges came about to be low for this permit truck. Rating factor is based on the worst loading on the member (that is what the rating factor is all about). Here, we are trying to find a way to allow the vehicle to go over the bridge. In a few bridges, we are able to make the vehicle go over the bridge by straddling it closer to the barrier rail (so that it lower the demand of bent cap). Locating a truck in a bridge so it could travel over a bridge is a very time consuming task.

Since transformers need to go to different locations from different port, there are many bridges that need to be checked. For example, currently we are working on one (about 800,000 lbs) move that involves about 100 bridges, of which we identified 20 bridges need review of substructures. (Ideally, we like to rate all the bent caps, however, because of limited time, we picked the worst case bridges). There are 4 more variances to be checked. These variances have several (different route) bridges. The next permit variance weighs about 1.1 million pound one and may produce much larger demands than the one we currently working on. If I need to guess, I would say probably about 80 bridges to be done within 4 months from today.

I hope it makes sense

If you know of any other tool or any other methods that could help us rating bent caps, let me know

FROM: bgoodrich DATE: Thursday, February 12, 2004 10:12:52 AM

There is no method for setting the shear distance within Virtis for each span; however, this distance can be specified on a point of interest (POI). The only problem is that the BRASS export does not permit point of interest overrides when the user opts to generate point-of-interest data from the schedules. The manual alternative is to specify the desired points of interest, override the schedule data by entering stirrup area and spacing, shear distance, etc. for the point of interest, and select the option to not generate point of interest data from schedules. Data for one POI could be entered and then that POI could be copied over and over. The biggest headache is determining and specifying the stirrup area and spacing for each POI.

4/19/2016 3:03:48 PM

HRS AASHTO

503

Complete Issue Information

FROM:bgoodrich DATE:Thursday, February 12, 2004 10:15:42 AM

I discussed this issue with WYDOT on Feb. 11, and the request for modifying BRASS to address this issue was denied. WYDOT felt that the structure was really outside the scope of the BRASS-GIRDER superstructure engine. Therefore, if this issue is to be addressed, it must be done within the Virtis framework.

Alternatives include:

- 1) Modify Virtis to collect the shear distances at the ends of each span (on the member alternative), which is consistent with providing this information on the point of interest window.
- 2) Automatically set the shear distance to zero for spans in which the section depth is greater than the span length. The user can always do the work-around discussed above. This alternative would take a couple hours to implement.

For either alternative, the shear distances could be exported to the STIRRUP-SCHEDULE commands.

FROM:jcarney DATE:Friday, February 13, 2004 9:08:22 AM

Just a thought- but one possible solution in the meantime may be to input dummy stirrup steel (high area) for the region of the cap beam which is within "d" distance from the pier. This should get rid of the problem with these points governing the shear ratings and provide governing shear ratings beyond the "d" distance from the support.

FROM:bgoodrich DATE:Wednesday, February 25, 2004 7:41:42 PM

I made the necessary export modifications to address the shear distance problem. I also added some text to the "Point of Interest: Shear" topic in the engine help files. Fixed for version 5.1.1.

|                            |
|----------------------------|
| Issue ID: 4990             |
| Subject: Shear errors: R/C |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 2/9/2004 2:28:46 PM  |
| Modified By: administrator            | 6/19/2008 4:09:56 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 54-0781R.bbd        |             |

Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4993.12355 | Resolved      | Export of RC cross sections |

Description

FROM:bmccaffrey DATE:Monday, February 09, 2004 9:28:58 AM

Girder G1 on the second Superstructure Definition is rating zero in shear for no apparent reason. Hand calcs show this section is fine for shear. Interior beams are fine - bridge is on 50^ skew.

Did notice in the detailed output that 'd' was negative - see below.

PERFORMING AASHTO SPECIFICATION CHECKS - 8.16.6 Concrete Shear

CONSTRUCTION STAGE: 1

ANALYSIS POINT : 100.00

Input Parameters:

bw = 18.000 (in)      d = -0.475 (in)  
 Av = 0.800 (in^2)    s = 1.000 (in)  
 f'c = 3000. (psi)    fy = 40000. (psi)

Stirrup Angle = 1.57 (rad)  
 % of Concrete to be used in Vertical Shear = 100.00 (%)  
 Lightweight Concrete Factor = 1.00  
 Phi(shear) = 0.85

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

Shear calculated according to AASHTO 8-48

rho w = 0.0000  
 bw = 18.0000 in  
 d = -0.4755 in  
 Vu = 54.5171 kips  
 Mu = 296.5239 kip ft

Calculated Values:

Vc = -1.50 (kips)      [AASHTO (8-48)]  
 Vs = -15.22 (kips)    [AASHTO (8-53)]

Ultimate Shear Capacity :

Complete Issue Information

$$\Phi * V_n = -14.21 \text{ (kips)} \quad [\text{AASHTO (8-46)}]$$

Rating equation factors

$$\begin{aligned} V_u &= -14.21 \text{ (kips)} \\ \text{ALDF} &= 1.30 \\ \text{BETAD} &= 1.00 \\ \text{Dead Ld V} &= 8.15 \text{ (kips)} \\ \text{BETAL} &= 1.67 \\ \text{Live Ld V} &= 20.23 \text{ (kips)} \\ \text{Shear sign} &= 1 \quad (1 = \text{positive}, 2 = \text{negative}) \\ \text{Rating fctr} &= 0.00 \end{aligned}$$

FROM: bgoodrich DATE: Monday, February 09, 2004 11:26:25 AM

I analyzed the member alternative in question with the development version of BRASS-GIRDER (5.8.8). The "d" value has been corrected, which results in a much better rating at the 100.0 POI. I suspect this issue was similar to Incident 4549, which was recently addressed. The output from the new version follows:

PERFORMING AASHTO SPECIFICATION CHECKS - 8.16.6 Concrete Shear  
CONSTRUCTION STAGE: 1  
ANALYSIS POINT : 100.00

Input Parameters:

$$\begin{aligned} b_w &= 18.000 \text{ (in)} & d &= 56.161 \text{ (in)} \\ A_v &= 0.800 \text{ (in}^2\text{)} & s &= 1.000 \text{ (in)} \\ f'_c &= 3000. \text{ (psi)} & f_y &= 40000. \text{ (psi)} \end{aligned}$$

$$\begin{aligned} \text{Stirrup Angle} &= 1.57 \text{ (rad)} \\ \% \text{ of Concrete to be used in Vertical Shear} &= 100.00 \text{ (\%)} \\ \text{Lightweight Concrete Factor} &= 1.00 \\ \Phi(\text{shear}) &= 0.85 \end{aligned}$$

Load Level : 1

Truck No. : 1 - Truck: AASHTO H 20-S 16 Loading, 1944 Ed

Shear calculated according to AASHTO 8-48

$$\begin{aligned} \rho_w &= 0.0062 \\ b_w &= 18.0000 \text{ in} \\ d &= 56.1609 \text{ in} \\ V_u &= 54.5171 \text{ kips} \\ M_u &= 296.5239 \text{ kip ft} \end{aligned}$$

$$\begin{aligned} \Gamma * [\text{BetaD} * M(\text{DL}) + \text{BetaL} * M(\text{Conc. LL})] &= 296.524 \text{ (ft-k)} \\ \Rightarrow \text{Positive bending shear depth used.} \end{aligned}$$

Calculated Values:

$$\begin{aligned} V_c &= 109.50 \text{ (kips)} & [\text{AASHTO (8-48)}] \\ V_s &= 1797.15 \text{ (kips)} & [\text{AASHTO (8-53)}] \end{aligned}$$

Ultimate Shear Capacity :

4/19/2016 3:03:48 PM

HRS AASHTO

506

Complete Issue Information

Phi \* Vn = 1620.65 (kips) [AASHTO (8-46)]

Rating equation factors

Vu = 1620.65 (kips)  
 ALDF = 1.30  
 BETAD = 1.00  
 Dead Ld V = 8.15 (kips)  
 BETAL = 1.67  
 Live Ld V = 20.23 (kips)  
 Shear sign = 1 (1 = positive, 2 = negative)  
 Rating fctr= 36.66

I'm not sure when this version of BRASS-GIRDER will be released. I will add v5.2 to the tracking field for now.

|                                      |
|--------------------------------------|
| Issue ID: 4993                       |
| Subject: Export of RC cross sections |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 2/10/2004 1:41:45 PM |
| Modified By: administrator            | 6/19/2008 4:09:56 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State      | Summary                                  |
|------------|--------------------|------------------------------------------|
| 4997.12351 | Information Needed | TIMBER RATINGS BASED ON CONDITION MANUAL |

Description

FROM:kkennelly DATE:2/10/2004 8:39:33 AM  
Submitted on behalf of Vinacs via email:

Krishna

In this particular bridge, we tried to create bent cap. Since there are a lot rebar get terminated and tried to rate the bridge at the bar termination point. We identified ten possible sections for a bent. However when the export program generate the input file, it used only 5 sections. Why did the program ignore some of the user defined sections? Please check this for us. If the BRASS export ignore some of the section as we saw in this example, we may have wrong rating results for the previously rated bent caps and need to revisit them as well

Thanks

Vinacs M Vinayagamoorthy  
916-227-8657

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 02/09/04

11:51 AM ----- Li Zhang To: Murugesu Vinayagamoorthy@dot.ca.gov  
02/09/04 11:49 cc: AM Subject: BRASS program

concerns

Hi, Vinacs,

I have a problem with the attached bridge. My concerns to the BRASS program:

1. This bridge has total of 10 cross sections. It looks like the BRASS recognized/reported and is using only 5 of them.
2. In the BRASS output file, reported cross sections 1 to 4 are correctly representing those user defined, but the cross section #5 reported jumped to the 10th user defined.
3. It looks that the section moment capacities are estimated using those 5 sections reported accordingly, which gave wrong capacity at point of interested.

(See attached file: 54-0781R.bbd)

Li Zhang

FROM:kkennelly DATE:2/10/2004 8:52:00 AM  
Response sent to Vinacs:

It appears that there is a bug in the export that takes the Virtis data and produces the BRASS input file. Since BRASS has a limit on the number of sections the user can enter, the export tries to reduce the total number of cross sections sent to BRASS by comparing the sections and not creating sections for duplicates.

4/19/2016 3:03:49 PM

HRS AASHTO

508

Complete Issue Information

It looks like the export is incorrectly determining that your sections 5, 6, 7, 8 and 9 are duplicates of sections 3 and 4. I've entered your problem as Incident 4993 on the Technical Support website.

As a workaround, you can revise your input as follows so the export won't think you have duplicate sections. The following rebar data was entered for section #05:ABCFG

top of girder 4 # 14 @ 7.3"  
top of girder 4 # 14 @ 7.3"  
top of girder 4 # 14 @ 7.3"  
bot of girder 8 # 14 @ 6.4"  
bot of girder 4 # 14 @ 6.4"

Revise this input to the following:

top of girder 12 # 14 @ 7.3"  
bot of girder 12 # 14 @ 6.4"

Make similar changes (try to input just 1 line of data for each row of rebar instead of entering multiple lines of data for each row of rebar) for sections 6 7,8 and 9 and all of your sections will be exported.

FROM:bgoodrich DATE:Tuesday, February 10, 2004 5:19:57 PM  
I corrected the problem in the export (BrassCrossSections.cpp). Now all 10 cross sections are exported. Fixed for Version 5.2.0.

|                                                   |
|---------------------------------------------------|
| Issue ID: 4997                                    |
| Subject: TIMBER RATINGS BASED ON CONDITION MANUAL |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Jensen, Paul            | 2/12/2004 3:42:23 PM  |
| Modified By: hlee                     | 10/26/2012 1:18:39 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Bug      |
| Kennelly, Krisha | Assigned           |          |          |
| Goodrich, Brian  | Information Needed |          |          |
| Goodrich, Brian  | Information Needed | High     | Bug      |
|                  |                    |          | Unknown  |



## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Modified INBT7x4-11.xml |             |
|      | I-80-BR.bbd             |             |
|      | Prestressed Forces.doc  |             |

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 5004.14336 | Resolved      | question on moments in prestressed beam |

### Description

FROM:pjensen DATE:Thursday, February 12, 2004 10:42:23 AM  
THE PROGRAM IS STILL NOT CALCULATING ALL OF THE MEMBERS ON THE ALTERNATE METHOD. DECKS ARE STILL USING THE SPEC WHEN CALCULATING THE RATING. THIS WAS DISCOVERED WHEN REVIEWING THE DETAILED MADERO OUTPUT. I DISCOVERED THE PROBLEM WHEN I WAS TESTING THE PATCH AND REVIEWING THE RESULTS OF THE TRAINING TIMBER BRIDGE. IS THERE SOMETHING ELSE THAT I MISSED OR SHOULD THE LABEL AND THE CALCULATIONS IN THE DETAILED REPORT BE LISTED IN THE MULTI-LANE COLUMN?

FROM:kkennelly DATE:2/24/2004 2:04:15 PM

FROM:bgoodrich DATE:Monday, March 15, 2004 11:27:23 AM  
Only the member alternative for Member G2 is specified. Therefore, Members G1 and G3-G13 are not analyzed. Was this the concern from your first sentence?

For the deck rating, only 1-lane loaded results are calculated by Madero.

We need some more information on the deck rating comments:  
"DECKS ARE STILL USING THE SPEC WHEN CALCULATING THE RATING."

Please elaborate.

|                                                  |
|--------------------------------------------------|
| Issue ID: 5004                                   |
| Subject: question on moments in prestressed beam |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Goodrich, Brian      |

4/19/2016 3:03:49 PM

HRS AASHTO

510

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Hart, Erich  | 2/17/2004 9:48:16 PM |
| Modified By: administrator | 6/19/2008 4:15:30 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          | Bug      |
| Duray, Jim      | Duplicate | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | T-06-009.bbd        |             |

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 5010.14330 | Duplicate     | Crash when trying to print Analysis Results for GF structure |

### Description

FROM:bgoodrich DATE:Tuesday, February 17, 2004 4:48:16 PM  
E-mail from Ken Teng (2/17/04):

Another question regarding to the prestressed beam. As I notice (actually I checked), VIRTIS uses the negative moment caused by prestressed strands and add to total girder actions for all dead loads and maximum live loads. Why? I checked the PCI manual and found that they do not use this moment when calculates the Mu.

Please advise. Thank you,

Ken Teng  
RQAW Corp.

FROM:bgoodrich DATE:Wednesday, February 25, 2004 7:30:37 PM  
I requested the BBD file from Ken via e-mail. I also requested he identify the locations in the output or Virtis results to assist in the investigation of this issue.

4/19/2016 3:03:49 PM

HRS AASHTO

511

Complete Issue Information

FROM:bgoodrich DATE:Thursday, February 26, 2004 10:05:56 AM  
I attached the files from Ken.

FROM:bgoodrich DATE:Thursday, February 26, 2004 10:37:15 AM  
E-mail to Ken (2/26/04):

The BRASS report you included in the Prestressed Forces.doc file is a standard report provided for all materials (steel, R/C, P/S, etc.). This report really isn't that helpful for prestressed concrete because the actions are unfactored as noted in the heading: DEAD LOAD + CONTROLLING UNFACTORED LIVE LOAD ACTIONS. The moments combined at each point in this report are only for reporting purposes and are not used directly in any calculations. BRASS does not include the moment due to prestress in the factored loads that are compared to the ultimate moment capacity of a prestressed concrete section. Please let me know if this answers your questions.

FROM:bgoodrich DATE:Thursday, February 26, 2004 3:14:58 PM  
E-mail from Ken Teng (2/26/04):

Thanks for the help.

I just pick one of output as an example. Actually, I need to have negative moment to design my slab reinforcement over support. But if I use the Min moment the output (factored) gives me, it will have a large of negative moment because it includes the moment caused by prestressed forces.

What should I do in convenient way? Please advise.

FROM:bgoodrich DATE:Thursday, February 26, 2004 3:15:46 PM  
E-mail to Ken (2/26/04):

For simple-span structures made continuous, there is no moment due to prestress over the support when AASHTO losses are specified. There should be no contribution from an stage 1 loads because the spans are simply supported. The only loads you have to find are those applied to the composite structure. You could manually pick out the unfactored dead and live loads and calculate the factored moment.

Another alternative is to find the TOTAL GIRDER ACTIONS AND DISPLACEMENTS FOR ALL DEAD LOADS AND MAXIMUM LIVE LOADS report in the BRASS output file or the LFD Critical Loads tabular report in Virtis. These moments are factored and include prestress moments. You should be able to pick a moment from this report and remove the prestress moment contribution. Be careful to account for the gamma factor, which is applied to all actions.

The easiest solution is to find the ANALYSIS POINT summary near the end of the BRASS output file. The factored dead and live load moments are listed here and do not include prestress moments.

Issue ID: 5010

Subject: Crash when trying to print Analysis Results for GF structure

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:03:50 PM

HRS AASHTO

512

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 2/23/2004 4:54:44 PM |
| Modified By: administrator     | 6/19/2008 4:15:29 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 5021.14320 | Closed        | Report Tool – Dead Load Report |

### Description

FROM:kkennelly DATE:2/23/2004 11:52:44 AM

Submitted on behalf of Tamer Osman, United International Corporation via email:

Analyze Floorbeam 1, open Analysis Results window. Hit either Print or Print Preview and Virtis crashes.

FROM:mordoobadi DATE:2/23/2004 3:14:46 PM

Related to incidents 4865, 4276 and 4939.

This is resolved in 5.1.1.

Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 5021                          |
| Subject: Report Tool – Dead Load Report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Teal, Dean              | 2/26/2004 7:30:26 PM |
| Modified By: administrator            | 6/19/2008 4:15:29 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Thursday, February 26, 2004 2:30:26 PM

In the Report Tool we have an LRFD Analysis Output report that may contain up to 5 items like LL Reactions, LL Moments, LL Shear, LL Flex Analysis and LL shear Analysis.

How do I, if it's possible, create a report that contains Dead Load reactions, moments and deflections. Did I miss something?

FROM:kkennelly DATE:3/3/2004 8:08:00 AM

If you pick the report type as "LRFD Analysis Output" you cannot add any additional items to the report. That is a hardcoded report that we developed to deliver with Opis before the Report Tool was

Complete Issue Information

fully developed. You can pick the report type as "BWS Report" and add the "Anaysis Event" group under the member alternative to be able to create a customized report of the analysis output. The "Analysis Event" group has an attribute for "Dead Load Actions" that lets you report on the dead load.

FROM:dteal DATE:Tuesday, March 16, 2004 9:50:26 AM  
I hae been playing with this off and on for days and can't do it. I have report type selected as BWS Report - How do you add the "Analysis Event" group, where is it???

FROM:dteal DATE:Tuesday, March 16, 2004 10:23:13 AM  
Do analysis events have to be saved first??

FROM:kkennelly DATE:3/17/2004 9:35:48 AM  
No, the analysis events don't have to be saved. The analysis event belongs to the Member Alt and it can be found below the member alt label, eg. "Member Alt - Steel Plate I Beam Schd". For example, look under "Superstructure Definitions", "Girder System Structure Def", "Girder Member", "Member Alt - Steel Plate I Beam Schd" and then Analysis Event is available.

FROM:kkennelly DATE:3/18/2004 8:13:25 AM  
Closed based on Accepted in Track field.

Issue ID: 5042  
Subject: Rating calculation error for P/S I-Beam?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 3/17/2004 1:50:23 PM  
Modified By: administrator 6/19/2008 4:15:27 PM  
Priority: Urgent  
Category: Bug - BRASS

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  | Urgent   | Bug - BRASS |
|                 | Suspended |          |             |
| Goodrich, Brian | Suspended | Urgent   | Bug - BRASS |

Contacts

### Complete Issue Information

| Name           | Company                           | Email 1                             | Phone 1       |
|----------------|-----------------------------------|-------------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc.                  | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |
| Dean Teal      | Kansas Dept. of<br>Transportation | teal@ksdot.org                      | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Report Writer.bbd   |             |
|      | RCSH Analysis.abr   |             |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 5049.14292 | Resolved      | Report Tool – Vehicle Type |

### Description

FROM:tarmbrecht DATE:Wednesday, March 17, 2004 9:50:23 AM

I think I'm getting erroneous results for the rating calculation for this structure. It tells me that shear controls at the 303 point with a 1.26 rating factor for truck 1 at Load Level (LL) 1. However, if I put a point of interest at 303.03, the rating factor is 1.88 for truck 1, LL1. Furthermore, the rating factor for truck 1, LL1 at point 107 for this symmetrical bridge is 1.88. Therefore, I'm questioning the 1.26 rating factor. What caught my eye for this is that the final Inv/Opr ratings for this structure were calculated to be HS25.3/HS38.6, but with a 4 inch wearing surface, the rating reduced only to HS25.2/HS38.2. Something appears to be wrong. Any help would be greatly appreciated. Thanks,

Tim

FROM:bgoodrich DATE:Thursday, March 18, 2004 9:31:26 AM

I investigated the issue and found that the shear resistance is lower at the 303.0 POI than at the 303.03 POI. The  $V_i$  term in the shear equation is different. The  $V_i$  term is calculated using the live load shear concurrent with the maximum moment. Therefore, I turned on the output to list concurrent actions using the engine properties in the Analysis Settings window. The live load shear concurrent with the maximum moment at the 303.0 POI is only 10.8 kips, while the shear for the 303.03 POI is 34.5 kips. This difference in concurrent shears is enough to ultimately cause a large difference in the shear resistance, which affects the rating significantly. I have not verified the concurrent shears at this point. I will need to get WYDOT approval to investigate this issue further as the issue resides in the engine.

FROM:bgoodrich DATE:Friday, March 19, 2004 2:57:40 PM

E-mail from Tim Armbrecht (3/19/04):

Thanks Brian, I appreciate it. I figured it was something in BRASS. The only thing in your reply you may want to verify is that you're referencing point 300 when comparing with 303.03, and I'm wondering if you mean to reference point 303 when comparing to 303.03. Please keep me posted as soon as

4/19/2016 3:03:50 PM

HRS AASHTO

516

Complete Issue Information

WYDOT allows you to investigate further. Thanks again,

Tim

FROM: bgoodrich DATE: Friday, March 19, 2004 2:58:44 PM  
I corrected my original response to refer to the 303 POI instead of 300.

FROM: bgoodrich DATE: Wednesday, March 24, 2004 10:41:15 AM  
Preliminary investigation notes:  
It seems odd that the shear concurrent with maximum moment is so much different when there is only 0.18 ft between the two POI. I ran the same bridge with BRASS-GIRDER(LRFD) and BRASS-GIRDER after making the distribution factors consistent. Note the dip in the BRASS-GIRDER shear concurrent with maximum moment even though the distance to the lead axles are about the same. I am simply looking at the result trends at this point in the investigation.

| Point No.           | Distance to Lead Axle (ft) | Max Moment (ft-kips) | Conc. Shear (kips) |
|---------------------|----------------------------|----------------------|--------------------|
| -----               |                            |                      |                    |
| BRASS-GIRDER(LRFD): |                            |                      |                    |
| 3.294               | 170.5 U                    | 540.4                | 26.4               |
| 3.300               | 171.1 U                    | 554.9                | 25.6               |
| 3.303               | 171.1 U                    | 557.9                | 25.6               |
| BRASS-GIRDER:       |                            |                      |                    |
| 3.294               | 170U                       | 525.7                | 58.7               |
| 3.300               | 170U                       | 535.1                | 18.0               |
| 3.303               | 171U                       | 541.1                | 57.7               |

FROM: bgoodrich DATE: Wednesday, March 24, 2004 10:43:12 AM  
WYDOT has assigned this issue to BRASS Problem Log 493.

FROM: bgoodrich DATE: Monday, April 05, 2004 2:08:42 PM  
I have found that the concurrent shears are different depending on the wheel advancement denominator that is specified. The default is 100 and that is what is used for your bridge. I changed this value to 200 in the member alternative engine properties and shear at the 303 no longer controls because the shear concurrent with maximum moment at the 303 changed. The process used by BRASS to incrementally move the truck across the bridge uses linear interpolation when an axle is between influence ordinates, which leads to this particular difference. Please try a higher wheel advancement denominator, and let me know if this addresses your concern.

FROM: bgoodrich DATE: Friday, April 23, 2004 12:06:02 PM  
From: Ambrecht, Timothy A. [mailto:ARMBRECHTTA@dot.il.gov]  
Sent: Friday, April 23, 2004 9:14 AM  
To: Goodrich@BridgeTech-Laramie.com  
Subject: Incident 5042

Brian,

I apologize for the delay. I finally had time to review your solution to incident 5042. Yes, by changing the wheel advancement denominator (WAD) to 200, the results are what I would expect. My only concern is: Is this really a solution? Do we really need to use a default WAD of 200 for all our ratings from now on? If we change all our analyses to use a WAD of 200, would there be a case where the



Complete Issue Information

WAD should have been 300 or 500 in order to avoid erroneous results? In order to get more accurate results for live load shear, perhaps a better solution would be to have BRASS automatically place the truck axles directly to the right and left of the POIs (user and 10th points). I would just like to be confident enough in the program to know that if the output spits out a suspicious rating, that the reason is likely a user input error. Thanks again for looking into this for me.

Tim

FROM:bgoodrich DATE:Tuesday, April 27, 2004 12:38:23 PM

I have forwarded your concerns regarding the "solution" to Incident 5042 (BRASS Problem Log 493). WYDOT understands your concerns, but revising the live load positioning algorithm would be a major enhancement. The suggestion for increasing the WAD is the best solution for the current implementation of the live load positioning algorithm in BRASS. WYDOT has added your request to the list of BRASS enhancements. I am setting the status of the incident to Suspended until the enhancement is voted on by the user group and ultimately authorized by WYDOT.

FROM:bgoodrich DATE:Monday, May 23, 2005 1:02:35 PM

An identical issue was entered in Incident 6254.

|                                     |
|-------------------------------------|
| Issue ID: 5049                      |
| Subject: Report Tool – Vehicle Type |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Teal, Dean              | 3/18/2004 4:36:24 PM |
| Modified By: administrator            | 6/19/2008 4:15:26 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Bug         |
|                    | On Hold  |          | Bug - GUI 2 |
| Bhanushali, Girish | Resolved | High     | Bug - GUI 2 |
|                    | Resolved |          | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:03:51 PM

HRS AASHTO

518

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5062.14280 | Closed        | 5.1 SP 1 Installation Errors |

Description

FROM:dteal DATE:Thursday, March 18, 2004 12:36:24 PM

I attached the .bbd and the BWS report criteria

After generating the report and looking at the Live Load Actions the vehicle type is blank. I have vehicle type selected. If it is supposed to be blank, how is one to know whether or not it's a Axle, Lane, Truck Train, Tandem or Tandem Train?

FROM:dteal DATE:Wednesday, November 07, 2007 11:25:43 AM

Marked as Resolved - What was done??

|                                       |
|---------------------------------------|
| Issue ID: 5062                        |
| Subject: 5.1 SP 1 Installation Errors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Teal, Dean              | 3/26/2004 1:22:32 PM |
| Modified By: administrator            | 6/19/2008 4:15:25 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:03:51 PM

HRS AASHTO

519

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Urgent   | Bug         |
| Duray, Jim      | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          |             |
|                 | Duplicate |          | Bug - BRASS |
| Goodrich, Brian | Duplicate | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 5065.14277 | Duplicate     | BRASS P/S shear question |

### Description

FROM:dteal DATE:Friday, March 26, 2004 9:22:32 AM

I tried to install Service Pack 1 on a fresh pc, my test pc( 5.1 then 5.1 patch then SP1) got these two error messages in this order.

#### Patch Error

Old File not found, However, a file of the same name was found. No update done since file contents do not match.

Then

#### Severe

Be sure any previous patches have been applied

jpg's of these error messages are attached

I then tried to apply the patch to my other pc. Which was already up to date with 5.1 running. I got the same two error messages.

FROM:jihnat DATE:3/26/2004 1:11:51 PM

Patch error was caused by the replacement BRASS DLL issued last November; patch program was expecting original DLL from 5.1.0 CD-ROM.

I've updated the service pack files to handle either the DLL from the 5.1.0 CD-ROM or the replacement

4/19/2016 3:03:51 PM

HRS AASHTO

520

Complete Issue Information

DLL.

Dean successfully tested the update for us.

FROM:dteal DATE:Friday, March 26, 2004 1:47:38 PM

|                                   |
|-----------------------------------|
| Issue ID: 5065                    |
| Subject: BRASS P/S shear question |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 3/30/2004 3:42:17 PM |
| Modified By: administrator            | 6/19/2008 4:15:25 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Tuesday, March 30, 2004 11:42:17 AM

Does anyone why the Mcr/Mmax term in equation (9-27) is set to one if Mmax < Mcr??? I can't find this provision in the specs anywhere.

See below...

Shear Computations:

d >= 0.8h = 55.244 in

4/19/2016 3:03:51 PM

HRS AASHTO

521

Complete Issue Information

$$Mcr = (l / Yt (6 * \text{SQRT}(f'c) + fpe - fd)) / 12000 \quad (\text{AASHTO 9-28})$$

$$= 4176.71 \text{ kip ft}$$

$$Vci = 0.6 * \text{SQRT}(f'c) b'd + Vd + Vi * Mcr / Mmax \quad (\text{AASHTO 9-27})$$

$$= 260.6 \text{ kip}$$

$$Vci(\text{min}) = 1.7 * \text{SQRT}(f'c) b'd = 53.8 \text{ kip}$$

$$Vci \geq Vci(\text{min}) \Rightarrow Vci = 260.6 \text{ kip}$$

Note:  $Mmax < Mcr$ , so  $Mcr/Mmax$  limited to 1.0.

$$Vcw = (3.5 * \text{SQRT}(f'c) + 0.3fpc) * b'd + Vp \quad (\text{AASHTO 9-29})$$

$$= 253.7 \text{ kip}$$

$$Vs = Av * fsy * d / s = 67336.2 \text{ lbs} \quad (\text{AASHTO 9-29})$$

$$Vs(\text{max}) = 8 * \text{SQRT}(f'c) b'd = 253026.7 \text{ lbs}$$

$$Vs \leq Vs(\text{max}) \Rightarrow Vs = 67336.2 \text{ lbs}$$

FROM:bmccaffrey DATE:Tuesday, March 30, 2004 11:46:19 AM

I just saw incident 5054 after I posted this. I agree that this should be better documented or taken out all together until AASHTO adds it to the specs.

FROM:bgoodrich DATE:Wednesday, March 31, 2004 11:11:15 AM

This issue is a duplicate of Incident 5054. All discussion will be logged in that incident.

Issue ID: 5072  
 Subject: Unable to import bbd file due to cross section deck type not being set

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Ordoobadi, Mehrdad  
 Submitted By: Kennelly, Krishna 4/7/2004 1:54:28 PM  
 Modified By: administrator 6/19/2008 4:15:25 PM  
 Priority: Urgent  
 Category: Bug - GUI 2

History

| Primary Contact    | Status   | Priority | Category    |
|--------------------|----------|----------|-------------|
| Duray, Jim         | New      | High     | Unknown     |
| Kennelly, Krishna  | Assigned |          | Bug - GUI 2 |
| Ordoobadi, Mehrdad |          |          |             |

4/19/2016 3:03:51 PM

HRS AASHTO

522





Complete Issue Information

FROM:kkennelly DATE:4/7/2004 1:36:36 PM  
Superstruct def wizard is not setting the GirderSystemStructDef deck type.

FROM:kkennelly DATE:4/7/2004 2:13:51 PM  
Code fixed in the SuperStructDefWizard to set the GirderSystemStructDef->DeckType.

We need a script to check abw\_girder\_sys\_struct\_def for null deck types.  
If deck type is null, check the abw\_deck\_panel deck\_type and set the appropriate deck\_type in  
abw\_girder\_sys\_struct\_def.  
Then check the xsection\_deck\_type in abw\_stl\_xsection and set it according to the deck panel type if it  
is null.

FROM:mordoobadi DATE:8/3/2004 8:32:56 AM  
SQL scripts created to fix the problem in the 5.2.0 migration.

FROM:mordoobadi DATE:9/21/2006 9:48:20 AM  
While investigating incident 6230. I noticed that the MSDE/SQL Server script that was created for this  
incident was not run to completion.  
Added code to the "RemoveOrphanedBeamDefs" project to fix this for MSDE/SQL Server databases  
that did not run INCIDENT\_5072 sql script to completion.  
Tested on IDOT's Ratings database.

FROM:mordoobadi DATE:9/21/2006 2:11:41 PM  
Fixed in 5.5 Beta 4.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 5074                                             |
| Subject: 5.1.1 Release: BRASS moment capacity calculation. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Duray, Jim              | 4/8/2004 6:49:13 PM  |
| Modified By: administrator            | 6/19/2008 4:15:25 PM |
| Priority: Urgent                      |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:03:52 PM

HRS AASHTO

525



Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 5084.14258 | Resolved      | Questions on floorbeam live load results |

Description

FROM:hlee DATE:4/8/2004 2:45:39 PM  
E-mail from Brian Goodrich:

=====  
All,

I think there is a problem with the BRASS moment capacity. It's too high. I reviewed the intermediate output and found the lateral bracing check is not satisfied, but the other checks in that section pass. My interpretation is that the moment capacities from Equations 10-99 and 10-103a should be calculated. Then, the smaller of the two should be the final moment capacity. It appears that the 10-99 capacity is not being considered. Do you agree with this assessment?

I think this issue is linked to the modifications that addressed Incident 4525 (BRASS Problem Log 421). What incident number is this new issue assigned?

This is a serious bug that warrants immediate attention. Mike Watters is out this week, but I will contact him on Monday.

Brian L. Goodrich  
BridgeTech, Inc.

-----Original Message-----

From: Jim Duray [mailto:JDURAY@mbakercorp.com]  
Sent: Thursday, April 08, 2004 7:17 AM  
To: Goodrich@bridgetech-laramie.com; Herman Lee  
Cc: Krishna Kennelly  
Subject: RE: BRASS standalone run.

Brian

Did you look at the output at all? The same input file run on the latest version of BRASS produces nearly twice the rating factors as the previous version! Did the spec change that much or is there some other problem?

4/19/2016 3:03:52 PM

HRS AASHTO

526

Complete Issue Information

Thanks  
Jim

>>> "Brian L. Goodrich" <Goodrich@bridgetech-laramie.com> 04/07/04  
02:38PM >>>  
Herman,

Attached are the two output files. I turned on the intermediate output for  
the 110 point of interest.

Brian L. Goodrich  
BridgeTech, Inc.

-----Original Message-----

From: Herman Lee [mailto:HLee@mbakercorp.com]  
Sent: Wednesday, April 07, 2004 12:04 PM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Jim Duray  
Subject: BRASS standalone run.

Hi Brian,

We are trying to isolate the effect of BRASS on Virtis 5.1.0 and 5.1.1.  
Could you rate the attached girder (Alternative1.dat) on BRASS-GIRDER  
5.08.07 and 5.08.08 and send us back the outputs?

Thanks,  
Herman

=====

FROM:jduray DATE:Sunday, April 11, 2004 7:32:45 AM

FROM:bgoodrich DATE:Monday, April 12, 2004 11:36:55 AM  
I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Monday, April 19, 2004 3:30:36 PM  
WYDOT assigned this issue to BRASS Problem Log 503.

FROM:bgoodrich DATE:Monday, April 19, 2004 5:36:15 PM  
For steel structures in which Article 10.48.2.1 applies, the moment capacity calculated by  
BRASS-GIRDER 5.8.8 may be incorrect when all checks within that article are satisfied, except the  
spacing of lateral bracing check (Equation 10-101). When this condition occurs, the moment capacity  
from Equation 10-99 and Equation 10-103a should be considered. However, Equation 10-99 was not.  
The use of both equations is now implemented in BRASS-GIRDER 5.8.9. This is the only issue  
addressed in this interim version. This DLL should be used to replace the BRASS-GIRDER 5.8.8 DLL  
recently released with Virtis 5.1.1.

4/19/2016 3:03:52 PM

HRS AASHTO

527

## Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 5084                                    |
| Subject: Questions on floorbeam live load results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 4/13/2004 8:04:25 PM |
| Modified By: administrator            | 6/19/2008 4:15:24 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Education |
|                 | Resolved |          |           |
| Duray, Jim      | Resolved | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 5095.14248 | Resolved      | Questions from Lichtenstein Eng. |

## Description

FROM:bgoodrich DATE:Tuesday, April 13, 2004 4:04:25 PM

Scott Darling (Lichtenstein Eng.) called with a question regarding the correctness of the floorbeam live load results. His hand calculations show a midspan moment of ~1250 ft-k, but BRASS is giving 1383 ft-k. The floorbeam will accommodate 3 lanes, so a 0.9 multiple presence factor should be considered. The result of 0.9 x 1383 is 1244 ft-k, which is fairly close to the hand calc. Is this just coincidence?

I instructed Mr. Darling to turn on the intermediate output option for the floorbeam, so he can verify vehicle positions, etc. He may call again if this does not provide him with the necessary information.

4/19/2016 3:03:52 PM

HRS AASHTO

528

Complete Issue Information

FROM:bgoodrich DATE:Friday, April 16, 2004 4:00:51 PM  
E-mail from Scott Darling (4/16/04):

Brian,

I have attached the input file for the floorbeam. If you need more files to run the program please let me know. I wasn't exactly sure which files you need.

Below I have pasted output from our run. You can see the over lapping of the lanes. The largest overlap is lane 1 from 6.2 to 18.2, lane 2 from 16 to 28, and lane 3 from 27 to 39. This allows the second axle to be 2.8 feet from the first axle.

Thanks for your help.

Scott Darling, P.E.  
Lichtenstein Consulting Engineers, Inc.  
11 Huron Drive  
Natick, MA 01760  
Phone (508) 647-0500  
Fax (508) 647-5609

```

For truck # 1
Rating Truck in Lane 1 Lanes loaded 3
Edges of Lane 1 = 5.2 - 17.2      rtg trk edge dist =
3.0
mpt edge dist = 2.0
Edges of Lane 2 = 18.0 - 30.0     rtg trk edge dist =
3.0
mpt edge dist = 2.0
Edges of Lane 3 = 29.0 - 41.0     rtg trk edge dist =
3.0
mpt edge dist = 2.0
Distance to wheel lines 1 - 12 = 8.2 14.2 20.0 26.0
31.0
37.0 0.0 0.0 0.0 0.0 0.0 0.0
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1
23.1
23.1 0.0 0.0 0.0 0.0 0.0 0.0
For truck # 1
Rating Truck in Lane 1 Lanes loaded 3
Edges of Lane 1 = 5.2 - 17.2      rtg trk edge dist =
3.0
mpt edge dist = 2.0
Edges of Lane 2 = 18.0 - 30.0     rtg trk edge dist =
3.0
mpt edge dist = 2.0
Edges of Lane 3 = 30.0 - 42.0     rtg trk edge dist =
3.0

```

4/19/2016 3:03:52 PM

HRS AASHTO

529

Complete Issue Information

mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 8.2 14.2 20.0 26.0  
 32.0  
 38.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 16.0 - 28.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 26.0 - 38.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 18.0 24.0  
 28.0  
 34.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 16.0 - 28.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 27.0 - 39.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 18.0 24.0  
 29.0  
 35.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 16.0 - 28.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 28.0 - 40.0 rgt trk edge dist =  
 3.0

Complete Issue Information

mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 18.0 24.0  
30.0  
36.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 16.0 - 28.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 29.0 - 41.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 18.0 24.0  
31.0  
37.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 16.0 - 28.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 30.0 - 42.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 18.0 24.0  
32.0  
38.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 17.0 - 29.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 27.0 - 39.0 rtg trk edge dist =  
3.0

Complete Issue Information

mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 19.0 25.0  
 29.0  
 35.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 17.0 - 29.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 28.0 - 40.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 19.0 25.0  
 30.0  
 36.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 17.0 - 29.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 29.0 - 41.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 19.0 25.0  
 31.0  
 37.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0  
 For truck # 1  
 Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 6.2 - 18.2 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 2 = 17.0 - 29.0 rgt trk edge dist =  
 3.0  
 mpt edge dist = 2.0  
 Edges of Lane 3 = 30.0 - 42.0 rgt trk edge dist =  
 3.0

Complete Issue Information

mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 19.0 25.0  
32.0  
38.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 18.0 - 30.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 28.0 - 40.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 20.0 26.0  
30.0  
36.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 18.0 - 30.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 29.0 - 41.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Distance to wheel lines 1 - 12 = 9.2 15.2 20.0 26.0  
31.0  
37.0 0.0 0.0 0.0 0.0 0.0 0.0  
Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
23.1  
23.1 0.0 0.0 0.0 0.0 0.0 0.0  
For truck # 1  
Rating Truck in Lane 1 Lanes loaded 3  
Edges of Lane 1 = 6.2 - 18.2 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 2 = 18.0 - 30.0 rtg trk edge dist =  
3.0  
mpt edge dist = 2.0  
Edges of Lane 3 = 30.0 - 42.0 rtg trk edge dist =  
3.0



Complete Issue Information

mpt edge dist = 2.0  
 Distance to wheel lines 1 - 12 = 9.2 15.2 20.0 26.0  
 32.0  
 38.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Weight of wheel lines 1 - 12 = 23.1 23.1 23.1 23.1  
 23.1  
 23.1 0.0 0.0 0.0 0.0 0.0 0.0

-----  
 Jennifer L. Diamon, Structural Engineer  
 Lichtenstein Consulting Engineers, Inc.  
 11 Huron Drive, Natick MA 01760  
 Tel: 508-647-0500 Fax: 508-647-5609  
 E-Mail: JDiamon@LCE.us

FROM: bgoodrich DATE: Friday, April 16, 2004 4:02:17 PM  
 I did some investigating with the files Mr. Darling sent and found the following block of intermediate output is used to determine the critical live load moment at midspan:

Rating Truck in Lane 1 Lanes loaded 3  
 Edges of Lane 1 = 4.25 - 16.25 Truck Edge Dist = 4.00  
 Edges of Lane 2 = 18.00 - 30.00 Truck Edge Dist = 4.00  
 Edges of Lane 3 = 27.00 - 39.00 Truck Edge Dist = 2.00  
 Distance to wheel lines 1 - 12 = 8.25 14.25 22.00 28.00 29.00 35.00 0.00 0.00 0.00 0.00  
 0.00 0.00  
 Weight of wheel lines 1 - 12 = 19.41 19.41 19.41 19.41 19.41 19.41 0.00 0.00 0.00 0.00  
 0.00 0.00

It is obvious from the output that there is a problem in the BRASS engine because the edges of lanes 2 and 3 overlap by three feet. Hence, the user's hand calculation for the midspan moment is probably correct.

FROM: bgoodrich DATE: Monday, April 19, 2004 11:04:51 AM  
 Brian,

I don't believe the location you have found gives the maximum moment. The output you found gives a moment at midspan of 1079 k-ft. The program gives 1383 k-ft.

The output you found does bring up another question. Why is the weight of the wheels 19.41? The output for one truck has a wheel load of 25.6. Then for 3 lanes loaded all of the output I had seen before your example was a wheel weight of 23.1 which is .9 times 25.6 for multiple lanes loaded. We don't understand the output for the 19.41.

What should we do? Wait for an answer from the Support Center? Please let me know.

Thanks.

Scott Darling, P.E.  
 Lichtenstein Consulting Engineers, Inc.  
 11 Huron Drive

Complete Issue Information

Natick, MA 01760  
Phone (508) 647-0500  
Fax (508) 647-5609

FROM: bgoodrich DATE: Monday, April 19, 2004 11:05:33 AM

I did send you the wrong output for the critical position, and the wheel line weights were for the lane load, not for the HS20 truck. Below is the correct output for the critical live load moment at midspan:

```

Rating Truck in Lane 1 Lanes loaded 3
Edges of Lane 1 = 6.25 - 18.25 Truck Edge Dist = 4.00
Edges of Lane 2 = 16.00 - 28.00 Truck Edge Dist = 3.00
Edges of Lane 3 = 26.00 - 38.00 Truck Edge Dist = 2.00
Distance to wheel lines 1 - 12 = 10.25 16.25 19.00 25.00 28.00 34.00 0.00 0.00 0.00 0.00
0.00 0.00
Weight of wheel lines 1 - 12 = 23.06 23.06 23.06 23.06 23.06 23.06 0.00 0.00 0.00 0.00
0.00 0.00

```

This position results in a midspan moment of 1067.3 ft-kips. When multiplied by impact of 1.295, the moment is 1382 ft-kips.

I forwarded this issue to the Wyoming Department of Transportation (the owners of BRASS) last week. They will review the issue, assign it to a BRASS problem log, and finally decide when this issue will be addressed. I generally send the user an e-mail when I post new information to the incident, but you can check the status of this issue yourself on the Support Center website.

FROM: bgoodrich DATE: Tuesday, April 27, 2004 4:03:24 PM  
WYDOT assigned this issue to BRASS Problem Log 505.

FROM: bgoodrich DATE: Tuesday, August 03, 2004 11:32:53 PM  
This issue was addressed in BRASS-GIRDER 5.9.0, which will be released with Virtis 5.2. BRASS now calculates a mid-span moment of 1255.9 ft-kips.

|                                           |
|-------------------------------------------|
| Issue ID: 5095                            |
| Subject: Questions from Lichtenstein Eng. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Goodrich, Brian         | 4/20/2004 7:17:52 PM |
| Modified By: administrator            | 6/19/2008 4:15:23 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

4/19/2016 3:03:53 PM

HRS AASHTO

535

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrrecht | Illinois DOT     | tim.armbrrecht@illinois.gov         | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0820380.bbd         |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 5099.14244 | Resolved      | Hybrid R factor applied twice? |

### Description

FROM:bgoodrich DATE:Tuesday, April 20, 2004 3:17:52 PM  
Fahred from Lichtenstein Eng. called with questions regarding Virtis.

1. How to account for a truck on the sidewalk when checking the exterior girder? Answer: Override the distribution factors.
2. How to input concrete and rebar section losses for R/C T-beam? Answer: Copy the member alternative and reduce the section dimensions manually or use the % shear field on the point of interest windows.

## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 5099                          |
| Subject: Hybrid R factor applied twice? |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrrecht, Tim         | 4/26/2004 6:32:11 PM |
| Modified By: administrator            | 6/19/2008 4:15:23 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Accepted |          |          |
|                 | Assigned |          |          |
|                 | On Hold  |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

## Contacts

| Name         | Company                        | Email 1                   | Phone 1        |
|--------------|--------------------------------|---------------------------|----------------|
| Dean Teal    | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001  |
| David Koenig | Missouri DOT                   | david.koenig@modot.mo.gov | (573) 526-0556 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 5114.14229 | Resolved      | Blanked out Material |

## Description

FROM:tarmbrecht DATE:Monday, April 26, 2004 2:32:11 PM

Please verify that the hybrid girder factor defined in AASHTO Std Specs 10.53.1.2 is applied twice in

4/19/2016 3:03:53 PM

**HRS AASHTO**

537

## Complete Issue Information

Virtis in certain situations. Specifically, according to the provisions of 10.53.1.3, eq 10-103a in section 10.48.4.1 is replaced by eq 10-148a ( $\mu = MrRbR$ ) and the yield moment is calculated according to eq 10-148b ( $M_y = F_y fSR$ ). However, if  $L_b \leq L_p$ , then  $M_r = M_y$  according to eq 10-103d. It appears that in this situation, Virtis inserts 10-148b into 10-148a to get  $\mu = F_y f^*S^*R^*R_b^*R$ . Is this the case?

File is attached: Unit 1, memb alt 96" WPLG(8A - 2nd S Int), pt 110 with a rating factor of 1.09 Inventory.

Thanks,

Tim

FROM:bgoodrich DATE:Tuesday, April 27, 2004 2:11:12 PM  
I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Tuesday, May 04, 2004 5:02:39 PM  
WYDOT assigned this issue to BRASS Problem Log 506.

FROM:bgoodrich DATE:Monday, August 09, 2004 1:44:14 PM  
E-mail from Tim Armbrecht:

Brian,

Thanks for looking into it. You know, I would be real surprised if the intention was for the moment to take a double hit with the reduction factor in this situation. We checked against MDX and Merlin-Dash and neither of those engines apply a double hit. Our consultant's program (which they used to design this structure) also did not apply the double hit. Does Jay have an opinion about this?

I agree that if you plug in the equations as written in the code, it appears to apply the reduction factor twice, but we're talking moment capacity here. Only need to apply the factor once, twice is too conservative. On the bright side, it is conservative. I would ask WYDOT to consider this - maybe check with their own designers and if they usually don't do hybrid girders, perhaps check with other states or analysis engine developers.

Tim

FROM:bgoodrich DATE:Tuesday, August 10, 2004 3:23:49 PM  
E-mail from WYDOT:

Brian:

Keith and I discussed this. We both agree that BRASS should not be applying the reduction factor twice. When you take it out, make sure it is not being removed for other cases where it needs to remain.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, August 23, 2004 12:42:40 PM

4/19/2016 3:03:53 PM

HRS AASHTO

538

### Complete Issue Information

This issue has been addressed in BRASS-GIRDER 5.9.0, which will be released with Virtis 5.2.0.

|                               |
|-------------------------------|
| Issue ID: 5114                |
| Subject: Blanked out Material |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Teal, Dean              | 5/4/2004 11:58:03 AM |
| Modified By: administrator            | 6/19/2008 4:15:22 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Tuesday, May 04, 2004 7:58:03 AM

Selected a steel material for the top flange of a plate girder – when I “OK’d” the window and then reopened it the material field was blank. In the materials library I found that I had one space after the material name. I removed this space and all worked fine. I notice that many material in my agency library have a space after them, are they going to be a problem also. I didn’t add the space, somehow it automatically got inserted.

Didn’t we have a problem like this before and it was resolved – if so – it’s back!

FROM:dkoenig DATE:Wednesday, May 05, 2004 11:17:12 AM

We have had several issues related to the blank spaces after names in the library. You will need to remove the blank spaces on all of your names in your library. If you don't, you will eventually see other problems. They are supposed to be adding something to an upcoming version that will not allow these blanks to be stored.

4/19/2016 3:03:54 PM

HRS AASHTO

539

Complete Issue Information

FROM:dteal DATE:Wednesday, November 07, 2007 11:26:30 AM  
Marked as Resolved - What was done??

Issue ID: 5117  
Subject: Problem copying diaphragms to bay 1 when no. of bays > 9

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Armbrecht, Tim 5/5/2004 4:40:23 PM  
Modified By: administrator 6/19/2008 4:15:21 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Ihnat, Joseph   | Closed   | High     | Bug      |

Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

Documents

4/19/2016 3:03:54 PM

HRS AASHTO

540

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0162791test.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 5131.14212 | Resolved      | Question regarding relationship between P/S transfer length and overhang |

### Description

FROM:tambrecht DATE:Wednesday, May 05, 2004 12:40:23 PM

File is attached. For EB structure under framing plan detail, when I try to copy the diaphragms from any bay to bay 1, it not only copies them into bay 10, but it adds them to the existing data in bay 10.

FROM:jihnata DATE:5/10/2004 10:39:02 AM  
Fixed for version 5.2

FROM:jihnata DATE:5/12/2004 3:29:46 PM  
Fixed similar code in UiStringerGroupDefDiaphragmDlg.cpp

FROM:jihnata DATE:12/14/2005 7:13:21 AM  
Track field Accept.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 5131                                                                    |
| Subject: Question regarding relationship between P/S transfer length and overhang |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Pierce, Ron             | 5/12/2004 4:26:16 PM |
| Modified By: administrator            | 6/19/2008 4:15:20 PM |
| Priority: Low                         |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:03:54 PM

HRS AASHTO

541



### Complete Issue Information

|             |          |      |           |
|-------------|----------|------|-----------|
| Duray, Jim  | New      | Low  | Education |
|             | Resolved |      |           |
| Duray, Jim  | New      | High | Bug       |
| Lee, Herman | Assigned |      |           |
|             | Resolved |      | Education |
| Lee, Herman | Resolved | High | Education |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BRASS_LFD.zip       |             |
|      | sd_07100328.bbd     |             |
|      | s-fb-g_problem.doc  |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 5137.14206 | Resolved      | Problem with FB analysis in S-FB-G system |

### Description

FROM: bgoodrich DATE: Wednesday, May 12, 2004 12:26:17 PM

Ron Pierce called with a question regarding the relationship between P/S transfer length and the overhang distance. BRASS was issuing a message indicating that the transfer+debond length must be greater than the overhang distance. Ron increased his transfer length from 25 inches to 30 inches in Virtis and was then able to analyze the structure with BRASS.

FROM: dkoenig DATE: Friday, May 14, 2004 2:35:42 PM

We had the same issue come up on a structure that had unusually large overhangs because of some skew issues and other design issues. We resolved it by reducing the overhang until Virtis would run the structure.

Issue ID: 5137

Subject: Problem with FB analysis in S-FB-G system

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 5/17/2004 4:09:07 PM |
| Modified By: administrator            | 6/19/2008 4:15:20 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          |           |
|                 | ReOpen   |          | Education |
|                 | Resolved |          |           |
|                 | Accepted |          |           |
|                 | Closed   |          |           |
| Goodrich, Brian | Closed   | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 17030.bbd           |             |

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 5138.14205 | Closed        | Serviceability Equations for Prestressed Concrete Girders |

### Description

FROM:thompson DATE:Monday, May 17, 2004 12:09:47 PM

I've been working on my first stringer-floor beam-girder system bridge and I keep having problems with the floor beam analysis. When it's running the BRASS analysis, It's showing an error called Time Check at 500 positions and it continues to show this over and over and over in BRASS analysis window.

(I've attached a screen shot of this error.)

4/19/2016 3:03:55 PM

HRS AASHTO

543

## Complete Issue Information

I've reviewed my data, started over, let it run for an extended amount of time but can't seem to locate my data error. Maybe it's a problem with something else.

Bridge Specifics -

Stringer Unit -

7 simple span stringers, framed into floorbeams, all stringers are W24x76, composite with the deck.

Floorbeams -

Plate Girders, each frames into the main member (in my case it's actually a truss, but I'm only interested in analyzing the floor system in Virtis currently). The bottom is flat and the web varies linearly across the top. (Virts assumes the bottom of the web varies - but I don't think this impacts the computations, just looks funny in the schematic)

The stringers analyze okay. The floorbeam appears to do the virtual stringer analysis okay, but appears to hang on the actual floorbeam.

I've attached my bbd with the data set.

FROM:hlee DATE:5/19/2004 10:35:27 AM

The floorbeam analysis will take a while since the floorbeams are quite long.

I performed a HS20-44 inventory rating on the "system" superstructure definition. It took 7 minutes for the whole process. After I changed the Lane Advancement Increment on the Engine tab of "FBB FBC" floorbeam definition window from the default of 1 ft to 2 ft, the time for the rating reduced to 30 seconds.

The following is the description of Lane Advancement Increment in BRASS-GIRDER(LFD) help: "Enter the distance lanes and axles within lanes will be moved each time as they are 'stepped' across the floorbeam as maximum actions are sought. The smaller the number, the finer the analysis, but run time will increase."

Issue ID: 5138

Subject: Serviceability Equations for Prestressed Concrete Girders

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Murgoitio, Shanon 5/17/2004 9:36:56 PM

Modified By: administrator 6/19/2008 4:15:20 PM

Priority: High

Category: Education

## History

4/19/2016 3:03:55 PM

HRS AASHTO

544

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | virtis crash detail.xls |             |

### Tasks

| Name       | Current State      | Summary           |
|------------|--------------------|-------------------|
| 5141.14202 | Information Needed | Printing problems |

### Description

FROM:smample DATE:Monday, May 17, 2004 5:36:57 PM

I have been checking the serviceability output for a composite prestressed girder. I cannot verify the output listed under "AAHSTO Serviceability Check 9.15.2.2(b)." The numbers I am concerned about are the stress in the top (& bottom) of the beam due to prestress. Shouldn't these two stresses be equal when the eccentricity of the strands = 0? Also, shouldn't the stress in the bottom of the beam due to prestress = fpe in the shear calculations?

FROM:bgoodrich DATE:Wednesday, May 19, 2004 12:35:50 PM

The stress in the top and bottom of the beam should be equal to the strand stress (including losses) divided by the beam area. However, you only entered the final loss on the lump-sum losses tab. This means that no losses occur in the non-composite stage when the strand centroid matches the beam centroid. When the losses are applied in the composite stage, the centroids no longer match, so the stress at the top and bottom of the beam becomes different. You will need to enter some or all of the final loss in the Composite Loss field.

FROM:bgoodrich DATE:Wednesday, May 19, 2004 2:23:06 PM

Brian,

Thank you for your help. By inserting a value into the Composite loss field, I am now getting the numbers that I want.

Mary Walker, PE

FROM:bgoodrich DATE:Wednesday, May 19, 2004 2:23:23 PM  
Closed.

4/19/2016 3:03:55 PM

HRS AASHTO

545

### Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 5141             |
| Subject: Printing problems |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: McCaffrey, Brian        | 5/19/2004 3:40:36 PM  |
| Modified By: hlee                     | 10/26/2012 1:21:29 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Assigned | High     | Bug - GUI 1 |
|                 | Resolved |          |             |
| Lee, Herman     | Resolved | High     | Bug - GUI 1 |

### Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | FloorbeamCrashOnUpdate.<br>bmp |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 5159.14184 | Resolved      | Crash when updating floorbeam web profile. |

### Description

FROM:bmccaffrey DATE:Wednesday, May 19, 2004 11:40:36 AM

From one of our consultants using Virtis 5.1.1 single workstation version:

We installed VIRTIS 5.1.1, we encounter no problems during installation. However, I keep on getting the same error message when I try to print the bridges. It happens every-so-often (about 80% of the time). Did anyone else encounter the problem?

4/19/2016 3:03:55 PM

HRS AASHTO

546

Complete Issue Information

They were trying to print a report generated by the report writer.

I cannot replicate this on our version (unlimited V/O 5.1.1)

FROM:jduray DATE:5/21/2004 9:22:30 AM  
No other printing problems have been reported.

Are you printing from Explorer?

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5159                                      |
| Subject: Crash when updating floorbeam web profile. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 5/25/2004 7:34:43 PM |
| Modified By: administrator            | 6/19/2008 4:15:18 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 1                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:5/25/2004 3:03:44 PM  
To reproduce:

Complete Issue Information

1. Open BID 13 Bridge Workspace.
2. Open "Alt #1" ("Floorbeam1" member alternative) schematic window.
3. Open "Floorbeam Def 1" Floorbeam Profile window.
4. Change "Depth Vary" from None to Linear.
5. Hit Apply 2 times.
6. Crash (See attached bitmap).

E-mail from Todd Thompson, SDDOT:

=====

==

Todd

There is a problem when printing from the tabular reports window that was fixed in 5.1.1. I don't know if that is the problem you are having with printing or not.

We will investigate the problem you describe when changing the floorbeam web profile.

Jim

>>> <Todd.Thompson@state.sd.us> 5/25/2004 2:04:33 PM >>>

Jim,

I've been getting MS Visual C++ Runtime Library error message (followed by Application Error and then Dr Watson) when I attempt to do the following functions:

- A) Print
- B) Change a Floor Beam web profile (web depth)

Any time I try to print or hit apply or OK after changing a floorbeam web profile, I crash out.

I uninstalled and reinstalled from scratch the virtisopis application but still keep getting these error messages. Would you be of any assistance in helping me track down these error message(s).

ASA 8 with VirtisOpis 5.1.0 (w/ updated BRASS dll)

Todd Thompson, PE  
SDDOT - Bridge Design  
605-773-3285  
todd.thompson@state.sd.us

=====

==

FROM:hlee DATE:5/26/2004 8:50:47 AM  
Missing MoveTemplate statement before GetLength in CUiBmDefGProfileWebPlateDlg,  
CUiBmDefGProfileFlangePlateDlg, and CUiBmDefGProfileRolledShapeDlg.

4/19/2016 3:03:56 PM

HRS AASHTO

548

Complete Issue Information

Fixed for 5.2 and 6.0 Development.

For now, the crash can be avoided by closing the schematic window before hitting ok or apply on the floorbeam profile window.

FROM:ttompson DATE:Thursday, May 27, 2004 1:26:32 PM  
Work-around works

|                                             |
|---------------------------------------------|
| Issue ID: 5161                              |
| Subject: Unable to import 5.0 data into 5.1 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Yannoni, Paul           | 5/26/2004 8:06:08 PM |
| Modified By: administrator            | 6/19/2008 4:15:18 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

Contacts

| Name         | Company                   | Email 1             | Phone 1      |
|--------------|---------------------------|---------------------|--------------|
| Paul Yannoni | Fay, Spofford & Thorndike | pyannoni@fstinc.com | 781-221-1109 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 5161.14182 | Resolved      | Unable to import 5.0 data into 5.1 |



Complete Issue Information

Description

FROM:pyannoni DATE:Wednesday, May 26, 2004 4:06:08 PM

When attempting to import data from Virtis 5.0 into 5.1 a data base error is encountered. Can 5.1 import 5.0 data or does the user need to connect to a different database?

FROM:jduray DATE:6/3/2004 8:32:36 AM

PLEASE refer to the documentation (installation instructions) provided with 5.1. The 5.0 database must be migrated to 5.1.

|                        |
|------------------------|
| Issue ID: 5162         |
| Subject: ADTT question |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 5/27/2004 2:28:06 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Assigned  |          | Bug - GUI 2 |
|                 | On Hold   |          |             |
|                 | Duplicate |          |             |

4/19/2016 3:03:56 PM

HRS AASHTO

550

Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | Duplicate | High | Bug - GUI 2 |
|------------|-----------|------|-------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | pic22532.jpg        |             |
|      | pic02963.jpg        |             |

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 5163.14180 | Resolved      | User rights to run BARS and BRASS Import. |

Description

FROM:tthompson DATE:Thursday, May 27, 2004 10:28:06 AM

The GUI displays Recent ADTT but the AASHTO LRFD Spec 3.6.1.4.2 says to use the average daily truck traffic over the design life of the bridge. I have a designer questioning why it says Recent when Opis is using it as per AASHTO. He believes it should say Avg ADTT (or something along those lines).

FROM:kkennelly DATE:5/28/2004 8:25:48 AM

I agree that the label "Recent" is misleading. I think when we first designed the system, we used the term "Recent" in anticipation of providing the ability to determine the estimated remaining fatigue life (we would have to provide additional info to determine the rate of ADTT growth to do that). Since we haven't provided that ability, maybe we should re-name that attribute.

FROM:jduray DATE:4/13/2005 9:52:51 AM

duplicate of 4322

|                                                    |
|----------------------------------------------------|
| Issue ID: 5163                                     |
| Subject: User rights to run BARS and BRASS Import. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 5/27/2004 3:25:16 PM |
| Modified By: administrator            | 6/19/2008 4:15:18 PM |

### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | Medium   | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | Medium   | Education |

### Contacts

| Name           | Company     | Email 1                 | Phone 1      |
|----------------|-------------|-------------------------|--------------|
| Scott Neubauer | Iowa D.O.T. | sneubau@max.state.ia.us | 515-239-1290 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 5164.14179 | Resolved      | %concrete used in vertical shear |

### Description

FROM:hlee DATE:5/27/2004 11:18:28 AM  
E-mail from Michael Rizzi, Florida DOT:

=====  
==

Answers to your questions. Please let me know if you need anymore information.

Yes, Windows 2000 Professional  
The user-id is a member of the Users group. (When the user-id is a member of administrators group the error does not occur.)  
The error occurs when running either Import process in Virtis.

Michael Rizzi (ss973rm)  
PONTIS/BMS Project Manager  
VIRTIS Project Manager  
Rhyne Building - Room #290

4/19/2016 3:03:56 PM

HRS AASHTO

552

Complete Issue Information

Florida Department of Transportation  
(850) 410-5550 Suncom 210-5550

"Herman Lee"  
<HLee@mbakercorp.com>  
To  
<michael.rizzi1@dot.state.fl.us>  
05/26/2004 11:36 AM  
cc  
"Jim Duray" <JDURAY@mbakercorp.com>  
Subject  
Re: Fwd: Virtis Error

Michael,

We are looking into the errors you got when attempting to run BARS and BRASS Import. We need more information, as stated below, in order to continue our investigation.

1. Are you using Windows 2000?
2. The user-id is a member of which user group or groups (e.g. Power Users, Users, ...)?
3. Are you running BARS or BRASS Import from Virtis?

Thanks,  
Herman

Herman Lee, P.E.  
Michael Baker Jr., Inc.  
Airside Business Park  
100 Airside Drive  
Moon Township, PA 15108  
Voice: (412) 269-7920  
FAX: (412) 375-3999  
E-mail: hlee@mbakercorp.com

>>> Jim Duray 5/26/04 9:59:22 AM >>>  
Please check this.

>>> <michael.rizzi1@dot.state.fl.us> 5/26/2004 9:56:09 AM >>>

4/19/2016 3:03:56 PM

HRS AASHTO

553

Complete Issue Information

We are receiving the following errors when attempting to run either BARS or BRASS Import.

(Embedded image moved to file: pic22532.jpg)  
(Embedded image moved to file: pic02963.jpg)

The error does not occur on my PC where I have administrator rights, but does happen on our MetaFrame where my user-id does not have admin rights.

Does Virtis require its users to have administrator rights to the computer?  
What is the program attempting to update in the registry?

Thanks,

Michael Rizzi (ss973rm)  
PONTIS/BMS Project Manager  
VIRTIS Project Manager  
Rhyne Building - Room #290  
Florida Department of Transportation  
(850) 410-5550 Suncom 210-5550

=====  
==

FROM:hlee DATE:5/28/2004 10:47:46 AM  
E-mail response to Michael Rizzi:

=====  
==

I have entered Incident 5163 for the reported error message to Virtis Support Center. We are able to reproduce the error message with a Users Group's user on Windows 2000 Professional.

Please see Microsoft Knowledge Base Article 254957 "BUG: Registry Update Code for MFC OLE Server Fails in Windows 2000" (<http://support.microsoft.com/default.aspx?scid=kb;en-us;254957>) for the details of getting those error message. The following is extracted from the article:

1. "In Windows 2000, access to HKEY\_CLASSES\_ROOT is restricted to administrators and power users."
2. "An MFC OLE server, which has previously been registered by a privileged user, continues to run successfully after the error is resolved.". If BARS or BRASS Import has been used by a privileged user (member of administrators and power users) previously, it will run without problem after hitting OK on the error message. This scenario has been tested and confirmed. Both applications successfully

Complete Issue Information

imported bridges to Virtis database.

For now, please ignore the message and continue to use BARS and BRASS Imports. We will resolve this incident in 5.2 release.

For your second question, BARS and BRASS Import will update login information (User Name and Data Source Name) and import's Preferences setting to the registry.

Let me know if you need more information.

Regards,  
Herman

=====  
==

Also tested both Imports in 5.2 Development Release. There is no error message when a Users Group's user login to the Imports.

|                                           |
|-------------------------------------------|
| Issue ID: 5164                            |
| Subject: %concrete used in vertical shear |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Neubauer, Scott         | 5/27/2004 4:06:01 PM |
| Modified By: administrator            | 6/19/2008 4:15:18 PM |
| Priority: Medium                      |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:03:57 PM

HRS AASHTO

555

Complete Issue Information

FROM:sneubauer DATE:Thursday, May 27, 2004 12:06:01 PM

Under a specific point of interest it has a Override Schedule check box. I am assuming that the %shear value is to change the % of concrete area used for the shear calculation. If I am correct, changing the percentage under the point of interest does not work. In the analysis output it always says that 100% of the concrete was used for shear calculation.

FROM:kkennelly DATE:5/28/2004 8:40:44 AM

What have you selected for the POI Control on the Member Alt: Engine properties window for BRASS LFD?

The data on the Point of Interest windows is only used if you have selected the POI Control as Option 0 on the Member Alt: Engine tab for the BRASS LFD properties. The following explanation can be found in the BRASS LFD Engine Related Help topic for the Point of Interest: Shear tab. (You can access this Engine Help by opening the Virtis/Opis help topic for the tab and selecting the "Engine Related Help" link in that topic.)

"BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows."

Also, I don't know if you are analyzing a reinforced concrete girder or a ps girder. The BRASS LFD engine help also states that this tab in Virtis is not considered for ps members.

FROM:sneubauer DATE:Friday, July 29, 2005 4:22:07 PM

I still have a problem. When I enter a % of concrete to consider for shear, the Vc used in the output is now 0. It does not matter what % I enter the Vc is always 0. When I run it using option 5, it calculates the correct value for Vc using 100% of the concrete available. What am I missing now?

FROM:sneubauer DATE:Monday, August 01, 2005 9:59:33 AM

I have found my problem. The Shear factor was set to 0 instead of 1.0.

Issue ID: 5165  
Subject: Error in System Error Message

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 5/28/2004 6:54:11 PM  
Modified By: administrator 6/19/2008 4:15:18 PM  
Priority: High

### Complete Issue Information

Category: Bug - Export 2

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 14366.bbd           |             |
|      | 07106.bbd           |             |
|      | 06945.bbd           |             |

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 5166.14177 | Resolved      | Shear rating of RC slabs |

### Description

FROM:dteal DATE:Friday, May 28, 2004 2:54:11 PM

Error generating LRFD point-of-interest commands!

A duplicate point of interest has been specified at 603.0000 ft/mm.

BRASS only allows the left or right side to be specified for the same location. The same side was specified for one or more identical locations.

Note that on the second line of this error message it says 603.000 ft/mm  
Sh/be 603.0000 in/mm and not ft/mm

FROM:bgoodrich DATE:Thursday, June 03, 2004 10:49:21 AM

I modified the export (BrassCmd.cpp) to display the correct units in the duplicate point of interest error message. Fixed for Version 5.2.

FROM:dteal DATE:Tuesday, October 26, 2004 8:28:39 AM

4/19/2016 3:03:57 PM

HRS AASHTO

557



Complete Issue Information

I can't reproduce this error message in 5.2 B4 -

FROM:dteal DATE:Thursday, October 28, 2004 9:58:38 AM  
Accepted

|                                   |
|-----------------------------------|
| Issue ID: 5166                    |
| Subject: Shear rating of RC slabs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 6/3/2004 11:56:02 AM |
| Modified By: administrator            | 6/19/2008 4:15:18 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:6/3/2004 7:55:00 AM  
Submitted on behalf of Joseph Wellington, OK via email:

Attached bridges show inv ratings greater than operating ratings.

FROM:kkennelly DATE:6/3/2004 8:01:35 AM  
Response sent to Joseph via email:  
Hi Joseph,

I examined your bridge 06945.bbd for an H2O load and found the following:

1. The Inv and Op ratings you receive do not show the typical pattern of the Op rating = 5/3(Inv rating) because the ratings being reported are not at the same location along the length of beam and are not

4/19/2016 3:03:57 PM

HRS AASHTO

558

## Complete Issue Information

due to the same load effects (ie, moment capacity being reported for Inv rating and shear capacity being reported for Op rating.)

Some states do not rate rc slabs for shear based on AASHTO Article 3.24.4 which states slabs designed for bending moment shall be considered satisfactory in shear. If you don't really want to rate the slab for shear, you can check "LFD Ignore Shear" on the Member Alternative window. If you check this box, then your ratings will have the pattern Op rating = 5/3(Inv rating).

2. If you do want to rate for shear, I've found the following in the BRASS output. I created a point of interest at the 7/10 point of the span, ran BRASS for the H20 load and saw the following in the BRASS detailed output at this point:

BRASS is checking AASHTO Article 8.19.1.1 to determine if a minimum amount of shear reinf steel should be provided. This check compares the factored shear force to  $\frac{1}{2}$  the shear strength provided by the concrete. BRASS computes different values for the capacity of the section based on this comparison.

For the H20 truck Inv rating, the following message is printed out in the BRASS output:

```
** WARNING: At Analysis Point: 107.00
    Load Level   : 1
    Truck No.    : 1 - Truck: AASHTO H 20 Loading, 1944 Edition
    Shear stirrups are required according to AASHTO 8.19.1.2 (8-64). No
    stirrups have been provided. Therefore, section capacity has been
    calculated based on  $\frac{1}{2} * \Phi * V_c$  only.
```

### Calculated Values:

```
Vc = 13.91 (kips)      [AASHTO (8-48)]
Vs = 0.00 (kips)      [AASHTO (8-53)]
```

### Ultimate Shear Capacity :

```
Phi * Vn = -11.82 (kips)      [AASHTO (8-46)]      <<<<< KEK note: This value is not
1/2*phi*Vc
```

For the H20 truck Op rating, the following message is printed out:

```
** WARNING: At Analysis Point: 107.00
    Load Level   : 2
    Truck No.    : 1 - Truck: AASHTO H 20 Loading, 1944 Edition
    No shear Stirrups have been provided. Stirrups are not required under
    AASHTO 8.19.1.2 (8-64) for these conditions. Therefore, section capacity
    has been limited to  $\frac{1}{2} * \Phi * V_c$  only.
```

### Calculated Values:

```
Vc = 13.85 (kips)      [AASHTO (8-48)]
Vs = 0.00 (kips)      [AASHTO (8-53)]
```

### Ultimate Shear Capacity :

```
Phi * Vn = -5.88 (kips)      [AASHTO (8-46)]      <<<<< KEK note: This value is
1/2*phi*Vc, but stirrups aren't required
```

Complete Issue Information

I have the following observations on these spec checks:

- a. Article 8.19.1.1 states that the min shear reinf requirement doesn't apply to slabs so I don't think this Article should be considered by BRASS.
- b. The ultimate shear capacity computed based on checking the shear reinf required does not appear to be correct.

I have entered your problem as Incident 5166 on the Virtis/Opis Technical Support website (<http://aashto.bakerprojects.com>). You can track progress on resolution of this problem on that website. Please let me know if you have any further questions.

FROM:bgoodrich DATE:Thursday, June 03, 2004 12:20:23 PM  
I have confirmed the findings and will forward this issue to WYDOT.

FROM:bgoodrich DATE:Friday, June 04, 2004 11:31:13 AM  
WYDOT assigned this issue to BRASS Problem Log 514.

FROM:bgoodrich DATE:Tuesday, August 03, 2004 12:10:32 PM  
This issue has been addressed in BRASS-GIRDER 5.9.0, which is to be released with Virtis 5.2.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 5167                                          |
| Subject: why isn't eq. 10-129c used for steel structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 6/3/2004 4:13:16 PM  |
| Modified By: administrator            | 6/19/2008 4:15:17 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Duray, Jim      | New      | High     | Education     |
| Goodrich, Brian | Resolved |          |               |
|                 | Assigned |          | Enhance BRASS |
|                 | Resolved |          |               |
| Goodrich, Brian | Resolved | High     | Enhance BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 820-Girder.bbd      |             |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 5169.14174 | Resolved      | Why are non-composite section properties used at POI? |

### Description

FROM:bgoodrich DATE:Thursday, June 03, 2004 12:13:16 PM  
E-mail from Timothy Armbrecht:

I'm trying to determine why the moment capacity isn't based on equation 10-129c for a composite steel section in the positive moment region. As far as I can tell, compactness isn't even checked at a point of interest just to the right of the 0.4 point. However, when we have another point of interest at the steel transition, compactness is checked. Why check at the one point, but not at the other, and why isn't eq. 10-129c used in positive moment regions for composite beams? File attached. Thanks,

Tim

Timothy A. Armbrecht, P.E., S.E.  
Bridge Ratings Group Engineer  
Illinois Department of Transportation  
Bureau of Bridges and Structures

FROM:bgoodrich DATE:Thursday, June 03, 2004 12:14:42 PM

To get BRASS to consider equation 10-129c, you need to modify the member alternative engine properties. Check the span box(es) under the "Compactness at the pier" to indicate that the pier sections at the ends of each span are compact. The compactness check is then shown.

FROM:bgoodrich DATE:Monday, June 03, 2004

E-mail from Tim Armbrecht:

From: Armbrecht, Timothy A. [mailto:ARMBRECHTTA@dot.il.gov]  
Sent: Thursday, June 03, 2004 10:26 AM  
To: Goodrich@BridgeTech-Laramie.com  
Subject: RE: Incident 5054

## Complete Issue Information

Thanks for the response. I'm not sure I understand. What if the structure is not compact at the pier, but compact in the middle of a span? Shouldn't a compactness check be performed even if the "Compactness at the pier" is not checked?

FROM:bgoodrich DATE:Monday, June 03, 2004

For structures not compact at the piers adjacent to a POI, BRASS takes the flexural capacity as the yield moment when checking positive flexure. Because the 10-129b and 10-129c equations are not considered for this condition, BRASS does not perform the compactness check at the POI because the decision was already made to use the yield moment. Note that my comments reflect the procedure implemented in BRASS. I would rather see the spec check performed. Please let me know if you would like me to forward any requests to WYDOT.

FROM:bgoodrich DATE:Monday, June 04, 2004

E-mail from Tim Armbrecht:

From: Armbrecht, Timothy A. [mailto:ARMBRECHTTA@dot.il.gov]  
Sent: Friday, June 04, 2004 9:55 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Best, Richard M.  
Subject: RE: Incident 5054

Brian,

Thanks for the info. You know, now that I'm able to devote my full attention to ratings and Virtis, it's interesting what I'm finding in Virtis/BRASS. If you don't mind, please inform WYDOT that we would like to request this enhancement: As an option, BRASS computes the moment capacity for a positive moment section based on AASHTO 10.50.1.1 provided the section meets the "compactness" requirements. If it's too much trouble to incorporate 10-129d, we can live without it, but we really need 10-129c. Thanks again for your help,

Tim

FROM:bgoodrich DATE:Monday, June 04, 2004

I just want to clarify the BRASS procedure. If the user specifies that the adjacent piers are non-compact, BRASS uses the yield moment as the capacity. If the user specifies that the adjacent piers are compact, BRASS actually performs the compactness check of 10-129. If the POI is determined to be compact, BRASS calculates the capacity from equations 10-129b or 10-129c as applicable. If the POI is determined to be non-compact, the yield moment is used. Therefore, BRASS already performs the calculation you are requesting. Please let me know if I'm misunderstanding your request.

Also, equation 10-129d requires moment capacities at the pier, which may or may not have been input as a POI. Therefore, the second term in the equation cannot be calculated.

FROM:bgoodrich DATE:Monday, June 04, 2004

E-mail from Tim Armbrecht:

From: Armbrecht, Timothy A. [mailto:ARMBRECHTTA@dot.il.gov]  
Sent: Friday, June 04, 2004 12:30 PM

4/19/2016 3:03:58 PM

HRS AASHTO

562

Complete Issue Information

To: Goodrich@BridgeTech-Laramie.com  
Cc: Best, Richard M.; Kurtenbach, Tom L.  
Subject: RE: Incident 5054

So if the piers are labeled as compact, the entire span is checked for compactness, and if compact, 10-129c&d applies. If the piers are not labeled as compact, the whole bridge is considered non-compact and moment at first yield applies. That is my understanding. If so, then I'm requesting the option of having BRASS check compactness according to 10.50.1.1 (and apply 10-129c&d) for any points in the composite positive moment region, whether the piers are labeled compact or not.

Back to the example I sent: The intermediate output checked the POI around the 0.7 point for compactness, but did not check the POI near the 0.4 point. Is that because the 0.7 point is in the non-composite region, and the 0.4 point is in the composite region?

FROM:bgoodrich DATE:Monday, June 07, 2004 10:36:47 AM  
I now understand your request and will forward it to WYDOT.

As you suspected, the 0.7 point was checked for compactness because it is in the non-composite region.

FROM:bgoodrich DATE:Tuesday, June 15, 2004 1:30:58 PM  
WYDOT has assigned this issue to BRASS Problem Log 515.

E-mail from C.J. Riley (WYDOT):  
"...The agreed solution is to have BRASS produce a note indicating that the compactness checks are skipped if the user codes this in the analysis command. ..."

FROM:bgoodrich DATE:Tuesday, August 10, 2004 3:22:26 PM  
BRASS-GIRDER 5.9.0 has been revised as described above. Fixed for Version 5.2.0.

Issue ID: 5169  
Subject: Why are non-composite section properties used at POI?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Fox, Travis 6/4/2004 2:49:40 PM  
Modified By: administrator 6/19/2008 4:15:17 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:03:58 PM

HRS AASHTO

563

### Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
| Duray, Jim       | New      | High | Education |
|                  | Resolved |      |           |
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Resolved |      | Education |
| Kennelly, Krisha | Resolved | High | Education |

### Contacts

| Name                                     | Company   | Email 1                        | Phone 1      |
|------------------------------------------|-----------|--------------------------------|--------------|
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT | Shanon.Murgoitio@itd.idaho.gov | 208-334-8547 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 5175.14168 | Resolved      | Floorbeam input for Girder - Floorbeam - Stringer System |

### Description

FROM:bgoodrich DATE:Friday, June 04, 2004 10:49:40 AM  
Entered for Travis Fox:

>>> "Travis Fox" <TFox@abmb.com> 6/3/2004 5:26:28 PM >>>  
Joe Ihnat,

It appears that for a composite, braced non-compact steel plate girder Virtis calculates the moment capacity using the noncomposite section properties. I have attached a .bbd file as an example. The structure definition to view is "820' Comp Steel Span - Girder". The member is G2 and a Point of Interest has been defined at the point in question. Please note in the BRASS output that the Dc and Afc are for a non-composite section at the POI, even though the POI is within the composite section range. Please contact me if further information is needed. Thank you.

Travis A. Fox  
ABMB Engineers, Inc.  
225-765-7400

FROM:bgoodrich DATE:Friday, June 04, 2004 10:50:49 AM

The point of interest in question is located at a cross section transition where the section is non-composite on the left side and composite on the right side. The point of interest within Virtis was specified as the right side, however, BRASS does not support specifying the "side". BRASS chooses the cross section with the lowest moment of inertia when this condition occurs, which is why the

4/19/2016 3:03:58 PM

HRS AASHTO

564

Complete Issue Information

non-composite properties are utilized. The solution is to move the point of interest slightly past the change point.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 5175                                                    |
| Subject: Floorbeam input for Girder - Floorbeam - Stringer System |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Murgoitio, Shanon       | 6/8/2004 10:32:14 PM |
| Modified By: administrator            | 6/19/2008 4:15:17 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:smample DATE:Tuesday, June 08, 2004 6:32:15 PM

I am trying to input my first G-FB-S system. My structure has 4 main girders. The floorbeams are framed into the main girders. The floorbeams in bays 1 & 3 are the same while the floorbeam in bay 2 is different. Is it possible to input these different floorbeams according to the bay they are located in?

FROM:kkennelly DATE:6/9/2004 10:56:15 AM

Floorbeams are described in a manner similar to girders in that you can define different plates or rolled shapes at different lengths along the member. So you can define different plates or rolled shapes in the bays. One thing that cannot be different between the bays is switching from a rolled shape in bay 1 to a plate in bay 2. The floorbeam must be either plate or rolled shape in all of the bays. We have several floor system examples on the Tutorial page on the website that may help you enter your first floor system bridge.



## Complete Issue Information

Issue ID: 5180  
Subject: Rotations at beam ends

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 6/10/2004 8:05:26 PM  
Modified By: administrator 6/19/2008 4:15:16 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |
|                 | Closed   |          |           |
| Goodrich, Brian | Closed   | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State      | Summary                        |
|------------|--------------------|--------------------------------|
| 5200.14143 | Information Needed | Unpredictable P/S slab results |

Description

FROM:dteal DATE:Thursday, June 10, 2004 4:05:26 PM

Dean, I am using VIRTIS/OPIS with BRASS LRFD as the engine. In the main BRASS output file, for the UNFACTORED GIRDER ACTIONS DUE TO APPLIED LIVE LOADS there are Positive and Negative Rotations given for both the left and right ends of each span. Are these rotations maximum and minimum values or are they corresponding rotations associated with the positive and negative reactions shown in the table for each span? Would you please forward this on?

Stephen G. Burnett  
 Kansas Department of Transportation

FROM:bgoodrich DATE:Tuesday, June 15, 2004 1:30:32 PM

The rotations reported in the UNFACTORED GIRDER ACTIONS DUE TO APPLIED LIVE LOADS report are the maximum and minimum for the unfactored live load.

FROM:bgoodrich DATE:Wednesday, August 18, 2004 9:48:57 AM

Track field marked as Accepted, so status set to Closed.

|                                         |
|-----------------------------------------|
| Issue ID: 5200                          |
| Subject: Unpredictable P/S slab results |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: McCaffrey, Brian        | 6/29/2004 3:09:08 PM  |
| Modified By: hlee                     | 10/30/2009 7:12:50 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Complete Issue Information

|                 |                    |      |             |
|-----------------|--------------------|------|-------------|
| Duray, Jim      | New                | High | Bug         |
|                 | Information Needed |      |             |
| Duray, Jim      | New                | High | Bug         |
| Goodrich, Brian | Assigned           |      |             |
|                 | Duplicate          |      | Enhancement |
| Goodrich, Brian | Duplicate          | High | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 099-0068taa.bbd     |             |

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 5201.14142 | Duplicate     | Does Virtis skip servicability check for operating rating when selected? |

### Description

FROM:kkennelly DATE:7/2/2004 2:35:07 PM

Please enter some text describing the problem and attach a bbd file. Thanks.

FROM:bmccaffrey DATE:Tuesday, July 13, 2004 3:40:33 PM

I didn't intend to save this incident - you can delete it. Sorry, I must have hit Update by mistake.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 5201                                                                    |
| Subject: Does Virtis skip servicability check for operating rating when selected? |

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis             |
| Primary Contact: Goodrich, Brian                  |
| Submitted By: Armbrecht, Tim 6/30/2004 6:38:35 PM |
| Modified By: administrator 6/19/2008 4:15:15 PM   |
| Priority: High                                    |
| Category: Enhancement                             |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Medium   | Bug         |
|                 | Suspended |          | Enhancement |
| Ihnat, Joseph   |           | High     |             |
|                 | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Resubmit  |          |             |
|                 | Accepted  |          |             |
|                 | Closed    |          |             |
| Ihnat, Joseph   | Closed    | High     | Enhancement |

Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 5204.14139 | Closed        | COVER PLATES FOR TOP AND BOTTOM |

Description

FROM:tarmbrecht DATE:Wednesday, June 30, 2004 2:38:36 PM

File attached. For the span 1-3 superstructure definition, the lane load controls the rating apparently

4/19/2016 3:03:59 PM

HRS AASHTO

569

Complete Issue Information

due to servicability. We set our points of interest so that servicability is not supposed to control the operating rating, but the results show that it still does. Is there any way to fix this? Thanks,

Tim

FROM:kkennelly DATE:7/2/2004 2:33:33 PM

FROM:bgoodrich DATE:Friday, July 02, 2004 3:24:30 PM

This is a duplicate of Incident 3602 in which the point of interest override data is not generated. This feature has been available in BRASS for about two years, but it has not been implemented in Virtis yet.

The work-around is to set the POI Control option to 0 (on the member alt engine properties), so that POIs will not be generated from the schedule data. When this option is selected, the fields on the point-of-interest window must be entered, i.e., stiffeners, bracing, engine properties, etc.

FROM:hlee DATE:10/2/2007 8:59:43 AM

The above mentioned incident should be 3062.

|                                          |
|------------------------------------------|
| Issue ID: 5204                           |
| Subject: COVER PLATES FOR TOP AND BOTTOM |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Jones, Daniel           | 7/6/2004 4:23:48 PM  |
| Modified By: administrator            | 6/19/2008 4:15:15 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:04:00 PM

HRS AASHTO

570

Complete Issue Information

FROM:rfulton DATE:Tuesday, July 06, 2004 12:23:49 PM  
CAN WE ADD A COPY BUTTON TO COPY THE TOP FLANGE/COVERPLATES TO THE BOTTOM FLANGE (OR VISA VIRSA), IF THE BRIDGE IS NONCOMPOSITE THE FLANGES WILL BE THE SAME.

FROM:hlee DATE:7/19/2006 10:03:16 AM  
Changed Priority to High to be included in the Enhancement List.

FROM:jduray DATE:12/21/2006 8:59:17 AM  
Need to prepare an estimate and send to TF before development.

FROM:jduray DATE:1/19/2007 3:57:23 PM  
TF authorized us to implement this enhancement.

FROM:jihnat DATE:1/31/2007 3:17:28 PM  
Scope included the following windows:  
Profile Cover Plates  
Profile Flange  
Cross Section Cover Plates  
Add Copy button to Top/Bottom tabs, confirm before replacing existing data.  
Done for 5.6.0

FROM:xli DATE:3/15/2007 1:09:55 PM  
Open TrainingBridge1/Simple Span Structure/G2/Plate Girder/Girder profile window  
1, Select "Bottom Flange" tab, click "Copy to top Flange" button, click "OK" for popup message box  
2, Select "Top Flange" tab, select second row, click duplicate button, change 3rd row "Length" from 36.6666 to 26.6666, 4th row "Start distance" is changed from 161 to 151 automatically, enter 10 for "Length" column for 4th row  
3, Click "Copy to bottom Flange" button, click "OK" for popup message box  
4, Select "Bottom Flange" tab, there should be 4 rows copied to bottom flange, not 5.

FROM:xli DATE:3/15/2007 2:12:14 PM  
Above issure is resolved.

Verified the following windows for 5.6 beta 2  
Plate Girder (Cross Section Based)- Cover Plates  
Plate Girder (Schedule Based)- Flange  
Built-up Girder (Cross Section Based)- Cover Plates

Issue ID: 5205  
Subject: FLARED GIRDERS

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Jones, Daniel 7/6/2004 4:27:39 PM  
Modified By: administrator 6/19/2008 4:38:36 PM  
Priority: High

## Complete Issue Information

Category: Enhancement

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1020280.bbd         |             |
|      | 1042080.bbd         |             |
|      | 1042080.doc         |             |

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 5218.14125 | Resolved      | Riveted girder capacity on floorsystem structure |

## Description

FROM:rfulton DATE:Tuesday, July 06, 2004 12:27:40 PM

VIRTIS WILL ALLOW YOU TO BUILD A SYSTEM MODEL WITH FLARED GIRDERS BUT WILL NOT ALLOW YOU TO RUN THE MODEL BECAUSE IT DOES NOT KNOW HOW TO ACCOUNT FOR THE VARIABLE GIRDER SPACING. COULD VIRTIS NOT MAKE SIMPLIFYING CONSERVATIVE ASSUMPTIONS BY USING THE MAXIMUM SPACING TO DETERMINE DISTRIBUTION FACTORS AND ACTUAL WIDTH AND USE THE MINIMUM SPACING FOR EFFECTIVE WIDTH.

FROM:jduray DATE:7/9/2004 8:23:31 AM

This is an enhancement request similar to CalTrans.

FROM:jduray DATE:7/9/2004 8:24:49 AM

FROM:jduray DATE:7/13/2004 2:32:05 PM

Same as VI 3423.

4/19/2016 3:04:00 PM

HRS AASHTO

572

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 5218                                            |
| Subject: Riveted girder capacity on floorsystem structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 7/12/2004 7:09:41 PM |
| Modified By: administrator            | 6/19/2008 4:15:14 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, July 12, 2004 3:09:41 PM

Please look at the intermediate output for section 3 of the main girder (girder 1) that is attached along with the .bbd file. The section is at mid-span and does not control. It is a built up member comprised of angles and plates with a 12"x1" top cover plate. A discrepancy was found in the calculation of equation 10-100 (b/t ratio). It appears that the top flange thickness is being ignored in the equation - only the angle thickness is used.

I believe 't' should be:

top angle thickness + top cover plate thickness  
= 1.0781" + 1.0" = 2.0781"

Thanks, Brian McCaffrey, NYSDOT

4/19/2016 3:04:00 PM

HRS AASHTO

573



Complete Issue Information

FROM:bmccaffrey DATE:Monday, July 12, 2004 3:21:20 PM

The correct bbd file is 1042080. You can delete 1020280.

FROM:bmccaffrey DATE:Tuesday, July 13, 2004 8:25:56 AM

FROM:bgoodrich DATE:Monday, August 2, 2004  
WYDOT assigned this issue to BRASS Problem Log 520.

FROM:bgoodrich DATE:Monday, August 16, 2004 11:40:49 AM  
E-mail from WYDOT:

Brian:

Keith and I discussed this issue and reviewed the AASHTO Specifications. No where in the spec does it clearly define which is the "flange" in a built up section with angles and cover plates. It has been WYDOT policy to use the cover plate as the flange dimensions since the spec states specifically that the thickness must be equal to or greater than the angle thickness. In this type of built up section, we consider the angles as acting as fillets as shown on page 9.25 of the user manual. If the user disagrees with our interpretation of the code, he can simply code an equivalent I-beam section and use whatever flange dimensions he desires.

This closes out Problem Log 520.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, August 16, 2004 11:50:29 AM  
I modified the export (BrassStdAnalysisCmd.cpp) to transfer the cover plate dimensions to the flange dimensions, which corresponds to the instructions in the BRASS-GIRDER command manual.

FROM:bgoodrich DATE:Tuesday, June 28, 2005 4:05:05 PM  
On April 14, 2005, Herman Lee commented out all the changes for this incident. The changes had lowered the rating factors.

FROM:bmccaffrey DATE:Wednesday, August 01, 2007 11:31:01 AM

|                                        |
|----------------------------------------|
| Issue ID: 5225                         |
| Subject: question of Floor Beam rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: xu, han                 | 7/14/2004 3:24:16 PM |
| Modified By: administrator            | 6/19/2008 4:15:13 PM |

4/19/2016 3:04:01 PM

HRS AASHTO

574

### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-10-010 (2TT).bbd  |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 5228.14115 | Duplicate     | Point-of-interest override does not work for BRASS LFD |

### Description

FROM:hxu DATE:Wednesday, July 14, 2004 11:24:16 AM

I am rating a Girder-FB bridge. The spacing of the Floor Beams is 7', per AASHTO 3.23.3.2, the deck should be considered as simply supported beam and to get max. wheel reaction on the Floor Beam. It is so obviously, the reaction on the Floor Beam of a H20 truck in this case should be 16 kips. But when I look through the Brass output file, I noticed that the wheel reaction Virtis used is 16.229 kips. Although the difference is small (1.4%), still I want to figure out what happened. I believe it should come from the virtual stringer analysis. The BBD file was attached, please look at Floor Beam #4E. Thanks.

FROM:bgoodrich DATE:Thursday, July 15, 2004 11:55:30 AM

For the virtual stringer analysis, BRASS places a hinge at 0.12 ft from the interior support. This small length effectively becomes a cantilever, which slightly increases the reaction at that support. The wheel advancement denominator is set to 70, so the truck is moved at 0.1 ft increments across the stringers. Therefore, the reaction is:

$$16 \text{ kips} * 7.1 / 7 = 16.229 \text{ kips}$$

4/19/2016 3:04:01 PM

HRS AASHTO

575

Complete Issue Information

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 5228                                                  |
| Subject: Point-of-interest override does not work for BRASS LFD |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Goodrich, Brian         | 7/15/2004 6:42:46 PM |
| Modified By: administrator            | 6/19/2008 4:15:13 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Thursday, July 15, 2004 2:42:46 PM  
Entered for Alkesh Parikh:

For Girder A, I've defined a point of interest at 6.896' from support and also I've defined the properties of stirrups and concrete area to be used for shear rating. The "Override Schedule" box is checked. But when you look at the output, you'll realize that for some reason, the program does not use the right properties. For example, the area of stirrups for this point of interest is 0.75 sq. in. but the output shows area of stirrups for this point of interest as 1.00 sq. in.

Can you please look in to this and suggest me a solution ?

Thanks,  
Alkesh Parikh  
(508) 647 0500 (Phone)

4/19/2016 3:04:01 PM

HRS AASHTO

576

Complete Issue Information

(508) 647 5609 (Fax)

FROM:bgoodrich DATE:Thursday, July 15, 2004 2:46:57 PM  
This issue is a duplicate of Incident 3062.

FROM:bgoodrich DATE:Thursday, July 15, 2004 2:59:41 PM  
The "Point of Interest: Shear" help topic for the BRASS LFD engine explains:

"BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows."

You can either generate points of interest from the schedules or enter your own points-of-interest information for every point of interest. The later is tedious, but it is the only work-around there is.

|                                      |
|--------------------------------------|
| Issue ID: 5242                       |
| Subject: Highlight the selected Tabs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Waheed, Amjad           | 7/26/2004 3:14:59 PM |
| Modified By: administrator            | 6/19/2008 4:15:12 PM |
| Priority: Medium                      |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Medium   | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | Medium   | Enhancement |

Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI5247Doc2.doc      |             |
|      | VI5247Doc1.doc      |             |
|      | 33620.bbd           |             |
|      | Agency.xml          |             |

Tasks

| Name       | Current State      | Summary                                     |
|------------|--------------------|---------------------------------------------|
| 5247.14096 | Information Needed | Agency truck not used in timber deck rating |

Description

FROM:awaheed DATE:Monday, July 26, 2004 11:15:00 AM

This is a suggestion for a minor enhancement.

In Virtis/Opis, on a screen that has multiple Tabs (example: Structure Typical Section), highlight the Tab name when it is selected. For example when a user selects 'Lane Position' Tab, the name of the Tab should become bold.

I noticed on some monitors, for some people in our office, it is hard for them to tell which Tab is selected.

Thanks,

Amjad Waheed, PE  
Ohio DOT  
614-752-9972

FROM:jduray DATE:4/14/2005 9:45:42 AM

We are using standard Windows features.

|                                                      |
|------------------------------------------------------|
| Issue ID: 5247                                       |
| Subject: Agency truck not used in timber deck rating |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Murgoitio, Shanon       | 7/28/2004 7:24:55 PM  |
| Modified By: hlee                     | 10/26/2012 1:17:46 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |





## Complete Issue Information

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 5249.14094 | Closed        | Prestressed Negative Moment Locations |

### Description

FROM:dteal DATE:Thursday, July 29, 2004 10:18:55 AM

Occasionally when evaluating a RC Slab structure we find that during construction they may have gotten a bad truck or two of concrete that was of lower (or higher) compressive strength (f'c). When performing a rating on this structure you can not model this correctly. With BRASS it will use the first f'c value it finds and then use that throughout (I think).

In a recent construction problem we where to get concrete of f'c = 4000 psi but over the pier area (25 feet on either side) we got f'c = 3000 psi.

In order to rate the bridge I have to use the reduced strength for the entire structure and limit my POI's to the area of concern.

If we can't use differing concrete strengths by areas (sections) why are we allowed to enter differing strengths??

FROM:kkennelly DATE:7/30/2004 8:09:34 AM

Virtis is not designed for a particular analysis engine. It is designed to allow you to describe a bridge without regards to the engine that will be used.

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:35:43 PM

I have forwarded this issue to WYDOT to add to the list of BRASS enhancements.

FROM:bgoodrich DATE:Monday, August 02, 2004 11:06:14 AM

E-mail from WYDOT:

I will add this to the list that I send out this month for prioritization.

Micheal J. Watters, P.E.

Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, August 02, 2004 11:07:06 AM

Status set to Suspended.

FROM:hlee DATE:4/30/2008 2:34:14 PM

Discarded by TAG 12/07.

Issue ID: 5249

Subject: Prestressed Negative Moment Locations

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

4/19/2016 3:04:02 PM

HRS AASHTO

581



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Teal, Dean   | 7/29/2004 2:23:17 PM |
| Modified By: administrator | 6/19/2008 4:15:11 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact  | Status    | Priority | Category      |
|------------------|-----------|----------|---------------|
| Kennelly, Krisha | New       | High     | Unknown       |
| Goodrich, Brian  | Assigned  |          | Enhance BRASS |
|                  | Duplicate |          |               |
| Goodrich, Brian  | Duplicate | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | wybardell.bbd       |             |

### Tasks

| Name       | Current State | Summary                                                                        |
|------------|---------------|--------------------------------------------------------------------------------|
| 5251.14092 | Duplicate     | Ability to use different in concrete materials in different spans for ps beams |

### Description

FROM:dteal DATE:Thursday, July 29, 2004 10:23:17 AM  
Submitted for: Stephen G. Burnett , KDOT staff designer

Dean, I have coded a 3 span K3 prestressed beam bridge into VirtisOpis. This bridge is our typical prestressed bridge that is simple beam for stage one and continuous for stage two. When reviewing the BRASS output, I noticed that for the Unfactored Girder Actions Due to Applied Live Loads during Construction Stage 2, the max. actions for Live Load No. 3 (Truck Train) that the Negative Moment is given at the pier only. I believe that this load would produce negative moment at other locations also. According to AASHTO LRFD Article 3.6.1.3.1 "for both negative moment between points of contraflexure under a uniform load on all spans, and reaction at interior piers only, 90 percent of the effect of two design trucks spaced a minimum of 15000 mm between the lead axle of one truck and the rear axle of the other truck, combined with 90 percent of the effect of the design lane load." For a continuous structure with a uniform load on all spans, the points of contraflexure would approximately

4/19/2016 3:04:02 PM

HRS AASHTO

582



Complete Issue Information

I have this attached file, with five spans , simply supported PCI but assumed continuous for live load with variable girder materials (fc) for each span. At the beam details window, it is not accepting variable girder materials. I assumed as a result, the shear rating is very low for Military loading (HS25) .

Wanley

>>> "Krisha Kennelly" <KKENNELLY@mbakercorp.com> 07/29/04 10:58AM >>>  
Hi Wanley,

The following message is given in the log file that is produced by the export of Virtis data to a BRASS input file when you analyze a mbr alt.  
(You can view this log file by selecting the name of the girder mbr alt in the Bridge Workspace tree and clicking the "View latest analysis output" toolbar button.)

WARNING (High):  
BRASS does not support different concrete materials for each span.  
The concrete material from the first span will be utilized.

Virtis lets you assign different concrete materials to different spans but BRASS LFD does not allow that.

FROM:kkennelly DATE:7/30/2004 8:07:40 AM

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:37:47 PM  
This issue is a duplicate of Incident 3454.

Issue ID: 5252  
Subject: Max number of shear reinf ranges exceeded in BRASS

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 7/30/2004 12:16:16 PM  
Modified By: administrator 6/19/2008 4:15:11 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Unknown       |
| Goodrich, Brian | Assigned  |          | Enhance BRASS |
|                 | Duplicate |          |               |

4/19/2016 3:04:03 PM

HRS AASHTO

584



Complete Issue Information

vertical stirrups with inclined stirrups. It is just that the total number of range commands in the BRASS input file exceeds the BRASS limit.

I've entered your problem as Incident 5252 on the Virtis/Opis Technical Support website. Maybe Brian can find a way to combine the range input commands so the BRASS limit is not surpassed (although that is probably unlikely since you have 134 ranges and the BRASS limit is 50. I'd be surprised if 134 can be combined to less than 50) or maybe they will change BRASS to allow more ranges.

FROM:kkennelly DATE:7/30/2004 9:31:58 AM

Thanks Krisha,

I can work around it so it is not critical but I thought you should see it. Unfortunately, the bridges in our state that have this shear detail are all continuous parabolic RCDG construction and it is very common on our interstate system.

Sincerely,  
Robert Y. Fulton

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:39:36 PM

This issue is a duplicate of Incident 3884.

Issue ID: 5264  
Subject: Unable to save after creating a Stringer Group Definition Geometry that does not have a name

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Hutter, Greg 8/2/2004 3:27:47 PM  
Modified By: administrator 6/19/2008 4:15:10 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Ihnat, Joseph      | Resolved |          |          |
| Ihnat, Joseph      | Resolved | High     | Bug      |

Contacts

4/19/2016 3:04:03 PM

HRS AASHTO

586

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5275.14069 | Suspended     | Enhancements to Member Loads window |

### Description

FROM:ghutter DATE:Monday, August 02, 2004 11:27:47 AM

We are trying to input a girder-floorbeam-stringer bridge. Virtis will not allow us to save and it is giving us the following error.

Unable to save bridge data!

Saving new and modified objects failed while processing

CDmFsysStringerGroupDef (SaveOrder object 101).

Assignment of data to recordset variables failed.

Trying to set NAME to NULL in table

ABW\_FSYS\_STRINGER\_GROUP\_DEF, but the field is not allowed to be NULL.

FROM:ghutter DATE:Monday, August 02, 2004 11:36:34 AM

The bbd file is attached.

FROM:jduray DATE:Wednesday, August 04, 2004 8:36:00 AM

FROM:mordoobadi DATE:8/5/2004 8:49:45 AM

The error indicates that there is a stringer group definition with empty name field.

I reproduced the problem by following these steps.

(1) Open bridge "FSys GFS TrainingBridge1" BID 13

(2) Double click the "STRINGER GROUP DEFINITION GEOMETRY" folder to create a new stringer group def

(3) click the x to close the window.

(4) refresh the BWS by pushing the R key you will see a new stringer group def item without a name in the tree.

(5) save the BWS and get the same errors as Greg reported.

Joe could you please investigate this. Thanks.

FROM:jihnmat DATE:8/5/2004 9:45:48 AM

4/19/2016 3:04:03 PM

HRS AASHTO

587

Complete Issue Information

Added code in versions 5.2 and 6.0 to prevent this error.

|                                              |
|----------------------------------------------|
| Issue ID: 5275                               |
| Subject: Enhancements to Member Loads window |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                                                |
| Primary Contact: Duray, Jim                                                          |
| Submitted By: vinayagamoorthy, vinacs                      8/9/2004 12:14:43 PM      |
| Modified By: administrator                                      6/19/2008 4:15:09 PM |
| Priority: High                                                                       |
| Category: Enhancement                                                                |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM:kkennelly    DATE:8/9/2004 8:17:13 AM  
Submitted on behalf of Vinacs, Caltrans via emial 8/6/04:

The bridge that you reviewed yesterday brought up this enhancement request. See whether this one has been reported earlier or not. If not, please enter this as an enhancement request.

First I will mention the problem we faced to in order for you to understand the problem and the request.

We had three steel girders that are different in lengths (256 ft,260 ft, 264 ft), however, most of the details are the same except the length. As a result, we decided to enter first girder from scratch and then copy, paste and modify approach for the other two. We modelled the shorter girder first. Once

## Complete Issue Information

we are satisfied with the rating result, we moved on to the other two. We copied the member alternative (of the shorter girder) and pasted to save time. Later, as I mentioned earlier, we modified the girder, deck, hinge details to match the actual geometry.

All went well, except the Member loads portion.

Member loads on the member that was copied from had a uniform load of 0.262 kip/ft for Load case DL2. Since the span length of the member that was copied from (SL=256) was less than that of the girder that was being copied to (SL=260), the member loads was pasted as distributed load starting from 0 to 256 feet for the load case DL2. When we modified the data after copied, we checked the uniform load tab and found none. SO WE ASSUMED THAT THE uniform load was not copied (probably many users will do the same) and entered the uniform load and DID NOT CHECK THE distributed load (since it is not our practice to place any load in the distributed load and it consumes a lot of time as well -see next para on this subject). This resulted in very low rating factor for the member.

The irony is that there is no easy way to check the member load data. Note that we may have four or five load group (DL1, DL2, DW, SIP and etc) and there are four tabs (Uniform, Distributed, Concentrated, Settlement). That means a user has to open  $4 \times 4 = 16$  UI to check the data once he copied. It is very painful. (Review report is too long since it provide comprehensive report).

I wish that a right mouse click on the UI gives the option to show a table gives all the data entered within the UI only. When I talked to others in our group, they mentioned they noticed that Virtis sometimes put loads in the distributed load WHEN copy and paste, but didn't know how and when it does (it illustrates the point there are others have problem with this copy paste method).

### WHAT I PROPOSE IS THIS:

1. When the program copy and paste a member alternative, if the loads is entered as uniform load, it should go as uniform load (meaning it goes from full length of each span and remain as uniform load even if the user changes the span length in Member UI).
2. Also, provide an option a user could click on any UI that gives an option to show a table that gives data entered in the Members Loads or add the Load Case Name as the table within the UI as shown below.

Uniform Load UI will look the following:

This arrangement will give the overall data entry when a user checks the data.

### DISTRIBUTED LOAD UI WILL LOOK THE FOLLOWING:

This arrangement will give the overall data entry when a user checks the data. If a user copy and paste, if the load moves from uniform load to distribute load UI, one click will be enough to locate the shift. Same thing applies to the Concentrated Load Tab

The Settlement Tab may need to change, where the user have to have option to add the support number. (now user cannot pick the support)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:jduray DATE:12/12/2007 3:46:10 PM

4/19/2016 3:04:03 PM

HRS AASHTO

589



Complete Issue Information

TAG has decided to change this incident to the ability to copy member loads from one member to another. Make adjustments that make sense if span length differ.

|                                           |
|-------------------------------------------|
| Issue ID: 5312                            |
| Subject: Cannot see bridge id information |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Withers, Richard        | 8/25/2004 7:07:59 PM |
| Modified By: administrator            | 6/19/2008 4:15:06 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Bug      |

Contacts

| Name            | Company                   | Email 1                   | Phone 1      |
|-----------------|---------------------------|---------------------------|--------------|
| Richard Withers | Mississippi Dept of Trans | rwithers@mdot.state.ms.us | 601-359-7167 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 5312.14032 | Resolved      | Cannot see bridge id information |

Description

FROM:rwithers DATE:Wednesday, August 25, 2004 3:07:59 PM  
 When in the Bridge Workspace, I can't open the window that allows me to edit the administrative information on the bridge. In other words, when I right click on the top level of the bridge workspace (The bridge id next to the small bridge symbol) and drop down to "open", nothing happens.

Complete Issue Information

FROM:rwithers DATE:Wednesday, August 25, 2004 3:13:15 PM  
IGNORE THIS INCIDENT - IT WAS NOT DUE TO VIRTIS AND HAS BEEN RESOLVED.

FROM:hlee DATE:8/27/2004 9:23:25 AM  
Resolved by user.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 5313                                            |
| Subject: Standard spec article 10.48.1.3 - BRASS question |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 8/26/2004 2:35:33 PM |
| Modified By: administrator            | 6/19/2008 4:15:06 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          | Education |
| Goodrich, Brian | Resolved | High     | Education |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

4/19/2016 3:04:04 PM

HRS AASHTO

591

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State    | Summary                                             |
|------------|------------------|-----------------------------------------------------|
| 5328.14016 | Not Reproducible | Problem importing BBD file during Michigan training |

Description

FROM:bmccaffrey DATE:Thursday, August 26, 2004 10:35:33 AM

Is BRASS considering the subject spec provision? - moment redistribution of negative moments for compact sections. If so, is there any documentation or help files pertaining to it - I can't find anything on this.

FROM:kkennelly DATE:8/27/2004 1:26:47 PM

I don't think BRASS considers moment redistribution but I'll let Brian give the answer.

FROM:bmccaffrey DATE:Thursday, September 09, 2004 8:34:48 AM

Any idea at all if BRASS uses this article????? Anyone???

FROM:kkennelly DATE:9/9/2004 8:45:05 AM

The BRASS-GIRDER Capabilities help file lists the following under the Limitations topic:

BRASS contains the following limitations in addition to the ranges of applicability:

- No moment redistribution

FROM:bgoodrich DATE:Thursday, September 09, 2004 10:59:24 AM

Neither BRASS-GIRDER nor BRASS-GIRDER(LRFD) support moment redistribution.

FROM:bmccaffrey DATE:Thursday, September 09, 2004 2:06:28 PM

Why not??? It's part of the spec.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 5328                                               |
| Subject: Problem importing BBD file during Michigan training |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Goodrich, Brian         | 9/2/2004 7:50:13 PM  |
| Modified By: administrator            | 6/19/2008 4:15:05 PM |
| Priority: High                        |                      |

4/19/2016 3:04:04 PM

HRS AASHTO

592

### Complete Issue Information

Category: Bug - Domain 2

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | Urgent   | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | Urgent   | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Delete Error.JPG    |             |
|      | Delete Error.bbd    |             |

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 5366.13978 | Closed        | Unknown Deleting Error |

### Description

FROM:bgoodrich DATE:Thursday, September 02, 2004 3:50:13 PM  
During the Michigan training, a user had a problem importing the attached BBD file.

FROM:mordoobadi DATE:8/17/2006 12:21:14 PM  
Not reproducible in 5.4.0.

Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 5366                  |
| Subject: Unknown Deleting Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Teal, Dean              | 9/27/2004 2:57:09 PM |
| Modified By: administrator            | 6/19/2008 4:15:02 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Monday, September 27, 2004 10:57:11 AM

I have been trying to delete a Superstructure Def. from the attached .bbd file. I have tried I think every possibility of checkin's/checkout's – then I got the attach error – which simply stated that the delete failed for reasons unknown, shut down Virtis and contact technical support.

FROM:dteal DATE:Monday, September 27, 2004 10:57:48 AM

FROM:mordoobadi DATE:10/7/2004 5:34:11 PM

You should check-out the whole bridge and then delete the structure def.  
We are not allowing deletion of an individually checked-out structure def. The edit/delete menu item shouldn't have been enabled.  
Fixed for version 5.2 Beta 4 or later.

4/19/2016 3:04:05 PM

HRS AASHTO

594

Complete Issue Information

FROM:dteal DATE:Friday, October 22, 2004 12:05:39 PM

FROM:mordoobadi DATE:10/25/2004 11:20:07 AM  
Accepted by Dean.

Issue ID: 5368  
Subject: Imported File Rates Different

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 9/27/2004 4:33:44 PM  
Modified By: administrator 6/19/2008 4:15:02 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
| Duray, Jim      | Assigned |          |          |
|                 | Resolved |          |          |
| Duray, Jim      | Closed   |          |          |
|                 | Closed   | High     | Bug      |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 13876.bbd           |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 5373.13971 | Resolved      | Girder DL moment calculation for plate girder |

### Description

FROM:dteal DATE:Monday, September 27, 2004 12:33:44 PM

I imported the attached BRASS file to Virtis – When I run Virtis I don't get the same LFD Load Ratings for the T130 and T170 trucks.

Brass gives me

T130 Inv/ Operating = 59.06/98.64 and T170 Inv/Operating = 67.62/112.93

and Virtis gives me

T130 Inv/Operating = 45.52/76.01 and T170 Inv/Operating = 52.17/87.13

Both should be one lane distribution

T130 – 50% Impact and Fatigue Requirements

T170 – No Impact and No Fatigue Requirements

Can you tell me why they differ? I have enclosed all pertinent files: .bbd, BRASS dat file, along with our truck & sections lib, LLOAD.dat and Kansas.dat

FROM:dteal DATE:Tuesday, September 28, 2004 11:50:44 AM

I also sent my Virtis Vehicle Library, my Analysis settings along with settings under the advanced tab.

FROM:bgoodrich DATE:Wednesday, September 29, 2004 2:47:27 PM

The source of the difference is in the distribution factors. In the original BRASS data file, the T130 and T170 trucks had a lower distribution factor than the other trucks. To compensate for this in Virtis, you need to set the Scale Factor on the Vehicle Properties window (from Advanced button). Because the distribution factor of 1.0152 is imported, you need to set the Scale Factor to 0.7857 (0.7976/1.0152) to effectively get the same live load actions. Additionally, setting the Impact to zero is not working properly as it causes the impact percent sent to BRASS to be -100, instead of zero. If you want no impact enter 1.0. Incident 3145 discusses the problem with deciding what values to input for impact, but no decision was ever made. It would be best to input 0.5 to reduce impact by 50% and 0.0 to remove impact.

4/19/2016 3:04:05 PM

HRS AASHTO

596

Complete Issue Information

FROM:dteal DATE:Thursday, September 30, 2004 7:46:15 AM  
Brian, I am confused here:

The help file states that for 50% impact use 1.50 and for zero impact use 0.0 – are you telling me the Virtis Help file is wrong?

Distribution Factor Question – My BRASS structure that imported into Virtis both have Dis. Factors of 1.0152. Why do I have to adjust the factor? How did I know this? Where did the 0.7976 com from?

FROM:dteal DATE:Thursday, September 30, 2004 8:42:57 AM  
Okay, after some thought I now know where the 0.7976 comes from, single lane dist. factor.

So here's another question (goes back to VI 4731) – is there a work around for this??  
As you can see, our T130 and T170 permit vehicle uses one lane dist. for girders and a 15% increase on slabs. The scale factor that is calculated is only correct for one particular girder spacing. How does one do a batch rating when the scale factor will change form one bridge to another? And then for a slab designed by a unit width (girder line) you can select single or multi lane on the Superstructure Def. window, but only 2 of our 8 trucks are single lane. How does one work around that?

FROM:bgoodrich DATE:Thursday, September 30, 2004 10:20:46 AM  
Track field marked as "Resubmit 9/30/04".

FROM:bgoodrich DATE:Thursday, September 30, 2004 10:22:10 AM  
The help file and export conflict only in the method used to enter zero impact. One of them needs to be changed as discussed in Incident 3145. I asked Jim and Krisha to review that incident and decide what to do.

I cannot think of a work-around to get Virtis to use the single-lane distribution factors for certain trucks. This is what the Single Lane checkbox did prior to its removal as discussed in Incident 4731. I am keeping this incident open until we can get some answers on Incidents 3145 and 4731.

FROM:bgoodrich DATE:Thursday, October 07, 2004 11:30:31 AM  
I am marking this incident as resolved because the additional issues are being addressed in the other incidents.

Issue ID: 5373  
Subject: Girder DL moment calculation for plate girder

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Murgoitio, Shanon 9/29/2004 5:49:30 PM  
Modified By: administrator 6/19/2008 4:15:02 PM  
Priority: High  
Category: Bug - BRASS



Complete Issue Information

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Education |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 5423.13921 | Resolved      | Truck weight associated with Inventory & Operating ratings |

Description

FROM:sample DATE:Wednesday, September 29, 2004 1:49:31 PM

I have a plate girder with two different sections. Section #1 is from 0 - 39'1", Section #2 is from 39'1" - 156'5", and Section #1 from 156'5" - 195'6". At 39'1" both the top and bottom flanges increase in thickness. I do not agree with the dl moment calculated for the girder weight.

BRASS FILE:

# 480 SPAN-C            1, 39.0833, 1, 2  
 # 490 SPAN-D            156.4167, 2, 1, 195.5000, 1

Self-Load Summary:

| Span No. | Beginning of Load |                 | End of Load  |                 |
|----------|-------------------|-----------------|--------------|-----------------|
|          | Distance, ft      | Magnitude, k/ft | Distance, ft | Magnitude, k/ft |
| 1        | 0.00              | 0.3920          | 19.55        | 0.3920          |
| 1        | 19.55             | 0.3920          | 39.10        | 0.4899          |
| 1        | 39.10             | 0.4899          | 156.40       | 0.4899          |
| 1        | 156.40            | 0.4899          | 175.95       | 0.3920          |

Why is the load varying from 19.55' (1st tenth point) to 39'1"? The load should change from 392 plf to 489.9 plf at 39'1". I cannot find anything in my input under "Girder Profile" that would cause the load to vary.

Complete Issue Information

I think the dl moment due to girder weight should be 2265.7 k-ft. Currently, BRASS is calculating the moment to be 2298.6 k-ft.

FROM:bgoodrich DATE:Monday, October 18, 2004 2:21:56 PM

The flange change points are so close to 10th points that the change points are not added. This causes element 2 (start = 19.55 ft, end = 39.1 ft) to have a different area at each end, which translates into a varying selfweight being reported for that range. We cannot simply replace the tenth point because subsequent special points could all be close to each other and the original tenth point would just keep shifting. For this particular case, the section dimensions at the right end of element 2 are not being assigned correctly, which should be investigated. The only work-around within Virtis is to adjust the flange change points, but that would be changing the bridge data to conform to an engine.

FROM:bgoodrich DATE:Tuesday, October 19, 2004 12:39:02 PM

WYDOT has assigned this issue to BRASS Problem Log 546, but has not authorized work to begin.

FROM:bgoodrich DATE:Friday, December 10, 2004 12:19:16 PM

This issue has been corrected in BRASS-GIRDER and BRASS-GIRDER(LRFD). Fixed for Virtis/Opis 5.3.0.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 5423                                                      |
| Subject: Truck weight associated with Inventory & Operating ratings |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Hart, Erich             | 10/15/2004 9:40:25 PM |
| Modified By: administrator            | 6/19/2008 4:14:58 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Friday, October 15, 2004 5:40:25 PM

E-mail from Ken Teng:

Hi Brian,

Could you please show me why VIRTIS use 20 kips (H20 truck) for BOTH Inventory & Operating ratings? And 36 kips for HS20?

I know it is one set of wheel but for both Inventory and Operating. I thought Operating will be different than Inventory.

I know you have very good VIRTIS Description of Specification Analysis manuals. Just wonder whether you guys can release those manuals or not.

Thanks for the help.

Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

FROM:bgoodrich DATE:Friday, October 15, 2004 5:41:52 PM

I may not fully understand the nature of your question. As you said, the difference in the H20 and HS20 truck weights is the variable axle on the HS truck. Within Virtis, you can apply any truck to any rating group (Inventory or Operating) and run an analysis. The Inventory and Operating ratings for a particular vehicle is based on the actions from that vehicle, but each rating group has its own capacity and its own set of load factors to determine the factored actions. The truck weight is constant and does not change between rating groups. You also mentioned some manuals, but I'm not sure what you are referring to.

FROM:bgoodrich DATE:Wednesday, October 27, 2004 1:36:52 PM

E-mail from Ken Teng:

Hi Brian,

Thank you for the help. About the manual, I remembered that you said you need to check something in the books when I asked you shear questions long time ago. I guess "the book" is the in-house manual that shows lots of details how BRASS does calculations.

About the question, I need to investigate more and I will enter issues followed Incident 5423.

Ming-Hung (Ken) Teng  
RQAW Corp.

4/19/2016 3:04:05 PM

HRS AASHTO

600

### Complete Issue Information

FROM:bgoodrich DATE:Wednesday, October 27, 2004 1:36:59 PM

There are no in-house manuals that illustrate BRASS calculations. I may have been referring to textbooks that are used as guides. There is a capabilities manual that is released to both BRASS and Virtis users in the form of a help file. In general, the best thing to do to find out how BRASS performs calculations is to turn on the intermediate output for the point of interest in question.

I checked the Virtis Support center and didn't find any open incidents from you that related to BRASS questions. Please add an incident for each of your questions and we will work on getting you the answers.

|                                      |
|--------------------------------------|
| Issue ID: 5430                       |
| Subject: GUI and Import Errors on PS |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Teal, Dean              | 10/19/2004 6:10:58 PM |
| Modified By: administrator            | 6/19/2008 4:14:58 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
| Lee, Herman     | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Closed             |          |          |
| Lee, Herman     | Closed             | High     | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B046232.DAT         |             |

4/19/2016 3:04:06 PM

HRS AASHTO

601

## Complete Issue Information

Sections.lby  
PS Window Error.JPG  
side-by-side box beams.bbd

## Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 5434.13910 | Resolved      | Incorrect calculation of St. Venant Torsional constant for ps box beams |

## Description

FROM:dteal DATE:Tuesday, October 19, 2004 2:10:58 PM  
I imported a dataset from BRASS (attached).

It couldn't import the stirrup schedule, why?

The imported file in Virtis lost the harp point dimensions for spans 2 and 3? They appear in the BRASS output file but not viewable in Virtis.

I attached a jpg of the Stand Layout for span #2. Notice 2 things – The window that should indicate the Harp Point Locations is not correct. It shows what was in the Bridge Explorer window behind it. When I click on the little window it refreshes the window but comes in blank showing blanks for the Distance and Radius. The distances are correct in the BRASS output file. This is true for spans 2 and 3, 1 and 4 are ok.

I included the jpg, the original BRASS dataset I imported and the Virtis .bbd.

FROM:dteal DATE:Tuesday, October 19, 2004 2:13:30 PM  
I did close and restart Virtis - didn't help

FROM:dteal DATE:Tuesday, October 19, 2004 2:15:22 PM  
Also look at the strand locators at the top of the beam. It has a space where it shouldn't and one extra row between two rows.

FROM:dteal DATE:Wednesday, October 20, 2004 7:41:41 AM  
FROM:dteal DATE:Wednesday, October 20, 2004 3:59:57 PM  
Migrated this to 5.2.0 beta 4 - same problems, no change

FROM:hlee DATE:10/28/2004 3:07:25 PM

1. For the STIRRUP-SCHEDULE card, BRASS Import requires that the schedule length divided by the spacing be a whole number. In Virtis's PS Shear Reinforcement Ranges window, the input for "Number of Spaces" is limited to whole number.

2. Virtis requires all the left harp points located at the same distance from the left end of the beam and all the right harp points located at the same distance from the right end of the beam. BRASS Import needs to check for this limitation and report to the user.

Dean, please attach the Sections.LBY file to this incident so I can reproduce the import process.

4/19/2016 3:04:06 PM

HRS AASHTO

602

Complete Issue Information

Thanks, Herman.

3. I don't understand the space you are referring at the top of the beam. Please give me more detail information.

4. The extra row is there because the distance from the top of the girder to the strands at the left end (2.75 in) is different from the right end (3.75 in).

CABLE-H1 2, 7, 2, 0.153, 2.75, 46  
CABLE-H2 3.75, 33.3333, 66.6667, 1, 1

FROM:dteal DATE:Friday, October 29, 2004 9:18:25 AM  
Reponses to 1-4

1. My big question/problem here is that the original BRASS data set runs in BRASS-GIRDER as is, shouldn't it then import and run in virtis?
2. Attached is my sections library
3. I don't understand the question, what space at the top of the beam are referring?
4. Yes – the strand dimension D1 is not equal to D3, BRASS allows this.

You didn't comment on the screwed up jpg of the strand layout window??

FROM:hlee DATE:11/1/2004 9:08:19 AM

1. A BRASS dataset that runs in BRASS-GIRDER doesn't imply it will import and run in Virtis. Like the STIRRUP-SCHEDULE card, the import will give an error message when the number of spaces is not a whole number.

The screwed up jpg of the strand layout window is caused by the import failed to check for Virtis's limitation mentioned in (2) of my previous reply.

FROM:hlee DATE:11/3/2004 11:06:40 AM

I added a check in BRASS Import to enforce left harp distances of all strands are the same and right harp distances of all strands are the same in a span. The update is for the first service pack of 5.2. I changed the status to Resolved since the bug that caused the screwed up strand layout window is fixed and the stirrup schedule issue is recorded in Incident 5440.

FROM:hlee DATE:1/24/2005 10:22:23 AM

The update is available in 5.2, not the first service pack of 5.2.

FROM:dteal DATE:Tuesday, March 28, 2006 9:32:18 AM

Accepted in 5.4 beta 7

Issue ID: 5434

Subject: Incorrect calculation of St. Venant Torsional constant for ps box beams

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Kennelly, Krishna

10/20/2004 12:50:45 PM

Modified By: administrator

6/19/2008 4:14:57 PM

4/19/2016 3:04:06 PM

HRS AASHTO

603

## Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - GUI 1 |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | side-by-side box beams.bbd |             |

## Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 5435.13909 | Resolved      | Debond location at tenth point causes zero rating |

## Description

FROM:kkennelly DATE:10/20/2004 8:48:03 AM

Submitted on behalf of Dan Broekhuizen, URS Corp via email which is excerpted below:

1. The Virtis program does not calculate the value for "J" correctly (the Saint-Venant torsional constant). This beam property J is a variable in the calculation for the live load distribution factor for side-by-side box beams according to section 3.23.4.3 of AASHTO. The bridge that URS is working on for the load rating project has 39" deep by 36" wide box beams. Based on section properties, Virtis calculates a value of J of 16,175 in<sup>4</sup>. URS is calculating that the value should be closer to approximately 155,000 in<sup>4</sup>. We're off by a factor of 10 or so. This actually doesn't change the distribution factor that much. In fact, the distribution factor is higher using the incorrect value of J, but we feel that this information should be brought to the attention of Michael Baker Associates.

FROM:kkennelly DATE:10/20/2004 8:51:06 AM

Virtis is computing  $J = A^4/40lp$  but that equation does not apply to box beams. It should be using  $J=4A_o^2/\sum(s/t)$  as per AASHTO LRFD equation C4.6.2.2.1-3.

4/19/2016 3:04:06 PM

HRS AASHTO

604

Complete Issue Information

FROM:dkoenig DATE:Friday, November 05, 2004 4:30:07 PM

We just recently stumbled on to this issue in the last week and were getting ready to send it in as an incident related to the distribution factors being calculated incorrectly. The route of the problem is in the calculation of the J value. We concur with the problem statement as submitted as well as Krishna's comments on the issue.

FROM:mordoobadi DATE:3/16/2005 10:46:14 AM

Fixed for 5.3 Beta 6.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 5435                                             |
| Subject: Debond location at tenth point causes zero rating |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Kennelly, Krishna       | 10/20/2004 12:55:15 PM |
| Modified By: administrator            | 6/19/2008 4:14:57 PM   |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:10/20/2004 8:53:48 AM

Submitted on behalf of Dan Broekhuizen, URS Corp via email which is excerpted below:

2. The other issue that we have had with the side-by-side box beam bridge is with the debonding of some of the strands. The bridge we are working on has 4 strands debonded for a length of 17'-0". When we enter a debonding length in the program of 204", the rating factor for the bridge is computed as 0. For some reason, when the debonding length is entered as 204", the output file is saying that there is no section defined at the two-tenths point from support #1. The debonding length can be



Complete Issue Information

defined as 203.95 or 204.05 and the program works fine, but for some reason it doesn't like a debonding length of 204". URS has no idea why the program is doing this.

FROM:kkennelly DATE:10/20/2004 8:55:37 AM

FROM:bgoodrich DATE:Friday, October 29, 2004 3:45:11 PM

When the debond length of 204" is specified, the BRASS mesh is created with two node points that are too close together. A node point at the end of debonding plus transfer is added (204 debond - 8 overhang + 25 transfer = 221" = 18.4167'). The node at 2/10 of the span length is at  $92.6667' * 0.2 = 18.5333'$ . Therefore, the difference between these two points is 0.1167', which is smaller than the 0.12' small element allowed by BRASS. Simply put, the additional point at 18.4167' should not have been added.

FROM:bgoodrich DATE:Monday, December 06, 2004 11:54:00 AM

WYDOT has assigned this issue to BRASS Problem Log 554.

FROM:bgoodrich DATE:Thursday, January 27, 2005 4:13:48 PM

This issue has been addressed in the BRASS-GIRDER 5.9.1 engine to be released in May 2005.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5438                                      |
| Subject: Questions regarding prestress calculations |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 10/20/2004 8:02:09 PM |
| Modified By: administrator            | 6/19/2008 4:14:57 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Kennelly, Krisha | New      | High     | Education |
| Goodrich, Brian  | Assigned |          |           |
|                  | Resolved |          |           |
| Goodrich, Brian  | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | Bridge A0723 R Impact Loading<br>Error.bbd |             |
|      | Bridge A6521 Impact Loading<br>Error.bbd   |             |
|      | ImpactError.zip                            |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 5477.13867 | Resolved      | Load Rating Values Not Correct for Detailed Output |

### Description

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:02:09 PM  
E-mail from Aran Lessard (Bayside Eng.):

Hello Krisha,

I am looking to find out how Virtis/Brass determines the "secondary moment" in the analysis of prestressed concrete beams. I was unable to find any information on the subject through the Virtis help directory. If you can help me out please let me know.

Thank you,

Aran Lessard

--

BAYSIDE ENGINEERING, INC.  
Aran Lessard, P.E. Structural Engineer  
Phone: (617) 625-4696  
Fax: (617) 625-5095  
alessard@baysideengineering.com

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:02:53 PM  
Hi Brian,

Can you provide Aran with this information?

Thanks, Krisha

4/19/2016 3:04:07 PM

HRS AASHTO

607

## Complete Issue Information

(Aran,

Brian is more familiar with the BRASS program than I am so he should be able to provide more help with this question than I can. If you have any other questions about Virtis, please let me know.

Thanks, Krishna)

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:03:57 PM

There is some intermediate output available within BRASS, but the necessary flag is not exposed to the Virtis user at present. Basically, the secondary moment is calculated within BRASS as:

$$M_s = M_1 - M_2$$

where:

$M_s$  = Secondary moment

$M_1$  = Moment on continuous structure caused by losses

$M_2$  = Moment due to eccentricity of prestress force

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:04:50 PM

E-mail from Aran Lessard (Bayside Eng.):

Hello Brian,

Thank you for your response on the Secondary Moment issue. I am also looking for a good example on how Virtis/Brass generates the nominal moment capacity of prestressed concrete beams. I have produced hand calculations that are close to the moment capacity provided in the Brass Output file but are still a little off. I am just looking to find out where the difference lies.

Please let me know when you get a chance.

Thank you,

Aran Lessard

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:05:52 PM

BRASS-GIRDER generally produces intermediate output that illustrates calculations. This calculation is provided within BRASS, but the flag to turn it on is not exposed to the Virtis user. BRASS-GIRDER calculates the nominal moment capacity of P/S beams per AASHTO 9.17 and 9.18. I suspect the difference lies in the calculation of  $f^*_{su}$  for which BRASS-GIRDER always follows Equation 9-17 or a simplification of Equation 9-18 ( $f^*_{su} = f_{se} + 15$ ). Please submit your bridge in the form of a BBD file if you would like me to turn on the intermediate output and send this to you.

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:06:41 PM

E-mail from Aran Lessard (Bayside Eng.):

Brian,

Thank you for the information. I am sending you the bridge file: W-30-025 (3UD) TEST.bbd and would appreciate it if you could turn on the intermediate output. In particular, I was looking at the moment

4/19/2016 3:04:07 PM

HRS AASHTO

608

Complete Issue Information

capacity of Beam 42.

FROM:bgoodrich DATE:Wednesday, October 20, 2004 4:08:02 PM  
Attached is the output file (38\_INCH\_BEAM.out) with the additional intermediate output turned on. I hope this helps.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 5477                                              |
| Subject: Load Rating Values Not Correct for Detailed Output |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Koenig, David           | 11/2/2004 4:16:06 PM |
| Modified By: administrator            | 6/19/2008 4:14:54 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkoenig DATE:Tuesday, November 02, 2004 12:16:08 PM  
We have noticed on some structures that the impact and without impact values on the load rating results are the same. To create this problem, we have rated bridges with the normal analysis settings. We then go to the member alternative and view the results. Once on this window, we select the option

Complete Issue Information

for getting detailed results. On the detailed results, you will see that the with and without impact values are identical. The normal system calculated impact factors were used in the analysis. This seems to only be happening on some of the vehicles that we are rating. We have not been able to find any explanation for it. The bbd files for two structures are attached below. We also have a word document with some screen shots and output from a rating results report to show you what it is giving.

FROM:bgoodrich DATE:Monday, December 06, 2004 2:15:43 PM  
There is a bug in BRASS. I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Tuesday, January 11, 2005 11:25:40 AM  
WYDOT has assigned this issue to BRASS Problem Log 558, but they have not authorized the actual work yet.

FROM:bgoodrich DATE:Friday, February 11, 2005 4:13:09 PM  
BRASS-GIRDER was corrected to address this incident. Fixed for service pack 1 of Virtis 5.3.

|                                                 |
|-------------------------------------------------|
| Issue ID: 5506                                  |
| Subject: Problem defining floor system geometry |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Kennelly, Krisha     |                        |
| Submitted By: Armbrecht, Tim          | 11/16/2004 10:15:33 PM |
| Modified By: administrator            | 6/19/2008 4:14:52 PM   |
| Priority: High                        |                        |
| Category: Education                   |                        |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B08 of 70025.bbd    |             |

Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 5511.13833 | Resolved      | Moment due to prestressing |

Description

FROM:tarmbrecht DATE:Tuesday, November 16, 2004 5:15:33 PM

This may be more of a problem with significant digits. File attached. When attempting to assign a stringer group definition to the Floor System Geometry, we get a "Validation Error" message stating the following:

"Floor System Geometry

ERROR: StrgrGrp (Stringer Group Definition) assigned to Stringer Unit 1 has specified a floorbeam at a distance 0.000 ft but a corresponding floorbeam does not exist at this location.

ERROR: StrgrGrp (Stringer Group Definition) assigned to Stringer Unit 1 has specified a floorbeam at a distance 12.1146 ft but a corresponding floorbeam does not exist at this location. ..."

As far we can tell, floorbeams do exist at each location where Virtis says they don't. The only unusual thing about this structure is that the end floorbeams are centered 7" inside of the CL bearing of the main girder. We have attempted to address this by indicating a 7" cantilever at the end of the stringer spans.

Thanks, Tim

FROM:kkennelly DATE:11/17/2004 12:54:57 PM

When you assign your stringer group definition to a stringer unit in the Floor System Geometry window you should enter the "Distance to Stringer Group Definition Workpoint" as 0.5833'. As the help for this window states, "The work point of a stringer group definition is the intersection of the superstructure definition reference line and the first floorbeam of the stringer group definition assigned to this unit." Your first floorbeam mbr location is at 0.5833' in the Floorbeam Member Locations window.

FROM:kkennelly DATE:12/16/2005 11:32:39 AM

Closed based on accepted in track field.

|                                     |
|-------------------------------------|
| Issue ID: 5511                      |
| Subject: Moment due to prestressing |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Triezenberg, Jeff       | 11/18/2004 4:36:09 PM |

4/19/2016 3:04:08 PM

HRS AASHTO

611

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:14:52 PM |
| Priority: Medium           |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

### Contacts

| Name           | Company                 | Email 1             | Phone 1      |
|----------------|-------------------------|---------------------|--------------|
| Michael LeBeau | Bryant Associates       | unknown@unknown.com |              |
| han xu         | Vollmer Associates, LLP | hxu@vollmer.com     | 617-210-0468 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 5514.13830 | Resolved      | Version Update |

### Description

FROM:jtriezenberg DATE:Thursday, November 18, 2004 11:36:09 AM

The prestress moment reported by Virtis in the results graph seems to be equal to the Initial Stress multiplied by the eccentricity. This is the initial stress without losses.

Is this the moment that Virtis uses to calculate the dead load moment? If so shouldn't it also include prestress losses?

FROM:jtriezenberg DATE:Monday, November 29, 2004 7:55:15 AM

I have included the .bbd file to help.

FROM:bgoodrich DATE:Friday, May 13, 2005 1:37:15 PM

WYDOT has assigned this issue to BRASS Problem Log 599.

FROM:bgoodrich DATE:Friday, November 11, 2005 9:40:24 AM

BRASS has been corrected. Fixed for Virtis version 5.4.

4/19/2016 3:04:08 PM

HRS AASHTO

612

## Complete Issue Information

|                         |
|-------------------------|
| Issue ID: 5514          |
| Subject: Version Update |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: xu, han                 | 11/19/2004 8:01:15 PM |
| Modified By: administrator            | 6/19/2008 4:14:51 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hxu DATE:Friday, November 19, 2004 3:01:16 PM

I have an old file from a previous version (3.0 I believe). I need to open the file in the latest version. How can I do that?

FROM:jduray DATE:12/22/2004 10:40:03 AM

You need to migrate the database that contains the bridge description that you would like view in the latest version. Please refer to the Startup Guide for migration instructions.



## Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 5520                         |
| Subject: Saint-Venant torsion constant |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: McCaffrey, Brian        | 11/22/2004 3:50:14 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned  |          |          |
|                    | Duplicate |          |          |
| Ordoobadi, Mehrdad | Duplicate | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1        |
|-----------------|-----------------|---------------------------|----------------|
| David Koenig    | Missouri DOT    | david.koenig@modot.mo.gov | (573) 526-0556 |
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |                |

4/19/2016 3:04:08 PM

HRS AASHTO

614

Complete Issue Information

---

Documents

| Name | Resource Identifier | Description                                  |
|------|---------------------|----------------------------------------------|
|      | 0280013.bbd         | Erroneous Virtis Wf for Ext. Steel Beams.doc |

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 5521.13823 | Resolved      | Calculation of wheel fraction for exterior steel beams |

Description

FROM:bmccaffrey DATE:Monday, November 22, 2004 10:50:14 AM

How is Virtis calculating 'J' (Saint-Venant torsion constant) for adjacent voided and non-voided box-section beams and slabs??? I'm using the equations from section 3.23.4 (Standard Specs) and I'm coming up with values 10 to 11 times larger than what's calculated in the box beam 'Properties' tab. A sample .bbd file is attached.

The LLDF's calculated by the 'Compute from Typical Section' wizard are different because of this.

FROM:dkoenig DATE:Monday, November 22, 2004 2:13:21 PM

Brian, a consultant submitted the problems with this in Incident 5434. We have also ran across it in Missouri. As far as I know, they have not done anything with fixing this problem.

FROM:bmccaffrey DATE:Tuesday, November 23, 2004 1:29:11 PM

I didn't catch 5434 before - thanks Dave.

FROM:jduray DATE:12/14/2004 9:22:02 AM

Same as 5434.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 5521                                                  |
| Subject: Calculation of wheel fraction for exterior steel beams |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Armbrecht, Tim          | 11/22/2004 8:23:53 PM |
| Modified By: administrator            | 6/19/2008 4:14:51 PM  |
| Priority: High                        |                       |

### Complete Issue Information

Category: Education

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
| Goodrich, Brian | Assigned  |          | Enhance BRASS |
|                 | Suspended |          |               |
|                 | Discard   |          |               |
| Goodrich, Brian | Discard   | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5748.13596 | Discard       | Placement of liveload on floorbeams |

### Description

FROM:tarnbrecht DATE:Monday, November 22, 2004 3:23:53 PM

Could you please verify how the wheel fractions are calculated for exterior steel beams? Please read my consultant's write-up (attached Word document) on the subject and let me know what you think. For reference, 0280013.bbd is also attached. Thanks,

Tim

FROM:kkennelly DATE:12/1/2004 2:57:01 PM

Virtis is following AASHTO Article 3.23.2.3.1.5 which is for exterior steel beams in a structure with a concrete deck supported by 4 or more stringers. There it specifies the wheel load shall not be less than  $S/(4 + 0.25S) = 6.33/(4 + 0.25(6.33)) = 1.134$

4/19/2016 3:04:09 PM

HRS AASHTO

616

Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 5748                               |
| Subject: Placement of liveload on floorbeabs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 1/3/2005 1:38:26 PM  |
| Modified By: administrator            | 6/19/2008 4:14:35 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, January 03, 2005 8:38:27 AM

Is there any way to report where the controlling live load location is on a girder-floorsystem bridge and how many vehicles there are??? I'm trying to verify live load moments on a floorbeam.

FROM:bgoodrich DATE:Tuesday, January 11, 2005 11:28:39 AM  
I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 10:05:34 AM  
This issue has been added to the BRASS enhancement list.

FROM:hlee DATE:4/30/2008 2:34:38 PM  
Discarded by TAG 12/07.

4/19/2016 3:04:09 PM

HRS AASHTO

617

## Complete Issue Information

Issue ID: 5757  
Subject: Floorbeam Output Questions

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: McCaffrey, Brian 1/4/2005 9:40:45 PM  
Modified By: administrator 6/19/2008 4:14:35 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Education |
|                 | Assigned |          |           |
| Duray, Jim      | Assigned | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:04:09 PM

HRS AASHTO

618

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 5761.13583 | Resolved      | Composite and Continuous Lump Sum Losses |

### Description

FROM:bgoodrich DATE:Tuesday, January 04, 2005 4:40:45 PM

E-mail from Brian McCaffrey: 12/31/2004

Jim,

Is there any way to report or view how many trucks (and where they are) are used in a floorbeam analysis?

Thanks, B

FROM:bgoodrich DATE:Tuesday, January 04, 2005 4:41:50 PM

There is some intermediate output that can be turned on in engine properties of the Analysis Settings window. The Floorbeam Intermediate Output Level will report the location and weight of wheel lines for each position at which loads are applied to the floorbeam during analysis for maximum actions. I hope this helps.

FROM:bgoodrich DATE:Tuesday, January 04, 2005 4:42:09 PM

E-mail from Brian McCaffrey: 1/4/2005

Brian,

This was the last position I got from running the intermediate output for my first intermediate floorbeam. I forgot about that option.

Some questions:

Is the last set of numbers the controlling position?

[BG] No. The output show every position considered. The critical truck positions for each point along the floorbeam are not currently reported, but they could be.

and

Is lane loading considered?

[BG] Yes, but with the following implementation. The longitudinal analysis is performed with the lane load as a uniform load with the additional concentrated loads. Once the reaction to the floorbeam is known for this load, the reaction is applied as a two-wheel axle, not a uniform load.

and

4/19/2016 3:04:09 PM

HRS AASHTO

619

Complete Issue Information

Where are these distances measured from? (left side of travelway, left edge of bridge, etc.)

[BG] All distances listed in the intermediate output reference the left edge of the deck. I will make a request to WYDOT to add a note to explain this.

and

If this is the controlling position, why is there 6' between trucks (I got 6' from the 'distance to wheel lines' line)? Shouldn't it be 4'.

[BG] The controlling position is not currently shown. BRASS considers the 10' design lane within a 12' traffic lane. If the design lane is pushed to the left side in each of two adjacent traffic lanes, the distance between axles is 6'. When the design lanes are pushed to the inside of adjacent traffic lanes, the distance between axles is 4'.

and

Why are the wheel lines 14.98k? I was using 16k since my floorbeam spacing is 6' and the other axles wont have any effect.

[BG] The wheel line weights reported in the intermediate output include the multiple presence factor (1.0 for 1 and 2 lanes, 0.9 for 3 lanes, and 0.75 for >3 lanes). I will make a request to WYDOT to add a note to explain this.

I attached the .bbd file also.

Thanks, B

```

Rating Truck in Lane 3 Lanes loaded 3
Edges of Lane 1 = 14.07 - 26.07      Truck Edge Dist =
4.00
Edges of Lane 2 = 26.00 - 38.00      Truck Edge Dist =
4.00
Edges of Lane 3 = 38.00 - 50.00      Truck Edge Dist =
4.00
Distance to wheel lines 1 - 12 = 18.07 24.07 30.00 36.00
42.00 48.00 0.00 0.00 0.00 0.00 0.00 0.00
Weight of wheel lines 1 - 12 = 14.98 14.98 14.98 14.98
14.98 14.98 0.00 0.00 0.00 0.00 0.00 0.00

```

FROM:bgoodrich DATE:Tuesday, January 04, 2005 4:43:20 PM  
I replied within the above e-mail with [BG]. I also forwarded these issues to WYDOT.

FROM:bgoodrich DATE:Tuesday, January 11, 2005 11:33:22 AM  
WYDOT assigned the work of adding notes to BRASS Problem Log 560. The critical truck positions are already part of Incident 5748 and will be tracked separately there.

Issue ID: 5761

### Complete Issue Information

Subject: Composite and Continuous Lump Sum Losses

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 1/7/2005 1:18:42 PM  
Modified By: administrator 6/19/2008 4:14:34 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Not Reproducible   |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
| Ihnat, Joseph   | Resolved           | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 4434180.bbd         |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 5764.13580 | Resolved      | Deterioration on built up floorbeam flanges |

### Description

FROM:kkennelly DATE:1/7/2005 8:17:17 AM  
Submitted on behalf of Martin Short, Modjeski & Masters via email:

4/19/2016 3:04:09 PM

HRS AASHTO

621



## Complete Issue Information

I have a question regarding the input for Virtis under the Loss Data-Lump Sum tab for Prestress Properties. Input fields are available on this tab for the Final Loss, Composite Loss, and the Continuous Loss. My question is in regards to the Composite Loss and Continuous Loss fields. I am wondering how Virtis/BRASS uses this information in the rating computations and if it is necessary to populate these fields to obtain an accurate result, assuming the rating is being computed based on the AASHTO LFD specifications. I did not find any detailed information or documentation in the Virtis help menu relating to these fields. Any information you can provide would be appreciated.

Regards,

Martin J. Smith, P.E.  
Modjeski and Masters, Inc.  
4909 Louise Drive  
Mechanicsburg, PA 17055  
Telephone # (717) 790-9565  
Fax # (717) 790-9564  
Email: mjsmith@modjeski.com

FROM:kkennelly DATE:1/7/2005 8:20:00 AM

Reply sent:

I'm not sure if you want BRASS to compute your losses or if you want to input them yourself.

If you want the losses to be computed by the AASHTO method specified in Article 9.16.2.1 of the LFD spec, select "AASHTO" as the loss method on the General P/S Data tab. Then you do not need to enter any data on the Loss Data - Lump Sum tab since that tab is for data only for the Lump Sum method of loss computation.

If you want to use the Lump Sum method to compute the losses, choose "Lump Sum" as the loss method on the General P/S Data tab. Then enter data on the Loss Data - Lump Sum tab. I have submitted your question about leaving the Composite and Continuous loss fields blank as incident 5761 so someone more familiar with BRASS can answer.

FROM:bgoodrich DATE:Tuesday, January 11, 2005 11:59:47 AM

The Composite Loss and Continuous Loss fields are provided to allow for incremental losses to be addressed during the construction process. Any losses that occur between the time the strands are stressed and the time the structure becomes continuous are applied to the non-composite simple spans. Any losses that occur between the time the structure becomes continuous and when it becomes composite are applied to the non-composite continuous spans. And so on. Virtis currently allows only one type of continuous P/S structure: simple spans made continuous for live load. For this case, the structure becomes composite and continuous at the same time when the deck hardens. Note that the lump-sum losses input into Virtis are measured from the time the strand is stressed. BRASS will determine the difference between each step (stressing to continuity, continuity to composite, composite to final). BRASS considers several other P/S structure types than are provided in Virtis, which is why it is structured in this way. If you do enter the Continuous Loss, enter the same loss in the Composite Loss field. If you only enter the final loss, it will be applied to the continuous/composite structure. If you enter the same loss in all fields, all losses will be applied to the non-composite, simple spans. This discussion should provide the necessary information for you to determine how you wish to enter losses.

---

4/19/2016 3:04:10 PM

HRS AASHTO

622

### Complete Issue Information

|                                                      |
|------------------------------------------------------|
| Issue ID: 5764                                       |
| Subject: Deterioration on built up floorbeam flanges |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: McCaffrey, Brian        | 1/7/2005 4:24:54 PM  |
| Modified By: administrator            | 6/19/2008 4:14:34 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | rebar schematic.JPG |             |
|      | rebar.JPG           |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 5837.13508 | Resolved      | Reinforcing bars and member schematic |

### Description

FROM:bmccaffrey DATE:Friday, January 07, 2005 11:24:54 AM

We're having a problem with deterioration on riveted floorbeam flanges. If you hit OK and reenter the window, the range gets doubled. The web and cover plate windows are fine. A .bbd is attached.

FROM:jihnata DATE:1/12/2005 12:23:56 PM  
BBD file is version 5.1.1

4/19/2016 3:04:10 PM

HRS AASHTO

623

Complete Issue Information

FROM:jihnat DATE:1/12/2005 12:49:09 PM  
I'm not able to reproduce this. Do I have to enter anything, or just click OK? Any StructureDef/Floorbeam in particular?

FROM:bmccaffrey DATE:Tuesday, January 18, 2005 10:56:21 AM

Just click OK and reenter the window.

FROM:bmccaffrey DATE:Wednesday, January 26, 2005 10:58:23 AM

You have to have a range in there to begin with.

FROM:bmccaffrey DATE:Wednesday, February 02, 2005 9:45:12 AM

- Go into any floorbeam and enter deterioration on either flange - not the cover plates or web, they work fine.

- Hit OK

- Get back into the window and look at the range field.

FROM:jihnat DATE:3/3/2005 3:29:55 PM  
Fixed for version 5.3.0 Release.

|                                                |
|------------------------------------------------|
| Issue ID: 5837                                 |
| Subject: Reinforcing bars and member schematic |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 1/24/2005 1:26:43 PM |
| Modified By: administrator            | 6/19/2008 4:14:30 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 5873.13472 | Resolved      | Plastic moment capacity |

Description

FROM:bmccaffrey DATE:Monday, January 24, 2005 8:26:43 AM

A minor discrepancy between the GUI and engine. Not sure what the proper way to display fractions of rebar is.

The following is an e-mail excerpt I sent to one of our users.

...

The engine uses the fractional (or actual) number of bars in the analysis correctly. In this bridge, 2.3 #8 (dia=1.0", area=0.79 in ^2) bars are entered for the bottom of the slab which sets As=1.817 in^2 (2.3\*0.79) and is confirmed in the output file extract below. The schematic only shows 2 #8 bars and is misleading but the analysis is using the correct value.

B

=====

REINFORCED CONCRETE SECTION - STRENGTH DESIGN/RATING

ANALYSIS POINT 102.00

SECTION DIMENSIONS (in)

SECTION DEPTH : 21.00  
 WEB THICKNESS : 12.00  
 TOP FLANGE THICKNESS : 0.00 TOP FLANGE WIDTH : 0.00  
 BOTTOM FLANGE THICKNESS: 0.00 BOTTOM FLANGE WIDTH: 0.00

REINFORCING DETAILS

BOTTOM STEEL: AREA1 = 1.817 (in^2) DIST FROM BOT. D1 = 2.000 (in)  
 AREA2 = 0.000 D2 = 0.000  
 AREA3 = 0.000 D3 = 0.000  
 TOP STEEL : AREA4 = 0.000 DIST FROM TOP D4 = 0.000  
 AREA5 = 0.000 D5 = 0.000  
 AREA STIRRUPS, Av = 0.790 (in^2)  
 STIRRUP SPACING =192.000 (in)

FROM:bmccaffrey DATE:Monday, January 24, 2005 8:34:27 AM

FROM:jduray DATE:3/7/2005 10:53:30 AM

4/19/2016 3:04:10 PM

HRS AASHTO

625

Complete Issue Information

I assume this is with regard to the R/C cross section schematic...it was decided while we working on the first release of R/C that the schematic would not show partial bars.

|                                  |
|----------------------------------|
| Issue ID: 5873                   |
| Subject: Plastic moment capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 1/26/2005 3:59:55 PM |
| Modified By: administrator            | 6/19/2008 4:14:27 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          | Education |
| Goodrich, Brian | Resolved | High     | Education |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Wednesday, January 26, 2005 10:59:55 AM

How do I turn on the intermediate output for Mp calculations when it applies? Does BRASS LFD automatically check for this? I have a two span continuous steel plate girder that is compact in the positive moment region but the analysis seems to stop at first yield.

Complete Issue Information

FROM:bgoodrich DATE:Wednesday, February 09, 2005 11:07:16 AM

To get BRASS LFD to consider Mp for a section, you need to visit the Member Alternative Engine Properties window. Review the help for the "Compactness at the Pier" grid. In short, you must check the "Compact" box for each span in which the adjacent pier sections are compact for BRASS LFD to consider Mp. This will export the section type "41". If you are entering your own points of interest without generating schedules, you must select Section Type "41" on the Point of Interest Engine Properties window for the LFD engine.

FROM:bgoodrich DATE:Wednesday, February 09, 2005 11:39:29 AM

E-mail from Brian McCaffrey:

Brian,

That's what I did and it works fine - I had forgotten about that setting. I got confused because it works automatically for simple spans.

Thanks, Brian

|                                        |
|----------------------------------------|
| Issue ID: 5879                         |
| Subject: Rating results are different. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Hart, Erich             | 1/26/2005 8:09:49 PM |
| Modified By: administrator            | 6/19/2008 4:14:27 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

4/19/2016 3:04:11 PM

HRS AASHTO

627

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 144-41-7969.bbd     |             |
|      | 1033230.bbd         |             |

Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 5922.13423 | Suspended     | Controlling rating locations and POI's - create poi's at transition points |

Description

FROM:hlee DATE:1/26/2005 2:59:22 PM  
 Submitted on behalf of Ken Teng of RQAW Corp.

E-mail to Brian Goodrich:

=====

Brian,

I received a support request from Ken Teng of RQAW Corp. In the attached 5.1.0 bbd, the two member alternatives "BOX BEAM #2 (POI control=0)" and "BOX BEAM #2 (POI control=5)" in member G2 are the same except the POI Control values in the BRASS LFD engine properties. He questioned why the rating results are different. Also, when I compared the BRASS dat files, stirrup schedules only show up in "BOX BEAM #2 (POI control=5)" dat file.

Thanks,  
 Herman

>>> "Ming Hung Teng" <mteng@RQAW.com> 1/26/05 2:19:56 PM >>>

Ming-Hung (Ken) Teng  
 RQAW Corp.  
 4755 Kingsway Dr., Suite 400  
 Indianapolis, IN 46205-1547  
 (317) 255-6060 X 260  
 FAX: 317-255-8354

-----Original Message-----

From: Ming Hung Teng  
 Sent: Wednesday, January 26, 2005 1:55 PM  
 To: 'Herman Lee'  
 Subject: FW: VIRTIS

Ming-Hung (Ken) Teng  
 RQAW Corp.  
 4755 Kingsway Dr., Suite 400

4/19/2016 3:04:11 PM

HRS AASHTO

628

Complete Issue Information

Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

-----Original Message-----

From: Ming Hung Teng  
Sent: Wednesday, January 26, 2005 1:43 PM  
To: 'Herman Lee'  
Subject: VIRTIS

Herman,

I will call you. Could you please import this one to your machine?  
VIRTIS 5.1.0

Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

=====

FROM:bgoodrich DATE:Thursday, January 27, 2005 4:05:25 PM  
Option 5 uses the stirrup schedules to populate the points of interest and rates for both flexure and shear. However, option 0 does not use any of the schedules and uses only the overrides on the "Point of Interest" window. The only problem here is that the Override Schedules option does not work for prestressed concrete. This is all documented in the corresponding Engine Related Help: "Point of Interest: Shear (BRASS LFD)" topic. For option 0, BRASS will not calculate the shear ratings in prestressed concrete because stirrups at points of interest cannot be specified in BRASS. Your best bet for prestress is to use a POI control option other than 0, so you get the shear ratings too.

FROM:bgoodrich DATE:Wednesday, February 02, 2005 11:58:29 AM  
More related questions from Ken Teng:

=====

Hi Brian,

Thanks for the help.

Did you notice that the POI locations that I assigned are different than the outputs? For example, if I assign 78ft for POI, then VIRTIS shows SPAN2-1.167ft right but the result shows on span1. Why?

Also, the POI control 0 or 5 will show the different critical locations even though I use exactly POI point (please run H20 and there will be 2ft away for same locations). Could you please tell me why?

If I assign POI using the Span & Fraction tab for Span1 with Fraction=1, the program shows  
"\*\*\*ERROR\*\* A POINT-OF\_INTEREST command is required when parameter 6 of the ANALYSIS command is 3, 4, or 5". Please show me why?

There may be a problem with shear ratings. The design programs (CONSPAN & PCBM) show OK for #4 shear stirrups spacing. But I need to use #5 stirrups for VIRTIS. Please see attached Microsoft

4/19/2016 3:04:11 PM

HRS AASHTO

629



Complete Issue Information

Word file for stirrups spacing. What should I do? Please advise.

FROM: bgoodrich DATE: Wednesday, February 02, 2005 11:59:59 AM  
Here are responses to your questions.

Issue 1: POI location

BRASS does not have the capability to analyze the span length of simple-span bearing for the non-composite stage and a different span length of the continuous span for the composite stage. The prestress modeling method option can be utilized, so the BRASS Export will generate commands associated with the shorter or longer span lengths. You have the "Centerline of Simple-span Bearing" method currently selected, so BRASS will use the span lengths adjusted to remove the bearing offset at each end of the span, i.e.,

- Span 1 = 76.833' - 1' = 75.833'
- Span 2 = 79.666' - 2' = 77.833'
- Span 3 = 76.833' - 1' = 75.833'

Therefore, the POI you specified at 78' (SPAN2-1.167') is adjusted as well:

$$1.167' - 1' \text{ (offset)} = 0.167'$$

$$\text{POI} = \text{Span} * 100 + 10(0.167/77.833) = 200.0215$$

This POI is not placed on span 1.

Issue 2: POI Control 0 or 5

As I wrote earlier, POI control option 0 DOES NOT consider shear, but option 5 does. This is why the locations are different between the two options.

Issue 3: Error message

You entered a point of interest at 76.833', which is directly at the bearing. When the BRASS model is generated based on the "Centerline of Simple-span Bearing" method, this POI is not in that model. The only reason this message is given is there are no other POI entered that actually coincide with the BRASS model. When the flag on the ANALYSIS command is set (long before the POI are generated), the export doesn't know if any of the POI will be eliminated because they are not on the BRASS model. To work-around this issue, please enter another point that will actually be present in the BRASS model you specify.

Issue 4: Possible shear problem

I believe the difference in stirrup size may be due to the method BRASS uses to calculate the factored shear near the ends of the spans. BRASS does not use the shear "d" away from the support. It uses the shear at the POI.

FROM: bgoodrich DATE: Monday, February 07, 2005 5:47:47 PM  
More related questions from Ken Teng:

=====  
Hi Brian,

Thank you so much for the help. I really appreciate.

But I still can not figure out the issue #4. You mentioned that the BRASS use the shear at POI but usually the POI will be the 10th point and usually is larger than "d". Based on this point of view, it

Complete Issue Information  
should be OK for shear control.

Is anyway that I can assign the BRASS use the shear at "d"?

Please advice. Thanks again for the help.

FROM:bgoodrich DATE:Monday, February 07, 2005 5:48:25 PM

I have reviewed your issue again and here are my thoughts. First, you cannot currently assign BRASS to use the shear at "d" away from the support. To determine why #4 stirrups do not satisfy the shears, you will need to review the BRASS output. Turn on the intermediate output for the "Span 3 - 2.480067 - Right" point of interest. The output will show the shear equations, input parameters, and any assumptions that BRASS makes. If you don't agree with the BRASS output, please let me know where you think the problem might be.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 5922                                                                      |
| Subject: Controlling rating locations and POI's - create poi's at transition points |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Duray, Jim           |                     |
| Submitted By: McCaffrey, Brian        | 2/1/2005 7:11:22 PM |
| Modified By: hlee                     | 6/9/2011 2:39:09 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

#### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Bug         |
| Kennelly, Krisha | Resolved  |          | Education   |
| Duray, Jim       | Assigned  |          | Enhancement |
|                  | Suspended |          |             |
| Duray, Jim       | Suspended | High     | Enhancement |
|                  | Discard   |          |             |

#### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

#### Documents

4/19/2016 3:04:11 PM

HRS AASHTO

631

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 5988.13357 | Resolved      | Effective flange width wizard for skewed bridges |

## Description

I have a two span continuous plate girder that rates out fine until I put a POI at a flange transition to check stresses. The ratings drop quite a bit (inv. rating factor without a POI = 1.16 at the pier, .813 with a POI at ~0.275 from the left end).

I thought that the controlling rating was reported out all the time regardless of where it was and without any POI's defined. Am I wrong????? The actions for the transition point are reported but the rating factors are not calculated.

We've assumed that the controlling ratings reported after an analysis were the true controlling ratings.

The girder I'm looking at is member G3. Put a POI at 0.274576 of span 1 and recheck the controlling ratings for the member.

FROM:kkennelly DATE:2/2/2005 7:57:57 AM

BRASS only computes rating factors at tenth points (if you have the POI control on the Member Alt:Engine - BRASS LFD Properties window set to generate poi's at tenth points) and points of interest you enter in Virtis. Neither BRASS nor Virtis look to see if any other points may have more critical rating factors.

FROM:bmccaffrey DATE:Wednesday, February 02, 2005 10:28:52 AM

Thanks, I thought that transition points were included in the check since they are also node points.

This is a good enhancement.

FROM:jduray DATE:4/14/2005 10:42:13 AM

To address this we should improve the POI wizard.

FROM:jduray DATE:4/14/2005 3:43:59 PM

incident 162 - let user enter their own pois in addition to wizard

FROM: Herman Lee DATE: 6/9/2011 10:36:36 AM Eastern Daylight Time  
Discarded by TAG April 2011.

Issue ID: 5988

Subject: Effective flange width wizard for skewed bridges

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: McCaffrey, Brian        | 2/3/2005 6:34:03 PM  |
| Modified By: administrator            | 6/19/2008 4:14:19 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | Assigned |          |                |
|                  |          |          | Bug - Domain 1 |
|                  |          |          | Bug - Domain 2 |
|                  | Resolved |          |                |
| Kennelly, Krisha | Resolved | High     | Bug - Domain 2 |

Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0440013.bbd         |             |

Tasks

| Name       | Current State | Summary                                                                                             |
|------------|---------------|-----------------------------------------------------------------------------------------------------|
| 6013.15322 | Resolved      | Error messages for schedule based reinf when straight portion of Type3 bar to left of first support |

Description

FROM:bmccaffrey DATE:Thursday, February 03, 2005 1:34:03 PM

What dimension for beam spacing should the eff fl wizard use - perpendicular to girder or along the support? If you have a skewed bridge and change the girder spacing orientation to 'along support' and recalculate the effective flange width, the wizard does not consider the revised beam spacing due to the skew.

4/19/2016 3:04:12 PM

HRS AASHTO

633

Complete Issue Information

FROM:jduray DATE:3/7/2005 10:59:46 AM  
I think it should use perpendicular to the girder.

FROM:kkennelly DATE:3/7/2005 2:54:56 PM  
The effective flange width should be based on the perpendicular spacing. The width measured along the support for a skewed mbr is not the physical width of the concrete along the length of the mbr. The effective flange width can't be larger than the physical width along the length of the mbr.

FROM:bmccaffrey DATE:Wednesday, March 23, 2005 11:48:12 AM

Why can't the wizard calculate the correct eff fl width if the girder spacing is entered along the support since the skew is given? It seems like a simple calculation since many of our bridge plans show this dimension along the support for skewed structures. We have been manually calculating the spacing perpendicular to the members from the skew (length along support x sin(skew)) so we can use the wizard.

FROM:kkennelly DATE:3/23/2005 2:01:37 PM  
The Compute Eff Flange Width button is using the skewed girder spacing along the support when it should really be using the perpendicular spacing.

FROM:kkennelly DATE:3/23/2005 2:18:42 PM  
Fixed for 5.3. If you enter a skewed spacing along the support, the compute eff flange width button will use the perpendicular girder spacing to compute the effective flange width.

Issue ID: 6013  
Subject: Error messages for schedule based reinf when straight portion of Type3 bar to left of first support

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Armbrecht, Tim 2/4/2005 2:25:50 PM  
Modified By: administrator 6/19/2008 4:20:30 PM  
Priority: High  
Category: Bug - Domain 2

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:04:12 PM

HRS AASHTO

634

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6027.15308 | Duplicate     | Concrete railing table with null for railing ids |

Description

FROM:tarmbrecht DATE:Friday, February 04, 2005 9:25:50 AM

When trying to analyze the Member Alternative "0440013-TPL/TES, 1-Span RC T-beam (Orig.), Interior Beam, RC Tee-beam (Sched.)" the following error message appears...

Error converting Virtis/Opis R/C schedules to 'general' cross sections!  
04:15:54 PM - Line 7877 in source file .\EngineExport.cpp.

Error getting ConcBeamDefWebProfile to left of 0.0000000 ft!  
Current tolerance for ft is 0.0100000.  
04:15:54 PM - Line 270 in source file .\DoRangeSetCmdTarget.cpp.

This alternative is modeled as "Scheduled Based". The same member modeled as "Cross-section Based" runs OK. File attached.

FROM:kkennelly DATE:2/4/2005 1:41:10 PM  
Bar mark G1 is Type 3. It has very short start and end straight lengths (3") that start to left of CL Bearing. When trying to compute the bar development at end of straight portion which is to left of CL bearing, code tries to get beam depth at point to left of where beam depth starts.

FROM:kkennelly DATE:3/3/2005 11:18:33 AM  
Fixed for 5.3 Release

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6027                                            |
| Subject: Concrete railing table with null for railing ids |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Kennelly, Krisha     |                     |
| Submitted By: Kennelly, Krisha        | 2/8/2005 5:26:03 PM |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:38:36 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0600035E.bbd        |             |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 6045.15290 | Resolved      | GFS Error messages and a problem with floorbeam labeling |

### Description

FROM:kkennelly DATE:2/8/2005 12:25:11 PM

Submitted on behalf of Glen Mullings, Prudent Engineering, LLP via email:

Attached is the ".bbd" file for a bridge that I am performing a load rating analysis on.

Whenever I try to run the analysis I get a message saying "The number of deck line loads exceeds the maximum allowed by BRASS". Whenever I remove the concrete parapets that are input in the "Structure Typical Section", the analysis runs fine.

Is there something that I am missing or doing incorrectly?

Thank you for your help.

PS

The file is from VIRTIS 5.1.1

Glen A. Mullings

4/19/2016 3:04:12 PM

HRS AASHTO

636

Complete Issue Information

Design Engineer  
Prudent Engineering, LLP  
591 Main Street, Suite 205  
East Aurora, NY 14052  
Tel: (716) 652 - 2080  
Fax: (716) 652 - 2099  
Email: gmullings@prudenteng.com  
website: www.prudenteng.com

FROM:kkennelly DATE:2/8/2005 12:30:34 PM  
Response sent:  
Hi Glen,

The BRASS LFD program has a limit on the number of deck loads. However, based on your bridge I don't think that your bridge is violating this limit.

I've entered your problem as incident 6027 on the Virtis/Opis Technical Support website. You can track progress on your problem on that website. Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM:kkennelly DATE:2/8/2005 12:30:48 PM  
Problem is not due to export or BRASS. Bridge has extra rows in the concrete railing table with null railing ids. Email sent to Glen:

Glen,

I realized what your problem is after I sent the previous email.

Your problem is not related to BRASS. Somehow your bridge has some extra rows in the railing table but these rows don't have a railing id assigned so you don't see them in the Virtis UI.

I've attached a revised bbd file that has these railing rows removed. Please review your Structure Typical Section window to verify the remaining data is correct.

Do you remember if the Structure Typical Section window experienced any unusual behavior when you were entering your data? Any info you can give us might help us track down the source of this problem. Thanks.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM:kkennelly DATE:2/8/2005 12:48:41 PM  
User's problem is fixed but have we fixed our system so this doesn't happen anymore?

FROM:kkennelly DATE:2/8/2005 1:06:04 PM  
I suspect this is related to Incident 4971 where appurtenance names have trailing blank spaces. That problem has been fixed for 5.1 service pack 1. Was this bridge entered prior to 5.1.1?

4/19/2016 3:04:13 PM

HRS AASHTO

637



## Complete Issue Information

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 6045                                                    |
| Subject: GFS Error messages and a problem with floorbeam labeling |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 2/14/2005 5:17:35 PM |
| Modified By: administrator            | 6/19/2008 4:20:27 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Boukamp, Sabine | Assigned |          |          |
|                 | Resolved |          |          |
| Boukamp, Sabine | Resolved | High     | Unknown  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 6054.15281 | Resolved      | POI Wizard - issue error message if Generate button fails |

## Description

FROM:tarmbrecht DATE:Monday, February 14, 2005 12:17:36 PM

Get following error message when trying to analyze the main girder:

Error generating LFD/ASD load commands!

Error generating load group commands!

Unable to compute dead load of floorbeam!

Error in the loads utility!

Floorbeam self load cannot be computed since existing Floorbeam Member Alternative not assigned to

4/19/2016 3:04:13 PM

HRS AASHTO

638

Complete Issue Information

Floorbeam Member Flbm1!

This occurs even tho' the defined floorbeam has been entered under the Floor System Geometry.

Also, there is a problem with the floorbeam name prefix when entering the Floorbeam member locations utilizing the "Floorbeam Location Wizard". If one uses, for example, "FB" as the "Prefix for system to use when naming generated floorbeams:", all of the generated Floorbeam Names are shown as #.##. If, say FLBM is used, the first 9 Floorbeam Names are "#.##" and after that they are displayed as intended, i.e., FLBM10, FLBM11, etc.

FROM:jduray DATE:3/7/2005 11:02:54 AM

Herman - please import the attached bbd file and run. Perhaps work with Krisha to resolve.

FROM:hlee DATE:3/9/2005 2:44:30 PM

There was a problem in assigning existing floorbeam member alternative to floorbeam member. This had been fixed since 5.3 Beta Build 3.

FROM:hlee DATE:3/9/2005 4:16:12 PM

The Floorbeam Member Locations window used the wrong type of data when displaying the floorbeam names on the grid.

Resolved in 5.3 Beta Build 3.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 6054                                                     |
| Subject: POI Wizard - issue error message if Generate button fails |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Boukamp, Sabine      |                      |
| Submitted By: Kennelly, Krisha        | 2/16/2005 3:09:41 PM |
| Modified By: administrator            | 6/19/2008 4:20:27 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:04:13 PM

HRS AASHTO

639

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:2/16/2005 10:07:53 AM

If Generate button fails to create poi's due to problem creating reinf dev length pois, call Report\_error to issue message that something failed.

FROM:kkennelly DATE:2/16/2005 10:43:38 AM

File attached to 6055 can be used to test this.

FROM:sboukamp DATE:2/17/2005 9:47:17 AM

resolved.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 6055                                                             |
| Subject: Schedule based reinforcement Type 3 bar mark with zero dimensions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 2/16/2005 3:30:38 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Bug - Domain 1              |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug - Domain 1 |
| Kennelly, Krisha | Assigned |          | Bug - Domain 2 |
|                  | Resolved |          |                |
| Kennelly, Krisha | Resolved | High     | Bug - Domain 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 6057.15278 | Resolved      | Validating length of Type 2 bar prevents it from being assigned |

### Description

FROM:kkennelly DATE:2/16/2005 10:30:55 AM  
Submitted on behalf of Lisa Schwartz, STV via email:

Krisha,

Attached is the bridge I'm having problems with. I'm getting the error when rating G3.

Thanks,

Lisa Schwartz  
STV Incorporated  
321 Summer St. 7th Floor  
Boston, MA 02210  
617.303.1152  
schwarla@stvinc.com

(See attached file: C-11-028\_021605.bbd)

FROM:kkennelly DATE:2/16/2005 10:32:41 AM  
Reply sent:

Hi Lisa,

4/19/2016 3:04:13 PM

HRS AASHTO

641

Complete Issue Information

Virtis is having a problem with your bar mark A-8 since it has a zero value for the A and E dimensions. Can you use a Type 2 bar instead of a Type 3 bar mark since the Type 2 bar doesn't have the A and E extensions? Also, your A-2 and A-5 bars do not have the same number of significant digits entered for the angles so the bars do not have the same total length (38.198 and 38.199 ft) which may cause a tolerance problem. You may need to revise the angles for these bar marks so that the total straight lengths of the bars are the same. Please let me know if you need additional information.

FROM:kkennelly DATE:2/28/2005 3:55:56 PM  
Duplicate of 6013 caused by zero dimensions for A and E.

FROM:kkennelly DATE:3/3/2005 11:17:37 AM  
Fixed for the 5.3 Release

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 6057                                                           |
| Subject: Validating length of Type 2 bar prevents it from being assigned |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Kennelly, Krisha                   |
| Submitted By: Kennelly, Krisha 2/16/2005 5:19:00 PM |
| Modified By: administrator 6/19/2008 4:20:27 PM     |
| Priority: High                                      |
| Category: Bug - Domain 2                            |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:2/16/2005 12:19:10 PM  
File attached to 6055. Change A-8 to Type 2 bar. A = C = 4.5', B = 30.58. Start distance = 3.81. Validation thinks bar is not on beam when in fact it is. UI won't let you assign reinforcement since validation failed.

4/19/2016 3:04:13 PM

HRS AASHTO

642

Complete Issue Information

FROM:kkennelly DATE:3/3/2005 11:24:31 AM  
Fixed for 5.3 Releas

Issue ID: 6069  
Subject: Engine help for scaled rating factors

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 2/23/2005 1:38:30 PM  
Modified By: administrator 6/19/2008 4:20:26 PM  
Priority: High  
Category: Help

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Help     |
|                 | Resolved |          |          |

4/19/2016 3:04:14 PM

HRS AASHTO

643

### Complete Issue Information

|                 |          |      |      |
|-----------------|----------|------|------|
| Goodrich, Brian | Resolved | High | Help |
|-----------------|----------|------|------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S03 of 41064.bbd    |             |

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 6082.15253 | Duplicate     | With and without impact results are the same |

### Description

FROM:kkennelly DATE:2/23/2005 8:37:55 AM

Submitted based on email from Martin Smith, Modjeski and Masters:

I am currently working on the rating of a bridge in Michigan and I have a question regarding the rating summaries that I get out of Virtis. I noticed some discrepancies in the output for the interior girder (Girder G2). When I run the bridge with the program calculated multiple and single lane distribution factors, the "Detailed Rating Report Summary Table" lists the Single Lane Operating Rating Factor, including Impact as 2.060 for the HS20 (SI) axle load. If I override the program computed values for the multiple lane factors and input the program computed single lane distribution factors (i.e. - the multiple lane distribution factors are set equal to the single lane distribution factors) the "Detailed Rating Report Summary Table" lists the Single Lane Operating Rating Factor, including Impact as 1.975 for the HS20 (SI) axle load. This is about a 4% difference. I was wondering if you might have an explanation for the difference.

The ratings in question are controlled by the shear strength in Span 2 at a location of 19.4%. After briefly looking at the output, I am guessing that Virtis/Brass calculates the controlling rating factor, which is controlled by the multi-lane distribution factor in the first run, and scales the single lane distribution from this. I am assuming this is the case because I did not find any reference to the single lane distribution factors in the output file. In the second case, both distribution factors are the same, so the Multiple Lane Operating Rating with Impact and the Single Lane Operating Rating Factor with Impact are the same, albeit lower than in the first run. The problem appears to be that the shear capacity assuming a single lane distribution factor is slightly lower than the shear capacity assuming a multi-lane distribution factor at the controlling location.

I have included a \*.BBD file of the bridge for your reference. I would appreciate any thoughts or comments that you may have that could help explain the differences in the rating values. We are currently double checking the input to make sure there are not any mistakes that may account for the discrepancy. Please feel free to contact me if you have any questions.

4/19/2016 3:04:14 PM

HRS AASHTO

644

Complete Issue Information

Regards,

Martin J. Smith, P.E.  
Modjeski and Masters, Inc.  
4909 Louise Drive  
Mechanicsburg, PA 17055  
Telephone # (717) 790-9565  
Fax # (717) 790-9564  
Email: mjsmith@modjeski.com

FROM:kkennelly DATE:2/23/2005 8:41:52 AM  
Hi Martin,

You are correct that BRASS is computing the ratings for the controlling distribution factor and then scaling the results to obtain the rating for the other distribution factor. Since your beam is being controlled by the moment-shear interaction equation for shear, this scaling of rating factors does not produce the exact result since the capacity of the section is dependent on the load on the section.

I've entered Incident 6069 on the Virtis/Opis Technical Support website to add to the BRASS Engine Related Help to describe how BRASS is computing the scaled rating factor and that it is not exact if the rating is dependent on the load on the section.

If you create a point of interest at your controlling point, the BRASS output file will contain detailed calculations for the rating factor that you can review. Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM:bgoodrich DATE:Thursday, March 17, 2005 4:34:59 PM  
Rating Results Summary

If the "Detailed" option is selected as the Lane/Impact Loading Type, ratings are provided for several scenarios: as-requested, single-lane, multi-lane, with and without impact. BRASS LFD analyzes the structure based on the lanes loaded as specified by the user. Once the analysis is complete, the export process scales the original ratings by various combinations of distribution factors (wheel fractions) and impact factors to obtain the ratings for the other combinations of lanes loaded and impact.

Warning: The scaled ratings may not be exact if an interaction rating controlled.

FROM:bgoodrich DATE:Thursday, March 17, 2005 4:35:10 PM  
Fixed for version 5.3.0.

Issue ID: 6082

Subject: With and without impact results are the same

4/19/2016 3:04:14 PM

HRS AASHTO

645



### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 2/28/2005 1:24:20 PM |
| Modified By: administrator            | 6/19/2008 4:20:25 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Analysis Settings.JPG |             |
|      | system error.JPG      |             |
|      | Failed Analysis.bbd   |             |
|      | Int Output.JPG        |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6118.15217 | Closed        | Failed Analysis Due to Unknown Error |

### Description

FROM:kkennelly DATE:2/28/2005 8:22:59 AM  
Submitted on behalf of Martin Smith, Modjeski and Masters:

4/19/2016 3:04:14 PM

HRS AASHTO

646

## Complete Issue Information

I am currently working on the rating of a another bridge in Michigan and I have a question regarding the rating summaries that Virtis provides as output. This bridge is a two span, prestressed beam structure that is continuous for live load. The Rating Summary Tables show the controlling ratings as being governed by the limit state of "Ultimate Strength Flexure" due to HS 20 (SI) Lane loading, with the controlling location at 99.5% of Span #1 (over the pier).

My question involves the "Detailed" Rating Report Summary. The detailed summary shows the same rating factor value for multiple lane distribution, with and without impact. Similarly, the rating factors for single lane distribution, with and without impact, are also the same.

I don't think that the impact factor should be equal to one (1.0) in this case. I was hoping that you might be able to explain why the two values are the same. I would also like to know if the values shown include impact. Based on the output file, it appears that they do.

I have included a \*.BBD file of the bridge for your reference. I would appreciate any thoughts or comments that you may have regarding these values. Please feel free to contact me if you have any questions.

Regards,

Martin J. Smith, P.E.  
Modjeski and Masters, Inc.  
4909 Louise Drive  
Mechanicsburg, PA 17055  
Telephone # (717) 790-9565  
Fax # (717) 790-9564  
Email: mjsmith@modjeski.com

FROM:kkennelly DATE:2/28/2005 8:47:29 AM  
Reply sent via email:

Hi Martin,

The single lane and multi-lane results are the same for member G1 because the live load distribution factors for single and multi-lane are entered as the same numbers.

I don't know why you are getting the same values for with and without impact. I've entered that problem as incident 6082 on the Virtis/Opis Technical Support website (<http://aashto.bakerprojects.com/virtis>). You can track resolution of this problem on that website.

If you create a point of interest in Virtis, the BRASS output file will contain detailed information for the rating calculations it performed at that location. This may assist you in evaluating your output. I believe the values output do include impact but that should be verified in the incident on the Technical Support website by someone more familiar with BRASS.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM:kkennelly DATE:2/28/2005 8:47:59 AM

4/19/2016 3:04:14 PM

HRS AASHTO

647

### Complete Issue Information

Brian, I suspect this has something to do with the controlling point being located over the support. BID 9 in the sample database, G2 is a 3 span ps bridge and it exhibits the same behavior. Controlling point is at 99.1% of span1 and the with/without impact results are the same. If I change the beam description so that the controlling point is not over the interior support, the detailed rating results show different with/without impact when the controlling point is not at the interior support.

FROM: bgoodrich DATE: Monday, February 28, 2005 11:13:40 AM

The issue with the results being the same with and without impact was addressed in Incident 5477.

|                                               |
|-----------------------------------------------|
| Issue ID: 6118                                |
| Subject: Failed Analysis Due to Unknown Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 3/8/2005 5:57:58 PM  |
| Modified By: administrator            | 6/19/2008 4:20:22 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dteal DATE: Tuesday, March 08, 2005 12:57:59 PM

Attached is the bbd – I was doing an Opis Analysis of G1 using HL93 loading. The Engine properties were set for LRFD to find the Service II moments only, see the attached jpegs for the settings. The analysis will begin and then hang at POI #5 giving a system error message that states “Unable to perform Analysis” and the result will close Opis.

Is there any reason that you can't analysis for Service II only??

4/19/2016 3:04:14 PM

HRS AASHTO

648

Complete Issue Information

FROM:bgoodrich DATE:Thursday, March 17, 2005 12:32:56 PM  
I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Thursday, March 17, 2005 1:14:10 PM  
WYDOT authorized this work in Problem Log 588. I have found that BRASS was trying to write some result details to the Opis results object before an actual record is created to write the details to. BRASS-GIRDER(LRFD) 1.6.1 was fixed. Fixed for version 5.3.1.

FROM:dteal DATE:Tuesday, June 28, 2005 8:49:24 AM  
Accepted in 5.3 SP1 Beta 1

FROM:bgoodrich DATE:Monday, July 11, 2005 9:22:10 AM  
Closed.

|                                        |
|----------------------------------------|
| Issue ID: 6125                         |
| Subject: Existing and Current settings |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 3/9/2005 6:32:13 PM  |
| Modified By: administrator            | 6/19/2008 4:20:22 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

|                 |                 |                           |
|-----------------|-----------------|---------------------------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |
|-----------------|-----------------|---------------------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RCRebarTest.bbd     |             |

Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6129.15206 | Closed        | not recognizing development of hooked bars |

Description

FROM:bmccaffrey DATE:Wednesday, March 09, 2005 1:32:14 PM

I cannot set any of the floorbeams on this bridge as either existing or current and therefore cannot run it in batch mode. I can select existing and current for any of my members but they are not savednce I exit and reenter the window.

FROM:hlee DATE:3/9/2005 2:35:27 PM

This incident is part of Incident 6045.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6129                                      |
| Subject: not recognizing development of hooked bars |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 3/9/2005 8:42:22 PM  |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |

4/19/2016 3:04:15 PM

HRS AASHTO

650

## Complete Issue Information

Category: Education

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Resolved |          | Education |
|                  | Closed   |          |           |
| Kennelly, Krisha | Closed   | High     | Education |

## Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Bad Shear Calc.bbd  |             |

## Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6130.15205 | Closed        | getting shear at supports live load DF of zero |

## Description

FROM:tarmbrecht DATE:Wednesday, March 09, 2005 3:42:23 PM

A simple span RC-Slab is modeled w/#10 bars, hooked at both ends, and spaced at 9"oc, specified as the main bottom-of-slab reinforcement. With the "Fully Developed" box not checked the controlling inventory RF is 0.429 @ .9 of the span. With the "Fully Developed" box checked the control point is at the 5/10 point of the span (as one would expect with hooked bars specified and the "Fully Developed" box not checked). Could you please verify that Virtis/BRASS is correctly taking the development length of hooked bars into account? File attached. Thanks,

Tim

FROM:kkennelly DATE:3/9/2005 4:20:57 PM

Do you agree with the calculations presented in the reinforcement dev length log file created when you analyze the member? You can view this log file from the Bridge/Output command when the name of the mbr alt is selected in the BWS tree (this is where you can also view the BRASS input and output files).

Also note that Virtis does not consider hooked bars to be completely developed over their length just because they are hooked. Virtis will compute the required development length for the hooked bar in

4/19/2016 3:04:15 PM

HRS AASHTO

651

Complete Issue Information

accordance with Article 8.29. Virtis considers the end of the hook to be zero percent developed and then at the end of the req. development length the bar is considered to be 100 percent developed. So if you have not checked the Fully Developed checkbox, Virtis does not consider the very end of the hook to be developed.

Refer to the "Export of Schedule Based Reinforced Concrete Members" help topic for the following:

When Virtis/Opis computes the percent development of a hooked bar at a point within the development length of the bar, Virtis/Opis assumes the bar is developed 0% at the start of the bar and 100% at the end of the development length. Hooked bars are actually developed more than 0% at the start of the bar due to the hook, but this percentage of development is not computed by Virtis/Opis.

FROM:kkennelly DATE:3/21/2005 11:16:47 AM  
Email from Tim:

I appreciate your response. As a followup to this incident, could you please verify that 8.29.3.2 is being followed? We think there is adequate side cover or at least the side cover is not applicable. Should the 0.7 factor be applied in this case? Thanks,

FROM:kkennelly DATE:3/22/2005 9:06:59 AM  
Please refer to the "Export of Schedule Based Reinforced Concrete Members" help topic. This topic lists which specs are considered by Virtis/Opis. Article 8.29.3.2 is not considered by Virtis/Opis.

FROM:kkennelly DATE:12/16/2005 11:33:01 AM  
Closed based on accepted in track field.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6130                                          |
| Subject: getting shear at supports live load DF of zero |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 3/9/2005 9:14:14 PM  |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:04:15 PM

HRS AASHTO

652

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                                   |
|------------|---------------|-------------------------------------------------------------------------------------------|
| 6131.15204 | Suspended     | User shouldn't have to specify PS I Beam shape for Virtis to compute distribution factors |

Description

FROM:tarmbrecht DATE:Wednesday, March 09, 2005 4:14:14 PM

File attached. For this one, for girder G3, which is under a roadway, when we click the Calculate from Typical Section button, it calculates the Live load distribution factor for shear at supports to be zero. Could you please look into this and tell me if we're missing something? We don't think it should be zero and we can't find the reason. Thanks, Tim

FROM:kkennelly DATE:3/10/2005 8:10:34 AM

On the Structure Typical Section:Lane Positions tab, the lane position is only specified at the start of the structure. The dimensions for the lane position at the end of the structure are blank. If you enter values for the lane position at the end of the structure the shear df is computed as non-zero.

FROM:kkennelly DATE:12/16/2005 11:33:22 AM

Closed based on accepted in track field.

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 6131                                                                                     |
| Subject: User shouldn't have to specify PS I Beam shape for Virtis to compute distribution factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 3/10/2005 1:06:04 PM |

4/19/2016 3:04:15 PM

HRS AASHTO

653



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:20:21 PM |
| Priority: High             |                      |
| Category: Enhancement      |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2226180b.bbd        |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 6133.15202 | Duplicate     | Member alt. not working for floorbeams |

### Description

FROM:kkennelly DATE:3/10/2005 8:00:06 AM

This came up at the Virginia training course in January. Member alt is specified as PS I Beam. Go to Live Load Distribution Factor window, hit Compute from Typ Section button. Get message that beam shape has to be specified on Beam Details window. There is no need to specify the I Beam shape before distribution factors are computed. It is necessary to specify beam shape for boxes and tees but I don't think it is necessary for I beams.

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 6133                                  |
| Subject: Member alt. not working for floorbeams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: McCaffrey, Brian        | 3/10/2005 1:25:43 PM |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Thursday, March 10, 2005 8:25:43 AM

I cannot set any of my floorbeams as existing or current, I thought this only happened on floorline models but it applies to girder-system as well.

Try to set any floorbeam in the attached model as existing and/or current, save it and reenter the window to see it hasn't been saved.

Also, when you create a new floorbeam it will be assigned as existing and current but the radio buttons are not checked. If you do check them the settings get dropped.

FROM:hlee DATE:3/10/2005 8:57:10 AM

4/19/2016 3:04:16 PM

HRS AASHTO

655

### Complete Issue Information

This incident is part of Incident 6045. It has been resolved in 5.3 Beta Build 3.

|                                    |
|------------------------------------|
| Issue ID: 6135                     |
| Subject: Report Writer Saved Files |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 3/10/2005 4:54:35 PM |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Ihnat, Joseph   | Assigned |          |           |
| Duray, Jim      | Resolved |          | Education |
|                 | Closed   |          |           |
| Duray, Jim      | Closed   | High     | Education |

### Contacts

4/19/2016 3:04:16 PM

HRS AASHTO

656

## Complete Issue Information

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 26636.bbd           |             |

## Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 6137.15198 | Duplicate     | Prestress nominal capacity is -Infinity |

## Description

FROM:dteal DATE:Thursday, March 10, 2005 11:54:42 AM

Question:

When a report is created in say version 5.2 – then we install a newer version, before installing we have to backup any saved reports – run the install, there will be 4 questions about overwriting the reports directory (do we say yes to this?). After the install we restore our backups of saved reports to the reports directory – or do we keep all saved reports separate from the canned (provided) reports?

Will reports created in version X be upwardly compatible or do they have to be re-created in the newer version?

FROM:jduray DATE:3/16/2005 7:57:43 AM

The report automatically migrates the report definition to the latest format when a report definition is opened. When you save it will be saved in the latest format.

Joe - If the user chooses to overwrite during the install do we delete the files they created or just overwrite the ones we previously delivered?

FROM:jihnate DATE:3/16/2005 8:41:08 AM

We just overwrite the files we previously delivered.

FROM:jduray DATE:4/8/2005 4:03:46 PM

FROM:dteal DATE:Monday, April 18, 2005 12:49:11 PM

I guess I don't understand the process.

When I have a saved report in a current version. How do I make that report available in the newer version? How do I answer the questions the install asks – Yes or No?

FROM:dteal DATE:Friday, April 29, 2005 9:35:55 AM

Ok I get it - the new install only overwrites delivered reports and leaves user defined reports alone and

4/19/2016 3:04:16 PM

HRS AASHTO

657

Complete Issue Information

available to the new version - Correct?

FROM:jihnata DATE:4/29/2005 10:01:35 AM  
That is correct.

FROM:dteal DATE:Tuesday, June 28, 2005 11:08:52 AM  
Accepted

|                                                  |
|--------------------------------------------------|
| Issue ID: 6137                                   |
| Subject: Prestress nominal capacity is -Infinity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 3/10/2005 9:05:39 PM |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Resolved  |          | Education   |
| Goodrich, Brian  | Assigned  |          | Bug - BRASS |
|                  | Duplicate |          |             |
| Goodrich, Brian  | Duplicate | High     | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM:kkennelly DATE:3/10/2005 4:05:46 PM

4/19/2016 3:04:16 PM

HRS AASHTO

658

## Complete Issue Information

Submitted on behalf of Joseph Wellington Oklahoma DOT via phone and email:  
This is the file.

(See attached file: 26636.bbd)

Please review and let me know why we're getting zero rating.

FROM:kkennelly DATE:3/10/2005 4:24:35 PM  
Reply sent via email:

Member Alt EXT for member G1 has the BRASS POI Control set as option 3 on the Member Alternative Description: Engine tab for the BRASS LFD program. This means that the controlling rating will be determined checking the rating at tenth points plus user defined points-of-interest.

Member Alt INT for member G2 has the BRASS POI Control set as option 5 on the Member Alternative Description: Engine tab for the BRASS LFD program. This means that the controlling rating will be determined only from the user defined points-of-interest.

G1's critical rating is 0 at 2/10 point of the span. The 2/10 point is not considered when you rate G2 because the BRASS POI Control option was set to only check user defined points of interest.

You can change the POI Control to Option 3 by opening the Member Alternative Description: Engine tab, select BRASS LFD and then click the Properties button. If you do that for member alt INT and rate it, it will show the critical rating of 0.

I've entered this problem as incident 6137 on the technical support website. Someone will contact you shortly with a user name and password so you can access the website.

Please let me know if you need additional information.

FROM:kkennelly DATE:3/11/2005 9:49:53 AM

I misunderstood what type of problem you were experiencing. I created a point of interest at the 20% location so that BRASS would output the detailed calculation data at the point. When I reviewed the output at this location, I see that BRASS reports the nominal capacity as "-Infinity" and computes the rating factor equal to zero. I also noticed that BRASS reports the stresses for the serviceability checks as "\*\*\*\*\*" at this point.

This appears to be related to the BRASS LFD engine. Someone more familiar with BRASS will have to look into this problem to resolve it. As a side note, I ran this bridge in Virtis 5.2 and get the same results.

Please let me know if you need additional information.

FROM:bgoodrich DATE:Friday, March 11, 2005 3:50:31 PM

After reviewing this issue, it is actually a duplicate of Incidents 5435 and 5564, which were assigned to BRASS Problem Log 554. This issue has been corrected in the BRASS engine, which is scheduled for release this May.

For now, the work-around is to change the debond distance at 248" to 249.4", so the debonding plus transfer length minus beam projection coincides with the 102 POI. You might also be able to leave the

4/19/2016 3:04:16 PM

HRS AASHTO

659

Complete Issue Information

debond distance as-is and change the transfer length for the prestressing strand.

|                           |
|---------------------------|
| Issue ID: 6138            |
| Subject: Invalid argument |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: McCaffrey, Brian        | 3/11/2005 2:01:21 PM |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Bug - Domain 2              |                      |

History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | High     | Bug            |
| Kennelly, Krisha   | Assigned |          | Bug - Domain 2 |
|                    | On Hold  |          |                |
| Ordoobadi, Mehrdad | Assigned |          |                |
|                    | Resolved |          |                |
| Ordoobadi, Mehrdad | Resolved | High     | Bug - Domain 2 |

Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

Documents

| Name | Resource Identifier | Description         |
|------|---------------------|---------------------|
|      | 1073792             | schematic error.bbd |

Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 6138.15197 | Resolved      | Invalid argument |

Description

FROM:bmccaffrey DATE:Friday, March 11, 2005 9:01:21 AM

4/19/2016 3:04:17 PM

HRS AASHTO

660

Complete Issue Information

I'm getting an 'Invalid Argument' when I try to view the girder profile for either beam in the second superstructure definition - labeled 1.

FROM:hlee DATE:3/11/2005 11:58:20 AM  
Superstructure definition 1 contains bearing stiffener information in support 5 and 6, but it is a 3 span structure.

To fix the problem in superstructure definition 1:

1. Change number of spans to 5 on the Superstructure Definition window. Enter span lengths for span 5 and span 6. Hit OK.
2. For both G1 and G2, open Support 5 and Support 6 Bearing Stiffener Location window. Enter 0 for "Pairs of bearing stiffeners at this support". Hit OK.
3. Change number of spans back to 3.
4. You should be able to see the girder profile now.

When the number of spans is changed (decrease), Virtis needs to clean up the bearing stiffener locations in those supports that are no longer exist.

FROM:bmccaffrey DATE:Monday, March 14, 2005 1:42:01 PM

It worked, thanks Herman.

FROM:mordoobadi DATE:2/17/2006 8:32:35 AM  
The extra bearing stiffeners are most likely left behind when the number of spans of the structure definition was decreased. Domain is probably not cleaning up the bearing stiffeners in removed spans.

FROM:mordoobadi DATE:2/17/2006 4:02:57 PM  
Fixed in 5.4 Beta 6.

|                              |
|------------------------------|
| Issue ID: 6139               |
| Subject: Spec Checker Filter |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 3/11/2005 3:30:47 PM |
| Modified By: administrator            | 6/19/2008 4:20:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:04:17 PM

HRS AASHTO

661



### Complete Issue Information

|                    |          |      |           |
|--------------------|----------|------|-----------|
|                    | Assigned |      | Education |
| Duray, Jim         | New      | High | Bug       |
| Ordoobadi, Mehrdad | Assigned |      |           |
|                    | Resolved |      |           |
| Ordoobadi, Mehrdad | Resolved | High | Bug       |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 6163.15172 | Resolved      | Multiple rolled shapes w/same designation |

### Description

FROM:dteal DATE:Friday, March 11, 2005 10:30:47 AM

When you save a filter in the spec Checker – is this lost when upgrading to a new version? Is there a way to save this?

FROM:dteal DATE:Monday, March 14, 2005 9:10:49 AM

Is there a way to make "Saved Filters" available to all users? Managed through the system defaults and controlled by the administrator?

Issue ID: 6163

Subject: Multiple rolled shapes w/same designation

### Complete Issue Information

|                  |                               |                      |  |
|------------------|-------------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Virtis |                      |  |
| Primary Contact: | Ordoobadi, Mehrdad            |                      |  |
| Submitted By:    | McCaffrey, Brian              | 3/16/2005 3:17:13 PM |  |
| Modified By:     | administrator                 | 6/19/2008 4:20:19 PM |  |
| Priority:        | High                          |                      |  |
| Category:        | Bug                           |                      |  |

### History

| Primary Contact  | Status      | Priority | Category |
|------------------|-------------|----------|----------|
| Duray, Jim       | New         | High     | Bug      |
| Kennelly, Krisha | Assigned    |          |          |
|                  | On Hold     |          |          |
| Boukamp, Sabine  | Development |          |          |
|                  | Resolved    |          |          |
| Boukamp, Sabine  | Resolved    | High     | Bug      |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1027620.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 6164.15171 | Resolved      | Invalid argument - unable to view Structure Typical Section Schematic |

### Description

FROM:bmccaffrey DATE:Wednesday, March 16, 2005 11:17:14 AM

When retrieving a rolled beam in the BWS from an 'Agency' library for rolled shapes that have multiple listings with the same designation, only the shape from the 'Standard' library displays.

Try retrieving a W 30x108 from the library into an active bridge.

FROM:jduray DATE:3/16/2005 11:24:25 AM

4/19/2016 3:04:17 PM

HRS AASHTO

663

Complete Issue Information

Mehrdad - Why don't the names have to be unique?

FROM:mordoobadi DATE:3/16/2005 11:36:20 AM  
The {name, year} combination should be unique.  
I was able to reproduce the problem that Brian reported.

FROM:mordoobadi DATE:3/16/2005 3:08:41 PM  
Currently, if multiple shapes with same designation are present and the user picks one, the shape with the latest year will get copied to bridge. This was by design.

It is now changed so that if you select a shape in the list box either by using mouse or arrow keys then hit OK, the properties of the shape that you requested will be copied.  
If you just type in the shape name and select OK then the shape with the latest year will be copied.

FROM:mordoobadi DATE:3/16/2005 3:15:26 PM  
Fixed for 5.3 Beta 6.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 6164                                                                 |
| Subject: Invalid argument - unable to view Structure Typical Section Schematic |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Boukamp, Sabine      |                      |
| Submitted By: McCaffrey, Brian        | 3/16/2005 3:21:33 PM |
| Modified By: administrator            | 6/19/2008 4:20:19 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Wednesday, March 16, 2005 11:21:33 AM

4/19/2016 3:04:17 PM

HRS AASHTO

664

Complete Issue Information

Viewing the 'Structure Typical Section' schematic gives me an 'Invalid Argument' message now.

I cannot increase the number of spans like the fix for 6138 states so it won't work for this case.

FROM:sboukamp DATE:5/17/2005 10:21:25 AM

Number of spans is read-only for Girder Floorbeam Floor System and Girder Floorbeam Stringer Floor System.

Besides the system is trying to add cantilevers to the schematics but failes and produses the above message.

Workaround: If you have to view the 'Structure Typical Section' schematic, temporally uncheck Cantilever in the Floorbeam Definition.

For a final solution see 5.3.0 Service Pack 1.

FROM:sboukamp DATE:5/17/2005 1:55:52 PM

Fixed for 5.3.0 Service Pack 1.

|                             |
|-----------------------------|
| Issue ID: 6165              |
| Subject: Tolerance problems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: McCaffrey, Brian        | 3/16/2005 3:29:46 PM |
| Modified By: administrator            | 6/19/2008 4:20:19 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:04:18 PM

HRS AASHTO

665

Complete Issue Information

|                  |                    |        |                |
|------------------|--------------------|--------|----------------|
|                  | Information Needed | Urgent |                |
| Kennelly, Krisha | Assigned           |        |                |
| Duray, Jim       | New                | High   | Bug            |
| Kennelly, Krisha | Assigned           |        |                |
| Goodrich, Brian  | On Hold            |        |                |
|                  |                    |        | Bug - BRASS    |
|                  |                    |        | Bug - Export 1 |
|                  | Resolved           |        |                |
| Goodrich, Brian  | Resolved           | High   | Bug - Export 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrrecht | Illinois DOT     | tim.armbrrecht@illinois.gov         | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0820247.bbd         |             |

Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6167.15168 | Resolved      | Error messages due to diaphragms entered with negative spacing |

Description

FROM:bmccaffrey DATE:Wednesday, March 16, 2005 11:29:47 AM

I'm having serious tolerance problems on quite a few bridges now in v/5.2 that worked fine in previous versions. These bridges will not run anymore. Attached are a few .bbd's. I have many more if needed.

FROM:dkoenig DATE:Thursday, March 17, 2005 8:58:18 AM

We have noticed some tolerance issues also. What we found was that the tolerances in the configuration browser had been changed. As an example, we had the feet set at .01. It had been changed to .10. These are global settings, there are a limited number of people that have access to change these settings. I can't say for sure that no one changed them. But my instinct is that they were changed by Virtis when it was upgraded. You might check your tolerance settings to see if they have been changed from your previous defaults.

4/19/2016 3:04:18 PM

HRS AASHTO

666

Complete Issue Information

FROM:jduray DATE:3/17/2005 10:25:21 AM

We are checking the migration scripts to see if they change the tolerance (we don't think they do). We will need bbd files from before the migration as well as after the migration.

FROM:hlee DATE:3/17/2005 11:24:03 AM

The migration scripts provided in 5.2 installation will not change the tolerances. There's no statement changing the records in abw\_unit\_tolerance table.

FROM:bmccaffrey DATE:Thursday, March 17, 2005 3:24:46 PM

Our tolerance settings did not change at all when we upgraded. Something else is wrong. I'm compiling .bbd's right now from v/5.1.1. I will send them via e-mail instead of using VI. Did anyone try running the two .bbd's attached here???

Our tolerances are set to 0.01 ft and 0.1 in and have been for a number of years.

FROM:kkennelly DATE:3/18/2005 1:55:40 PM

Problem is not related to user's tolerances. Fixed for service pack for 5.2

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6167                                                          |
| Subject: Error messages due to diaphragms entered with negative spacing |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 3/16/2005 6:12:29 PM |
| Modified By: administrator            | 6/19/2008 4:20:18 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:04:18 PM

HRS AASHTO

667



Complete Issue Information

point, the program appeared to give reasonable results for the beams indicated above to have R.F.'s of 0.00. However, the beams with run errors still gave the same error messages when a run was attempted for them.

FROM:kkennelly DATE:3/17/2005 2:20:34 PM

1. Unable to analyze Member 8.

Span lengths on member window add up to 398.06258'. web input up to 398.0626'. Flanges input up to 398.062591.

Programmer solution: DoGirderMbrAlt line 2877 is setting the end pt to end distance = 398.06258' but the 398.0626 still exists due to changes we made for VI5397 for rc schedules. We shouldn't set end pt

to end of mbr length anymore.

2. Haven't investigates rf's = 0 yet.

FROM:kkennelly DATE:3/18/2005 1:46:16 PM

1. Is a duplicate of 6165.This problem has been fixed for a service pack for 5.2. The service pack will be issued as soon as it gets tested thoroughly.

2. Based on the note entered by Tim above, the rf's = 0 appear to be related to the export to BRASS and the bracing entered with negative values. Brian, please investigate.

FROM:bgoodrich DATE:Wednesday, April 13, 2005 12:28:32 PM

No bracing is exported for the first span of Member 10. This causes the unbraced length to equal the span length, which leads to a low flexural capacity.

FROM:bgoodrich DATE:Friday, April 22, 2005 5:03:08 PM

I revised one of the export files (EngineExport.cpp) to address the negative lengths that are entered for the diaphragms. Fixed for version 5.3.

FROM:kkennelly DATE:4/25/2005 8:11:04 AM

The cd's for 5.3 have already been made so this change can't be included in 5.3. It will have to wait for the next service pack or next release.

Issue ID: 6177  
Subject: Bug with Security Settings in Virtis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Koenig, David 3/17/2005 7:10:47 PM  
Modified By: administrator 6/19/2008 4:20:18 PM  
Priority: High  
Category: Bug

History

4/19/2016 3:04:18 PM

HRS AASHTO

669



### Complete Issue Information

| Primary Contact | Status          | Priority | Category |
|-----------------|-----------------|----------|----------|
| Duray, Jim      | New             | High     | Bug      |
| Duray, Jim      | New             | High     | Unknown  |
|                 | On Hold         |          | Bug      |
| Ihnat, Joseph   | Rejected by TAG |          |          |
| Ihnat, Joseph   | Rejected by TAG | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State   | Summary                                                                                   |
|------------|-----------------|-------------------------------------------------------------------------------------------|
| 6206.15129 | Rejected by TAG | Unable to display engine properties for newly created floorbeam and stringer definitions. |

### Description

FROM:dkoenig DATE:Thursday, March 17, 2005 3:10:48 PM

We have discovered a problem with the security settings in Virtis. We have users setup with differing levels of access to the program. On the configuration browser, we only have administrators setup to be able to read/write/create/delete on the configuration folder under the access privileges. We had a user that was able to go to the tolerance tab on the system default folder and change the tolerances. This user is setup to only have read access to the configuration browser. We played around with some of the different folders in the browser and have found that this is only happening on the tolerance tab. This user should not be able to make these changes. If you need additional information, please let me know.

FROM:jihnmat DATE:3/18/2005 10:16:23 AM

Fixed for version 5.3.0

Complete Issue Information

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 6206                                                                                     |
| Subject: Unable to display engine properties for newly created floorbeam and stringer definitions. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Lee, Herman             | 3/24/2005 11:59:35 AM |
| Modified By: administrator            | 6/19/2008 4:20:16 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status          | Priority | Category |
|------------------|-----------------|----------|----------|
| Duray, Jim       | New             | High     | Unknown  |
| Kennelly, Krisha | Assigned        |          | Bug      |
| Duray, Jim       | On Hold         |          |          |
| Kennelly, Krisha |                 | N/A      |          |
|                  | Rejected by TAG | High     |          |
| Kennelly, Krisha | Rejected by TAG | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State   | Summary                                                  |
|------------|-----------------|----------------------------------------------------------|
| 6209.15126 | Rejected by TAG | Analyzing a floorbeam without stringer span information. |

Description

FROM:hlee DATE:3/24/2005 7:46:35 AM  
5.3 Beta Build 5

Complete Issue Information

FROM:jihnat DATE:3/24/2005 8:37:18 AM  
I ran version 5.1.1 and it has the same behavior

FROM:jduray DATE:4/13/2005 12:28:41 PM  
Also should add Help button to the Engine dialogs.

Issue ID: 6209  
Subject: Analyzing a floorbeam without stringer span information.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Lee, Herman 3/24/2005 1:21:18 PM  
Modified By: administrator 6/19/2008 4:20:15 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:3/24/2005 8:58:04 AM  
I have a Girder-floorbeam floor line structure def, the distances to previous and next adjacent

4/19/2016 3:04:19 PM

HRS AASHTO

672

### Complete Issue Information

floorbeams (Floorbeam Member window) are 0. Export complains the following when I tried to rate the floorbeam member alternative, but the analysis was successful. When there is a distance to next adjacent floorbeam (there is a stringer span), every went fine. Shouldn't the analysis stop when there is an error?

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

Computed number of virtual stringer spans is zero!  
09:04:13 AM - Line 6076 in source file .\EngineExport.cpp.

Error computing number of virtual stringer spans!  
09:04:13 AM - Line 6075 in source file .\EngineExport.cpp.

FROM:jduray DATE:3/24/2005 11:46:50 AM  
Is this new to 5.3?

FROM:kkennelly DATE:3/28/2005 7:54:52 AM  
No, this exists in 5.2 also.

Issue ID: 6225

Subject: Riveted girder section properties in 5.2

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 3/25/2005 6:55:58 PM |
| Modified By: administrator            | 6/19/2008 4:20:14 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Lee, Herman        | Assigned |          |          |
|                    | On Hold  |          |          |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Assigned |          |          |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |
| Ordoobadi, Mehrdad | Closed   | High     | Bug      |

### Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | DeleteBeamDef(0600205).xml |             |
|      | DeleteBeamDef.xls          |             |
|      | 0600205.bbd                |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 6230.15105 | Closed        | Can't delete objects |

Complete Issue Information

Description

FROM:bmccaffrey DATE:Friday, March 25, 2005 2:55:59 PM

We're getting differences between 5.1.1 and 5.2 for riveted girder section properties. It appears that 5.2 ignores top cover plates. In the attached .bbd files, look at the section property table in the output file for both versions - all girders are affected.

In the export, the XSECT-B and XSECT-C commands are different for each version.

This appears related to VI 5218.

FROM:bmccaffrey DATE:Friday, March 25, 2005 3:17:30 PM

FROM:bgoodrich DATE:Wednesday, April 06, 2005 1:39:42 PM

The bottom cover plate dimensions were transferred to the bottom flange dimensions and the bottom cover plate dimensions were also exported. I fixed the export (BrassStdCrossSections.cpp) and uploaded the file to Incoming/Virtis. Fixed for version 5.3.

FROM:bmccaffrey DATE:Monday, April 18, 2005 11:03:39 AM

Nothing was fixed - this is still wrong. The BRASS engine is generating incorrect results. See previous incidents related to this.

FROM:bgoodrich DATE:Tuesday, June 28, 2005 4:06:39 PM

On April 14, 2005, Herman Lee commented out all the changes for this incident. The changes had lowered the rating factors.

|                               |
|-------------------------------|
| Issue ID: 6230                |
| Subject: Can't delete objects |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 3/28/2005 4:21:19 PM |
| Modified By: administrator            | 6/19/2008 4:20:14 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:04:19 PM

HRS AASHTO

675

## Complete Issue Information

---

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 6236.15099 | Resolved      | Influence Lines and Truck Placement |

### Description

FROM:tarmbrecht DATE:Monday, March 28, 2005 12:21:19 PM

Please see file attached. We copied this in, using another structure as a template for this structure. Is there any way we can delete "AASHTO M222 Steel" from the Materials folder? We're getting the message "The attempt to delete this object has failed..." We're pretty sure we've removed all references. We're also trying to delete "PL-3/8x5" from the Transverse Stiffener Definition folder and can't.

This isn't a first time occurrence for us. We've also had problems in other files with objects such as beam shapes, appurtenances and bearing stiffeners.

Thanks, Tim

FROM:jduray DATE:3/28/2005 1:25:02 PM

Herman - perhaps generate a report with the report tool (using the bws report) and search the xml file for "AASHTO M222 Steel".

FROM:hlee DATE:4/6/2005 3:43:14 PM

Note for developer:

When deleting girderline member, Virtis has problem deleting objects that belong to the girderline member.

To reproduce:

1. Open TrainingBridge3 Bridge Workspace
2. Delete "Exterior Girder" from "3 Span GirderLine" structure definition.
3. Save the bridge to the database.
4. Delete "Type 1" transverse stiffener will get the message "The attempt to delete this object has failed! This object is in use by another object ..."

The record in abw\_super\_struct\_spng\_mbr has been deleted, but the records in abw\_spng\_mbr\_def, abw\_stl\_trans\_stiff\_loc\_range, abw\_stl\_beam\_assembly, abw\_stl\_flg\_plate, ... have not been deleted.

FROM:mordoobadi DATE:4/7/2005 11:00:59 AM

To prevent this I think we should update the domain code to delete the beam definitions associated with the member alternatives of the member that is being deleted. Otherwise we will get orphaned beam definitions that will be present in the domain and the database and cannot be deleted from the GUI.

This happens for a girder line member, I think we need to investigate whether a similar situation exists

4/19/2016 3:04:20 PM

HRS AASHTO

676

Complete Issue Information

for other types of members. We have one-to-one correspondence between member alts and beam defs in girder line and girder system. So for Girder Line and Girder System structure members we should delete associated beam defs. But we have to be careful not to delete a beam definition of a floorbeam or stringer in a Floor System structure definition.

A domain independent utility program can be created to fix customers' databases and included with the migration wizard.

FROM:mordoobadi DATE:4/7/2005 12:59:03 PM  
Reproducible with a girder system member. Because the beam definition is not removed and it is orphaned.

FROM:mordoobadi DATE:4/7/2005 5:04:08 PM  
The domain is now fixed.

FROM:mordoobadi DATE:4/7/2005 5:04:50 PM  
Jim wants this issue to be addressed in the migration of the old databases (by removing orphaned beam definitions). He wants this fixed in next release 5.4 (pier)

FROM:mordoobadi DATE:4/12/2005 10:35:41 AM  
Attached is an xls file that contains the scripts that are useful for the implementation.

FROM:mordoobadi DATE:8/17/2006 12:24:34 PM  
Created scripts to remove orphaned beam definitions. To be included in 5.5 Beta 4 Migration.

FROM:mordoobadi DATE:8/18/2006 8:12:46 AM  
The two cases mentioned in this incident was fixed after running the SQL scripts to resolve the incident.

FROM:mordoobadi DATE:9/6/2006 10:27:08 AM  
Fixed in 5.5 Beta 4.

FROM:tarmbrecht DATE:Wednesday, September 13, 2006 12:20:58 PM  
My consultant checked this, and in "DeleteBeamDef(0600205).xml", the Structural Material "AASHTO M222" cannot be deleted. A thorough search has been made and this material cannot be found anywhere in the bridge model.

FROM:tarmbrecht DATE:Tuesday, September 19, 2006 1:36:32 PM  
Accepted.

Issue ID: 6236  
Subject: Influence Lines and Truck Placement

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Murgoitio, Shanon 3/28/2005 8:31:56 PM  
Modified By: administrator 6/19/2008 4:20:13 PM



### Complete Issue Information

|                     |
|---------------------|
| Priority: High      |
| Category: Education |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
|                  | Resolved |          | Bug      |
| Kennelly, Krisha |          |          |          |
| Kennelly, Krisha | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 08-0123L-cal.bbd    |             |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 6366.14969 | Resolved      | Unable to save bridge after deleting a concrete material |

### Description

FROM:smample DATE:Monday, March 28, 2005 4:31:57 PM

Is it possible to view the influence line used to generate the live loads at a specific check point? Also, does the output ever identify where the truck is placed on the member and the direction it is traveling to produce the reported live load?

FROM:kkennelly DATE:3/30/2005 8:34:35 AM

The following is my understanding of BRASS. Brian can confirm/correct my understanding and add additional comment.

1. I don't think BRASS LFD provides the influence line output for girders.
2. I don't think BRASS LFD lists the truck location or the direction it is traveling for live load on girders. It does provide such info for floorbeams by selecting the Floorbeam Intermediate Output Level 1 on the Analysis Settings:Engine tab in Virtis.

FROM:bgoodrich DATE:Wednesday, April 06, 2005 1:58:05 PM

BRASS LFD does not provide the influence line output for girders. However, it does provide the truck location and direction for the live load envelope. Go to the BRASS LFD engine properties on the Analysis Setting dialog (Engine tab). For the Action Output Level, select option 3 or 4, which show the concurrent actions. This report is located at the bottom of the BRASS output file.

4/19/2016 3:04:20 PM

HRS AASHTO

678

Complete Issue Information

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 6366                                                    |
| Subject: Unable to save bridge after deleting a concrete material |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: vinayagamoorthy, vinacs | 4/29/2005 6:32:06 PM |
| Modified By: administrator            | 6/19/2008 4:20:04 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:4/29/2005 2:29:52 PM  
Submitted on behalf of Vinacs, Caltrans via email:  
Krisha

One of our guys tried to delete concrete materials (f'c=2.5 ksi) from the data (that was not used anywhere within this bridge). He was able to delete the materials (meaning initial error check within Virtis recognized that this material is not used within the bridge), however, he was not able to save the bridge data.

Error message was:

Unable to save Bridge data!  
Delete process failed while deleting CDmMatlConc (SaveOrder object 93).  
Error deleting record from database record set.

4/19/2016 3:04:20 PM

HRS AASHTO

679

Complete Issue Information

Could you please check this for us

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:4/29/2005 2:45:33 PM  
Email sent back to Vinacs:  
Hi Vinacs,

I've entered your problem as incident 6366 on the Technical Support website.

The following workaround can be used to save this bridge.

1. Virtis shouldn't let you delete the concrete material f'c=2.5 ksi because it is being used in the Supports window for Support 3. Open the Supports:Elastic tab and put your cursor in the "Rotation Spring Constant" cell for support 3.
2. The "View/Compute" button will become active. Select that button. In the View/Compute Column Stiffness window that opens select the f'c = 3 ksi concrete material. Hit Apply.
3. The rotation spring constant value for support 3 will be blank so you'll need to copy it from Support 2.
4. You should then be able to save the bridge.

Please let me know if you need additional information.

FROM:kkennelly DATE:5/2/2005 10:21:47 AM  
Fixed for release in June, 0.9 Sub with 5.3 Super.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6396                                      |
| Subject: PS Nominal moment capacity = 0 at supports |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krishna       | 5/5/2005 3:56:06 PM  |
| Modified By: administrator            | 6/19/2008 4:20:02 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |

4/19/2016 3:04:20 PM

HRS AASHTO

680

### Complete Issue Information

|            |                  |      |               |
|------------|------------------|------|---------------|
|            |                  |      | Enhance BRASS |
| Duray, Jim | Suspended<br>New | High | Unknown       |
|            | On Hold          |      | Bug           |
|            | Not Reproducible |      |               |
| Duray, Jim | Not Reproducible | High | Bug           |

### Contacts

| Name       | Company          | Email 1        | Phone 1      |
|------------|------------------|----------------|--------------|
| Erich Hart | RQAW Corporation | ehart@rqaw.com | 317-255-6060 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Unit A-debonded Q.bbd |             |

### Tasks

| Name       | Current State    | Summary          |
|------------|------------------|------------------|
| 6407.14928 | Not Reproducible | Unable to debond |

### Description

FROM:kkennelly DATE:5/5/2005 11:54:06 AM

Submitted on behalf of Peter Greenberg, Bayside Engrs:

Hi Krisha, here's the bridge that we had spoke about earlier. If you could take a look at it and perhaps come up with some suggestions that would be great.

Thanks very much, Pete

BAYSIDE ENGINEERING, INC.

Peter Greenberg, Engineer

Phone: (617) 625-4696

Fax: (617) 625-5095

pgreenberg@baysideengineering.com

<http://www.baysideengineering.com>

FROM:kkennelly DATE:5/5/2005 12:03:52 PM

Email sent back to Pete:

Hi Pete,

I am unable to determine why you are getting a zero rating factor at the interior supports. I created a point of interest at 11.06' in span 1 and reviewed the BRASS output file but it only lists the nominal moment capacity as zero without listing any backup data as to how it computed that. It also appears that the capacity at all of your interior supports is zero.

4/19/2016 3:04:21 PM

HRS AASHTO

681

## Complete Issue Information

I've entered your problem as incident 6396 on the Virtis/Opis Technical Support website so someone more familiar with BRASS can look into this. Can you add some more information to that incident as to how you are trying to model a fake deck? For instance, how were these beams made continuous when they were constructed if there is no deck?

As a side note, I noticed that a lot of your shear reinforcement ranges are not on the beam. That is probably not the source of your problem but you should re-examine your data.

FROM:kkennelly DATE:5/5/2005 2:40:52 PM

Email from Pete:

Hi Krisha, thanks for taking a look at the bridge for me. I attached a detail showing how high-strength concrete continuity diaphragms were cast into place after the precast beams were installed. The bridge is comprised of butted deck beams and so there is no deck on the bridge. When I modeled the girder line as if there was no deck, VIRTIS cannot run, and an error message pops up saying "a deck and shear reinforcement must be defined for multiple-span members to achieve continuity over interior supports." To prevent this error message from coming up I modeled the deck as being 4" thick with a haunch of -4" so that I could place the appropriate negative moment steel over the interior piers at the bottom of the slab. The "fake" deck does not contribute to the composite section and the unit weight was input as zero. (I may have mistakenly sent you a version of the VIRTIS run where the deck weight was 0.150 kcf but I still receive the same rating when it is zero.) I forgot that when I define my shear reinforcement ranges for the beams I cannot input negative values for the spacings. Even though the reinforcing looks correct in the beam elevation schematic, BRASS uses those negative values for the spacings - I'll be sure to change that.

Once again thank you for taking a look at this and passing it on to the support website. I hope that this additional information will help.

Pete

FROM:bgoodrich DATE:Friday, May 13, 2005 10:22:04 AM

I forwarded this issue to WYDOT for consideration.

E-mail to C.J. Riley (WYDOT):

C.J.,

Here is an incident from Virtis. For some reason, a negative moment capacity is being calculated when the live load moment is positive as shown in the output below:

### Performing Rating Factor Calculations

Analysis Point: 201.00

Load Level : 1

Truck No. : 1 - AASHTO HS20-44 (MS 18) TRUCK

#### Load Factors:

Gamma = 1.30      Phi(flexure) = 1.00

Beta (DL) = 1.00      Beta (LL) = 1.67

Strength Rating Factor - Flexure (Positive Action)

Strength based on Prestressed section

4/19/2016 3:04:21 PM

HRS AASHTO

682

Complete Issue Information

Stage 1 Dead Load Moment = 113.16 (ft-kips)  
 Stage 2 Dead Load Moment = -9.80 (ft-kips)  
 Secondary Moment = 0.00 (ft-kips)  
 Dead Load M + Secondary M = 103.36 (ft-kips)  
 Live Load Moment = 25.77 (ft-kips)  
 Nominal Capacity = -9426.82 (ft-kips)

$$R.F. = \frac{[(\text{Phi}(\text{flexure}) * Mn) - (\text{Gamma} * \text{Beta}(\text{DL}) * \text{DLM} + S)]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

\*\*R.F. = 0.0000

The nominal capacity is incorrect because the f\*su variables that are used to calculate it are wrong:

AASHTO 9.17.4.1 Calculation of f\*su for bonded members

|                   |                 |
|-------------------|-----------------|
| "fc"              | = 5.000 ksi     |
| p*                | = 0.108652      |
| fs prime          | = 270.0000 ksi  |
| beta 1            | = 0.8000        |
| gamma *           | = 0.2800        |
| f*su for this row | = -284.4521 ksi |

f\*su should not be greater in magnitude than the ultimate stress. There appears to be a bug with how rho is calculated (rho = p\* \* fs prime), but I believe this issue is occurring because there is essentially no slab. The user would like the structure to be considered continuous for live load using mild beam steel. However, BRASS only supports continuity using mild steel in the slab. The user is trying to fool Virtis and BRASS into thinking there is a deck with mild steel, which throws the rho calculation off because BRASS assumes the slab is present. Note that I added a slab width of 2" so I could see something in the output. The user had entered zero for this. Let me know what you would like to do.

FROM: bgoodrich DATE: Friday, May 13, 2005 1:16:46 PM  
 E-mail from WYDOT:

This is a structure type that is not currently handled by BRASS. Addition of this structure type would be a major effort and will be put on our enhancement list for prioritization by the BRASS users. If it is made a priority, it will be implemented in the merged GIRDER/GIRDER(LRFD) program.

C.J. Riley, EIT  
 Engineer - Special Assignments  
 Wyoming Department of Transportation, Bridge Program

FROM: jduray DATE: 12/13/2007 8:33:02 AM  
 TAG determined this is a BRASS bug.

FROM: hlee DATE: 4/30/2008 2:35:11 PM  
 Discarded by TAG 12/07.

|                |
|----------------|
| Issue ID: 6407 |
|----------------|

### Complete Issue Information

Subject: Unable to debond

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Hart, Erich 5/10/2005 5:03:02 PM  
Modified By: administrator 6/19/2008 4:20:01 PM  
Priority: High  
Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Bug      |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BrAltProblem.bbd    |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 6408.14927 | Closed        | Can't assign superstructure definition to superstructure alternative |

### Description

FROM:kkennelly DATE:5/10/2005 12:55:47 PM

Submitted on behalf of Ken Teng via email:

Hi Krisha,

I got one very wierd question. I can not debond @1525mm BUT I CAN debond @1526mm or 1520mm or 1530mm. It does not work @1525mm??? Wierd, isn't it?  
Please advise.

4/19/2016 3:04:21 PM

HRS AASHTO

684

Complete Issue Information

Thank you,

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

FROM:mteng DATE:Thursday, May 12, 2005 11:17:38 AM

FROM:jduray DATE:10/27/2005 3:18:23 PM

FROM:jihnat DATE:8/7/2006 10:19:11 AM  
Can't reproduce.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 6408                                                                |
| Subject: Can't assign superstructure definition to superstructure alternative |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 5/11/2005 4:25:44 PM |
| Modified By: administrator            | 6/19/2008 4:20:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:04:21 PM

HRS AASHTO

685



Complete Issue Information

Description

FROM:tarmbrecht DATE:Wednesday, May 11, 2005 12:25:45 PM

Subject (attached) 2-Span continuous superstructure has zero skew at Supports 1 & 2 and 20 degree left ahead skew at Support 3 (see Unit 2 (Spans 1-2) in the example file). When attempting to assign the Superstructure Definition the following error message appears...

Superstructure Definition Length mismatch.  
The span lengths in the superstructure definition assigned to this superstructure alternative do not match the span lengths in the superstructure.

No matter whether the Reference Line span lengths or the span lengths for any of the individual girders are entered, the same error occurs. This did not occur in v. 5.2.

FROM:kkennelly DATE:5/18/2005 10:20:09 AM  
Fixed for 5.3 Service Pack 1. Virtis was using a hard-coded tolerance to compare the span lengths which was too strict. Changed to use user tolerance and issue message about the exact numbers that don't match.

FROM:tarmbrecht DATE:Tuesday, December 13, 2005 5:08:29 PM

FROM:kkennelly DATE:12/16/2005 11:33:40 AM  
Closed based on accepted in track field.

|                                                   |
|---------------------------------------------------|
| Issue ID: 6409                                    |
| Subject: Unable to save Bridge Data error message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 5/11/2005 4:33:51 PM |
| Modified By: administrator            | 6/19/2008 4:20:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:04:21 PM

HRS AASHTO

686

### Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          | Bug - BRASS |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N-22-004.bbd        |             |

### Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 6415.14920 | Resolved      | Warning Message |

### Description

FROM:tambrecht DATE:Wednesday, May 11, 2005 12:33:51 PM

Reported from my consultant:

(See attached 0162845x.bbd)

I attempted to create a file for a bridge that is a 2-Span continuous steel plate girder structure from the above file. It was created as a Girder Line Superstructure by re-defining the 3-Span Girder Line Superstructure from the original record as a 2-Span. It would not save after deleting "Unit 2 (Spans 1-2)". When first attempting to save (after deleting "Unit 2...", the following error message appeared...

See attached Word document "VirtisProblem2.doc" for message

Subsequent attempts to save simply return error message, "Unable to save bridge data."

FROM:mordoobadi DATE:5/25/2005 10:50:48 AM  
Duplicate of 6398.

FROM:mordoobadi DATE:6/14/2005 10:36:40 AM  
It is fixed in 0.9 and 5.3.1.

4/19/2016 3:04:22 PM

HRS AASHTO

687

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 6415           |
| Subject: Warning Message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Yannoni, Paul           | 5/12/2005 7:58:42 PM |
| Modified By: administrator            | 6/19/2008 4:20:00 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          | Bug       |
|                 | Resolved |          | Education |
| Goodrich, Brian | Resolved | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 21470.bbd           |             |

## Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 6416.14919 | Resolved      | Floorbeam dead loads don't appear to be correct |

## Description

FROM:pyannoni DATE:Thursday, May 12, 2005 3:58:42 PM

I have run the analysis for a 3 span continuous plate girder bridge and I noticed the following message:  
"A NEG MOMENT OF -2628.21 KIP FT IS GENERATED AT PT. NO. 107 BY TRUCK NO 1 BECAUSE THE MOMENT OF INERTIA WAS CALCULATED BASED ON A COMPOSITE SECTION FOR LIVE LOAD, BRASS SETS THE STRESSES FOR NEGATIVE MOMENT AT THIS POINT TO ZERO." What

4/19/2016 3:04:22 PM

HRS AASHTO

688

Complete Issue Information

should I do to correct for this message?

Thank you

FROM: bgoodrich DATE: Friday, May 13, 2005 9:39:38 AM

BRASS does not have the capability to check the stresses due to moments for both positive AND negative bending at a point of interest. The dead load contraflexure locations entered in the engine properties for the member alternative are used to generate a schedule of commands that tell BRASS which bending sense to check. Based on the contraflexure locations a positive bending region is determined from 0% to 72.3% along span 1. The 107 POI falls in this region, so BRASS will only check positive bending moments. When the dead and negative live load moments are combined at the 107 POI, they total -1909.02 ft-kips, which is not checked, so a warning is issued. Both BRASS ASD and BRASS LFD currently operate in this manner.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 6416                                           |
| Subject: Floorbeam dead loads don't appear to be correct |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 5/13/2005 12:15:37 PM |
| Modified By: administrator            | 6/19/2008 4:20:00 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: kkennelly DATE: 5/13/2005 8:14:05 AM

4/19/2016 3:04:22 PM

HRS AASHTO

689

Complete Issue Information

Submitted on behalf of Steve Mample, Idaho:

Hello, Krisha.

Regarding our last E-mail. I have updated the input file. The file is only complete for the floorbeam B2. So far I have been only using one truck when I analyze the member to try a cut down on the information fog. When I look at the analysis chart for dead load moment, what I see is not what I expect. The dead load moment chart does not look like what I would expect for a two span continuous beam, each span uniformly loaded. And the dead load moments near the 1.4 point and at the 2.00 point are not what I calculate using a uniformed load of 224.07 PLF. I calculate the moment near the 1.4 point to be 4.3 ft-K and at the 2.00 point to be 2.4 ft-K. Could you please take a quick look at the file and let me know what you think.

Thank You, Steve.

FROM:kkennelly DATE:5/13/2005 8:24:50 AM

Reply sent back to Steve:

Hi Steve,

I agree that the dead loads produced by BRASS do not appear to be correct. The following is my comparison of the deck dead loads:

Deck weight 0.224 k/ft

| Span | Dist     | My Calc Moment | Brass Moment |
|------|----------|----------------|--------------|
| 1    | 4.66 ft  | 2.43 kft       | ~ 4.1 kft    |
| 1    | 12.42 ft | -4.32 kft      | -0.2 kft     |

I've submitted this as incident 6416 on the Virtis Technical Support website.

FROM:bgoodrich DATE:Friday, May 13, 2005 10:04:15 AM

The floorbeam spans are considered simple spans, not continuous. This is achieved by inserting a hinge very close to interior supports. This is why a small negative moment is reported at the interior support.

Issue ID: 6421  
Subject: Unable to view analysis output report

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Murgoitio, Shanon 5/16/2005 4:40:58 PM  
Modified By: administrator 6/19/2008 4:20:00 PM  
Priority: High  
Category: Education

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
|                    | On Hold  |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0970003x.bbd        |             |
|      | 0970003.bbd         |             |
|      | 0970003.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 6430.14905 | Resolved      | Problems with Steel Haunched Plate Girder w/ Longitudinal Stiffeners |

### Description

FROM:kkennelly DATE:5/16/2005 12:39:33 PM  
Submitted on behalf of Steve Mample, Idaho DOT

Hello, Krisha.

I don't know who I really need to direct this to. This afternoon a problem developed with the Virtis Program. After I analyze a bridge member and click on the "View analysis report" tool button, The report is not displayed.

No error messages are generated.

The BRASS output file is produced and appears to be correct.

The "Analysis Progress" says the "Data file successfully exported and " Analysis Complete.

I shutdown and restarted the Virtis program and shutdown and rebooted my computer. No change, the report is not displayed.

4/19/2016 3:04:22 PM

HRS AASHTO

691

Complete Issue Information

Could you have someone check into this?

Thank You, Steve.

FROM:kkennelly DATE:5/16/2005 1:03:30 PM  
Email response sent :  
Hi Steve,

I've entered your problem as incident 6421 on the Technical Support website. What version of Virtis are you running and does this occur for a particular bridge or every bridge? If it is a particular bridge, please send me a bbd file for the bridge.

FROM:kkennelly DATE:5/16/2005 1:04:44 PM  
Response received:  
Version 5.2.0  
I've tested about 5 bridges, occurs on each bridge.

FROM:jduray DATE:5/18/2005 9:18:21 AM  
Do the graphs works ok?

FROM:smample DATE:Wednesday, May 25, 2005 4:29:06 PM  
All of the result graphs look OK.

FROM:smample DATE:Thursday, May 26, 2005 11:10:41 AM

FROM:kkennelly DATE:6/6/2005 10:49:09 AM  
Hello, Krisha.  
I found the reason for not being able to view the "Analysis Report" window. When I clicked on the "Analysis Report" button it was minimized for some reason, and was hide by the "Bridge Workspace" and "Bridge Explorer" windows. I had opened up Virtis to send you a bbd file and I was moving the windows around to get to other program icons on my screen, and there it was. When I maximized the "Analysis Report", the window showed the analysis results for the member. End of problem.  
Thank you, Steve.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 6430                                                                |
| Subject: Problems with Steel Haunched Plate Girder w/ Longitudinal Stiffeners |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 5/17/2005 8:48:17 PM |
| Modified By: administrator            | 6/19/2008 4:19:59 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

4/19/2016 3:04:23 PM

HRS AASHTO

692

## Complete Issue Information

### History

| Primary Contact                     | Status    | Priority | Category |
|-------------------------------------|-----------|----------|----------|
| Duray, Jim                          | New       | High     | Bug      |
| Kennelly, Krisha<br>Goodrich, Brian | Assigned  |          |          |
| Goodrich, Brian                     | Duplicate |          |          |
| Goodrich, Brian                     | Duplicate | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0620046.bbd         |             |

### Tasks

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 6431.14904 | Duplicate     | Problems with Continuous Prestressed Concrete Bridge Model Analysis |

### Description

FROM:tarmbrecht DATE:Tuesday, May 17, 2005 4:48:17 PM

From my consultant:

1. From the Member Alternative schematic, in a parabolicly haunched girder, the start (or end) point of the parabola defined for a bottom flange range starting (or ending) within the haunch is at the horizontal. It should start (end) at the same slope as the previous (subsequent) section. (See 0970003.bbd, Superstructure Def'n "Spans 1-8 (Main Unit)") Note: I suspect that this same error would occur for a web that changes thickness within a haunch.
2. For the same Superstructure as issue #1, the schematic shows the longitudinal stiffener that starts 106.67' from Support #2 ending 610 feet from its start even tho' it's defined a being 1280' long.
3. The attached file, 0970003x.bbd cannot be saved after it is imported.

I accidentally uploaded the wrong 0970003.bbd file and followed it up with the correct one. The one with the later file date is the one we want. Tim

FROM:jihnat DATE:8/25/2005 9:15:06 AM

4/19/2016 3:04:23 PM

HRS AASHTO

693



Complete Issue Information

#2 is fixed for 5.4.0

FROM:jihnna DATE:8/25/2005 3:59:35 PM  
#1 is fixed for 5.4.0

FROM:tarmbrecht DATE:Tuesday, December 06, 2005 5:24:34 PM

FROM:mordoobadi DATE:2/6/2006 4:43:28 PM  
Accepted by Tim Armbrecht 12/6/2005.

FROM:kkennelly DATE:8/15/2006 7:26:50 AM  
I'm marking this as resolved since #1 and #2 are marked as fixed and Mehrdad said Tim accepted it on 12/6/05

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 6431                                                               |
| Subject: Problems with Continuous Prestressed Concrete Bridge Model Analysis |

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis             |
| Primary Contact: Goodrich, Brian                  |
| Submitted By: Armbrecht, Tim 5/17/2005 9:18:25 PM |
| Modified By: administrator 6/19/2008 4:19:59 PM   |
| Priority: High                                    |
| Category: Bug                                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Tuesday, May 17, 2005 5:18:25 PM

Another one from my consultant. File attached.

Complete Issue Information

1. Analysis w/POI at 40.95' from left support (Member "3 - 2nd W Int"): RF = 0.0 (or, from output file, infinity). At 40.94 the Inv/Op RF's = 3.896/6.506 and at 40.96' they are 3.739/ 6.244. There is no difference in the section properties between those points. (Note: The intent of specifying a POI at that location was to get results just away from the end of the 16' long #6 reinforcement bars that start and end, respectively, at 24.8333' and 40.8333' from the left support. When those reinforcement bars are removed from the model, the results for analysis at 40.95' become reasonable.)
2. With the Prestress Modeling Method is set to "Centerline of simple-span bearing" (and issue #1 above is addressed), the Analysis Results indicates the location of the controlling points for the ratings improperly. For example, the control point for the inventory rating is said to be in Span 2 at 22.00 ft./46.8%. Regardless of the Prestress Modeling Method, it should be output as at 50.0% and at 23.5' from CL Support 2 since Span 2 is specified as 47.0' in the Girder System Superstructure Definition.

FROM: bgoodrich DATE: Monday, May 23, 2005 1:05:13 PM  
 A new BRASS-GIRDER DLL to be released with Virtis 5.3 Service Pack 1 addressed item 1. Item 2 is a duplicate of Incident 3141.

Issue ID: 6432  
 Subject: Question about rebar area within Ld in a RC structure

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Kennelly, Krishna  
 Submitted By: Armbrecht, Tim 5/17/2005 9:20:38 PM  
 Modified By: administrator 6/19/2008 4:19:59 PM  
 Priority: High  
 Category: Education

History

| Primary Contact   | Status   | Priority | Category  |
|-------------------|----------|----------|-----------|
| Duray, Jim        | New      | High     | Bug       |
| Kennelly, Krishna | Assigned |          |           |
|                   | Resolved |          | Education |

4/19/2016 3:04:23 PM

HRS AASHTO

695

### Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
| Kennelly, Krisha | Resolved | High | Education |
|------------------|----------|------|-----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | wizardbridge.bbd    |             |

### Tasks

| Name       | Current State | Summary                                                                                  |
|------------|---------------|------------------------------------------------------------------------------------------|
| 6461.14874 | Closed        | Compute from Typ Section button appears on Deck Concrete tab when we only have 2 girders |

### Description

FROM:tarmbrecht DATE:Tuesday, May 17, 2005 5:20:38 PM

In the attached Virtis file (LdRebarArea.bbd), for the Approach Span, a 1-Span RC-Slab (Span length = 14.5865'), there are hooked #10 bars @ 8.858" on center (1.72 sq-in/ft). In the output, the bottom steel area at .1 (1.4587') of the span is shown as .216 sq. in/ft, which results in an extremely low RF. According to the StdReinfDevLengthCalcs.log file, the development length for the hooked #10 bars is 24.98", which, based on the start point at .2609' left of CL bearing, results in full development at 1.82' (.125 of the span). By interpolation the area at .1 of the span would be 1.42 sq. in.

How does Virtis determine the area of reinforcement at a point between the end of a bar and the fully developed location?

Why does Virtis generate an area of .216 sq. in for this example?

FROM:kkennelly DATE:5/18/2005 1:34:57 PM

Refer to "Schedule Based Reinforcement Cross Section Export Examples" in the Virtis help file for sketches explaining what Virtis is doing.

At 0', the bars are  $3.132"/24.98" = 12.5\%$  developed.  $.125 * 1.27 \text{ in}^2 * 1.355 \text{ bars} = 0.216 \text{ in}^2$ .  
Virtis does not generate another cross section until it sees that the bar is developed at 21.84" into the span. At this point, the bar is 100% developed and the area of rebar is  $1.72 \text{ in}^2$ .

So from 0' to 21.84" the cross section passed to BRASS contains  $0.216 \text{ in}^2$ . From 21.84" to 12.7946' the the cross section contains  $1.72 \text{ in}^2$ . From 12.7946' to the end of the span, the cross section contains  $0.216 \text{ in}^2$ . The amount of rebar cannot vary over the length of the cross section range.

Since you have a tenth point within the first cross section range (0' to 1.82') you should add a point of interest within that range to get Virtis to generate an additional cross section before the tenth point. Then the percentage of bar developed at the tenth point will be greater than that developed at the start of the span.

4/19/2016 3:04:23 PM

HRS AASHTO

696

## Complete Issue Information

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| Issue ID: 6461                                                                                    |
| Subject: Compute from Typ Section button appears on Deck Concrete tab when we only have 2 girders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Boukamp, Sabine         | 5/26/2005 3:26:06 PM |
| Modified By: administrator            | 6/19/2008 4:19:57 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Duray, Jim       | New       | High     | Bug      |
| Kennelly, Krisha | Duplicate |          |          |
| Kennelly, Krisha | Duplicate | High     | Bug      |

## Contacts

| Name          | Company      | Email 1                    | Phone 1        |
|---------------|--------------|----------------------------|----------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266   |
| David Koenig  | Missouri DOT | david.koenig@modot.mo.gov  | (573) 526-0556 |

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | ErroneousLengthMismatch.bbd |             |

## Tasks

| Name       | Current State | Summary                                                                                             |
|------------|---------------|-----------------------------------------------------------------------------------------------------|
| 6464.14871 | Duplicate     | Erroneous length mismatch won't allow assignment of superstructure definition to bridge alternative |

## Description

FROM:sboukamp DATE:5/26/2005 11:11:10 AM

I created a bridge by the wizard with a girder system struct. def, 2 girder, 2 spans, (see attached bdb). When open the Deck Profile for Girder2 and hitting the Compute from Typical Section button, window pops up, enter no values but hit OK -> program will crash.

4/19/2016 3:04:23 PM

HRS AASHTO

697

Complete Issue Information

FROM:kkennelly DATE:6/1/2005 10:27:52 AM

This problem is not related to the Simple Bridge Wizard. It is due to the fact that we only have 2 girders.

VI 4139 hid the Compute button for cases when we have 2 girders but since we have a ps i beam the code in RefreshComputeButton() first hides the button cause there are 2 girders and then executes some code for ps beams and re-shows the button.

If we have 2 girders, always hide the Compute button regardless of the beam material type.

FROM:jihnat DATE:6/1/2005 11:00:27 AM  
Fixed for 5.3 SP1 and 0.9 Beta 11.

FROM:sboukamp DATE:6/8/2005 4:09:44 PM  
ok in Beta 11.

|                                                                                                              |
|--------------------------------------------------------------------------------------------------------------|
| Issue ID: 6464                                                                                               |
| Subject: Erroneous length mismatch won't allow assignment of superstructure definition to bridge alternative |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 5/27/2005 1:37:25 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Friday, May 27, 2005 9:37:25 AM

4/19/2016 3:04:24 PM

HRS AASHTO

698

Complete Issue Information

File attached. When attempting to assign the Superstructure Definition to the Superstructure Alternative, the following error message appears...

Superstructure Definition length mismatch  
The span lengths in the superstructure definition assigned to this superstructure alternative do not match the span lengths in the superstructure.

The span lengths entered in both places are the same.

Note: This 3-span continuous superstructure definition was created by modifying a copy of a 2-span continuous superstructure definition.

We didn't need to enter the number of spans and span lengths for the Bridge Alternatives/Superstructures in previous versions. What is the rationale for doing it now?

FROM:dkoenig DATE:Tuesday, May 31, 2005 9:00:34 AM  
We have the same question. This is basically double entry of data, which is contrary to the basic principles of data entry for databases. We have had similar problems with these fields being mismatched. Ours have typically been a tolerance issue, which I believe is addressed in another incident.

FROM:kkennelly DATE:6/3/2005 8:25:32 AM  
This is a duplicate of 6408 which has been resolved for 5.3 Service Pack1. I am able to assign this superstructure def using this service pack.

We added the number of spans and span lengths for Opis Substructure. In Opis Substructure there is additional data for selecting the substructure units supporting the superstructure.

Issue ID: 6477  
Subject: BRASS LFD does not use transformed section properties

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Neubauer, Scott 6/7/2005 5:34:02 PM  
Modified By: administrator 6/19/2008 4:19:56 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status | Priority | Category      |
|-----------------|--------|----------|---------------|
| Duray, Jim      | New    | High     | Enhance BRASS |

### Complete Issue Information

|                    |           |      |     |
|--------------------|-----------|------|-----|
| Goodrich, Brian    | Suspended |      |     |
| Duray, Jim         | New       | High | Bug |
| Ordoobadi, Mehrdad | Assigned  |      |     |
|                    | Duplicate |      |     |
| Ordoobadi, Mehrdad | Duplicate | High | Bug |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Intended.bbd        |             |
|      | Savable.bbd         |             |
|      | Can't Save.bbd      |             |

### Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 6488.14847 | Duplicate     | Can't save file |

### Description

FROM: bgoodrich DATE: Tuesday, June 07, 2005 1:34:02 PM  
Entered for Scott Neubauer:

I have been rating pre-stressed beams using Virtis with the Brass engine and have some questions about the pre-stressed beam analysis.

It appears to me that the transformed section is not used in any of the stress calculations. For the applied loads on a beam we use the transformed section properties and get inventory ratings that are significantly higher than what Virtis outputs. I have attached a Virtis file for a bridge that was designed for HS20 loading, but the Inventory Rating is HS18.3. My calculations show an Inventory Rating of HS26.7. Please review the attached file and let me know if there is something I am missing or a setting that can be changed. I don't know if you are the person I should contact, but I was hoping you could point me in the right direction.

Scott Neubauer, P.E.  
Iowa Department of Transportation  
Office of Bridges and Structures  
Bridge Rating Engineer  
800 Lincoln Way  
Ames, IA 50010  
Phone #515-239-1290

4/19/2016 3:04:24 PM

HRS AASHTO

700

Complete Issue Information

FROM:hlee DATE:4/30/2008 2:35:31 PM  
Discarded by TAG 12/07.

|                          |
|--------------------------|
| Issue ID: 6488           |
| Subject: Can't save file |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 6/9/2005 2:26:44 PM  |
| Modified By: administrator            | 6/19/2008 4:19:55 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Thursday, June 09, 2005 10:26:45 AM

This is from my consultant:

The attached file cannot be saved. When the Save was attempted the following message was initially generated...

Unable to save Bridge data!

09:58:43 AM - Line 867 in source file .\UiBWSDoc.cpp.

SpngMbrDefId not assigned to Member Alt!

09:58:25 AM - Line 5699 in source file .\DoGirderMbrAlt.cpp.

Subsequent attempts to save generated only the following...

"Unable to save Bridge data!"

4/19/2016 3:04:24 PM

HRS AASHTO

701



Complete Issue Information

09:46:32 AM - Line 867 in source file .\UiBWSDoc.cpp.”

Formerly (prior to some revisions and the deletion of a Superstructure Definition) it could be saved. The file from which Can't Save.bbd came from is also attached and is called "Savable.bbd". (It is suspected that the problem is in some way related to the deletion of former Superstructure Definitions within the Bridge Workspace.)

In order to retain the changes that were meant to be kept, a new bridge workspace was created and the Superstructure Definitions were copied into it. A file for that workspace is also attached. It is called, "Intended.bbd".

Note: This same problem has happened with other bridge workspaces that have had substantial revisions performed.

FROM:mordoobadi DATE:6/14/2005 10:30:53 AM  
Duplicate of 6409, 6398.

FROM:mordoobadi DATE:6/14/2005 10:37:43 AM  
It is fixed in 0.9 and 5.3.1.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 6489                                                                                |
| Subject: Continuous support details not deleted for last span when deleting prestressed spans |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 6/9/2005 2:33:25 PM  |
| Modified By: administrator            | 6/19/2008 4:19:55 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Closed   |          |          |
| Kennelly, Krisha | Closed   | High     | Bug      |

Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 6495.14840 | Resolved      | NHS Indicator |

Description

FROM:tarmbrecht DATE:Thursday, June 09, 2005 11:41:57 AM

When attempting to input the shear reinforcement near the end of the beam there is an error message stating that the shear reinforcement is beyond the end of the beam. In the example, the total length of the beam end-to-end is 70.0 ft. When attempting to enter the shear steel (Bar G2) located at 7.8125' from the end of the beam (69.599' from the start) Virtis erroneously states that the length is 69.5' and will not apply the bar to the input.

Note: This beam was created and modified from a beam that was, originally, 80.8333 ft. in length in a structure that had 7 continuous spans.

FROM:kkennelly DATE:6/20/2005 9:11:36 AM

Looks like data in the Continuous Support Detail table was not deleted for Support 2 when you went from 7 spans to 1 span. The attached bbd file has this extraneous data removed so you can continue working on this bridge.

FROM:kkennelly DATE:6/27/2005 9:55:19 AM

Fixed for 5.3.1. We will be sending you a dll with this fix to test. We are not issuing a beta 2 for this fix.

FROM:kkennelly DATE:6/27/2005 10:00:02 AM

Note that the fix occurs when you delete the spans. It does not repair any existing data that you might have.

FROM:kkennelly DATE:12/16/2005 11:34:34 AM

Closed based on accepted in track field.

|                        |
|------------------------|
| Issue ID: 6495         |
| Subject: NHS Indicator |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Jones, Daniel           | 6/10/2005 2:49:50 PM |
| Modified By: administrator            | 6/19/2008 4:19:54 PM |
| Priority: High                        |                      |

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category                      |
|-----------------|----------|----------|-------------------------------|
| Duray, Jim      | New      | High     | Unknown                       |
| Goodrich, Brian | Assigned |          | Bug - BRASS<br>Bug - Export 2 |
| Goodrich, Brian | Resolved | High     | Bug - Export 2                |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | serviceability.bbd  |             |

## Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 6520.14815 | Resolved      | Option to ignore serviceability not being considered by BRASS |

## Description

FROM:rfulton DATE:Friday, June 10, 2005 10:49:51 AM

We have installed and upgraded our data base to version 5.3. The NHS indicator choice under the Bridge description Tab (Cont.)is now blank. Under the Parameters tab the choices are gone. I do not want to reenter these as it might make things worse as far as the data base is concerned.

FROM:rfulton DATE:Friday, June 10, 2005 3:06:40 PM

PS: We are using Oracle 8.X

FROM:mordoobadi DATE:6/13/2005 1:31:48 PM

Is this an integrated database?

FROM:mordoobadi DATE:6/13/2005 1:48:16 PM

Please ask your database administrator to send us the results of the following queries:

4/19/2016 3:04:25 PM

HRS AASHTO

704

Complete Issue Information

```
SELECT count(*) FROM paramtrs WHERE table_name = 'bridge' AND field_name = 'nhs_ind';
```

```
SELECT count(*) FROM paramtrs WHERE table_name = 'roadway' AND field_name = 'nhs_ind';
```

```
SELECT count(*) FROM paramtrs WHERE lower(table_name) = 'bridge' AND lower(field_name) = 'nhs_ind';
```

```
SELECT count(*) FROM paramtrs WHERE lower(table_name) = 'roadway' AND lower(field_name) = 'nhs_ind';
```

```
SELECT count(*) FROM abw_sys_db_maintenance WHERE maintenance_keyword = 'DB_MIG_520_TO_530_INC_5531';
```

```
SELECT count(*) FROM abw_sys_db_maintenance_stage WHERE maintenance_keyword = 'DB_MIG_520_TO_530_INC_5531';
```

```
SELECT pontis_installed_ind FROM abw_sys_database;
```

```
SELECT table_name, field_name, parmvalue FROM paramtrs WHERE lower(field_name) = 'nhs_ind';
```

```
SELECT DISTINCT nhs_ind FROM abw_overflow;
```

```
SELECT maintenance_keyword, stage_keyword, maintenance_stage_timestamp FROM abw_sys_db_maintenance_stage ORDER BY maintenance_stage_timestamp;
```

FROM:mordoobadi DATE:6/14/2005 9:54:44 AM  
Duplicate of incident 6410.

FROM:mordoobadi DATE:6/14/2005 9:55:49 AM  
This script fixes the problem.

```
UPDATE paramtrs SET table_name = 'roadway' WHERE table_name = 'bridge' AND field_name = 'nhs_ind';
```

FROM:mordoobadi DATE:2/15/2006 2:19:25 PM  
The incident was addressed in 5.3.1 migration.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 6520<br>Subject: Option to ignore serviceability not being considered by BRASS |
|------------------------------------------------------------------------------------------|

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 6/21/2005 7:43:17 PM |
| Modified By: administrator            | 6/19/2008 4:19:52 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

## Complete Issue Information

### History

| Primary Contact | Status        | Priority | Category |
|-----------------|---------------|----------|----------|
| Duray, Jim      | Assigned      | High     | Bug      |
|                 | On Hold       |          |          |
| Lee, Herman     |               |          |          |
| Li, Xinmei      | Investigation |          |          |
|                 | Resolved      |          |          |
| Li, Xinmei      | Resolved      | High     | Bug      |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C0076088.dat        |             |

### Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 6521.14814 | Resolved      | BARS Import - isn't handling cover plates properly |

### Description

FROM:kkennelly DATE:6/21/2005 3:40:56 PM  
Submitted on behalf of Robert Kelley, Michigan DOT via email:

>>> "Bridgware" <Bridgware@mbakercorp.com> 6/21/2005 2:41PM >>>  
Hi Robert,

Can you export your bridge to a bbd file and email it to us so we can investigate?

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

>>> "Robert Kelley" <KELLEYR@michigan.gov> 06/21/05 2:28 PM >>>  
Thank you again for the fast response. Here's what I did.

- 1- Under Superstructure definitions, open up Span 1.
- 2- open up MEMBERS
- 3- Open up G1

4/19/2016 3:04:25 PM

HRS AASHTO

706

## Complete Issue Information

- 4- Open up MEMBER ALTERNATIVES
- 5- Double click on Exterior steel beam
- 6- Go to Engine tab
- 7- Open up BRASS LFD
- 8- Go to Properties
- 9- Set POI control to zero
- 10- Hit OK for this screen and the previous screen
- 11- Go to Points of Interest for Exterior steel beam
- 12- Create a POI at ½ point of span
- 13- Go to Engine tab
- 14- Go to Properties
- 15- Check the Skip operating rating based on serviceability
- 16- Hit OK for this screen and the previous screen
- 17- Repeat steps 3-16 for G2
- 18- Repeat steps 3-16 for G11
- 19- All other girders linked to these 3 girders
- 20- Repeat steps 1-19 for Spans 2/3
- 21- Repeat steps 1-19 for Span 4
- 22- Highlight Span 1
- 23- Push Analyze button
- 24- Generate Output- Serviceability still controls
- 25- Highlight Span 2-3
- 26- Push Analyze button
- 27- Generate Output- Serviceability still controls
- 28- Highlight Span 4
- 29- Push Analyze button
- 30- Generate Output- Serviceability still controls

All that I did makes not one bit of difference. Where did I go wrong?

>>> "Bridgeware" <Bridgeware@mbakercorp.com> 6/21/2005 1:44:39PM >>>  
Hi Robert,

If you want to override a value on the Point of Interest window, you should set the POI Control to "0" on the Member Alternative Engine Properties window for BRASS LFD. Then you must create Points of Interest for all points that you think may have a controlling rating on the member. (BRASS will only provide ratings for the points of interest under this option.) For each point of interest you create, you must fill in all of the data for that point as the export to BRASS will only use the data on the Point of Interest window when it creates the beam description in the BRASS input file.

The following description is available on the BRASS LFD Engine Related Help that can be accessed from the Virtis help file on the Point of Interest window:

<<BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows.

If you select "No point of interest data will be generated" as the POI Control, you must enter all of the

4/19/2016 3:04:25 PM

HRS AASHTO

707

Complete Issue Information

information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows.>>

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

>>> "Robert Kelley" <KELLEYR@michigan.gov> 06/21/05 12:39 PM >>>

Thanks for the quick feedback. I tried what you said, and here's the message I get:

WARNING (Low):

The POI Control engine property for the member alternative is invalid because only points of interest at tenth points have been specified! The POI Control option was specified as 3 but will be exported as option 1.

I have no idea what to do next. Any suggestions?

>>> "Bridgeware" <Bridgeware@mbakercorp.com> 6/21/2005 12:00:52PM >>>

Hi Robert,

For steel girders, the Point of Interest: Engine tab for BRASS LFD/ASD lets you specify if you want to ignore serviceability for the operating ratings at that point of interest. Other than that, you cannot turn off serviceability.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

>>> "Robert Kelley" <KELLEYR@michigan.gov> 06/21/05 11:24 AM >>>

I am finding that serviceability is controlling some load ratings. Is there a way to turn off this criterion? If so, please advise.

FROM:bgoodrich DATE:Tuesday, June 21, 2005 6:16:52 PM

I am able to duplicate the user's issue. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Tuesday, June 21, 2005 8:30:07 PM

After some more investigation, it appears there is a solution. The bracing override was not selected, so the STEEL-4 command was never generated. The serviceability control option is located on that same command, which is why nothing was happening when the ignore serviceability option was checked. At a minimum, the export must issue a message to alert the user to this requirement.

FROM:bgoodrich DATE:Monday, July 18, 2005 5:12:46 PM

I added a warning to the export to inform the user of the bracing and lateral support override requirement.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 6521<br>Subject: BARS Import - isn't handling cover plates properly |
|-------------------------------------------------------------------------------|

|                                                                      |
|----------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Li, Xinmei |
|----------------------------------------------------------------------|

4/19/2016 3:04:25 PM

HRS AASHTO

708

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Lee, Herman  | 6/22/2005 1:41:11 PM |
| Modified By: administrator | 6/19/2008 4:19:52 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status          | Priority | Category |
|-----------------|-----------------|----------|----------|
| Duray, Jim      | New             | High     | Bug      |
|                 | On Hold         |          |          |
| Li, Xinmei      |                 | N/A      |          |
|                 | Rejected by TAG | High     |          |
| Li, Xinmei      | Rejected by TAG | High     | Bug      |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | D0736140.DAT        |             |

### Tasks

| Name       | Current State   | Summary                                   |
|------------|-----------------|-------------------------------------------|
| 6522.14813 | Rejected by TAG | BARS Import - Problem with circular voids |

### Description

FROM:jduray DATE:Wednesday, June 22, 2005 9:41:11 AM

VA DOT training

C0076088.dat

First section imports correctly (no cover plate), second doesn't (has a cover plate).

FROM:xli DATE:3/16/2007 9:12:05 AM

Bars import can import sections defined by real dimensions or by A and I, but not able to import a section with combined definition method. The second cross section in the attached data file is defined by A and I and cover plate is defined by real dimensions.

FROM:xli DATE:3/16/2007 4:09:29 PM

4/19/2016 3:04:25 PM

HRS AASHTO

709



Complete Issue Information

Fixed for 5.6 beta 2.

Added code in BarsImportDoc Card12 to handle elements with a TypeCode of "E".

FROM:hlee DATE:3/19/2007 7:45:40 AM

Tested and checked the imported Virtis data for the attached BARS file. Also tested C0891900.dat from VA DOT training.

|                                                    |
|----------------------------------------------------|
| Issue ID: 6522                                     |
| Subject: BARS Import - Problem with circular voids |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Duray, Jim              | 6/22/2005 2:00:53 PM |
| Modified By: administrator            | 6/19/2008 4:19:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jduray DATE:Wednesday, June 22, 2005 10:00:54 AM

FROM:hlee DATE:6/23/2005 10:43:17 AM

Two more items related to box beam:

1. Non-void box imported as rectangular I shape. (Virginia Bars file: CUL\306168.dat)
2. Missing top dimension in imported box beam. (Virginia Bars file: STN\P008100.dat)

FROM:xli DATE:4/18/2006 5:05:24 PM

2 resolved

## Complete Issue Information

Issue ID: 6525

Subject: Import does not verify the district is valid

Folder: /Virtis/Support Center/Virtis

Primary Contact: Li, Xinmei

Submitted By: Duray, Jim

6/24/2005 2:57:23 PM

Modified By: administrator

6/19/2008 4:19:52 PM

Priority: High

Category: Bug

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | On Hold  | High     | Bug      |
| Li, Xinmei       |          |          |          |
| Kennelly, Krisha | Assigned |          |          |
| Li, Xinmei       |          |          |          |
|                  | Resolved |          |          |
| Li, Xinmei       | Resolved | High     | Bug      |

4/19/2016 3:04:26 PM

HRS AASHTO

711

## Complete Issue Information

### Contacts

| Name          | Company      | Email 1                    | Phone 1        |
|---------------|--------------|----------------------------|----------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266   |
| David Koenig  | Missouri DOT | david.koenig@modot.mo.gov  | (573) 526-0556 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                         |
|------------|---------------|---------------------------------------------------------------------------------|
| 6527.14808 | Duplicate     | adding superstructure names - wizard to create superstructures for Virtis users |

### Description

FROM:jduray DATE:6/24/2005 10:25:25 AM

The import reads the District from the BARS file and includes it with the bridge description without validating it. I think it should do a lookup in the parameters table and if a match is found it should include the data with the bridge description. If no match then do not include the data. Perhaps a message should be generated if no match.

FROM:xli DATE:4/14/2006 2:07:10 PM

Krishna, do we assume "8" and "08" match?

FROM:kkennelly DATE:4/17/2006 12:43:52 PM

No, I think we should look for an exact match since we are matching strings not integers.

FROM:xli DATE:4/18/2006 9:07:08 AM

Resolved for 5.5

Issue ID: 6527

Subject: adding superstructure names - wizard to create superstructures for Virtis users

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Armbrecht, Tim

6/24/2005 6:33:05 PM

Modified By: administrator

6/19/2008 4:19:52 PM

Priority: High

Category: Enhancement

4/19/2016 3:04:26 PM

HRS AASHTO

712

## Complete Issue Information

---

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
| Ihnat, Joseph   | Assigned  |          |          |
|                 | Duplicate |          |          |
| Ihnat, Joseph   | Duplicate | High     | Bug      |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6529.14806 | Duplicate     | characters causing problems in viewing reports |

### Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:33:05 PM

1) Bridge Alternatives – Superstructure Name: When adding a Superstructure Name to a Bridge Alternative, Virtis forces entry of both number of spans and lengths of spans which must match the Superstructure Definition. It is understood that this is a result of the addition of the substructure module in Opis. However, as far as Virtis superstructure ratings it only requires additional time to enter a structure with no additional benefit. In addition, if the span lengths vary between the Alternative and the Superstructure by even .000001, or perhaps less, the linkage is rejected. Could not this new requirement be eliminated for Virtis superstructure ratings, or, at least, restricted to only files where substructure information exists?

FROM:kkennelly DATE:6/27/2005 9:26:05 AM

The service pack 1 for 5.3 has loosened the tolerance. Are you still getting these messages in 5.3.1? If you are, please attach a bbd file.

FROM:tarmbrecht DATE:Monday, June 27, 2005 12:27:22 PM

No, we're not getting the messages. Sorry, shouldn't have put the "in addition" part in there. We are still questioning the requirement to enter span numbers and lengths twice. Seems like we should be fixing this now before the user's group finds out they're going to need to do this. I'm pretty sure there'll be tears.

4/19/2016 3:04:26 PM

HRS AASHTO

713

Complete Issue Information

FROM:dkoenig DATE:Tuesday, June 28, 2005 9:30:35 AM

We haven't shed any tears yet, but we agree with Tim 100%. This is double entry. If the program requires that these match within the user tolerances, then why would they need to be reentered for the substructure part of Opis? If this extra field is needed, then maybe a good compromise would be to have it default to what was entered the first time with the user having the option to change it if desired. This would at least move away from the double entry for Virtis users.

FROM:kkennelly DATE:8/26/2005 8:14:41 AM

I'm turning this into an enhancement request from Virtis user comments at the 2005 UG meeting and this incident. Virtis users are not happy with having to enter the span lengths on the Superstructure window. These span lengths were added for Opis Substructure. A Superstructure Layout wizard for Virtis users could solve this problem. User could enter the number of superstructures, pick the superstructure definitions they want to assign to the superstructures, and a distance between superstructures if there is more than 1 superstructure and then the wizard could create the superstructures and superstructure alts for the user.

FROM:hlee DATE:5/10/2007 12:11:36 PM

Duplicate of Incident 7445.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6529                                          |
| Subject: characters causing problems in viewing reports |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: lhnat, Joseph        |                      |
| Submitted By: Armbrecht, Tim          | 6/24/2005 6:38:20 PM |
| Modified By: administrator            | 6/19/2008 4:19:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:38:20 PM

3) When certain characters (“&”, etc.) are in fields such as Superstructure Name, Structure Name, etc. the LFD Analysis Output report (and perhaps other reports) cannot be viewed.

FROM:jihnat DATE:6/27/2005 1:56:21 PM  
Sounds like a duplicate of 3598

|                                                                                |                      |
|--------------------------------------------------------------------------------|----------------------|
| Issue ID: 6530                                                                 |                      |
| Subject: You say aternative, I say alternative, let's call the whole thing off |                      |
| Folder: /Virtis/Support Center/Virtis                                          |                      |
| Primary Contact: Kennelly, Krisha                                              |                      |
| Submitted By: Armbrecht, Tim                                                   | 6/24/2005 6:40:15 PM |
| Modified By: administrator                                                     | 6/19/2008 4:19:52 PM |
| Priority: High                                                                 |                      |
| Category: Cosmetic                                                             |                      |

History

4/19/2016 3:04:27 PM

HRS AASHTO

715

### Complete Issue Information

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Bug      |
| Duray, Jim       | New                | High     | Bug      |
|                  | Information Needed |          |          |
| Kennelly, Krisha | Not Reproducible   |          |          |
| Kennelly, Krisha | Not Reproducible   | High     | Bug      |

### Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                        |
|------------|------------------|--------------------------------|
| 6531.14804 | Not Reproducible | missing column in deck profile |

### Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:40:15 PM

4) In the "LFD Analysis Output" report, 11th non-blank line from top, the word "Alternative" is missing the "L" and is printed as "Aternative".

FROM:kkennelly DATE:10/6/2005 2:00:30 PM  
Fixed for 5.4

## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 6531                          |
| Subject: missing column in deck profile |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Armbrecht, Tim          | 6/24/2005 6:41:50 PM |
| Modified By: administrator            | 6/19/2008 4:19:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
|                 | Resolved  |          | Education     |
| Goodrich, Brian | Assigned  | High     | Enhance BRASS |
|                 | Suspended |          |               |
|                 | Discard   |          |               |
| Goodrich, Brian | Discard   | High     | Enhance BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 6532.14803 | Discard       | POI entry problems |

## Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:41:50 PM

5) Deck Profile entry, input of variable beam spacings: the Start Distance is the distance from the support at the beginning of the span in which the range starts but there is no column to identify what

4/19/2016 3:04:27 PM

HRS AASHTO

717



Complete Issue Information  
the applicable span number is.

FROM:kkennelly DATE:6/27/2005 12:59:51 PM  
What type of member are you trying to input this for? For girder members, there should be a Support Number column. For floorbeams and stringers there is no Support Number column. You enter a start distance from the left end of the member.

FROM:tarmbrecht DATE:Wednesday, June 29, 2005 3:40:19 PM

Krishna, please put this down as "non-reproducible". My consultant doesn't remember the structure he was working on when he submitted this to me. I docked him a day's pay off his invoice. Sorry about that. Tim

|                             |
|-----------------------------|
| Issue ID: 6532              |
| Subject: POI entry problems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 6/24/2005 6:42:35 PM |
| Modified By: administrator            | 6/19/2008 4:19:52 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:42:35 PM

4/19/2016 3:04:27 PM

HRS AASHTO

718

Complete Issue Information

6) In POI entry there is a place for entering whether analysis is to take place to the left or to the right of the POI. This does not work! To insure that an analysis takes place to one side or another of a point, one must set the POI a significant distance (say .2 ft) to the left or right of the actual point in question.

FROM:kkennelly DATE:6/27/2005 12:55:44 PM

The engine help for BRASS LFD for this window states this. This engine help also states the side with the smallest gross moment of inertia is used.

FROM:bgoodrich DATE:Monday, July 18, 2005 6:41:35 PM

Although this is a limitation with the BRASS engines, this may not be the case with future engines. BRASS is point-of-interest based, and technically, it would take a significant effort to change this. I will forward this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Saturday, August 27, 2005 9:34:06 PM

This issue was placed on the BRASS enhancement list. Status set to Suspended until issue is selected as an funded enhancement.

FROM:hlee DATE:4/30/2008 2:35:45 PM

Discarded by TAG 12/07.

Issue ID: 6533  
Subject: computing from typical section for an ext next to a linked int

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 6/24/2005 6:43:45 PM  
Modified By: administrator 6/19/2008 4:19:51 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Lee, Herman      | Assigned  |      |             |
| Duray, Jim       | New       | High | Bug         |
| Kennelly, Krisha | Assigned  |      |             |
|                  | Resolved  |      | Education   |
|                  | Assigned  |      |             |
| Duray, Jim       |           |      | Enhancement |
|                  | Suspended |      |             |
| Duray, Jim       | Suspended | High | Enhancement |

Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Girder-FlbmSystProb2.bbd |             |
|      | Girder-FlbmSystProb.doc  |             |
|      | Girder-FlbmSystProb.bbd  |             |

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6535.14800 | Suspended     | Girder-floorbeam system problems |

Description

FROM:tarmbrrecht DATE:Friday, June 24, 2005 2:43:45 PM

7) When doing a "Compute from Typical Section" for Deck Profile on an exterior beam where the adjacent girder is defined by a link to another beam, an error message comes up stating, "Adjacent interior girder does not have a current member alternative defined. LRFD effective flange width was calculated using zero for the adjacent interior girder." This is in error since the adjacent interior girder does have a current member alternative defined. Note: this does not happen for an interior beam that is positioned next to another linked beam.

FROM:hlee DATE:6/28/2005 11:17:32 AM  
Fixed for version 5.4.0.

|                |
|----------------|
| Issue ID: 6535 |
|----------------|

### Complete Issue Information

Subject: Girder-floorbeam system problems

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Armbrecht, Tim 6/24/2005 6:46:09 PM  
Modified By: administrator 6/19/2008 4:19:51 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Bug      |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | PSConcrAnalysisProb.bbd |             |

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6536.14799 | Duplicate     | Continuous prestressed concrete bridge model analysis problems |

### Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:46:09 PM

Submitted on behalf of my consultant. The text runs as follows, graphics are included in the attached Word file. Also attached the supporting bbd file.

1. In the file 0600035-TES, for Superstructure Definition, "Spans 7-10 (WB)", when an attempt to assign Stringer Group Definition, "StrGrp Sp10" to Unit 5 of the Floor System Geometry, a Validation Error, "The stringer group definition Stringer Unit 5 is not located on the structure.", occurs (as follows).

4/19/2016 3:04:28 PM

HRS AASHTO

721

## Complete Issue Information

2. In Superstructure Definition, "Spans 11-14" it is desired to utilize "User-defined dead load" for Stage 2 DL distribution to the exclusion of "Uniformly to all girders" as computed based on the Structure Typical Section. However when attempted the system calculated Stage 2 dead load is being used anyway.
3. When a Concentrated Load Moment is applied to a girder, there is no affect on the analysis. For an example, try Superstructure Definition, "Spans 11-14" where a 500 ft-k moment has been specified.
4. In Superstructure Definition, "Spans 11-14" when attempting to run the analysis of the floorbeam, "Flbm2" the following error occurs...  
Error generating LFD/ASD load commands!  
Error generating load group commands!  
Error in the loads utility!  
Error getting stringer dead load reaction!  
Error preparing stringer dead load reactions!

The stringer dead load reactions have been computed and are displayed as accepted both under the "Computed Stringer Reactions" and "Floorbeam-Stringer Reactions. This seems similar to incident 6045, which had to do w/floorbeam dead load reactions on the main girders.

- 5) Whole Bridge or Superstructure Definition Copy problems (test by copying "Spans 11-14"):  
When copying and pasting a whole bridge file or just the Superstructure Definition of a Floor-System Superstructure, the following errors occur...
  - a) For the Stringer Definitions, there are no supports. Under Supports is the message, "Zero spans were defined for this member". To correct this problem, one must first open the main Stringer Definition window and then select <OK>.
  - b) Under the stringer definitions, "Bearing Stiffener Locations" becomes inaccessible.
  - c) When attempting to analyze a stringer, the following error occurred, "Unknown error initiating member analysis!". Note: Prior to the copy, in the source, the stringer analyzed w/no problem.
  - d) The Bridge file could not be saved after creating a copy of a Superstructure Definition within it.
- 6) In a girder-floorbeam system Virtis by default incorrectly distributes parapet and other Stage 2 dead loads, located on or outside of the main girders, to stringers and floorbeams that are between the girders. These loads should be considered as supported only by main girders, outside stringers and cantilevered portions of floorbeams only. This is due to the much greater stiffness of the main girders relative to the stringers.

FROM:kkennelly DATE:6/29/2005 8:00:42 AM

This incident is being split into several incidents (6541-6545) since there are too many diverse items to address in one incident.

Submitted on behalf of my consultant. The text runs as follows, graphics are included in the attached Word file. Also attached the supporting bbd file.

1. In the file 0600035-TEs, for Superstructure Definition, "Spans 7-10 (WB)", when an attempt to assign Stringer Group Definition, "StrGrp Sp10" to Unit 5 of the Floor System Geometry, a Validation Error, "The stringer group definition Stringer Unit 5 is not located on the structure.", occurs (as follows)

FROM:kkennelly DATE:6/29/2005 8:47:58 AM

This window is adding up the lengths of all of the stringer group definitions and checking that total length against the structure def length. The error message indicates the last stringer unit is off the

4/19/2016 3:04:28 PM

HRS AASHTO

722

Complete Issue Information

structure because StrGrp Sp7 is defined incorrectly. I think StrGrp Sp7 is longer than it really should be.

Based on the span lengths input on the structure def window, span 2 where StrGrp Sp7 is assigned is 143.08' long. StrGrp Sp7 is defined as 165.08' long on the Stringer Group Definition Geometry window. I think it is spanning over 1 too many floorbeams. If StrGrp Sp7 is changed to span over 1less floorbeam (with spacing = 22') the assignment works ok in the Floor System Geometry window.

FROM:tarmbrecht DATE:Thursday, June 30, 2005 10:33:39 AM

We fixed the extra 22' stringer bay. However, when we attempted to assign StrGrp Sp 8/9 to Unit 4 (span 9), we got a message saying "...unit 4 has...a floorbeam at...347.0832 but a corresponding floorbeam member...does not exist at this location." Where it does exist is at 347.0833, i.e. Virtis expects precision to be 0.0001'. We're getting around it by creating seperate stringer group definitons for sp 8 and sp 9, but why do we need such precision? Where are the tolerance settings for this? See Girder-FlbmSystProb2.bbd

FROM:kkennelly DATE:6/30/2005 11:32:03 AM

Virtis is using hardcoded tolerances when it validates the geometry. You will need to use your workaround for this case but we can evaluate relaxing the geometry tolerances for floor systems for a future release.

FROM:kkennelly DATE:6/30/2005 12:44:12 PM

I don't think it's a bug that we use a stringent tolerance to guarantee user input all "fits" together but maybe we should relax the tolerance a bit for floor systems since other people run into this problem as well.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6536                                                          |
| Subject: Continuous prestressed concrete bridge model analysis problems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Armbrecht, Tim          | 6/24/2005 6:50:25 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | RC-SchBased-EpoxyBarProb.bbd |             |

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 6537.14798 | Suspended     | epoxy bar problem |

### Description

FROM:tarmbrecht DATE:Friday, June 24, 2005 2:50:25 PM

With the Prestress Modeling Method is set to "Centerline of simple-span bearing" (and issue #1 above is addressed), the Analysis Results indicates the location of the controlling points for the ratings improperly. For example, the control point for the inventory rating is said to be in Span 2 at 22.00 ft./46.8%. Regardless of the Prestress Modeling Method, it should be output as at 50.0% and at 23.5' from CL Support 2 since Span 2 is specified as 47.0' in the Girder System Superstructure Definition. File attached.

FROM:kkennelly DATE:6/27/2005 10:53:36 AM  
Duplicate of 3141

|                            |
|----------------------------|
| Issue ID: 6537             |
| Subject: epoxy bar problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 6/24/2005 6:57:03 PM |

4/19/2016 3:04:29 PM

HRS AASHTO

724

Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:19:51 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | Urgent   | Bug      |
| Ihnat, Joseph   | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Closed - Inactive  |          |          |
| Ihnat, Joseph   | Closed - Inactive  | Urgent   | Bug      |

Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State     | Summary                   |
|------------|-------------------|---------------------------|
| 6539.14796 | Closed - Inactive | RC - Bar Mark Definitions |

Description

FROM:tambrecht DATE:Friday, June 24, 2005 2:57:03 PM

Export file: RC-SchBased-EpoxyBarProb.bbd

A 3-Span continuous slab with epoxy coated bars, bottom bars hooked at each end support and defined utilizing the schedule based facility of Virtis 5.3 will not run and returns the error message copied at the end of this report. When the "Plain" type check box for the reinforcement bar material is selected instead of "Epoxy", the analysis runs without problem.

----- Contents of BRASS Error File -----

```
File: C:\Program
Files\AASHTOWARE\VirtisOpis53\0994615-DAB_TES\3-
Span_Continuous_Slab\12__Interior_Slab_Strip\12__RC-Slab_(Sch_)BRASS_LFD\12__RC-Slab_
(Sch_).ERR
Fatal Error Encountered - Unexpected Termination
Data File: -Slab_(Sch_)BRASS_LFD\12__RC-Slab_(Sch_).DAT
```



Complete Issue Information

-----  
Error No.: 2103

Type : Structural Analysis Error

Location : Data File

The change point located 0.0000 ft from the left end of span 1 is within 0.099 ft of another node point (located at 0.0075 ft).

-----  
Error No.: 2103

Type : Structural Analysis Error

Location : Data File

One or more elements are too small. A change point(s) is within 0.099 ft of another node point. Numerical instability will result.

Adjust the location of the change point slightly away from the conflicting point. See page 10.1 of Vol 1.

----- End of Contents of BRASS Error File -----

FROM:kkennelly DATE:6/27/2005 10:15:48 AM

The epoxy bar has different points of development than the plain does. This must be causing the cross section change points to be too close. Virtis uses the user tolerance to try to eliminate change points that are within the tolerance. This user tolerance must be different than the BRASS tolerance. Not sure we can do anything to fix this.

FROM:bgoodrich DATE:Tuesday, July 19, 2005 1:03:34 PM

I am able to reproduce this issue. The BRASS LFD engine checks for a short element based on the difference between the range to be added and the nodes in the span. However, it doesn't check the range against the first node in the span. I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 10:02:49 AM

This issue does not occur in BRASS-GIRDER(LRFD) or the merged engines. If this issue is addressed, it will require careful modifications to meshds.for.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 10:03:33 AM

E-mail from C.J. Riley (WYDOT):

From: Charles Riley [mailto:Charles.Riley@dot.state.wy.us]

We will leave this issue alone for now and have it addressed with the merged engine.

|                                    |
|------------------------------------|
| Issue ID: 6539                     |
| Subject: RC - Bar Mark Definitions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Jones, Daniel           | 6/27/2005 5:02:59 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
|                 | Resubmit |          |                |
|                 | Assigned |          |                |
|                 | Closed   |          |                |
| Goodrich, Brian | Closed   | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | SpstrLdsProb(540B6).xml |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6541.14794 | Closed        | User defined DL2 in a floor system |

### Description

FROM:rfulton DATE:Monday, June 27, 2005 1:03:00 PM

The "Save" button on the Bar Mark Definitions is gone. No way to define the bars for schedule based definition.

FROM:rfulton DATE:Monday, June 27, 2005 2:00:46 PM

Change priority to medium, The ok, apply buttons will show up if the screen is maximized, however they do not show up when the screen is not maximized.

FROM:jihnat DATE:6/27/2005 3:50:33 PM

Try making the window normal size (i.e. not maximized) then grab a corner and resize it. Do the

4/19/2016 3:04:29 PM

HRS AASHTO

727

Complete Issue Information

buttons pop back into place?

|                                             |
|---------------------------------------------|
| Issue ID: 6541                              |
| Subject: User defined DL2 in a floor system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Armbrecht, Tim          | 6/29/2005 12:10:30 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM  |
| Priority: High                        |                       |
| Category: Bug - Export 1              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:6/29/2005 8:09:59 AM

Originally submitted in incident 6535. See that incident for the bbd file.

2. In Superstructure Definition, "Spans 11-14" it is desired to utilize "User-defined dead load" for Stage 2 DL distribution to the exclusion of "Uniformly to all girders" as computed based on the Structure Typical Section. However when attempted the system calculated Stage 2 dead load is being used anyway.

FROM:kkennelly DATE:6/29/2005 9:20:47 AM

When I analyze a stringer or fb in that structure, I think the Stage 2 DL is handled correctly. I see a message in the export log file that stage 2 deck loads on Structure Typ Section window are ignored.

I think the user has assigned parapets with zero load on the Structure Typ Section window to get the results they want. If I change the assignment of parapets on the Structure Typ Section window to those that do have load, when I run BRASS I don't see that message in the log file and I do see the following load case:

4/19/2016 3:04:29 PM

HRS AASHTO

728

Complete Issue Information

COMMENT Curbs/Parapets  
LOAD-DESCR 2, 2, 0.00, Curbs/Parapets

FROM:bgoodrich DATE:Monday, July 25, 2005 10:19:39 AM  
I see the Curbs/Parapets load commands also, but they are being generated because a 0.211 kips/ft uniform load was entered on the Stringer Definition Loads window for the "Span 12,13" stringer definition. This is identical to the wearing surface load, so I suspect this could be an input error.

FROM:kkennelly DATE:7/27/2005 9:25:29 AM  
I don't think this is associated with user error.

Spans 11-14. If I change the parapet assignment on the Structure Typical Section window to a parapet that has a unit weight and run BRASS, I get a different BRASS input file than if I ran it as the user sent it to us. The second input file contains a curb/parapet load case that did not exist when I ran the file as the user sent it to us. The only difference I made was changing the parapet assignment so I don't think this additional load case has anything to do with the Stringer Def Load.

The Superstructure Loads window has the Stage 2 dead load selection as User Defined, so for both cases I should get a message in the export log that user defined loads are being used. But I don't get that error message.

FROM:bgoodrich DATE:Wednesday, July 27, 2005 9:59:51 AM  
E-mail from Tim Armbrecht:  
I discussed this with my consultant and he said that for this incident he wasn't referring to stringers or FBs, but he was referring to the main girders.

FROM:bgoodrich DATE:Wednesday, July 27, 2005 11:09:59 AM  
I am able to duplicate the issue with the main girder.

FROM:bgoodrich DATE:Monday, March 06, 2006 12:11:21 PM  
The export of a girder in a GFS or GF superstructure definition has been revised to exclude certain dead loads (appurtenance, wearing surface, and sidewalk) when the dead load distribution method for the stages assigned to those loads is set to "user defined." Fixed for version 5.4.

FROM:mordoobadi DATE:3/20/2006 8:55:35 AM

Comments From Tim Armbrecht:

-----  
1. Incident #6541 (Said to be resolved but is not): (See SpstrLdsProb(540B6).xml.) For main girders (not stringers & floorbeams) of a GFS system, when "User-defined dead load" is selected as the Stage 2 Dead Load Distribution method, the resultant Stage 2 Forces are the same as when one selects "Uniformly to all girders". If User-defined is used and Girder Member Loads for Stage 2 loads are not entered, there should be no resultant forces from Stage 2 loading, but there are. Test this by analyzing the GIRDER MEMBER alternately w/Stage 2 DL Distribution selected as User defined and Uniformly to all girders.  
-----

Complete Issue Information

FROM: bgoodrich DATE: Friday, April 14, 2006 12:48:13 PM

I ran the girder member alt (84" WPG-Comp.) with the stage 2 dead load distribution method set to "Uniformly to all girders" and then again with "User-defined dead load". The export generated the following commands for the "Uniformly to all girders" option, but not for the "User-defined dead load" option:

```

COMMENT Curbs/Parapets
LOAD-DESCR 2, 2, 0.00, Curbs/Parapets
UNIFORM-DL1 1, 0.0000, 0.2447, 139.0000, 0.2447
UNIFORM-DL1 1, 0.0000, 0.0898, 139.0000, 0.0898
UNIFORM-DL1 2, 0.0000, 0.2447, 176.0000, 0.2447
UNIFORM-DL1 2, 0.0000, 0.0898, 176.0000, 0.0898
UNIFORM-DL1 3, 0.0000, 0.2447, 176.0000, 0.2447
UNIFORM-DL1 3, 0.0000, 0.0898, 176.0000, 0.0898
UNIFORM-DL1 4, 0.0000, 0.2447, 139.0000, 0.2447
UNIFORM-DL1 4, 0.0000, 0.0898, 139.0000, 0.0898
COMMENT Wearing Surface
LOAD-DESCR 3, 2, 0.00, Wearing Surface
UNIFORM-DL1 1, 0.0000, 0.4219, 139.0000, 0.4219
UNIFORM-DL1 2, 0.0000, 0.4219, 176.0000, 0.4219
UNIFORM-DL1 3, 0.0000, 0.4219, 176.0000, 0.4219
UNIFORM-DL1 4, 0.0000, 0.4219, 139.0000, 0.4219

```

This was the only difference in the data file. This seems to be the correct behavior.

FROM: tarmbrecht DATE: Monday, April 24, 2006 10:20:10 AM

Accepted (5.4.0 Beta 8)

FROM: bgoodrich DATE: Monday, April 24, 2006 12:28:30 PM

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6542                                            |
| Subject: Concentrated load on girder not used in analysis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Armbrecht, Tim          | 6/29/2005 12:11:38 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

Complete Issue Information

|                    |          |      |           |
|--------------------|----------|------|-----------|
| Kennelly, Krisha   | Resolved |      | Education |
| Duray, Jim         | New      | High | Unknown   |
| Ordoobadi, Mehrdad | Assigned |      | Bug       |
|                    | Resolved |      |           |
|                    | Accepted |      |           |
|                    | Closed   |      |           |
| Ordoobadi, Mehrdad | Closed   | High | Bug       |

Contacts

| Name            | Company         | Email 1                    | Phone 1      |
|-----------------|-----------------|----------------------------|--------------|
| Tim Armbrecht   | Illinois DOT    | tim.armbrecht@illinois.gov | 217-782-6266 |
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com  |              |

Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | REVISED SPAN<br>42NB_43NB.bbd<br>2206050.bbd |             |

Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 6543.14792 | Closed        | Error preparing stringer dead load reactions on floorbeams |

Description

FROM:kkennelly DATE:6/29/2005 8:11:07 AM  
Originally submitted in 6535. See that incident for bbd file.

3. When a Concentrated Load Moment is applied to a girder, there is no affect on the analysis. For an example, try Superstructure Definition, "Spans 11-14" where a 500 ft-k moment has been specified.

FROM:kkennelly DATE:6/29/2005 9:04:30 AM  
The Engine Related help for BRASS LFD indicates that concentrated moments are not accepted by BRASS. It instructs you to enter 2 concentrated forces as a couple to produce the same moment. The log file created when you run BRASS also contains the following message:

WARNING (High):  
BRASS does not support concentrated moments!

### Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 6543                                                      |
| Subject: Error preparing stringer dead load reactions on floorbeams |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Armbrecht, Tim          | 6/29/2005 12:12:53 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Duray, Jim         | New      | High     | Unknown        |
| Ordoobadi, Mehrdad | Assigned |          |                |
| Kennelly, Krisha   | Resolved |          | Bug - Domain 1 |
| Ordoobadi, Mehrdad | Assigned |          |                |
|                    | Resolved |          |                |
|                    | Resubmit |          |                |
|                    | Assigned |          |                |
|                    | Resolved |          |                |
| Ordoobadi, Mehrdad | Resolved | High     | Bug - Domain 1 |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | GFSCopyProb(540B6).xml |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6544.14791 | Resolved      | Problem copying a floor system |

## Complete Issue Information

### Description

FROM:kkennelly DATE:6/29/2005 8:12:21 AM

Originally submitted in incident 6535. See that incident for bbd file.

4. In Superstructure Definition, "Spans 11-14" when attempting to run the analysis of the floorbeam, "Flbm2" the following error occurs...  
Error generating LFD/ASD load commands!  
Error generating load group commands!  
Error in the loads utility!  
Error getting stringer dead load reaction!  
Error preparing stringer dead load reactions!

FROM:kkennelly DATE:6/29/2005 9:39:58 AM

This has something to do with the floorbeam stringer dl reactions being up to date but I can't really figure it out. Open the bws, try to analyze Flbm2, get this error cause line 986 in DoFlrbmStringerDLReaction returns false. (Looks like stringer modification status = up to date but fb modification status = not up to date and CDoStringerDLReactionDetailSet::GetTentativeReaction() returns false cause its array is empty). Try to analyze the fb a second time and it works.

FROM:kkennelly DATE:7/14/2005 12:12:09 PM

I've attached "revised span 42nb\_43nb.bbd" from Cincia Zeng at Lichtenstein. This file is having the same problem when FlrbmStringerDLReactionPtr->GetStringerReaction() is called in LoadsUtility.cpp for the stage 2 DL. User has chosen to override stage DL2 on the Superstructure Loads window.

FROM:kkennelly DATE:7/14/2005 12:17:46 PM

Trying to run the floorbeam mbr alt 1 a second time does not work like it did for the workaround to this original incident.

FROM:mordoobadi DATE:7/15/2005 1:33:19 PM

The problem is with the Up-to-date flag of the dead load reactions. DoModificationStatus functions for the Floorbeam and Stringer Members changed so that they do not check the dead load reactions objects.

With this change and cleaning up the dead load reactions in the database for the Cicina's bridge I was able to perform an analysis accept and apply DL reactions and do another analysis successfully.

FROM:mordoobadi DATE:7/15/2005 3:20:53 PM

Fixed for 5.4. and 5.3.2(?).

FROM:bmcaffrey DATE:Tuesday, September 27, 2005 2:29:01 PM

Is there any go-around for this?

FROM:jihnat DATE:10/18/2005 8:45:21 AM

No workaround.

Also reported by Chris Jackman, Fisher Associates (attached 2206050.bbd)

FROM:mordoobadi DATE:2/6/2006 4:44:40 PM

Accepted by Tim Armbrecht 12/12/2005

4/19/2016 3:04:30 PM

HRS AASHTO

733



## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 6544                          |
| Subject: Problem copying a floor system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Armbrecht, Tim          | 6/29/2005 12:13:37 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM  |
| Priority: High                        |                       |
| Category: Bug - Domain 1              |                       |

## History

| Primary Contact                | Status                              | Priority | Category               |
|--------------------------------|-------------------------------------|----------|------------------------|
| Duray, Jim                     | New                                 | High     | Unknown<br>Enhancement |
| Kennelly, Krisha<br>Duray, Jim | Assigned                            |          |                        |
| Duray, Jim                     | Suspended<br>Suspended<br>Duplicate | High     | Enhancement            |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 6545.14790 | Suspended     | Distribution of appurtenance loads in a floor system |

## Description

FROM:kkennelly DATE:6/29/2005 8:13:37 AM  
Originally submitted in 6535. See that incident for bbd file.

5) Whole Bridge or Superstructure Definition Copy problems (test by copying "Spans 11-14"):  
When copying and pasting a whole bridge file or just the Superstructure Definition of a Floor-System

4/19/2016 3:04:30 PM

HRS AASHTO

734

## Complete Issue Information

Superstructure, the following errors occur...

- a) For the Stringer Definitions, there are no supports. Under Supports is the message, "Zero spans were defined for this member". To correct this problem, one must first open the main Stringer Definition window and then select <OK>.
- b) Under the stringer definitions, "Bearing Stiffener Locations" becomes inaccessible.
- c) When attempting to analyze a stringer, the following error occurred, "Unknown error initiating member analysis!". Note: Prior to the copy, in the source, the stringer analyzed w/no problem.
- d) The Bridge file could not be saved after creating a copy of a Superstructure Definition within it.

FROM:kkennelly DATE:11/7/2005 3:21:19 PM

The problem occurs when we copy a bridge that has Stringer Definitions associated with a Stringer Group Def. When we make that copy, the new Stringer Definition doesn't have any supports defined in the stringer Supports window. When we copy just the Stringer Definition in the BWS, we break the link to the Stringer Group Def in the new copy so that works ok.

Code that was added to DoSteelRolledBeamDef, etc. for VI5461 seems to have turned off the copy of this data for stringers that are associated with stringer group defs.

FROM:kkennelly DATE:11/7/2005 3:36:14 PM

Fixed for 5.4.0, beta build 2.

FROM:tarmbrecht DATE:Monday, December 12, 2005 2:43:24 PM

Beta 2

5 a) and b) appear to have been resolved. However, while 5 c) now runs and appears to give correct results, it generates a system error, "unable to locate data encapsulation objects" repeated 21 times, and then the same error as before. 5 d) has not been resolved - still can't save file after creating a copy of a superstructure definition within it.

FROM:kkennelly DATE:12/16/2005 11:05:05 AM

Assigned to Mehrdad since I will be out of the office for awhile. Thanks.

FROM:mordoobadi DATE:1/31/2006 9:12:52 AM

Fixing of this incident has broken copying of the whole structure definition or the whole bridge. (Incident 7057)

FROM:mordoobadi DATE:1/31/2006 9:29:37 AM

Fixed for 5.4 Beta 5.

FROM:mordoobadi DATE:3/20/2006 8:56:58 AM

Comments From Tim Armbrecht:

-----  
2. Incident 6544 (possibly 7057): (See GFSCopyProb(540B6).xml.) While the results are correct (as also reported for Beta 2 on 12/12/05) and the error "unable to locate data encapsulation objects" repeated 21 times no longer occurs, now appearing is the error message, "Unknown error initiating member analysis! - Line 1041 in source file .\UiAnalysisProgressDlg.cpp." Run Unit1 Stringer 1, N Stringer.

4/19/2016 3:04:30 PM

HRS AASHTO

735

Complete Issue Information

FROM:mordoobadi DATE:9/28/2006 10:32:43 AM  
After runing in debug mode I noticed that the problem is that  
CDoFlrSystemFloorbeamMbr::UpdateStringerSupportList() is not called after the copy.

FROM:mordoobadi DATE:10/2/2006 2:03:13 PM  
Fixed for 5.5 Beta 5 and 5.6.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 6545                                                |
| Subject: Distribution of appurtenance loads in a floor system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Armbrecht, Tim          | 6/29/2005 12:14:39 PM |
| Modified By: hlee                     | 7/17/2014 2:46:47 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:6/29/2005 8:14:28 AM  
Originally submitted in 6535. See that incident for bbd file.

6) In a girder-floorbeam system Virtis by default incorrectly distributes parapet and other Stage 2 dead loads, located on or outside of the main girders, to stringers and floorbeams that are between the girders. These loads should be considered as supported only by main girders, outside stringers and cantilevered portions of floorbeams only. This is due to the much greater stiffness of the main girders relative to the stringers.

FROM:kkennelly DATE:6/30/2005 8:55:21 AM  
The option to distribute stage 2 DL states that it will be distributed equally to all girders so the system is

Complete Issue Information

working as designed so this is not a bug. It is an enhancement request to add a distribution option based on stiffness of the members. (I think that will be hard for Virtis to determine, user requested outside stringers get load but inside stringers don't. They are probably the same stiffnesses.)

FROM: Herman Lee DATE: 7/17/2014 10:43:08 AM Eastern Daylight Time  
Duplicate of 8379 and 10161.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 6546                                                                  |
| Subject: MemberLoadsView.cpp not checking for type of superstructure definition |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Kennelly, Krisha        | 6/29/2005 12:58:09 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact    | Status      | Priority | Category |
|--------------------|-------------|----------|----------|
| Duray, Jim         | New         | High     | Unknown  |
| Bhanushali, Girish | Assigned    |          |          |
|                    | Development |          |          |
|                    | Resolved    |          |          |
| Bhanushali, Girish | Resolved    | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:04:31 PM

HRS AASHTO

737

Complete Issue Information

---

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | POIEngGFSProb.bbd   |             |

Tasks

| Name       | Current State | Summary                                                                   |
|------------|---------------|---------------------------------------------------------------------------|
| 6547.14788 | Closed        | Can't set POI engine properties for stringers or floorbeams in GFS bridge |

Description

FROM:kkennelly DATE:6/29/2005 8:56:25 AM

See bbd file for 6535. For "Spans 11-14" open the Girder Member Loads window for Girder 1. Asserts in line 405 cause we assume it is a Girder System Struct Def when it is really a floor system struct def.

FROM:gbhanushali DATE:10/27/2005 11:03:24 AM

Fixed for 5.4 beta 2

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 6547                                                                     |
| Subject: Can't set POI engine properties for stringers or floorbeams in GFS bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Armbrecht, Tim          | 6/29/2005 6:10:00 PM |
| Modified By: administrator            | 6/19/2008 4:19:51 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 6549.14786 | Resolved      | Concurrent shear reported by BRASS is incorrect |

### Description

FROM:tarmbrecht DATE:Wednesday, June 29, 2005 2:10:00 PM

In the attached bbd file, when attempting to access the Engine tab under Points of Interest for a stringer or floorbeam (works OK for Girder), an error message appears (see below) and any changes are not kept. In the bridge input file provided try it under Superstr. Def. "Arch Floor (Typ.)". (Note: The attached example is v. 5.3 the problem is also present in 5.3.1 (Beta).)

Error Debug Text...

Code meaning = Invalid pointer

Source = null

Description = null

02:24:25 PM - Line 370 in source file .\UiBmDefPointOfInterestEngineDlg.cpp.

FROM:jihnata DATE:6/30/2005 9:04:47 AM

Fixed for 5.3.1 Sent DLL for testing.

FROM:jihnata DATE:12/13/2005 7:07:33 AM

Track field Accept.

4/19/2016 3:04:31 PM

HRS AASHTO

739

Complete Issue Information

FROM:tambrecht DATE:Tuesday, December 13, 2005 5:02:40 PM

|                                                          |
|----------------------------------------------------------|
| Issue ID: 6549                                           |
| Subject: Concurrent shear reported by BRASS is incorrect |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Hart, Erich             | 6/29/2005 6:55:32 PM |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Wednesday, June 29, 2005 2:55:32 PM

E-mail thread from Ken Teng:

Hi Brian,

Thanks for the help.

But I still can not get the 20.28 kips. I use BOTH the trucks from left to right & from right to left. I can get the Shear=19.66 k (w/Max. Moment).

I also got the Vmax = 48.13 which match the output, but only got the Max M=286.92 k-ft (The output M= 287.2). A little off.

4/19/2016 3:04:32 PM

HRS AASHTO

740

Complete Issue Information

Please see my calculations for details (the attached file – I also make some notes, please double click on the “?” sign).

I am not sure if BRASS uses both directions for truck movements. If so, the second case on my calculation sheet#2 will control. But you said that BRASS shows the truck location at 9.85ft (on my second case of calculation sheet#1).

Please advise.

I appreciate your help.

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

-----Original Message-----

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]

Sent: Friday, June 24, 2005 12:36 PM

To: Ming Hung Teng

Cc: Krishna Kennelly

Subject: RE: Shear - AASHTO 9.20

Ken,

To help understand how BRASS determines the actions and concurrent actions, turn on the output to get a concurrent actions report. Change the "Action Output Level" in the engine properties on the Analysis Settings window to option 4. This report will be printed at the bottom of the output file. The

4/19/2016 3:04:32 PM

HRS AASHTO

741



## Complete Issue Information

report shows the maximum actions, concurrent actions, and the corresponding truck position that caused the actions. The DISTANCE TO LEAD AXLE is somewhat misleading in that is displayed as an integer although a real number is used internally. I was able to determine that BRASS positioned the military truck at 9.85 feet to the lead axle (the other axle was at 5.85 feet). Remember that BRASS moves the truck across the bridge in increments of (span length / Wheel advancement denominator (WAD)) or  $49.25/100=0.4925$  feet in your case. Using this position (barring round-off issues), I was able to match the maximum moment and concurrent shear at a POI of 6 ft. If you use a larger WAD, say 200, you will get different concurrent actions because the axles will be in a slightly different location. Also, BRASS is using an impact for shear at 6 ft of 1.2972. Only the impact for the reaction is shown in the output report that you can get from Virtis.

Brian L. Goodrich  
BridgeTech, Inc.

-----Original Message-----

From: Ming Hung Teng [mailto:mteng@RQAW.com]  
Sent: Friday, June 24, 2005 8:11 AM  
To: Goodrich@BridgeTech-Laramie.com  
Subject: RE: Shear - AASHTO 9.20

Hi Brian,

Good Morning! Thanks for the help.

After reviewing the incident 6511 and AASHTO 9.20.2.2, I agree that the concurrent shear shall be used for the maximum moment at the section. I went back to check some POI points and found out something wired.

For Military Loading (easy to check):

12 kips & 12 kips 4-ft apart. Maximum moment happened when putting the 12-kip load right at the POI.

Below is what I found:

BRASS computes the 10th points for shear concurrent with maximum moment WITHOUT subtracting the 12 kips.

4/19/2016 3:04:32 PM

HRS AASHTO

742

## Complete Issue Information

When you assign the POI points (not the 10th points), the BRASS computes the shear concurrent with maximum moment WITH subtracting the 12 kips.

For example, POI=6ft (I checked 4ft, 6ft, and 8ft ==> same conclusions)

### \*\*\*\* Summary of Actions for Calculating Shear Capacity

|                                    |   |                |
|------------------------------------|---|----------------|
| Dead load shear                    | = | 33.58 kips     |
| Dead load moment                   | = | 233.94 ft-kips |
| Live load pos shear                | = | 48.09 kips     |
| Shear concurrent with maximum mom. | = | 20.28 kips     |

I just can not figure out how BRASS gets the 20.28 kips (with Wheel Dist.=1.861 & l=1.2869). Maybe I did it wrong. Please show me the correct approach.

Please advise. Thank you very much.

Have a wonderful weekend!

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

4/19/2016 3:04:32 PM

HRS AASHTO

743

Complete Issue Information

-----Original Message-----

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]  
Sent: Tuesday, June 21, 2005 4:41 PM  
To: Ming Hung Teng  
Cc: 'Krisha Kennelly'  
Subject: RE: Shear - AASHTO 9.20

Ken,

The last sentence of Article 9.20.2.2 states that "... Mmax and Vi, shall be computed from the load combination causing maximum moment at the section."

There is some shear capacity discussion in Incident 6511 that might be of interest.

Brian L. Goodrich  
BridgeTech, Inc.

-----Original Message-----

From: Ming Hung Teng [mailto:mteng@RQAW.com]  
Sent: Tuesday, June 21, 2005 9:34 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Krisha Kennelly  
Subject: RE: Shear - AASHTO 9.20

4/19/2016 3:04:33 PM

HRS AASHTO

744

Complete Issue Information

Hi Brian,

Thanks for the help. But I still do not understand the "Shear Concurrent with maximum Moment". Does it mean the shear value (@POI=6ft) when the maximum moment right at the POI=6ft? Or shear value when the maximum moment at mid span (my case is simple span bridge)?

For truck loading, the "Shear" and "Shear concurrent with maximum moment" are the same for all 10th points.

Also, I double checked with PCI manual and found out there is no "Shear Concurrent with maximum Moment" available there.

Please advise. Thank you,

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

-----Original Message-----

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]

4/19/2016 3:04:33 PM

HRS AASHTO

745

Complete Issue Information

Sent: Monday, June 20, 2005 4:13 PM

To: Ming Hung Teng

Cc: 'Krisha Kennelly'

Subject: RE: Shear - AASHTO 9.20

Ken,

At the 101.218 POI, the MAXIMUM live load shear is 58.91, which leads to your calculation of 171.55 kips for Vu. However, the CONCURRENT shear (22.02 kips) needs to be used here, which results in  $V_{ci} = 57.9$  kips.

Brian L. Goodrich

BridgeTech, Inc.

-----Original Message-----

From: Ming Hung Teng [mailto:mteng@RQAW.com]

Sent: Monday, June 20, 2005 2:37 PM

To: Goodrich@BridgeTech-Laramie.com

Cc: Krisha Kennelly

Subject: RE: Shear - AASHTO 9.20

Hi Brian,

4/19/2016 3:04:33 PM

HRS AASHTO

746

Complete Issue Information

Thanks for the help.

Please check the previous email I sent. The Vi (@ POI = 6ft) does not match the formula you wrote below. I also checked the 1.10L and 1.20L, they matched. Thank you,

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

-----Original Message-----

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]

Sent: Monday, June 20, 2005 3:30 PM

To: Ming Hung Teng

Cc: 'Krisha Kennelly'

Subject: RE: Shear - AASHTO 9.20

Hi Ken,

I was in South Dakota last week doing Opis training. Regarding your "Vi" question, "Vi" is the factored shear concurrent with the maximum factored

4/19/2016 3:04:33 PM

HRS AASHTO

747

Complete Issue Information

moment at the section. BRASS uses the same method as PCI for determining this shear:

$$V_i = \text{Gamma} * (\text{Beta (DL)} * V_d + \text{Beta (LL)} * V_l) - V_d$$

This calculation and others are shown in the intermediate output for a point of interest. See the heading "Summary of Actions for Calculating Shear Capacity" in the .OUT file.

Brian L. Goodrich  
BridgeTech, Inc.

-----Original Message-----

From: Ming Hung Teng [mailto:mteng@RQAW.com]  
Sent: Monday, June 20, 2005 6:36 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Krisha Kennelly  
Subject: RE: Shear - AASHTO 9.20

Good Morning Brian,

I check the incident 5054 and found out the limits M<sub>cr</sub>/M<sub>max</sub> to an upper boundary of 1.0. This answers one of my two questions. But another

4/19/2016 3:04:33 PM

HRS AASHTO

748

Complete Issue Information

question I had is "Vi" calculation.

Please advise. Thank you,

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

-----Original Message-----

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]

Sent: Wednesday, June 15, 2005 12:15 PM

To: Ming Hung Teng

Subject: RE: Shear - AASHTO 9.20

Ken,

Refer to incident 5054 on the Support Website. I think there are cases when BRASS limits Mcr/Mmax to an upper boundary of 1.0. Maybe that is the source of your problem. Other than that, I don't have any input into how BRASS internally computes its values. You can try contacting Brian Goodrich but I know he is out of the office for the next 2 days.

4/19/2016 3:04:33 PM

HRS AASHTO

749



Complete Issue Information

Regards,

Krishna Kennelly, PE

Michael Baker Jr., Inc.

100 Airside Drive

Airside Business Park

Moon Township, PA 15108

(412) 269-7914

>>> "Ming Hung Teng" <mteng@RQAW.com> 06/15/05 1:07 PM >>>

Hi Krishna,

Actually, I did. But I can not figure what Vi VIRTIS use. As I mentioned on previous email, the Vi is in the EQ.9-27.

I double check the other POI, and it is correct. I guess maybe VIRTIS (BRASS) does different calculations for different POI. Is it true?

If

so, please refer me to the formula.

Thank you,

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4/19/2016 3:04:33 PM

HRS AASHTO

750

Complete Issue Information

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

-----Original Message-----

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]

Sent: Wednesday, June 15, 2005 11:46 AM

To: Ming Hung Teng

Subject: Re: Shear - AASHTO 9.20

Hi Ken,

You should create a point of interest in Virtis, run BRASS and then review the BRASS output file. The BRASS output file will contain detailed calculations that you can follow that should explain what values they are using in the equation.

Regards,

Krisha Kennelly, PE

Michael Baker Jr., Inc.

100 Airside Drive

Airside Business Park

4/19/2016 3:04:34 PM

HRS AASHTO

751

Complete Issue Information

Moon Township, PA 15108

(412) 269-7914

>>> "Ming Hung Teng" <mteng@RQAW.com> 06/15/05 12:38 PM >>>

Hi Krishna,

Could you show me how VIRTIS (BRASS) computes the "Vi - AASHTO EQ.9-27" for prestressed concrete beam?

From PCI:

$$(V)_i = (V_u)_{\text{Factored}} - (V_d)_{\text{non-factored}}$$

Thank you,

Regards,

Ming-Hung (Ken) Teng

RQAW Corp.

4755 Kingsway Dr., Suite 400

Indianapolis, IN 46205-1547

(317) 255-6060 X 260

FAX: 317-255-8354

FROM:bgoodrich DATE:Wednesday, June 29, 2005 2:56:40 PM

There is a problem in BRASS when storing concurrent actions. The integer portion of the truck position causing the maximum actions is stored. The concurrent actions are only stored when this position is different from the previous one. In short, the concurrent actions from the previous maximum are sometimes stored. I have forwarded this issue to WYDOT.

4/19/2016 3:04:34 PM

HRS AASHTO

752

Complete Issue Information

FROM: bgoodrich DATE: Monday, July 18, 2005 4:10:01 PM  
 WYDOT has assigned this issue to BRASS Problem Log 609.

FROM: bgoodrich DATE: Thursday, September 22, 2005 10:44:22 AM  
 The storing of the concurrent actions have been corrected.

FROM: bgoodrich DATE: Friday, November 04, 2005 3:38:29 PM  
 Fixed for Virtis 5.4.0.

FROM: bgoodrich DATE: Tuesday, April 18, 2006 3:29:04 PM  
 The changes to the engine for storing concurrent actions have been undone. The concurrent actions at a point may not be caused by the same truck position that caused the maximum action. BRASS moves the truck across the influence line and looks for a maximum action. When a new maximum is found, BRASS checks if the truck position is at least one foot different from the last position. If so, the concurrent actions are stored directly. If the new position is within one foot of the stored position, BRASS only stores each concurrent action if its absolute value is greater than the previously stored value. This process is done so a particular concurrent action does not greatly vary by moving the truck by a few inches. If this process were not done, moving the truck a few inches would cause concurrent shears to change by the weight of one axle times its wheel fraction and impact. The concurrent actions are sometime used to calculate a capacity, such as in shear capacity of a P/S concrete section per AASHTO Std. Eq. 9-27. A drop in concurrent live load shear can cause a dramatic decrease in the shear capacity, which can lead to a poor rating factor.

|                                               |
|-----------------------------------------------|
| Issue ID: 6554                                |
| Subject: Resistance Factors and Stress Limits |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Merklinger, Martin      | 7/7/2005 11:02:12 PM |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: Medium                      |                      |
| Category: Education                   |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | Medium   | Unknown   |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | Medium   | Education |

Contacts

4/19/2016 3:04:35 PM

HRS AASHTO

753

## Complete Issue Information

| Name              | Company      | Email 1                    | Phone 1      |
|-------------------|--------------|----------------------------|--------------|
| Martin Merklinger | RockSol      | merklinger@rocksol.com     | 303-962-9326 |
| Tim Armbrecht     | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SaveTooLong.bbd     |             |

## Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 6556.14779 | Duplicate     | Saves take too long |

## Description

FROM:mmerklinger DATE:Thursday, July 07, 2005 7:02:12 PM

In recent ratings, the Colorado DOT requested to make the controlling rating flexural. Therefore, if a bearing stiffener or shear strength controlled, adding transverse stiffeners or increasing the size of the bearing plate would force flexural to control. However, we did try changing the resistance factors. Changing the resistance factors would not change the ratings. This does not make sense since changing the resistance factors would change the capacity. How would we change our input besides adding stiffeners/falsifying sizes to get the desired results? Changing resistance factors seems like the proper solution but doesn't give desired results...

In rating a prestressed girder, concrete tension was controlling the inventory rating. Therefore, in the stress limits for this particular girder's concrete type and stress limits, we increased the initial and final allowable tension stresses. Once again, we would have thought increasing the allowable stresses would increase the rating. It would not. In trying various things to get the controlling case in the rating to change, the only this which would relieve the concrete tension from controlling was to decrease the Pjack. Of course, you can't decrease the actual Pjack and get a valid rating. Since changing the stress limits did not affect the rating, how would be alter the input in order to achieve our desired results?

FROM:kkennelly DATE:7/13/2005 3:05:28 PM

For the bearing stiffener question: You need to specify that you are overriding the default LFD factors on the Member Alternative: Factors tab. On that tab pick the set of LFD factors in your bridge for which you have changed the resistance factor. Then your resistance factor should be used by BRASS.

For prestressed girders: The BRASS LFD program does not use the allowable tension stresses on the Stress Limits window in Virtis. Refer to the Engine Related Help for that window to see that BRASS LFD does not use this info. BRASS internally computes the allowable stresses based on the strength of the concrete. Does changing the resistance factor in the LFD Factor window and specifying that factor on the Member Alternative: Factors tab work for you?

Note: The ability to have Virtis ignore the rating factors for user specified actions (eg, bearing stiffeners, flexure, etc.) has been on the enhancement list for several years and will be voted on by the

4/19/2016 3:04:35 PM

HRS AASHTO

754

Complete Issue Information

users at this year's User Group meeting Aug 3-6 in Baltimore.

FROM:kkennelly DATE:7/13/2005 3:15:32 PM

|                              |
|------------------------------|
| Issue ID: 6556               |
| Subject: Saves take too long |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 7/8/2005 6:27:10 PM  |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: High                        |                      |
| Category: Bug - Performance           |                      |

History

| Primary Contact    | Status    | Priority | Category          |
|--------------------|-----------|----------|-------------------|
| Duray, Jim         | New       | High     | Unknown           |
| Ordoobadi, Mehrdad | Assigned  |          | Bug - Performance |
|                    | Duplicate |          |                   |
| Ordoobadi, Mehrdad | Duplicate | High     | Bug - Performance |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Friday, July 08, 2005 2:27:11 PM

In the attached file SaveTooLong.bbd, it takes an inordinate amount of time (nearly 2 minutes) to accomplish a save after very minimal changes and longer when more substantial changes are made. To test for minimal changes, we went into the Description text and entered a word of text. The file is 5.3, but we're noticing similar delays in 5.3.1.

4/19/2016 3:04:36 PM

HRS AASHTO

755

Complete Issue Information

FROM:mordoobadi DATE:9/21/2005 2:00:12 PM

The bridge has 9 super-structure definitions in it. Considering the size of the bridge, the two minute save time is not too bad. Actually I saved a similar change to the bridge in 45 seconds.

|                                       |
|---------------------------------------|
| Issue ID: 6557                        |
| Subject: number of distribution loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 7/8/2005 6:34:46 PM  |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Unknown       |
| Goodrich, Brian | Assigned  |          | Enhance BRASS |
|                 | On Hold   |          |               |
|                 | Suspended |          |               |
|                 | Duplicate |          |               |
| Goodrich, Brian | Duplicate | High     | Enhance BRASS |

Contacts

4/19/2016 3:04:36 PM

HRS AASHTO

756

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | WhFctrCalcErrorPic.doc |             |
|      | WhFctrCalcError.bbd    |             |

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6558.14777 | Closed        | Error in shear wheel distribution calculation? |

### Description

FROM:tarmbrecht DATE:Friday, July 08, 2005 2:34:46 PM

Is there any interest in increasing the number of distributed loads allowed by BRASS? In the attached bbd file, when trying to analyze the main girder of Superstructure Definition "Spans 19-23" the following error message appears...

Error generating LFD/ASD load commands!

04:21:25 PM - Line 243 in source file .\BrassStdLoadControl.cpp.

Error generating load group commands!

04:21:25 PM - Line 1328 in source file .\BrassLoadControl.cpp.

Load Case: Deck + Haunches + Stringer+Floorbeam Loads

The number of distributed loads exceeds the maximum allowed by BRASS!

No. of distributed loads = 61 (Maximum = 38)

04:21:24 PM - Line 1120 in source file .\EngineExport.cpp.

It appears that BRASS should be enhanced to substantially increase the maximum number of distributed loads that it can handle.

If there is a better way to analyze the subject structure, I'd appreciate some insight. Thanks.

FROM:bgoodrich DATE:Wednesday, July 13, 2005 2:23:30 PM

I have forwarded this request to WYDOT.

FROM:bgoodrich DATE:Monday, July 18, 2005 6:56:46 PM

This is a duplicate of Incident 3662.

---

4/19/2016 3:04:38 PM

HRS AASHTO

757



### Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6558                                          |
| Subject: Error in shear wheel distribution calculation? |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 7/8/2005 6:47:01 PM  |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | On Hold  |          | Bug      |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI6559.bbd          |             |

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 6559.14776 | Resolved      | RC POI Wizard not creating correct poi if bar starts to left of first support |

### Description

FROM:tarmbrecht DATE:Friday, July 08, 2005 2:47:01 PM

Could you please explain how the calculation for the shear wheel load distribution is calculated? In the attached bbd file, when doing a "Compute from Typical Section" to get Wheel Distribution Factor, we feel erroneous values (see below) are being generated for Shear at Supports for Member "6 – 7th N Int", Member Alternative "36WF141-NC". This beam is flanked by a beam 6.5' left and a beam 3.0' right. The calculation appears to be correct for all the other beams.

4/19/2016 3:04:38 PM

HRS AASHTO

758

Complete Issue Information

Generated values: 1-Lane – 0.692, Multi-Lane – 2.192.

Correct values: 1-Lane & Multi-Lane – 1.000

FROM:kkennelly DATE:7/11/2005 8:15:57 AM

For the shear at the supports DF, Virtis positions the wheels within the lane positions you have defined. Since you have 2 travelways defined that exclude the median, Virtis is not placing a wheel directly over this member. It places the first wheel 2' from the edge of the lane you have defined. If you want the girders under the travelway to be subject to full live load, define 1 travelway with a left distance of -40 and a right distance of 40.

FROM:tambrecht DATE:Wednesday, July 13, 2005 9:43:03 AM

I understand what you are saying. However, my experience tells me that the multi-lane shear DF for this member cannot be greater than two. Please see the attached doc file which contains the diagram. The circled member is the member in question. It is under the edge of a travelway with a beam three feet away on one side and 6.5 feet away on the other. How can that member be taking more than two wheel loads? Furthermore, how can the DF for this member be greater that the DF for the beam that is 6.5 feet away, completely underneath the travelway and spaced 6.5 feet from the beams on either side of it? Please investigate, because something appears to be wrong here. Thanks, Tim

FROM:kkennelly DATE:7/13/2005 11:02:26 AM

FROM:kkennelly DATE:7/13/2005 11:26:13 AM

You are correct, the single lane shear at support df should be equal to the multi-lane df. The code was using a variable that was not initialized so the 2.192 was a garbage number. Fixed for 5.4 or any 5.3 service packs that come before that.

FROM:kkennelly DATE:12/16/2005 11:34:07 AM

Closed based on accepted in track field.

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 6559                                                                         |
| Subject: RC POI Wizard not creating correct poi if bar starts to left of first support |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 7/11/2005 6:35:08 PM |
| Modified By: administrator            | 6/19/2008 4:19:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI6560.bbd          |             |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 6560.14775 | Resolved      | Error rating timber deck for girderline structure def |

### Description

FROM:kkennelly DATE:7/11/2005 2:35:28 PM

POI wizard generates a point of interest at the max of dEffDepth, 15\*dBarDiam, dSpanLength/20 from the start of the bar. If the bar starts to left of first support we add the max to zero instead of true negative start value of the bar.

FROM:kkennelly DATE:7/11/2005 2:40:36 PM

Attached bbd. POI generated at 1.5' when it should be at 1.0'.

FROM:kkennelly DATE:10/7/2005 8:18:38 AM

Fixed for version 5.4.

Issue ID: 6560

Subject: Error rating timber deck for girderline structure def

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Goodrich, Brian         | 7/11/2005 10:59:05 PM |
| Modified By: administrator            | 6/19/2008 4:19:50 PM  |
| Priority: High                        |                       |
| Category: Bug - Export 2              |                       |

### History

| Primary Contact    | Status    | Priority | Category       |
|--------------------|-----------|----------|----------------|
| Duray, Jim         | New       | High     | Bug            |
|                    | Suspended |          | Change Request |
|                    |           |          | Enhancement    |
| Lee, Herman        | Assigned  |          | Bug            |
| Ordoobadi, Mehrdad |           |          |                |
| Lee, Herman        |           |          |                |
|                    | Resolved  |          |                |
| Lee, Herman        | Resolved  | High     | Bug            |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 6567.14768 | Resolved      | longitudinal stiffener ranges - length in inches |

### Description

FROM:bgoodrich DATE:Monday, July 11, 2005 6:59:05 PM

Entered for Jim Duray:

I'm at VDOT training and we had a problem rating a timber deck on steel girders (girder-line). Should we be able to do that?

FROM:bgoodrich DATE:Monday, July 11, 2005 7:00:08 PM

4/19/2016 3:04:39 PM

HRS AASHTO

761

## Complete Issue Information

I thought we should be able to do that, but I tried it and received several errors. I'm not sure why this is happening though.

Error generating Madero dead load commands!  
Error preparing stringer bridge dead loads!  
Invalid or unsupported member type detected!  
Error computing deck dead loads!  
Unable to retrieve member alternative component id!  
Error retrieving engine specific member alt properties!  
Invalid analysis module id!  
Unable to retrieve member alternative component id!  
Invalid analysis module id!  
Unable to retrieve analysis event component id!  
Error retrieving engine specific analysis event properties!  
Invalid analysis module id!

FROM:bgoodrich DATE:Monday, July 11, 2005 7:00:27 PM

Entered for Jim Duray:

Those are the same messages we get...do you have time to investigate?

FROM:bgoodrich DATE:Monday, July 11, 2005 7:00:47 PM

It looks like when the GetAnalysisModuleSysId function gets called for the DeckPanelRangeSetPtr in MaderoBase.cpp, an ID of 0 is returned. When the same function is called in MaderoAnalysisCtl.cpp, an ID of 4 is returned. The addresses of the pointers between the two files are identical, so I don't understand why this is happening. Do you have any ideas?

FROM:kkennelly DATE:7/15/2005 8:37:30 AM

You have to call DeckPanelRangeSetPtr ->MoveFirst() before you can call GetAnalysisModuleSysId(). You have to position yourself in the set before you can call any functions on it.

Note: Even with the above change I can't rate the timber deck in the attached girder line struct def. Looks like the code in CMaderoDeadLoads::ComputeGirderLineDeckLoads() does not support a timber deck on steel beams.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 11:17:51 AM

I added the DeckPanelRangeSetPtr->MoveFirst() function to a few locations and was able to rate the timber deck on a girderline. The Madero export contains a flag (m\_bSteelGirder) to indicate if the deck is supported by steel girders. This flag is used in the CMaderoDeadLoads::ComputeGirderLineDeckLoads() function.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 11:28:52 AM

The analysis now runs, but after rating the deck from the bridge workspace, I cannot open the Tabular Report from the toolbar or menu. I click the button and nothing happens, not even an error.

FROM:jihnat DATE:10/7/2005 1:38:13 PM

The Analysis Report is fixed for 5.4.0 (Alpha Build 2)

|                |
|----------------|
| Issue ID: 6567 |
|----------------|

4/19/2016 3:04:40 PM

HRS AASHTO

762

## Complete Issue Information

|                                                            |                      |
|------------------------------------------------------------|----------------------|
| Subject: longitudinal stifferner ranges - length in inches |                      |
| Folder: /Virtis/Support Center/Virtis                      |                      |
| Primary Contact: Lee, Herman                               |                      |
| Submitted By: Armbrecht, Tim                               | 7/15/2005 7:24:13 PM |
| Modified By: administrator                                 | 6/19/2008 4:19:49 PM |
| Priority: High                                             |                      |
| Category: Bug                                              |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Resolved  |          | Education   |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B008172.dat         |             |
|      | Sections.lby        |             |
|      | TRUCK.DAT           |             |
|      | truck.lby           |             |
|      | KANSAS.DAT          |             |

## Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 6570.14765 | Suspended     | BRASS Import |

## Description

4/19/2016 3:04:41 PM

HRS AASHTO

763

Complete Issue Information

FROM:tarmbrecht DATE:Friday, July 15, 2005 3:24:14 PM

Is there a reason the "length" of the longitudinal stiffener range is in inches when the start and end distances are in feet? The only reason I can think of is because the user wants the length to be accurate down to a fraction of an inch. However, it seems like it would be OK if the user were to use fractions of feet. I think that would be accurate enough and it would eliminate the confusion of mixing units.

FROM:hlee DATE:7/19/2006 11:09:55 AM  
Changed Category to Enhancement.

FROM:jduray DATE:12/13/2007 9:14:04 AM  
I disagree (and so does the TAG. Let's just fix it since I suspect it is minor effort.

FROM:hlee DATE:12/14/2007 1:51:21 PM  
Discussed with Jim. We are going to change the default unit in the database.  
Mehrddad, please assign to me for testing after you are done.

FROM:mordoobadi DATE:12/26/2007 1:43:30 PM  
Fixed in the data dictionary.  
US Unit changed from inches to ft.  
SI Unit changed from mm to m.

FROM:hlee DATE:12/27/2007 12:34:13 PM  
Tested user interface and report tool.  
Resolved for 6.0.

FROM:tarmbrecht DATE:Monday, May 12, 2008 5:06:46 PM  
Accepted in 6.0

|                       |
|-----------------------|
| Issue ID: 6570        |
| Subject: BRASS Import |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 7/21/2005 5:46:50 PM |
| Modified By: administrator            | 6/19/2008 4:19:49 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrrecht | Illinois DOT     | tim.armbrrecht@illinois.gov         | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Girder-FlbmSystProb.bbd |             |

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 6574.14761 | Duplicate     | Lost stringer supports when copying GFS superstructure definition |

### Description

FROM:dteal DATE:Thursday, July 21, 2005 1:46:50 PM  
REPORTED BY:Dean Teal

DESCRIPTION:I can use BRASS Import to import RC Parabolic Haunched slab bridges. I can rate a Post Tensioned Haunched slab bridge in BRASS Girder LFD (attached data set) So why can't import a Post Tensioned Haunched slab data set into Virtis. The error message I get from BRASS import tells me I can't import a PS section that is not uniform in thickness. It should be the same BRASS engine I am rating with as used in Virtis – right??

### COMMENTS:

FROM:jduray DATE:7/25/2005 9:28:48 AM  
Because Virtis does not support post-tensioned members. Not all BRASS capabilities have been implemented within Virtis.

FROM:dteal DATE:Saturday, August 13, 2005 10:00:52 AM  
Is this BRASS capability going to be added in the future?

FROM:dteal DATE:Monday, August 22, 2005 7:58:38 AM

Issue ID: 6574

Subject: Lost stringer supports when copying GFS superstructure definition



### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Armbrecht, Tim          | 7/27/2005 3:13:50 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

### Contacts

| Name     | Company | Email 1             | Phone 1 |
|----------|---------|---------------------|---------|
| John Doe |         | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 6576.14759 | Resolved      | Ability to import/export multiple bridges |

### Description

FROM:bgoodrich DATE:Wednesday, July 27, 2005 11:14:03 AM

E-mail from Tim Armbrecht:

On an additional note, you may want to add this to the support board because I think it's a Virtis issue, but when he copied superstructure definition "Spans 11-14" to a new bridge file, he lost the stringer supports ("No supports defined"). After he fixed it, floorbeams would not analyze - said there were no stringer dead loads:

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Error in the loads utility!  
Error getting stringer dead load reactions!  
Error preparing stringer dead load reactions!

4/19/2016 3:04:43 PM

HRS AASHTO

766

Complete Issue Information

Any help is appreciated. If you have any questions, please let me know. Thanks, Tim

Timothy A. Ambrecht, P.E., S.E.  
Bridge Ratings Group Engineer  
Illinois Department of Transportation

Bureau of Bridges and Structures

FROM:kkennelly DATE:7/28/2005 9:32:15 AM  
I think this is a duplicate of 6544

FROM:tambrecht DATE:Friday, July 29, 2005 9:29:37 AM  
Yep, you're right, sorry about that.

|                                                    |
|----------------------------------------------------|
| Issue ID: 6576                                     |
| Subject: Ability to import/export multiple bridges |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 8/5/2005 7:29:18 PM  |
| Modified By: administrator            | 6/19/2008 4:19:48 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:Friday, August 05, 2005 3:29:18 PM  
REPORTED BY:

DESCRIPTION:

4/19/2016 3:04:44 PM

HRS AASHTO

767

Complete Issue Information

COMMENTS:

FROM:jdoe DATE:Friday, August 05, 2005 3:29:19 PM  
requested at 2005 UG meeting

FROM:jduray DATE:8/10/2005 8:53:12 AM

FROM:kkennelly DATE:5/1/2006 11:13:19 AM  
Done for version 5.4

Issue ID: 6586  
Subject: Ability to find bridges with specific types of mbr alts

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Murgoitio, Shanon 8/9/2005 2:19:49 PM  
Modified By: hlee 5/13/2014 5:56:35 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

4/19/2016 3:04:44 PM

HRS AASHTO

768

Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 53C2033.bbd         |             |

Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 6587.14748 | Resolved      | Validation of Type 2 bar mark in girder profile |

Description

FROM:kkennelly DATE:8/9/2005 10:16:03 AM  
Request by Steve Mample at the 2005 UG meeting.

He'd like to be able to generate a list of bridges with specific member alt types (like reinforced concrete members).

FROM:smample DATE:Tuesday, August 09, 2005 4:44:13 PM  
I have a need to be able to list analyzed bridges by the type of the main span. Such as composite steel girders, non-composite steel girders, reinforced concrete tee beam girders, reinf conc frames, etc. Using the Member Alt. Types on the Girder System Superstructure Definition window to do that is a good idea. But the four alternative types are too limited for my need.

Would it be possible to add additional data entry boxes to the Bridge Workspace Bridge Window? These boxes would provide a place for user defined data that could be accessed and used to sort by and/or tabulate data not otherwise available in the Bridge Workspace tree. It may be useful to input items 43a & 43b from the Federal Highway Administration's Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges.

FROM: Herman Lee DATE: 5/13/2014 1:48:23 PM Eastern Daylight Time  
Implemented Bridge Explorer customization in the upcoming 6.6 release.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 6587                                           |
| Subject: Validation of Type 2 bar mark in girder profile |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Kennelly, Krishna    |

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 8/9/2005 5:43:48 PM  |
| Modified By: administrator     | 6/19/2008 4:19:48 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Ihnat, Joseph   | On Hold  |          | Bug - GUI 2 |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Ihnat, Joseph   | Closed   | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Support Distance Bitmap.JPG |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 6596.14739 | Closed        | Wrong Image in Wizard for PS Support Distance |

### Description

FROM:kkennelly DATE:8/9/2005 1:40:29 PM  
Submitted on behalf of Li Zhang, Caltrans.

I got another problem here. When I try to change the "start distance" for the Type 2 rebar to 4ft (refer to Girder "G2-1937" in "Typical Span for Span 1,2,3,4 (MDL 1) 08/05"), I got the following error message. What's wrong? I thought it might be the round off problem at the end of rebar. But it give me the same error message even if I try to get it start at 3.5ft.

FROM:kkennelly DATE:8/9/2005 1:43:05 PM

I think this is a bug in Virtis. When it is validating that the bar is within the beam length, it is including the length of the sloped portion of the bar as if it were a true horizontal length.

4/19/2016 3:04:46 PM

HRS AASHTO

770

Complete Issue Information

FROM:kkennelly DATE:10/6/2005 3:50:43 PM  
Resolved for 5.4

|                                                        |
|--------------------------------------------------------|
| Issue ID: 6596                                         |
| Subject: Wrong Image in Wizard for PS Support Distance |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: lhnat, Joseph                  |
| Submitted By: Teal, Dean 8/12/2005 4:59:10 PM   |
| Modified By: administrator 6/19/2008 4:19:47 PM |
| Priority: High                                  |
| Category: Bug - GUI 2                           |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Friday, August 12, 2005 12:59:10 PM  
REPORTED BY:Dean Teal

DESCRIPTION:Using the Wizard to create a PS structure. When it came to the "Support Distance" GUI the example image displayed above was for a Girder Floorbeam and not for Prestressed. I attached a jpeg

COMMENTS:

FROM:jihnat DATE:8/23/2005 10:01:32 AM

4/19/2016 3:04:46 PM

HRS AASHTO

771

Complete Issue Information

Fixed for 5.4.0

FROM:dteal DATE:Thursday, December 01, 2005 10:09:32 AM  
Accepted in 5.4 beta 2

|                                            |                      |
|--------------------------------------------|----------------------|
| Issue ID: 6597                             |                      |
| Subject: Diaphragm Wizard Missing a Sketch |                      |
| Folder: /Virtis/Support Center/Virtis      |                      |
| Primary Contact: Ihnat, Joseph             |                      |
| Submitted By: Teal, Dean                   | 8/12/2005 5:20:06 PM |
| Modified By: administrator                 | 6/19/2008 4:19:47 PM |
| Priority: High                             |                      |
| Category: Bug - GUI 2                      |                      |

History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Unknown     |
| Kennelly, Krisha | On Hold  |          | Bug - GUI 2 |
| Ihnat, Joseph    | Resolved |          |             |
|                  | Accepted |          |             |
|                  | Closed   |          |             |
| Ihnat, Joseph    | Closed   | High     | Bug - GUI 2 |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 6601.14734 | Resolved      | Increase the number of axles for a vehicle in Virtis Std Engine |

Description

FROM:dteal DATE:Friday, August 12, 2005 1:20:06 PM  
 REPORTED BY:Dean Teal

DESCRIPTION:Using the diaphragm wizard in a PS structure, - skewed (stair step diaphragms). Didn't there used to be a sketch showing describing the "Distance D"? It's missing – see attached jpeg.

COMMENTS:

FROM:jihnat DATE:8/23/2005 10:01:52 AM  
 Fixed for 5.4.0

FROM:dteal DATE:Thursday, December 01, 2005 10:10:09 AM  
 Accepted in 5.4 beta 2

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 6601                                                           |
| Subject: Increase the number of axles for a vehicle in Virtis Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Duray, Jim              | 8/15/2005 1:32:50 PM |
| Modified By: administrator            | 6/19/2008 4:19:47 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |



## Complete Issue Information

---

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | On Hold  |          | Bug - GUI 2 |
| Ihnat, Joseph   | Resolved |          |             |
| Ihnat, Joseph   | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Typical Section View Question.bbd       |             |
|      | Typical Section View Question (531).bbd |             |

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6615.14720 | Resolved      | Typical Section Schematic doesn't show correct girder spacings |

### Description

FROM:jduray DATE:8/15/2005 9:25:36 AM  
BAR7 currently limits number of axles to 24. Ken HURst indicated their typical permit trucks have at least 46 axles. (UG 2005 notes from Krishna).

FROM:hlee DATE:6/20/2006 9:23:58 AM  
Max number of axles has been increased to 64 in 5.5.

FROM:hlee DATE:7/10/2006 3:20:52 PM  
Changed Status to Resolved.

FROM:hlee DATE:7/19/2006 3:42:20 PM  
Changed Project to Support Center/Virtis.

FROM:hlee DATE:7/27/2006 11:12:35 AM  
This has not been resolved in Virtis Std engine (Incident 7531).

FROM:hlee DATE:10/10/2006 11:21:36 AM

4/19/2016 3:04:49 PM

HRS AASHTO

774

Complete Issue Information

Increase maximum number of axles for a vehicle to 80.  
Virtis Std Engine export is done.

FROM:hlee DATE:1/26/2007 9:30:12 AM  
Resolved in 5.6 Release.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6615                                                          |
| Subject: Typical Section Schematic doesn't show correct girder spacings |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Kennelly, Krisha        | 8/18/2005 12:11:04 PM |
| Modified By: administrator            | 6/19/2008 4:19:46 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 2                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/18/2005 8:07:25 AM  
Submitted on behalf of Ken Teng, RQAW via email:

Hi Krisha,

The Girder spacing are 8'-7/8", 8'-1/8", 7'-11 5/16", and 2 @ (7'-11")

The typical section view is only shown 8'-7/8". How could I correct it?

Please take a look at attached file.

Thank you,

4/19/2016 3:04:49 PM

HRS AASHTO

775

Complete Issue Information

Ken Teng

FROM:kkennelly DATE:8/18/2005 8:09:36 AM

reply sent via email:

That appears to be a bug. I've entered this as incident 6615 on the Technical Support website.

FROM:jduray DATE:Thursday, August 18, 2005 8:35:32 AM

FROM:jihnata DATE:8/22/2005 1:16:09 PM

The relatively small differences in the girder spacing were not being handled correctly in the schematic. Fixed for 5.4.0

For future testing, I've attached version 5.3.1 of the BBD file.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 6617                                                       |
| Subject: Error preparing stringer dead load reactions on floorbeams. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Zeng, Cincia            | 8/18/2005 3:35:16 PM |
| Modified By: administrator            | 6/19/2008 4:19:46 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | Duplicate | High     | Bug      |
| Lee, Herman     | Duplicate | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6629.14706 | Closed        | Routing Results File Error |

Description

FROM:hlee DATE:8/18/2005 11:25:17 AM

Submitted on behalf of Cincia Zeng. Received via bridgeware e-mail.

=====

Dear Support Group,

I have a floorbeam stringer system model for a two span bridge. Each span is simply supported. When I use user defined dead load DC2 in the stringer definition loads input, floorbeam won't run and all stringers ran. I got the following message:

- Error generating LFD/ASD load commands
- Error generating load group commands
- Error in the loads utility
  - Error getting stringer dead load reaction
- Error preparing stringer dead load reactions

Using the same model and input the same amount of load using user defined dead load DC1 instead of DC2 in the stringer definition loads input. All stringers and floorbeams ran without any errors. But 2 floorbeams rate zero and only the third floorbeam rates.

Please check the attached bbd file.

Does this mean I can't use user defined dead load DC2 for floorbeam stringer system model?

Cincia

=====

Reply e-mail:

=====

Cincia,

When you used user defined dead load DC2 in the stringer definition loads input, floorbeam didn't run and all stringers ran due to a bug in 5.3.0. This bug had been record in Incident 6543 and has been resolved for 5.4.0.

The two floorbeams rated zero are due to the fact that there are not enough capacity. I increased the thicknesses of the beam and they rated ok. Please note that the max shear on the second floorbeam is two times that of the third floorbeam. The inv rating for the third floorbeam is 0.12 already.

Complete Issue Information

Please let me know if you have more questions.

Regards,  
Herman Lee

=====

|                                     |
|-------------------------------------|
| Issue ID: 6629                      |
| Subject: Routing Results File Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Teal, Dean              | 8/18/2005 8:11:09 PM |
| Modified By: administrator            | 6/19/2008 4:19:45 PM |
| Priority: High                        |                      |
| Category: Bug - GUI 2                 |                      |

History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Unknown     |
| Kennelly, Krisha | Assigned |          | Bug - GUI 2 |
|                  | Resolved |          |             |
|                  | Closed   |          |             |
| Kennelly, Krisha | Closed   | High     | Bug - GUI 2 |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | RoutingFileResults.xml |             |
|      | RoutingFileResults.xsl |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:dteal DATE:Thursday, August 18, 2005 4:11:09 PM  
REPORTED BY:

DESCRIPTION:When you look at the Routing Results File, it appears that the title line "Routing Results Output" is being printed twice. Once at the top of the results output and once at the bottom.

COMMENTS:

FROM:kkennelly DATE:10/6/2005 4:08:12 PM  
Fixed for 5.4

|                                   |
|-----------------------------------|
| Issue ID: 6650                    |
| Subject: Unable to set tolerances |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Kennelly, Krisha        | 8/26/2005 12:04:27 PM |
| Modified By: administrator            | 6/19/2008 4:19:43 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          |          |
| Ordoobadi, Mehrdad | Resolved           | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 6654.14681 | Resolved      | Default problem for Vci control option in engine properties |

### Description

FROM:kkennelly DATE:8/26/2005 8:01:21 AM  
Submitted on behalf of Li Zhang, Caltrans via email:

Hi, Krisha,

I encountered a problems with Virtis. I cannot set the tolerance when I double clicked the "System Defaults" in the Virtis Configuration Browser window.  
(Embedded image moved to file: pic30742.jpg)

I got this error message:  
(Embedded image moved to file: pic01033.jpg)(Embedded image moved to file: pic04376.jpg)

and it followed by an empty screen when I clicked "Close":  
(Embedded image moved to file: pic17503.jpg)

I am using version 5.3.1 and logged in as "virtis"

What's wrong with my database?

Li Zhang  
Division of Maintenance  
Structure Maintenance and Investigations  
1801 30th Street, MS 9-1/9i  
Sacramento, CA 95816  
Office 916-227-9550  
Fax 916-227-8357

FROM:jduray DATE:5/1/2006 1:39:05 PM  
Do you have authorization to change them. Ask your administrator.

FROM:mordoobadi DATE:11/15/2006 3:01:38 PM  
I found out what is causing both issues. (6650 and 7691)

You have an Integrated database (Virtis/Opis/Pontis). There is a record missing from your COPTIONS

4/19/2016 3:04:52 PM

HRS AASHTO

780

Complete Issue Information

table that is required by Virtis/Opis. It defines the location of multimedia server (MULTISERVER option in Pontis). The migration did not populate the record because you had an integrated database and we do not change PONTIS table contents for integrated databases.

You can fix the problem by adding a record to the COPTIONS table by executing the attached SQL command in Interactive SQL.

- (0) Save the attached file to a folder on your hard disk drive.
- (1) Start Interactive SQL and login to the database.
- (2) Select File/Open and open the SCOptions.SQL file.
- (3) Select SQL/Execute.
- (4) Close the Interactive SQL.

After this you should try to duplicate the problems by:  
A) attempting to open the System Defaults Window  
B) Trying to attach a file to a bridge.

FROM:mordoobadi DATE:11/15/2006 2:59:57 PM  
in an email by Li Zhang:

Mehrdad, both problems fixed. Thanks a lot!!!

Li Zhang

FROM:mordoobadi DATE:11/15/2006 3:01:20 PM

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 6654                                                       |
| Subject: Default problem for Vci control option in engine properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Goodrich, Brian         | 8/26/2005 7:43:40 PM |
| Modified By: administrator            | 6/19/2008 4:19:43 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | On Hold  |          |          |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

4/19/2016 3:04:52 PM

HRS AASHTO

781



Complete Issue Information

---

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 6682.14658 | Resolved      | Increase number of vehicles in a single run in Virtis Std Engine |

Description

FROM:bgoodrich DATE:Friday, August 26, 2005 3:43:54 PM

I found a problem with the P/S shear settings in the latest service pack for 5.3. For existing member alternatives, the P/S shear option for controlling how Vci is calculated is actually set in the BRASS domain. The problem is that the variable is initialized to 1, which means to ignore P/S shear. So, for any existing bridges that did not choose to ignore shear, it will be ignored anyway. The only work around is to open the member alternative engine properties window and OK it.

FROM:jduray DATE:8/29/2005 11:48:08 AM

It should default to the the old BRASS default.

FROM:jihnat DATE:5/8/2006 2:02:10 PM

This got fixed in 5.4.0 (incident 7049)

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 6682                                                            |
| Subject: Increase number of vehicles in a single run in Virtis Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 9/12/2005 1:08:44 PM |
| Modified By: administrator            | 6/19/2008 4:19:41 PM |

4/19/2016 3:04:53 PM

HRS AASHTO

782

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | New     | High     | Enhancement |
| Duray, Jim      | New     | High     | Enhancement |
|                 | Discard |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 6683.14657 | New           | Add ability to specify springs at girder supports in Virtis Std Engine |

### Description

FROM:kkennelly DATE:9/12/2005 9:05:05 AM

Limit is currently 8 vehicles per run (or 7 vehicles + Ped LL). Michigan DOT had previously asked for more vehicles in a run since they rate for like 20 bridges. Request to increase number of vehicles per run was made to me again at the 2005 UG meeting.

FROM:kkennelly DATE:6/19/2006 9:18:18 AM

FROM:hlee DATE:7/21/2006 9:48:25 AM

Changed Project to Support Center/Virtis.

FROM:hlee DATE:2/5/2008 10:53:05 AM

Resolved in Virtis Std Engine for 6.0 Release. Limit is 40 vehicles in a run.

Complete Issue Information

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 6683                                                                  |
| Subject: Add ability to specify springs at girder supports in Virtis Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 9/12/2005 2:26:58 PM |
| Modified By: hlee                     | 6/9/2011 2:41:30 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:7/21/2006 9:50:12 AM  
Changed Project to Support Center/Virtis.

FROM: Herman Lee DATE: 6/9/2011 10:39:42 AM Eastern Daylight Time  
Discarded by TAG April 2011.

Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 6684                                             |
| Subject: Increase max number of spans in Virtis Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 9/12/2005 2:36:41 PM |
| Modified By: hlee                     | 6/9/2011 2:41:44 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | New     | High     | Enhancement |
| Duray, Jim      | New     | High     | Enhancement |
|                 | Discard |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6690.14650 | Duplicate     | Floorbeam analysis takes 4 hours |

### Description

FROM:kkennelly DATE:9/12/2005 10:33:54 AM

Max number of spans is currently 15. Based on previous user requests increase this max number.

FROM:hlee DATE:7/21/2006 9:50:29 AM

Changed Project to Support Center/Virtis.

FROM: Herman Lee DATE: 6/9/2011 10:40:39 AM Eastern Daylight Time

Discarded by TAG April 2011.

|                                           |
|-------------------------------------------|
| Issue ID: 6690                            |
| Subject: Floorbeam analysis takes 4 hours |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 9/13/2005 7:18:15 PM |
| Modified By: administrator            | 6/19/2008 4:19:41 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:04:55 PM

HRS AASHTO

786

Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
| Duray, Jim       | New                | High | Bug     |
| Goodrich, Brian  | Assigned           |      |         |
| Duray, Jim       | New                | High | Unknown |
| Kennelly, Krisha | Information Needed |      |         |
| Boukamp, Sabine  | Assigned           |      | Bug     |
|                  | Resolved           |      |         |
|                  | Closed             |      |         |
| Boukamp, Sabine  | Closed             | High | Bug     |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | User Defined POI.bbd |             |

Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6693.14647 | Closed        | User Defined POI's Not Being Printed |

Description

FROM:kkennelly DATE:9/13/2005 3:14:30 PM  
Submitted on behalf of Cincia Zeng, Lichtenstein via email:

Hi Krisha,

I am working on a simple span bridge. It has 8 stringers. I set up a floorbeam stringer system model for this bridge in virtis 5.3. Please see the attached bbd file. It took me 4 hours to run 4 trucks (HS20, H20, Type 3, Type 3S2) or 1.5 hours to run HS20 to rate the floorbeam. Is this normal? How long does it take you to run the same model? Is there anything can be done to speed up the process?

Appreciate your help.  
Cincia

-----  
Cincia Zeng, P.E.  
Lichtenstein Consulting Engineers, Inc.  
11 Huron Drive, Natick, MA 01760  
Tel: 508-647-0500 Fax: 508-647-5609

4/19/2016 3:04:55 PM

HRS AASHTO

787



## Complete Issue Information

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 6697.14643 | Resolved      | Secondary moment due to prestress |

### Description

FROM:dteal DATE:Wednesday, September 14, 2005 3:18:51 PM  
REPORTED BY:

### DESCRIPTION:

### COMMENTS:

FROM:dteal DATE:Wednesday, September 14, 2005 3:19:04 PM

Is it possible to print actions at user defined POI's (with or without 10th points) in RC structures. I have tried and can't seem to figure how.

FROM:kkennelly DATE:9/15/2005 8:19:08 AM

I think this works. I added a POI at a location other than a tenth point in the first structure def in BID 11 (single span RC bridge), ran BRASS LFD and I see the moments and shears at the point in both the Analysis Results window in Virtis and in the BRASS output text file. Are you looking for some other type of information?

FROM:dteal DATE:Monday, September 19, 2005 10:19:39 AM

I attached a RC bridge for an example, I used the Member for 2.5" clear for my testing

With Member Alt Description – Engine Data, POI control set to Generate @ user defined points.  
With Analysis Settings – Engine Properties – Output Control – Print Actions @ 10th Points.  
The above setting resulted in Analysis Results at 10th points

Now change the Analysis Settings – Engine Properties – Output Control – to print actions @ all node points.

Now the Analysis Results window = No Data Available, it's blank.

Now go back and change the Analysis Settings – Engine Properties – Output Control – Print Actions @ 10th Points again.

The Analysis Results window still = No Data Available, it's blank

After the second time doing this I had to not only exit Opis but I had to reboot to get the Analysis Results window to populate using 10th points again.

I never did get any results in this window other than 10th points – no user defined points.

FROM:kkennelly DATE:10/7/2005 9:27:01 AM

I am able to reproduce this in Opis. I think something got broken in the service pack for 5.3.1.

Following Dean's steps:

4/19/2016 3:04:56 PM

HRS AASHTO

789



## Complete Issue Information

1. With Member Alt Description – Engine Data, POI control set to Generate @ user defined points.  
With Analysis Settings – Engine Properties – Output Control – Print Actions @ 10th Points.  
The above setting resulted in Analysis Results at 10th points

This run results in the following BRASS LRFD commands being generated:

```
OUTPUT 1, ON, OFF, OFF, 1, , , , , , , OFF  
OUTPUT-STAGE ON, ON, ON
```

2. Make following changes and re-run BRASS LRFD:

Now change the Analysis Settings – Engine Properties – Output Control – to print actions @ all node points.

Now the Analysis Results window = No Data Available, it's blank.

This run results in the following BRASS LRFD commands:

```
OUTPUT 2, ON, OFF, OFF, 1, , , , , , , ON  
OUTPUT-STAGE OFF, ON, ON
```

The last parameter in the OUTPUT command is for the camber output. Looks like it is being switched from OFF to ON when no changes were made to that input on the Analysis Settings window.  
The first parameter in OUTPUT-STAGE is for printing stage 1 output. It is being switched from ON to OFF. That is why no Analysis Results are available.

The only difference in the commands between the 2 runs should be the first parameter in the OUTPUT command.

FROM:sboukamp DATE:10/11/2005 2:24:54 PM

It looks like the order for the properties passed to BRASS is getting mixed up: when I uncheck Camber in the GUI actually Stage 1 is set to OFF when the BRASS LRFD commands are generated.  
A temporary work around would be to have the Camber and all Stages checked.

FROM:sboukamp DATE:10/12/2005 10:18:02 AM

Resolved for next Service Pack.

FROM:dteal DATE:Thursday, December 01, 2005 10:08:35 AM  
Accepted in 5.4 beta 2

FROM: Dean Teal DATE: 8/7/2008 12:30:53 PM Eastern Daylight Time

This appears to be broken againJim,

Please follow the frustration I have been having in trying to create a camber report that contains DL camber data by stages at 10th points for RC. What I mean by stages is to separate out total deck DL camber before the rail or FWS is applied.

Not only can this not be done in RC, in steel and PS you can't get DL reports at 10th points without other points be added in.

4/19/2016 3:04:56 PM

HRS AASHTO

790

## Complete Issue Information

This is what the designer needs and what he has to work with when it comes to available Dead Load Camber (deflection) reports (needed at 10th points).

Not unique to any specific bridge type

1. Steel bridges
  - a. Blocking diagrams (shop details)
  - b. Fillet (haunch) amounts in Rolled beams
2. Prestressed
  - a. Fillets (haunches)
3. RC
  - a. DL Camber diagram to place form boards

Examples: I did this with RC so I could test both the current version 5.6 and the beta 3 version for 6.0.

Items that "need reporting" for the dead load camber only

For a common RC Slab (at 10th points only)

1. Girder Weight DL (slab DL)
2. Slab Sacrificial Wear DL (the rest of the slab DL)
3. Corral Rail DL
4. FWS DL

Items 1 & 2 are added together to make up the DL camber of the fluid concrete that will be supported by the wooden form boards. This value is multiplied by 3.5 to arrive at the amount needed to pre-camber the form boards (this camber will creep out of the slab within the first year). If the slab is skewed the camber is reduced by the % of the skew.

## Complete Issue Information

Item 3 is added in to check total deflection – not a very good check because it is assumed that rail loads are distributed over the entire deck when it should be just over the first 6 feet or so. Both items 3 & 4 are only used for final design checks, not to set concrete forms.

Steps to get one span of camber data to a set of production plans.

(using version v5.6 or v6.0 beta 3 the way things are right now)

Using the Report Tool:

1. Assuming that VI #8443 is completed to report to 4 decimals
2. This report can't be copy/pasted into excel – it will paste into one column only (useless if you want to perform any calculations). You would have to hand type all the values into your spreadsheet cells.
3. All the DL values lumped (deck, rail, FWS) together don't aid the designer being all these loads aren't applied at the same time. The top header of the report should list a column for each DL case that Opis included in the analysis.
4. The report is not in 10th points and I can't make it output in 10th points.
5. I had accepted VI #7453 as the camber report being there, I should have looked at its content much closer.

Using the Analysis Results Report for Dead load Actions:

1. This is available for each DL case (good thing)
2. I have a spreadsheet made with the same headers shown on this report (Span, Location, %, Mu, V, Axial, Reaction, X Defl, Y Defl). Using the tool bar only, you can copy from Opis and paste in excel. Yes, the tool bar is the only copy command that will work with excel!
3. Being you can't get POI's at 10th points only for RC (You used to be able to , #8442). I copy/paste the DL Actions for each DL Case to excel. Being I can't generate by 10th points only you then have to highlight the rows in excel that are 10th points and copy/paste them to another sheet. These values are used to do comps on.

So in a nut shell

The DL reports available are not readily usable by the designer for production work without jumping

Complete Issue Information

through a bunch of hoops.

10th point output alone is impossible to get. I tried RC, PS and Steel. All user defined POI's have been deleted. All LRFD engine properties set to 10th point's (can't set Opis Engine, no controls, you have to take what it gives you), Everything I try ends up with output more than just 10th points. I sent in a VI on the 10th points (1/24/08, #8442, no action has been taken). I think it was fixed for release 5.4 (VI #6693) – appears to be broken again.

If anybody has a-work around, I'm all ears.

|                                            |
|--------------------------------------------|
| Issue ID: 6697                             |
| Subject: Secondary moment due to prestress |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 9/16/2005 2:13:46 PM |
| Modified By: administrator            | 6/19/2008 4:19:40 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A-09-023 (2J5).bbd  |             |

Tasks

4/19/2016 3:04:57 PM

HRS AASHTO

793

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:9/16/2005 10:09:46 AM  
Submitted on behalf of Elizabeth Balcha, Mass. DOT via email:

Hi Krisha

I have a question about secondary moment for the bridge A-09-023 (2J5) . The unfactored stress due to secondary Moment is zero while secondary moment value is 14.02k-ft .

- 1) Is there any relationship between the moment and the stress ?
- 2) How could Virtis come up with the number can you show me the calculations ?
- 3) Is secondary moment applicable to simply supported structures ?
- 4) Why is secondary shear zero ?

I have attached the BBD file.

With regards

Elizabeth Balcha  
MHD, Bridge Section  
617-973-7599 (Ph)  
617-973-7990 (Fax)  
Email: Elizabeth.Balcha@mhd.state.ma.us

FROM:kkennelly DATE:9/16/2005 10:22:51 AM  
Response sent via email:  
Elizabeth,

Since these questions refer to the internal computations of the BRASS LFD engine, they would be better answered by someone more familiar with that engine. I have entered your question as incident 6697 on the Virtis/Opis Technical Support website.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

FROM:bgoodrich DATE:Monday, September 19, 2005 2:41:16 PM  
There appears to be a bug with BRASS reporting a secondary moment for a simple-span structure. The variable that is used to store the secondary moment is also used to store a centroid distance. This is why the stress and shear due to secondary effects are zero. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Thursday, September 22, 2005 11:27:33 AM

4/19/2016 3:04:57 PM

HRS AASHTO

794

### Complete Issue Information

WYDOT assigned this issue to BRASS Problem Log 629.

FROM: bgoodrich DATE: Monday, September 26, 2005 11:28:03 AM

This issue has been addressed in BRASS-GIRDER 5.9.2, which is to be released with Virtis 5.4.0.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 6699                                                  |
| Subject: Import does not work for a timber deck on a steel beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Duray, Jim              | 9/16/2005 3:39:59 PM |
| Modified By: administrator            | 6/19/2008 4:19:40 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status  | Priority | Category           |
|-----------------|---------|----------|--------------------|
| Lee, Herman     | On Hold | High     | Bug<br>Enhancement |
| Lee, Herman     | On Hold | High     | Enhancement        |

### Contacts

| Name      | Company                    | Email 1               | Phone 1 |
|-----------|----------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 6699.14641 | On Hold       | Import does not work for a timber deck on a steel beam |

### Description

## Complete Issue Information

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 6700                                                                                       |
| Subject: Add BRASS engine data for user to pick how to compute shear capacity in reinforced concrete |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 9/16/2005 4:46:45 PM |
| Modified By: administrator            | 6/19/2008 4:19:40 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | New Feature |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name         | Company            | Email 1                  | Phone 1      |
|--------------|--------------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT        | jonesdan@dot.state.al.us | 334-242-6752 |
| Jim Duray    | Michael Baker Jr., | jduray@mbakercorp.com    |              |

4/19/2016 3:04:59 PM

HRS AASHTO

796

Complete Issue Information

Inc.

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | RebarSections.pdf          |             |
|      | Caltrans 39 0160L.bbd      |             |
|      | 38 0122L.bbd               |             |
|      | VI6704 Proposed Change.bmp |             |

Tasks

| Name       | Current State | Summary                                                                         |
|------------|---------------|---------------------------------------------------------------------------------|
| 6704.14636 | Resolved      | Allow reinforcement to vary over length of a cross section range in the engines |

Description

FROM:kkennelly DATE:9/16/2005 12:43:12 PM  
Submitted on behalf of Robert Fulton based on phone conversation.

BRASS lets you specify if you want Equation 8-48 or 8-49 used to compute shear capacity of RC beams but this feature is not available in Virtis. (see incident 5150).

FROM:rfulton DATE:Friday, September 16, 2005 4:56:43 PM  
Should also include the detailed calculation for equation 8-4 (and equ 6-5 of the Maintenance manual) for the allowable stress method.

Issue ID: 6704  
Subject: Allow reinforcement to vary over length of a cross section range in the engines

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: vinayagamoorthy, vinacs 9/16/2005 7:46:52 PM  
Modified By: administrator 6/19/2008 4:19:40 PM  
Priority: High  
Category: Enhancement

History

4/19/2016 3:05:00 PM

HRS AASHTO

797



### Complete Issue Information

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Duray, Jim      | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | ES Loss Questions.bbd |             |

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 6713.14627 | Resolved      | Question about ES Loss, Fcir computations |

### Description

FROM:kkennelly DATE:9/16/2005 3:43:01 PM  
Submitted on behalf of Vinacs, Caltrans via email:

Krishna and Brian

(IN ORDER FOR TO SEE THE BRAASS OUTPUT CLEARLY, I SET THE FONT TO COURIER. IF THE COLUMNS DOES NOT ALIGNED PROPERLY WHEN YOU GET THIS E-MAIL, PLEASE READJUST THE FONT TO COURIER)

We have come across this problem by accident. When we had entered a set of rebars, we wondered about the development of the bar. As a result, we tried both ways to see what would be the end result. As expected the moment capacity reported at the 0.9th point of span 1 of two models were different. Unfortunately, capacity of the section where rebars considered fully developed produced smaller moment.

As a result of detail review of the results, we believe that the problem exists in the export routine of the VIRTIS program.

Attached is the bbd file, where you will find member G1 has two alternatives; they are: 1. 20.5 ft wide RC Slab (1971) 2. Copy of 20.5 ft wide RC Slab (1971)

4/19/2016 3:05:00 PM

HRS AASHTO

798

Complete Issue Information

As I mentioned earlier, difference between the two alternative is the rebar layout. In first alternative, one set of rebars (SET #9) is considered NOT developed at the end and in the 2nd alternative (Copy of..), the same set rebars (SET #9) is considered FULLY developed at the end.

The detail output of the moment estimated at the 0.9th point of Span 1 (copied below) shows the problem

Alternative 1: For 20.5 ft wide RC Slab (1971),

NEGATIVE Flexural Resistance:

\*\* Analyzed as a RECTANGULAR Section \*\*

| Layer | Area, in <sup>2</sup> | Stress, ksi          | Force, kips | Lever-Arm, in |
|-------|-----------------------|----------------------|-------------|---------------|
| R5    | 34.590                | 40.000               | 1383.608    | -12.768       |
| ----- |                       |                      |             |               |
| R1    | 10.340                | 0.610                | 6.308       | -0.018        |
| ----- |                       |                      |             |               |
| CTF   | 545.065               | -0.85*f <sub>c</sub> | -1389.917   | 1.499         |
| ----- |                       |                      |             |               |
| Sum   |                       |                      | 0.000       |               |

17666.297  
0.115  
2083.296  
19749.709

Flexural Resistance Summary:

beta 1 = 0.850                      phi f =  
0.900

c = 2.607 in                      Mn =  
19749.709 in-k

a = 2.216 in (from bottom)                      =  
1645.809 ft-k

phi\*Mn =  
17774.738 in-k  
=  
1481.228 ft-k

f<sub>c</sub> = 3.000 ksi (stem)

Alternative 2: For Copy of 20.5 ft wide RC Slab (1971)

Point of Interest : 109.00  
Construction Stage: 1

NEGATIVE Flexural Resistance:

\*\* Analyzed as a RECTANGULAR Section \*\*

Complete Issue Information

Layer Area, in<sup>2</sup> Stress, ksi Force, kips Lever-Arm, in  
Moment i, in-k

| Layer | Area, in <sup>2</sup> | Stress, ksi          | Force, kips | Lever-Arm, in | Moment i, in-k |
|-------|-----------------------|----------------------|-------------|---------------|----------------|
| R5    | 22.432                | 40.000               | 897.262     | -13.127       | 11778.778      |
| R1    | 20.610                | 14.611               | 301.136     | -0.377        | 113.667        |
| CTF   | 469.960               | -0.85*f <sub>c</sub> | -1198.399   | 1.292         | 1548.733       |
| Sum   |                       | 0.000                |             |               | 13441.178      |

Flexural Resistance Summary:  
 beta 1 = 0.850                      phi f = 0.900  
 c = 2.248 in                      Mn = 13441.178 in-k  
 a = 1.910 in (from bottom)                      = 1120.098 ft-k  
                                                                          phi\*Mn = 12097.060 in-k  
                                                                          = 1008.088 ft-k  
 f<sub>c</sub> = 3.000 ksi (stem)

Notice the Area of top reinforcement. For the first alternative, area is 34.59 and the 2nd alternative top area is 22.432. Bar that was adjusted between the two alternative is the bottom reinforcement bar and therefore, the top area should have remained the same.

Also note that I could not match the area reported for R5 in either case with my hand calculation. Area reported for R1 in the First alternative also did not match with my hand calculation.

Please verify the numbers and investigate the problem.

My Estimation of top reinforcement area for first alternative:

0.9th point is 22.95 feet away from first support and 2.55 feet from 2nd support.

- 2 #10 bars are continuous for whole length = 2 x 1.27 = 2.54 sq inch
- 13 # 7 bars continuous for the whole length = 13 x 0.60 = 7.80 sq. inch
- 13 # 7 bars Starts at 10 feet from support 2. Thus, dist from start point to 0.9th point = 7.45 feet, development length of #7 bars = 1.46 feet. Thus area = 13 x 0.6 = 7.80
- 13 # 11 bars; starts at 6 feet from support 2. Thus, dist from start point to 0.9th point = 3.45 feet, development length 0 #11 bars = 3.80 feet,

### Complete Issue Information

Thus, it is 3.45/3.80 (90.7%) developed. Therefore area =  $13 \times 1.56 \times 0.907 = 18.39$  sq inch.

So total top reinforcement area =  $2.54 + 7.80 + 7.80 + 18.39 = 36.53$  sq inch (BRASS reported it as 34.59 sq inch)

My Estimation of BOTTOM reinforcement area for first alternative:

0.9th point is 22.95 feet away from first support and 2.55 feet from 2nd support.

1. 2 #10 bars are continuous for whole length =  $2 \times 1.27 = 2.54$  sq inch
  2. 13 # 7 bars goes whole length of 1st span and considered fully developed =  $13 \times 0.60 = 7.80$  sq. inch
  3. 13 #7 bars starts 2 from support 1 and ends at 23.75 feet away from support 1 (meaning 0.8 feet from 0.9th point). The development length = 1.46 feet. Thus its 0.8/1.46 (54.8%) developed at 0.9th point. Thus area of steel =  $13 \times 0.6 \times 0.548 = 4.27$  sq inch
- Thus total area of bottom reinforcement =  $2.54 + 7.80 + 4.27 = 14.61$  sq inch. (BRASS reported it as 10.34, as if the 3rd set of bar never existed)

Please let me know your findings and possible fixes for this problem

(See attached file: Caltrans 39 0160L.bbd)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:9/16/2005 3:46:13 PM  
Response sent:

Hi Vinacs,

I think Virtis is correctly generating the cross sections for the BRASS export based on what was input for the 2 alternatives. I've attached a file that contains sketches of the cross section ranges generated for BRASS based on your input. It also contains the calculations Virtis uses to determine how much of the rebar is developed in these cross section ranges.

In your first alternative, Set 9 is not marked as fully developed. Virtis computes that Set 9 is fully developed at distance 22.21'. The presence of this pt of development causes Virtis to create a cross section range at this point and compute the percentage of bars developed at this point. In the copy of the first alternative, Set 9 is fully developed so Virtis does not create a cross section range at 22.21' like it did in the first alt.

Keep in mind that the amount of rebar cannot vary over the length of a range. So anything that introduces a cross section range into the Virtis export (like pts of rebar development or points of interest or web depth changes) causes different cross sections to be generated.

The development lengths listed in your calculations below also do not match what Virtis computes. You

4/19/2016 3:05:01 PM

HRS AASHTO

801

## Complete Issue Information

have listed the development length of the #7 bar in Set 3 as 1.46'. This value is the basic dev length, Virtis considers any applicable modification factors which in this case result in the development length of Set 3 being 1.64'. Refer to the "StdReinfDevLengthCalcs.log" file in the Analysis Output window in Virtis (where you can also open the BRASS output file) to see where Virtis considers the bars to be developed and what modification factors it used.

Please refer to example 3 in the "Schedule Based Reinforcement Cross Section Export Examples" in the Virtis help for additional explanation on how Virtis generates cross sections.

Please let me know if you have any further questions.

FROM:kkennelly DATE:9/16/2005 4:30:10 PM  
Email:  
Krisha

I will review the output as you suggested.

However, the results does not makes sense. I expected that negative moment capacity at the 0.9th point be more or less same for the alternate models, especially when the area bottom rebars between alternative have very minimal effect on the capacity. Yet, the results show a large difference (1481 k-ft vs 1008 k-ft) between the reported by BRASS. This difference is not acceptable. At this point, I am not sure what is the source of the problem, however, we need to resolve this.

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:9/16/2005 4:30:46 PM  
Hi Vinacs,

I haven't checked the BRASS capacity calcs but this is what I suspect is happening:

First alternative: At 22.95' top rebar in cross section 12 is 31.07 in<sup>2</sup> because the section at this point is taking into account Set 4 being 64% developed since the first section to the left of 22.95' is at 22.21'. At 22.21', Set 4 is 64% developed and rebar has to be constant along a cross section range.

Second alternative: At 22.95' top rebar in cross section 10 is only 22.43 in<sup>2</sup>. First section to left of 22.95' is 20.4'. At 20.4', Set 4 is only 21% developed and since rebar has to be constant along a cross section range, it is still only 21% developed at 22.95' in this model. Thus this alternative has a lower negative moment capacity.

An engine that can internally compute the percentage of developed rebar at a point from a schedule of rebar would solve this problem.

Regards,  
Krisha Kennelly, PE

FROM:kkennelly DATE:9/20/2005 1:33:34 PM  
9/19 email from Vinacs:

4/19/2016 3:05:01 PM

HRS AASHTO

802



### Complete Issue Information

Set 1 and 2 bars are continuous for the whole length - Set 1 = 2#10 = 2.54 sq inch, Set 2 = 14#7 = 8.4 sq inch

Set 3 is fully developed at these two points, 13.5 # 6 = 5.94 sq inch

Set 4 is also fully developed at these points (according to StdReinfDevLengthCalcs.log), 13 # 10 = 16.51 sq inch. TOTAL area = 33.39 sq inch

When I reviewed the area of section used at these points,

Area (R5) used within section 200 pt was 33.39 (this matches my hand calculation)

However Area used within Section 200.22 point was 24.509 sq inch. (This area is the estimated area at a section that is 3 feet away from the support).

This bridge rating calcs also illustrated the problem in OUR bridge modelling using BRASS program. I am at a loss as to how to fix the problem. After reviewing the bridge, I am inclining to your suggestion where BRASS linearly interpolates the area of the rebar between sections provided that a variable section option is selected.

(See attached file: 38 0122L.bbd)

FROM:kkennelly DATE:9/20/2005 1:36:42 PM  
Email from Brian Goodrich 9/20:

BRASS is calculating the flexural resistance based on the input sent to by the export. I see no problems with the BRASS tools that calculate the flexural resistance. Based on the exported data, the first alternative has nearly 40% more top steel than the second alternative, so the negative flexural resistance is going to be significantly different between the two. However, the bottom steel only slightly affects the negative flexural resistance by about 9 ft-kips in this case.

Now there is an issue happening within the engine that should be noted. BRASS performs specification checks and resistance calculations at a point of interest, which is located at the end of one element and the start of another. BRASS must choose which element end to obtain the section properties for the analysis. BRASS currently compares the gross moment of inertia between the two and chooses the section with the smaller I. For R/C, if the gross moments of inertia are equal, BRASS compares the total reinforcement area and chooses the section with the smaller As. For the first alternative, the section on the right side of the POI had a smaller area of steel. For the second alternative, the section on the left side of the POI had a smaller area of steel. This is part of the reason for the large difference in top steel. I'm basically saying that even though you can specify a "Side" on the Point of Interest window, BRASS does not use it to select the section properties. We recently added the area of steel check to address symmetry issues, which was an improvement. Note that before BRASS always chose the properties to the left of the POI. Incident 6532 is already in Visual Intercept requesting this change to use the side specified by the user. WYDOT put this on the enhancement list to be prioritized by the users.

Regards,

Brian Goodrich  
BridgeTech, Inc.

FROM:kkennelly DATE:9/21/2005 8:25:31 AM  
Email from Anthony Gugino, 9/20:

4/19/2016 3:05:01 PM

HRS AASHTO

804

## Complete Issue Information

It seems to me that when the user defines a point of interest Virtis/Brass should be determining the capacity from the (rebar and section properties) at that point of interest, otherwise the point of interest concept is not that useful. Does Virtis/Brass do that?

Response from Brian Goodrich, 9/20:

Virtis allows the user to specify a point of interest and the side to examine, i.e., left or right. That means that there can be two points of interest at the same longitudinal location with different properties.

However, BRASS has always automatically determined which properties to use for a point of interest because there was no mechanism to specify the side. Furthermore, the recent requests for this capability are the first of which I have heard.

Email from Vinacs, 9/20:

Brian

You are correct! BRASS is doing the rating based on the "mathematical" model created by the export program and Virtis Export program is the one needs revision!

In your e-mail, you have correctly pointed out that

"BRASS is calculating the flexural resistance based on the input sent to by the export. I see no problems with the BRASS tools that calculate the flexural resistance. Based on the exported data, the first alternative has nearly 40% more top steel than the second alternative, so the negative flexural resistance is going to be significantly different between the two. However, the bottom steel only slightly affects the negative flexural resistance by about 9 ft-kips in this case."

Problem:

We have entered data of a bridge into the Virtis program using as-built details (as we saw them). In the First alternative, we entered the POSITIVE bar as "undeveloped" and in the second Alternative, we stated the bars are FULLY developed. Other than this minor difference, everything is the SAME.

Now, as you have already stated this positive bar has very minor effect on the negative moment capacity and therefore the capacity at the point of concern is "practically" the SAME. I am sure that you will agree with me.

VIRTIS EXPORT program generated two mathematical models for the rating and capacity reported by ONE mathematical model is about 46% more than the SECOND model (1481 k-ft vs 1008 k-ft).

Only logical explanation for the difference (since BRASS does rating based on the input sent to by the export program), is that the VIRTIS EXPORT program did not produce an accurate mathematical model to REPRESENT the bridge. In other words, the logic used to create the RC sections for the BRASS program needs revision. We want this problem recognized and fixed ASAP.

If you would like discuss this further, please give me a call.

Vinacs M Vinayagamoorthy  
916-227-8657

Email from Jay Puckett, 9/20:

4/19/2016 3:05:01 PM

HRS AASHTO

805



## Complete Issue Information

Hi All-

An interesting and useful dialog. Hopefully, we can get a work order to fix this -- I think that we need the left/right option as well.

Jay

FROM:kkennelly DATE:9/21/2005 4:17:48 PM

Email from Vinacs:

I am responding with regards to left/right option here. (See attached file: AREA of Rebars to be used.doc)

FROM:kkennelly DATE:9/21/2005 4:18:46 PM

Response sent by me to Vinacs 9/21:

Hi Vinacs,

Jim Duray, Brian Goodrich and I had a conference call today to discuss how to address the problem you are having with schedule based reinforcement. We determined that the Virtis generation of cross sections and cross section ranges is correct and does not need to be revised. We also determined that introduction of the Left/Right parameter for a point of interest in the BRASS program will solve the problem by giving the user control over the amount of rebar to be considered at a point of interest.

We are proceeding with the process to get the Left/Right parameter into the BRASS LFD program. I do not yet know the timeframe required to incorporate this parameter into BRASS LFD. We will keep you informed on our progress. Also, Illinois DOT entered incident 6532 on the Technical Support website regarding usage of Left/Right in BRASS. The users may have voted on this at the 2005 User Group meeting but we do not yet know the results of that voting.

I have also entered this problem as incident 6704 on the Virtis/Opis Technical Support website.

FROM:kkennelly DATE:10/6/2005 2:27:06 PM

Based on phone call conference on Sept 26 between Jim Duray, Krisha Kennelly, Brian Goodrich, Vinacs and Anthony Gugino we agreed on the following solution:

1. Enhance BRASS to allow the amount of rebar to vary over a cross section range length.
2. Change the Virtis export to export cross section ranges with different amounts of rebar at the start and end of a cross section range. See attached VI6704 Proposed Change.bmp for sketch.

With these changes we will be able to accurately model how the amount of rebar varies in the development length areas.

FROM:kkennelly DATE:11/30/2005 10:37:35 AM

For #2 above, modify code in DoGirderMbrAlt::ComputePercentDev(). This is where we force the amount of rebar to be the same at start and end of a cross section range.

3. Modify example problems in Virtis/Opis Help and training examples.

FROM:kkennelly DATE:12/16/2005 12:52:09 PM

2. Is done. DoGirderMbrAlt::GenerateReinfConcCrossSectionInfo() now has a parameter "bVaryReinflnRange". Set this variable to TRUE if the engine allows the area of rebar to vary over the length of a cross section range.

4/19/2016 3:05:01 PM

HRS AASHTO

806

Complete Issue Information

FROM:jduray DATE:1/16/2006 12:01:12 PM

Brian - can you modify the export? I believe this request has been passed on to Wyoming for their approval of the BRASS changes.

FROM:bgoodrich DATE:Thursday, March 02, 2006 10:54:02 AM

WYDOT has assigned this issue to BRASS Problem Log 648, but has not yet authorized work.

FROM:bgoodrich DATE:Thursday, March 02, 2006 7:18:43 PM

WYDOT directed that this work be done following the March release, i.e., it will not be addressed for version 5.4. Status set to On Hold for now.

FROM:bgoodrich DATE:Tuesday, September 05, 2006 11:16:52 AM

The engine modifications have been implemented and the beta DLL has been sent to Baker. The preliminary export modifications have also been implemented.

FROM:bgoodrich DATE:Tuesday, September 05, 2006 1:32:16 PM

Assigned to Krishna.

FROM:kkennelly DATE:9/5/2006 3:56:43 PM

Help has been changed.

|                                                    |
|----------------------------------------------------|
| Issue ID: 6713                                     |
| Subject: Question about ES Loss, Fcir computations |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Hart, Erich             | 9/21/2005 12:20:49 PM |
| Modified By: administrator            | 6/19/2008 4:19:39 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:05:02 PM

HRS AASHTO

807

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:9/21/2005 8:09:02 AM  
Submitted on behalf of Ken Teng, RQAW via email:

I got two questions. Please also check my attached file.

Question#1:

Please show me how to get the ES Loss = 12.414 ksi (I got ES Loss=12.76 ksi)

Below is my calculations:

Basic Info from BRASS Output (Beam #2 @ Span #2 - Mid-span)

Eci= 4496.06 ksi

Ab (Area of Beam) = 924.5 in<sup>2</sup>

As (Area of Strand) = 0.167 in<sup>2</sup>

C.G. = 21.1266 in

Ixx = 216980.11 in<sup>4</sup>

Mb (beam self weight moment) = 1044.0 k-ft

Immediate Loss = 0 ksi (Does VIRTIS use it for LFD? I know LRFD use it, right?)

Then my calculations:

Trial/Guess ES loss = 12.76 ksi (Actually I tried three times) :)

$\text{Psi} = (0.75 \cdot 270 - 0 - 12.76) \cdot (38 \cdot 0.167) = 1204.090 \text{ kips}$

$\text{Fcir} = (\text{Psi}/\text{Ab}) + (\text{Psi} \cdot (21.09 - 3.21)^2) / \text{Ixx} - (\text{Mb} \cdot (21.09 - 3.21)) / \text{Ixx} = 2.049 \text{ ksi}$

$\text{ES} = (28000/\text{Eci}) \cdot \text{Fcir} = 12.76 \text{ ksi}$  (Converged)

\*\*\*\*\*

Question #2:

What is the "IROW" on the BRASS Loss output? There are five (5) IROW for every tenth POINT?

By the way, is there anyway that the loss detailed calculations (Fcir & Fclds) can be shown on the BRASS output?

Please Advise. Thank you very much.

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

FROM:bgoodrich DATE:Wednesday, September 21, 2005 4:39:21 PM

BRASS LFD does not use an iterative method to determine the elastic shortening loss. Instead, an estimate of  $0.69 \cdot f_s$  is used to determine the strand stress as allowed in the definition of fcir on page 234 of the Standard Specifications (17th edition). Therefore:

4/19/2016 3:05:02 PM

HRS AASHTO

808

### Complete Issue Information

$\text{Psi} = (0.69 \times 270) \times (38 \times 0.167) = 1182.3 \text{ kips}$   
 $\text{Fcir} = 1.99 \text{ ksi}$   
 $\text{ES} = 12.414 \text{ ksi}$

Also, IROW is the row number of the prestressing strands. There are five rows: 3 straight rows @ 40", 38", and 36"; 2 harped rows @ 40" and 38". BRASS calculates strand stress, losses, etc. at each of these rows individually and then superimposes the results.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 6715                                               |
| Subject: POI Requested at 10th Pt but Getting Something Else |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Teal, Dean              | 9/22/2005 11:42:06 AM |
| Modified By: administrator            | 6/19/2008 4:19:39 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Goodrich, Brian | Assigned  |          | Bug      |
|                 | Duplicate |          |          |
| Goodrich, Brian | Duplicate | High     | Bug      |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | POI at 10th Points.bbd |             |

### Tasks

4/19/2016 3:05:03 PM

HRS AASHTO

809

Complete Issue Information

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6715.14625 | Duplicate     | POI Requested at 10th Pt but Getting Something Else            |
| 6716.14624 | Duplicate     | Store rating at all points instead of just the critical rating |

Description

FROM:dteal DATE:Thursday, September 22, 2005 7:42:06 AM

REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Thursday, September 22, 2005 7:42:14 AM

Attached is a 15-21-18.5 m prestressed bridge. I am rating member #2 using an HS20-44 truck. The LFD engine properties for POI control is set to #1 (10th points) along with the Analysis Settings Engine properties set to "print actions at 10th points.

Run Virtis on member #2 with this HS20-44 truck and look at the "Analysis Results – Rating Results Summary". The controlling Inventory point for the Design Truck is at 16.8m (8.6% of span 2). This is not a tenth point? Where did this point come from?

This point is at 1.8 m into span #2. The first 10th point should be at 2.1m?? Am I reading this wrong?

FROM:bgoodrich DATE:Friday, November 11, 2005 1:49:44 PM

This is a duplicate of Incident 3141. See that incident for details.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 6716                                                          |
| Subject: Store rating at all points instead of just the critical rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 9/22/2005 1:19:44 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |

4/19/2016 3:05:04 PM

HRS AASHTO

810

Complete Issue Information

|            |          |      |             |
|------------|----------|------|-------------|
| Duray, Jim |          |      | Enhancement |
| Duray, Jim | New      | High | Bug         |
|            | Resolved |      | Education   |
| Duray, Jim | Resolved | High | Education   |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 6740.14600 | Resolved      | BRASS engine properties. |

Description

FROM:dteal DATE:Thursday, September 22, 2005 9:19:44 AM

REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Thursday, September 22, 2005 9:19:51 AM

Is there any way to ignore a rating controlling point – to move on and get the next controlling point?  
Would this have to be done manually by using User Defined POI's only?

FROM:bgoodrich DATE:Friday, November 11, 2005 1:50:53 PM

There is currently no automated mechanism for obtaining the next controlling point or the next controlling limit state at a point for that matter. Virtis only captures the critical rating and the corresponding point. If Virtis obtained the rating factors for every point for every limit state, it would be possible to filter these for any number of reports. For now, the only way to NOT consider a particular point would be to use the user-defined POIs and not use the tenth points option.

Jim - I think this is more of an enhancement request than a bug.

FROM:kkennelly DATE:6/19/2006 11:12:00 AM

Duplicate of 4699

|                                   |
|-----------------------------------|
| Issue ID: 6740                    |
| Subject: BRASS engine properties. |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lee, Herman             | 9/29/2005 4:03:33 PM |
| Modified By: administrator            | 6/19/2008 4:19:37 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S2406110L_6040.bbd  |             |

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 6751.14589 | Duplicate     | Unable to save bridge after copying a floor system structure def |

### Description

FROM:hlee DATE:9/29/2005 11:33:42 AM

Change BRASS LFD engine properties and click OK wil change BRASS ASD engine properties too.

FROM:kkennelly DATE:10/7/2005 8:22:45 AM

That is probably by design since there is really only 1 BRASS engine that is used for both ASD and LFD analysis.

Complete Issue Information

Issue ID: 6751  
Subject: Unable to save bridge after copying a floor system structure def

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Zeng, Cincia 10/4/2005 8:20:46 PM  
Modified By: administrator 6/19/2008 4:19:37 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:10/4/2005 4:17:54 PM  
Submitted on behalf of Cincia Zeng, Lichtenstien via email:

I attached the virtis file I am working on. Basically, I tried to copy the superstructure definition "FS system for sp 36NB - FB rating" and paste under superstructure definition. After I did that, the file can't be saved. The error message I got is "unable save the bridge data". Please take a look the file and let me know any solutions for this problem. Thanks.

4/19/2016 3:05:06 PM

HRS AASHTO

813



Complete Issue Information

Cincia

-----  
Cincia Zeng, P.E.  
Lichtenstein Consulting Engineers, Inc.  
11 Huron Drive, Natick, MA 01760  
Tel: 508-647-0500 Fax: 508-647-5609  
E-Mail: CZeng@LCE.us

FROM:jihnat DATE:10/5/2005 8:58:34 AM  
Duplicate of 6702.

This is fixed for 5.4.0, but there doesn't seem to be any workaround that would allow the bridge to be saved after doing this copy.

FROM:jihnat DATE:10/5/2005 9:11:51 AM

If you delete all the member loads from the original structure def before copying it, then the bridge can be saved after the structure def is copied.

|                            |
|----------------------------|
| Issue ID: 6758             |
| Subject: Analysis Settings |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Neubauer, Scott         | 10/11/2005 3:07:47 PM |
| Modified By: administrator            | 6/19/2008 4:19:36 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | High     | Unknown     |
| Kennelly, Krisha | Assigned |          |             |
| Duray, Jim       |          |          |             |
| Ihnat, Joseph    |          |          | Bug - GUI 2 |
|                  | Rejected |          | Education   |

4/19/2016 3:05:06 PM

HRS AASHTO

814

Complete Issue Information

|               |          |      |           |
|---------------|----------|------|-----------|
| Ihnat, Joseph | Rejected | High | Education |
|---------------|----------|------|-----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Cannot Delete W-Beam.bbd |             |

Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 6759.14581 | Resolved      | Unable to delete W-Beam |

Description

FROM:sneubauer DATE:Tuesday, October 11, 2005 11:07:47 AM  
 REPORTED BY: Scott Neubauer

DESCRIPTION: Selected rating vehicles are cleared

COMMENTS: When I change the rating analysis method under the Analysis Settings, the trucks that I had selected to rate get cleared out and I have to reselect them from the list. Previous versions did not do this. I am running Virtis 5.3.1.

FROM:sneubauer DATE:Tuesday, October 11, 2005 11:07:48 AM

FROM:kkennelly DATE:10/18/2005 12:08:15 PM

I tested this in Version 5.1 and found this behavior when I switch to/from "Member Alternative" as the Rating Method on the Analysis Settings window. If I switch from LFD to ASD and vice versa, the vehicles are not removed from the selected vehicles list.

FROM:jihnmat DATE:5/24/2006 9:07:51 AM

I see the same behavior in every version I checked (5.1.1 through 5.4.0).

|                                  |
|----------------------------------|
| Issue ID: 6759                   |
| Subject: Unable to delete W-Beam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Hart, Erich             | 10/11/2005 7:45:59 PM |
| Modified By: administrator            | 6/19/2008 4:19:36 PM  |

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Unknown     |
| Bhanushali, Girish | Assigned  |          | Bug         |
|                    | Suspended |          | Enhancement |
| Bhanushali, Girish | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 6766.14574 | Suspended     | Truss Command - Member Load |

### Description

FROM:kkennelly DATE:10/11/2005 3:43:28 PM  
Submitted on behalf of Ken Teng, RQAW via email:

Please take a look at the bridge. I cannot Delete W-Beam which I do not use (because of plate girder). Someone input as beam and I corrected. But I do not know why I cannot Delete W-Beam. Thank you,

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

FROM:jihnmat DATE:10/13/2005 3:46:01 PM  
Ken informed me that the bridge was originally entered in version 5.1.0 and has been migrated forward. I think that when the rolled beam member alt was deleted, the spng mbr def object was not deleted, and this is what has the shape still assigned.  
The bug that caused the problem has been fixed since 5.1.0, but I don't think it's possible to clean this

4/19/2016 3:05:07 PM

HRS AASHTO

816

Complete Issue Information

up through the GUI. It shouldn't cause any harm by being left there.

|                                      |
|--------------------------------------|
| Issue ID: 6766                       |
| Subject: Truss Command - Member Load |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Bhanushali, Girish      | 10/13/2005 3:53:37 PM |
| Modified By: administrator            | 6/19/2008 4:19:36 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbhanushali DATE:10/13/2005 11:47:46 AM

To handle this command , we would require changes to FE engine. Changes would be to convert member loads to nodal loads for truss element. It was decided for now not to incorporate this command in rating (for now). Should we remove it from the language?

FROM:jduray DATE:10/13/2005 2:43:05 PM

Remove it since the FE engine does not support it and we do not have a task to enhance the engine to handle it. After the command is removed change this incident to an enhancement and set the status to Suspended.

FROM:hlee DATE:7/19/2006 11:05:54 AM

4/19/2016 3:05:08 PM

HRS AASHTO

817

Complete Issue Information

Changed Project to Support Center/Virtis.

|                                               |
|-----------------------------------------------|
| Issue ID: 6767                                |
| Subject: Truss Command - Additional Self Load |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Bhanushali, Girish      | 10/13/2005 3:59:02 PM |
| Modified By: administrator            | 6/19/2008 4:19:35 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Unknown     |
| Bhanushali, Girish | Assigned  |          | Bug         |
|                    | Suspended |          | Enhancement |
| Bhanushali, Girish | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1055789.zip         |             |

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 6779.14561 | Assigned      | Runtime issues |

### Description

FROM:gbhanushali DATE:10/13/2005 11:53:31 AM

Additional Self Load <force\_per\_lenght> <percentage>

We are not sure right now how to incorporate the effects of this command so that engine takes into consideration this load . (with the fact that we don't handle member loads).

FROM:jduray DATE:10/13/2005 2:44:43 PM

Perhaps we can comput an equivalent nodal load. If not remove the command since the FE engine does not support it and we do not have a task to enhance the engine to handle it. After the command is removed change this incident to an enhancement and set the status to Suspended.

FROM:hlee DATE:7/19/2006 11:06:55 AM

Changed Project to Support Center/Virtis.

FROM:jduray DATE:7/20/2006 4:47:04 PM

The FE engine should be enhanced to handle truss member loads.

Issue ID: 6779

Subject: Runtime issues

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: McCaffrey, Brian 10/17/2005 1:15:01 PM

Modified By: administrator 6/19/2008 4:19:35 PM

Priority: High

Category: Unknown

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1007690.bbd         |             |

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 6780.14560 | Resolved      | Holes in riveted girders |

### Description

FROM:bmccaffrey DATE:Monday, October 17, 2005 9:15:01 AM  
REPORTED BY:

DESCRIPTION:Could someone try running this bridge? It has 256+- superstructure definitions - mostly girder system. It's a 5 girder, multigirder steel bridge, mostly simple spans. A consultant modeled it and we ran it a few years ago and it took overnight to finish. We just re-inspected it and updated Virtis and we're trying to run it again. I'm having a tough time trying to even get it to import and save (over an hour) into an MSDE database. I tried the existing model in Oracle and it ran for 4 hours before I killed it. It does start analyzing but it takes about 5 minutes to run one member alt. None of the members are linked. The odd thing though - if you run an individual SD in the workspace it runs in seconds.

### COMMENTS:

---

4/19/2016 3:05:10 PM

HRS AASHTO

820

### Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 6780                    |
| Subject: Holes in riveted girders |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: McCaffrey, Brian        | 10/17/2005 1:49:09 PM |
| Modified By: administrator            | 6/19/2008 4:19:35 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 6781.14559 | Duplicate     | Check in /check out problems w/5.3.1 |

### Description

FROM:bmccaffrey DATE:Monday, October 17, 2005 9:49:09 AM  
REPORTED BY:

DESCRIPTION: Virtis is not saving any changes to the number of rivet holes - see attached .bbd. Try changing the number of holes from one to two on any member alt, hit OK, and get back into the window. The number of holes is still one.

### COMMENTS:

FROM:jihnat DATE:12/5/2005 9:44:33 AM

4/19/2016 3:05:10 PM

HRS AASHTO

821



Complete Issue Information

Workaround is to make a change in each row of the grid at the same time you are changing the number of holes.

FROM:jihnat DATE:12/5/2005 12:31:14 PM  
Fixed for version 5.4.0

|                                               |
|-----------------------------------------------|
| Issue ID: 6781                                |
| Subject: Check in /check out problems w/5.3.1 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: McCaffrey, Brian        | 10/17/2005 1:56:50 PM |
| Modified By: administrator            | 6/19/2008 4:19:34 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, October 17, 2005 9:56:50 AM  
REPORTED BY:

4/19/2016 3:05:11 PM

HRS AASHTO

822

Complete Issue Information

DESCRIPTION: If you open a bridge that you do not have checked out, then check it out within the Bridge Workspace, make some changes, check the bridge back in and exit without saving, your changes are saved. This is new to 5.3.1 We're using Oracle 9.2.

COMMENTS:

FROM:jihnat DATE:10/17/2005 10:06:38 AM  
Sounds like 2880. Fixed for 5.4.0

|                                  |
|----------------------------------|
| Issue ID: 6786                   |
| Subject: Effective flange wizard |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: McCaffrey, Brian        | 10/17/2005 5:38:15 PM |
| Modified By: administrator            | 6/19/2008 4:19:34 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:05:11 PM

HRS AASHTO

823

Complete Issue Information

|                  |          |      |             |
|------------------|----------|------|-------------|
| Kennelly, Krisha | Resolved |      | Education   |
|                  | Closed   |      |             |
| Duray, Jim       | New      | High | Unknown     |
| Ihnat, Joseph    | Assigned |      | Bug         |
| Goodrich, Brian  |          |      | Bug - BRASS |
| Goodrich, Brian  | Assigned | High | Bug - BRASS |

Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 3337790.bbd         |             |
|      | PS debond error.JPG |             |

Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 6790.14550 | Assigned      | P/S debonding error |

Description

FROM:bmccaffrey DATE:Monday, October 17, 2005 1:38:15 PM  
 REPORTED BY:

DESCRIPTION: See Superstructure Definition 15 (called Location 15 in the workspace), member alt 5 (fascia beam) on the attached bridge. My calcs show the eff fl width should be controlled by the beam spacing ( $0.5 \times 7.67' + 0.5 \times 2.0833 = 58.44"$ ). The wizard is using  $0.25L$  ( $0.25 \times 23' = 69"$ ) as the controlling eff width.

COMMENTS:

FROM:kkennelly DATE:10/18/2005 12:21:07 PM

For the fascia beam, the effective flange width is the minimum of the following:

beam spacing:  $0.5 \times 7.67' + 2.0833' = 71"$  (overhang doesn't get multiplied by 0.5)

span length:  $0.25 \times 23' = 69"$  <=== controls

4/19/2016 3:05:12 PM

HRS AASHTO

824

Complete Issue Information

6\*slab thickness to each side of web: 6\*8" + 25" (use oh since it is smaller than 6\*8) = 73"

|                              |
|------------------------------|
| Issue ID: 6790               |
| Subject: P/S debonding error |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: McCaffrey, Brian        | 10/19/2005 12:51:56 PM |
| Modified By: administrator            | 6/19/2008 4:19:34 PM   |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Wednesday, October 19, 2005 8:51:56 AM  
REPORTED BY:

DESCRIPTION: See attached error and .bbd file - this worked in 5.2.

COMMENTS:

FROM:jihnat DATE:5/2/2006 3:39:52 PM  
I can't confirm if/why it worked in 5.2.  
It doesn't run in 5.3.1 or 5.4.0, but it'll work if I change the Transfer Length to 32".  
I found two older incidents (4884, 5131) that talk about the same error message.

FROM:bgoodrich DATE:Thursday, May 04, 2006 2:20:13 PM  
I confirmed that 5.3.1 is issuing the error message. There must be a reason why BRASS requires that the debond+transfer must be greater than the overhang length. However, I haven't found the reason.

4/19/2016 3:05:12 PM

HRS AASHTO

825

Complete Issue Information

I'll forward this issue to WYDOT.

FROM:bgoodrich DATE:Monday, January 29, 2007 1:25:04 PM  
E-mail from Mike Watters:

From: Micheal Watters [mailto:Micheal.Watters@dot.state.wy.us]  
Sent: Tuesday, October 24, 2006 2:45 PM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: bmccaffrey@dot.state.ny.us  
Subject: Re: FW: Virts/Opis Incident 6790

Brian,

If memory serves me the reason why we recommended that the debond+transfer must be greater than the overhang length is because users were inputting P/S girder span lengths for a double bearing pier as centerline point of bearing to centerline point of bearing. Then they were inputting the debond length measured from the end of the girder. For example, if a girder spans from pier 1 to pier 2 using a 100 foot girder, for simply supported girders made continuous for live load, the span length from center of bearing from pier to pier may only be 99 feet. If the girder is debonded for 2 feet from the end of the girder, users were inputting the debond distance as 2 feet and not 1.5 feet (debond length 2.0 feet minus the 6" overhang length). Because of this error, girders were being analyzed with a debond length greater than the design. The same applies for transfer length also.

I think this is a fundamental problem with continuous spans vs. simply supported spans made continuous for live load. When the girders are analyzed as simply supported, BRASS analyzes the girder from bearing to bearing and does not analyze any actions in the overhang resulting in the end of transfer or debond regions. If the user wants to see the effects of debonding or transfer in the BRASS output, it will only analyze the actions between the point of bearings. If the user wants an analysis of debonding or transfer, the lengths would need to be longer than the overhang length.

When the girder is made composite for live load, the span length theoretically should change to centerline pier to centerline pier. Obviously BRASS does not change the span length for this Stage.

I hope this information helps.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

FROM:bgoodrich DATE:Monday, January 29, 2007 1:42:57 PM  
The error that BRASS is giving (with respect to Incident 6790) is:

4/19/2016 3:05:12 PM

HRS AASHTO

826

Complete Issue Information

**\*\*ERROR\*\*** In all cases, the debond length + development/transfer length must be greater than the overhang length. Check input.

I don't see how we can handle this in the BRASS export because transfer length is set for a particular set of strand properties not on a row basis. I think we need a problem log to modify BRASS to allow input of a transfer length that is less than or equal to the beam overhang. All this means is the strand has reached full strength outside the region that BRASS is analyzing. We could detect if the end of the transfer is within the overhang and not add a node.

FROM:bgoodrich DATE:Tuesday, January 30, 2007 5:45:00 PM  
 First of all, for a 0.5" diameter strand, the transfer length is generally 25" for LFD and 30" for LRFD. Most overhangs that I've heard of are anywhere from 6" to 12". Larger overhangs are not as common, but I have heard of these structures built in California. Obviously, because Brian McCaffrey submitted this issue, New York has some structures with the longer overhangs. If the user wants to enter this type of structure with stand-alone BRASS or with Virtis/Opis, he has to fudge the input by shortening the beam overhang, increasing the transfer length, or adding some fictitious debond length. None of these options are appealing (at least to me).

FROM:bgoodrich DATE:Tuesday, February 27, 2007 9:53:43 AM  
 WYDOT indicated this is not a high priority. Will AASHTO fund this task?

Issue ID: 6866  
 Subject: Virtis STD Engine: Let user pick Mu or My in Moment Shear Interaction rating

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lathia, Hasmukh  
 Submitted By: Teal, Dean 10/27/2005 6:13:26 PM  
 Modified By: administrator 6/19/2008 4:19:28 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Lathia, Hasmukh | Assigned           |          | Bug         |
|                 | Information Needed |          |             |
|                 | Suspended          |          | Enhancement |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |

### Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
|                    | Closed   |      |             |
| Lathia, Hasmukh    | Closed   | High | Enhancement |
| Duray, Jim         | New      | High | Unknown     |
| Ordoobadi, Mehrdad | Assigned |      | Bug         |
|                    | Resolved |      |             |
| Ordoobadi, Mehrdad | Resolved | High | Bug         |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | save error.JPG      |             |
|      | 1.bbd               |             |

### Tasks

| Name       | Current State | Summary             |
|------------|---------------|---------------------|
| 6880.14460 | Resolved      | Unable to save data |

### Description

FROM:dteal DATE:Thursday, October 27, 2005 2:13:26 PM  
REPORTED BY:

DESCRIPTION:When running TrainingBridge1 with a HS20 truck I compared BRASS to Virtis Std Engine. The values are not comparable.

#### BRASS:

Truck – I=1.462, O=2.441, Lane – I=1.376, O=2.298

#### Virtis Std:

Lane/Axel – I=1.069, O=1.782 - Shear

Lane/Axel – I=1.380, O=2.380 – Pos. Moment Overload

Being Virtis Std engine doesn't break apart truck and lane we can't make direct comparisons

FROM:kkennelly DATE:10/28/2005 10:53:58 AM

I compared the BRASS and Virtis Std output files and found the following:

1. Composite section properties are slightly different because Virtis Std internally computes the eff flange width and BRASS uses what is input. Virtis Std computes the eff flange width as 114", eff flange width input in Virtis is 125". Difference is not substantial.

4/19/2016 3:05:13 PM

HRS AASHTO

828

## Complete Issue Information

2. DL1 moments are pretty close (at midspan Virtis Std MDL1 = 5909.6 kft, BRASS MDL1 = 5954.1 kft)  
DL2 moments very close (at midspan Virtis Std MDL2 = 1710.8 kft, BRASS MDL2 = 1709.8 kft)
3. DL1 shear exactly same (at support 1 Virtis Std VDL1 = 146.8 kip, BRASS VDL1 = 146.8 kip)  
DL2 shear exactly same (at support 1 Virtis Std VDL2 = 42.5 kip, BRASS VDL2 = 42.5 kip)
4. LL moments values very close at midspan  
Virtis Std Lane MLL = 2948.8 kft (we know it's lane because output file has an "L" after the value.)  
BRASS Lane MLL = 2947.3 kft
5. LL shear very close at support 1  
Virtis Std Lane VLL = 81.7 k (we know it's lane because output file has an "L" after the value.)  
BRASS Lane VLL = 81.6 k
6. Both engines produce same rf due to overload at midspan:  
Virtis Std Inv RF = 1.38  
BRASS Inv RF = 1.376
7. Difference is Virtis Std finds moment shear interaction RF = 1.069 at 32.2' while BRASS finds moment shear interaction RF = 1.72 at this point.

FROM:jduray DATE:11/1/2005 1:52:34 PM

Currently investigating Std engine. We need to determine if Mu should equal Fy or not. BRASS appears to be computing Mu and the Std engine is using Fy. PennDOT investigated and believe Mu=Fy is correct.

FROM:jduray DATE:11/3/2005 10:45:47 AM

I would like to get some direction from the TAG and/or Task Force in this issue.

FROM:kkennelly DATE:11/30/2005 8:11:36 AM

The following suggestion came from the Task Force meeting:

1. Add a checkbox to the Mbr Alt: Engine tab to let user pick if they want My used in the moment shear interaction rating equations.
  - Default in Virtis is this box is not checked. That means the default is to use Mu in the equation (if the section is compact).
  - Note: If the section is non-compact, My will be used internally in Virtis Std Engine regardless of the status of this check box.

2. Add an input parameter to the Virtis Std Engine for this indicator if My or Mu should be used.

FROM:kkennelly DATE:11/30/2005 9:04:36 AM

3. The default in Virtis Std Engine will be to use My since that is currently the default.

FROM:jduray DATE:1/16/2006 11:06:18 AM

We do not have authorization from the TF to resolve this issue. It is on the list being reviewed by the TAG.

FROM:jduray DATE:Monday, March 27, 2006 10:00:00 AM

FROM:hlee DATE:7/10/2006 10:08:15 AM

4/19/2016 3:05:13 PM

HRS AASHTO

829



Complete Issue Information

Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:10/2/2006 4:53:00 PM  
Task Force approved this enhancement for the 5.6 release.

Deliverables to be modified:

1. Virtis Std Engine
2. User Manual
3. Export
4. Engine Properties
5. Engine Properties Help
6. Database

#4 is done.

#6: Default property string needs to be updated  
from Virtis Std Member Alternative Properties,5.04.00.00,0,0,0,0,0,0,0,0,0,0,1  
to Virtis Std Member Alternative Properties,5.06.00.00,0,0,0,0,0,0,0,0,0,0,1,0

FROM:mordoobadi DATE:10/3/2006 9:35:57 AM  
Fixed #6 in V/O 5.6 database.

FROM:hlee DATE:10/10/2006 11:17:55 AM  
#3 is done.

FROM:hlee DATE:11/16/2006 9:15:33 AM  
#4 and 5 are done.

FROM:hlee DATE:1/26/2007 9:31:50 AM  
Resolved in 5.6 Release.

FROM:dteal DATE:Monday, February 26, 2007 10:01:03 AM  
Accepted in 5.6 Beta 1

|                              |
|------------------------------|
| Issue ID: 6880               |
| Subject: Unable to save data |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: McCaffrey, Brian        | 11/2/2005 7:13:21 PM |
| Modified By: administrator            | 6/19/2008 4:19:27 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:05:13 PM

HRS AASHTO

830

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6881.14459 | Discard       | BARS File Import-deterioration |

### Description

FROM:bmccaffrey DATE:Wednesday, November 02, 2005 3:13:39 PM

When I try to copy/paste any Superstructure Definition in the attached file, I get the attached error message.

FROM:mordoobadi DATE:2/1/2006 4:28:12 PM

It appears that the structure def "Copy of 2005 LR - BIN 1061441 Span 1" has a problem. After removing that structure def I was able to save the bridge.

I copied the original structure definition and attempted to save and the save failed. It seems that copying of the SD "2005 LR - BIN 1061441 Span 1" has some problems.

I'll migrate this to 5.4 (Beta 4) and try to find out whether this issue still exists.

FROM:mordoobadi DATE:2/1/2006 4:57:47 PM

The problem was that Weld Defs got copied after Stiffeners.

Fixed in 5.4 Beta 5.

## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 6881                          |
| Subject: BARS File Import-deterioration |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Horton, Doug            | 11/3/2005 4:11:29 PM |
| Modified By: administrator            | 6/19/2008 4:19:27 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Kennelly, Krisha | Information Needed |          |          |
| Kennelly, Krisha | Information Needed | High     | Unknown  |

## Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State      | Summary                                                |
|------------|--------------------|--------------------------------------------------------|
| 6882.14458 | Information Needed | No strand locations visible in prestressed strand view |

## Description

FROM:dhorton DATE:Thursday, November 03, 2005 12:13:39 PM

During some test imports, errors were received for card 12 entries that defined deterioration or holes in BARS. This applies to a multitude of older structures and is crucial during import.

Is this a new issue or does the import ignore all deterioration specified in the existing file? If not - is there a work around other than entering all deterioration again manually?

4/19/2016 3:05:14 PM

HRS AASHTO

832

Complete Issue Information

What would it take to modify the import?

(Can't believe Gale didn't complain about this, but saw no evidence)

FROM:hlee DATE:11/11/2005 1:57:14 PM

Card 12 column 57 identifies Plate code (P), Exception code (E), Defect code (D), Hole code (H), and blank. Only blank is supported in BARS import. Import will display "These data columns cannot be imported into the Virtis database." when the code is P, E, D, or H. BARS manual specifies that all defects and holes must be entered as area and moment of inertia. There is no work around to enter these information. Deterioration in Virtis is entered as % width and/or % thickness losses and also on a particular component (top flange, web, bottom flange, top cover plate, or bottom cover plate).

FROM:hlee DATE:4/30/2008 2:36:16 PM

Discarded by TAG 12/07.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 6882                                                  |
| Subject: No strand locations visible in prestressed strand view |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Horton, Doug            | 11/3/2005 4:22:07 PM |
| Modified By: administrator            | 6/19/2008 4:19:27 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dhorton DATE:Thursday, November 03, 2005 12:22:07 PM

4/19/2016 3:05:14 PM

HRS AASHTO

833

Complete Issue Information

When working with tutorial PS1, Strand layout window does not show x for possible strand locations. Believe this occurred in another class, but forgot fix. All input was verified as shown in tutorial.

Is there a setting on the machine that needs to be toggled?

FROM:kkennelly DATE:11/7/2005 12:56:32 PM

Does the beam shape you are using have the possible strand locations defined on the PS I Beam: Strand Grid window? If you created the beam shape from scratch instead of copying the shape from the library, the strand grid locations will be empty.

FROM:dhorton DATE:Tuesday, November 08, 2005 7:55:56 AM

The shape used is the same as in example PS1 and thus was copied from the library. The strand pattern was reviewed on two different machines, so it does not appear to be a machine setting issue. All other users (13) had the pattern x's show up.

FROM:kkennelly DATE:11/9/2005 11:15:43 AM

If it was only 1 or 2 users that had this problem, I have to think that they did not copy the shape from the library and instead just entered the shape dimensions on the first tab of the PS I Beam window and didn't enter a strand pattern on the Strand Grid tab because the tutorial does not show the Strand Grid tab. Do you have a bbd file from these users?

|                         |
|-------------------------|
| Issue ID: 6933          |
| Subject: Virtis Support |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Ihnat, Joseph           | 11/21/2005 12:24:06 PM |
| Modified By: administrator            | 6/19/2008 4:19:23 PM   |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                 |          |      |                      |
|-----------------|----------|------|----------------------|
| Goodrich, Brian | Assigned |      | Bug                  |
|                 | Resolved |      |                      |
| Duray, Jim      | New      | High | Bug<br>Documentation |
| Ihnat, Joseph   | Assigned |      |                      |
|                 | Resolved |      |                      |
|                 | Closed   |      |                      |
| Ihnat, Joseph   | Closed   | High | Documentation        |

### Contacts

| Name       | Company          | Email 1        | Phone 1      |
|------------|------------------|----------------|--------------|
| Erich Hart | RQAW Corporation | ehart@rqaw.com | 317-255-6060 |

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Question for PS Effective Width.bbd |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 6937.14403 | Closed        | Change Effective Flange Width tutorial on website as per 4946 change |

### Description

FROM:jihnat DATE:11/21/2005 7:21:21 AM

I am having problems analyzing the attached file.

1. Girder G1 will not yield rating results. The program cannot seem to calculate the yield moment (My) for G1.
2. G2 does not give me a rating. The program says the bearing stiffeners fail.

Is there something that I have overlooked?

Thank you for your assistance

Glen A. Mullings

Design Engineer

Prudent Engineering, LLP

1111 West DeKalb Pike

Wayne, PA 19087

Tel: (610) 265 - 4870

Fax: (610) 265 - 4879

4/19/2016 3:05:14 PM

HRS AASHTO

835

Complete Issue Information

Email: gmullings@prudenteng.com  
website: www.PrudentEng.com

FROM: bgoodrich DATE: Monday, December 05, 2005 5:36:42 PM

Issue 1: Due to the cross section ranges that are input, there is a small cross section range of 0.0005 feet that is exported to BRASS. I adjusted the cross section range at the end of span 1 so has a length of 11.62448 feet. This eliminates the short range and allows BRASS to run.

Issue 2: For G2, the bearing stiffeners at Support 3 are not sufficient, so they control the rating. If bearing stiffeners are input, they are rated. Place a point of interest at 184.6 feet, i.e., the right end of Span 2 for span 2. Then, rate the member alternative and review the BRASS output file, which illustrates how the bearing resistance is calculated. Let us know if you are questioning the bearing resistance or the inclusion of the bearing stiffener ratings in general.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 6937                                                                |
| Subject: Change Effective Flange Width tutorial on website as per 4946 change |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Kennelly, Krisha        | 11/21/2005 4:48:21 PM |
| Modified By: administrator            | 6/19/2008 4:19:22 PM  |
| Priority: High                        |                       |
| Category: Documentation               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: kkennelly DATE: 11/21/2005 11:45:40 AM  
Submitted on behalf of Ken Teng, RQAW via email:

4/19/2016 3:05:14 PM

HRS AASHTO

836

Complete Issue Information

Hi Krisha,

Based on the Technical website - Tutorials:

\* VIRTIS does not interpret the second sentence of Article 8.10.1.1 to mean that the thickness of the web is added to the six times the thickness of the slab. The six times the thickness of the slab is taken from the centerline of the beam.

When I click the "Compute from Typical Section", it shows 85 inches for effective width which is included the web thickness. Please advise. Also, please check the attached bridge. Thanks a lot!

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

FROM:kkennelly DATE:11/21/2005 11:47:28 AM  
Response sent via email:

Hi Ken,

The documentation on the Technical Website is incorrect. For PS beams with narrow top flanges, the web thickness is now added to the 6 times the thickness of the slab in response to incident 4946.

Thanks for bringing this to our attention. We will revise the document on the Technical Support website.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

FROM:kkennelly DATE:11/21/2005 12:26:49 PM  
Tutorial was already changed in Sourcesafe but not put on website. Tutorial is in sourcesafe virtis/documentation/Effective Flange Width Computation Method.pdf

Joe, please update file on the website. Thanks.

FROM:jihnmat DATE:11/21/2005 12:58:33 PM  
Website has been updated.

FROM:mteng DATE:Tuesday, November 22, 2005 3:29:26 PM

FROM:jihnmat DATE:11/29/2005 10:03:06 AM

4/19/2016 3:05:14 PM

HRS AASHTO

837



## Complete Issue Information

Track field accepted.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 6944                                                    |
| Subject: Virtis computation of effective slab width for box beams |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Hart, Erich             | 11/23/2005 4:19:48 PM |
| Modified By: administrator            | 6/19/2008 4:19:21 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

## History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

## Contacts

| Name       | Company                 | Email 1               | Phone 1      |
|------------|-------------------------|-----------------------|--------------|
| Erich Hart | RQAW Corporation        | ehart@rqaw.com        | 317-255-6060 |
| Jim Duray  | Michael Baker Jr., Inc. | jduray@mbakercorp.com |              |

## Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | PS Box Effective Width-Question.bbd |             |

## Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 6944.14396 | Resolved      | Virtis computation of effective slab width for box beams |

## Description

FROM:kkennelly DATE:11/23/2005 11:16:21 AM  
Submitted via email on behalf of Ken Teng, RQAW:

4/19/2016 3:05:15 PM

HRS AASHTO

838

Complete Issue Information

Hi Krisha,

Got it! Thanks a lot.

Could you please tell me why the BRASS/VIRTIS does not consider the width of box beam/girder for effective width (or entire slab width)?

Please refer to the AASHTO 8.10.2.1 and AASHTO 9.8.2.1. It all states that the effective width should be used the entire slab width.

Please check the attached file and VIRTIS only shows 78 inches for effective width (too conservative) and I think it should be 105.375 inches.

Please advise. Thank you,

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

-----Original Message-----

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]  
Sent: Tuesday, November 22, 2005 3:46 PM  
To: Ming Hung Teng  
Subject: RE: PS Effective Width

Hi Ken,

The updated file is on the website. It has a date of 1/22/04, not today's date.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

>>> "Ming Hung Teng" <mteng@RQAW.com> 11/22/05 3:35 PM >>>  
Hi Krisha,

FROM:jihnat DATE:11/21/2005 12:58:33 PM  
Website has been updated.

BUT...

I checked the website and it is not updated yet.

4/19/2016 3:05:15 PM

HRS AASHTO

839

Complete Issue Information

Thanks for the help. Happy Thanksgiving Day!

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260  
FAX: 317-255-8354

-----Original Message-----

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]  
Sent: Monday, November 21, 2005 11:45 AM  
To: Ming Hung Teng  
Subject: Re: PS Effective Width

Hi Ken,

The documentation on the Technical Website is incorrect. For PS beams with narrow top flanges, the web thickness is now added to the 6 times the thickness of the slab in response to incident 4946.

Thanks for bringing this to our attention. We will revise the document on the Technical Support website.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

>>> "Ming Hung Teng" <mteng@RQAW.com> 11/21/05 10:52 AM >>>  
Hi Krisha,

Based on the Technical website - Tutorials:

\* VIRTIS does not interpret the second sentence of Article 8.10.1.1 to mean that the thickness of the web is added to the six times the thickness of the slab. The six times the thickness of the slab is taken from the centerline of the beam.

When I click the "Compute from Typical Section", it shows 85 inches for effective width which is included the web thickness. Please advise. Also, please check the attached bridge.  
Thanks a lot!

Regards,  
Ming-Hung (Ken) Teng  
RQAW Corp.  
4755 Kingsway Dr., Suite 400  
Indianapolis, IN 46205-1547  
(317) 255-6060 X 260

4/19/2016 3:05:15 PM

HRS AASHTO

840

Complete Issue Information

FAX: 317-255-8354

FROM:jduray DATE:Sunday, November 27, 2005 11:09:44 AM

FROM:mteng DATE:Monday, November 28, 2005 8:50:57 AM

FROM:kkennelly DATE:12/6/2005 11:03:01 AM

Virtis assumes that 8.10.2.1 applies to cast in place reinforced concrete boxes which are not supported by Virtis. 9.8.2.1 states that it is for cast in place box girders which are also not supported by Virtis. Therefore 8.10.1 is followed for precast boxes.

If you think the effective flange width computed by Virtis is too conservative, you can enter a different value yourself instead of using the Compute button in Virtis.

Issue ID: 6947  
Subject: Two series with the same label in Results Graph.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Hart, Erich 11/29/2005 3:11:24 PM  
Modified By: administrator 6/19/2008 4:19:21 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | TruckOrLane.bmp     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:05:15 PM

HRS AASHTO

841

Complete Issue Information

|            |           |                                                                                   |
|------------|-----------|-----------------------------------------------------------------------------------|
| 6947.14393 | Duplicate | Two series with the same label in Results Graph.                                  |
| 6955.14385 | Closed    | Collect and report Std Engine generated warning and error messages back to Virtis |

Description

FROM:hlee DATE:11/29/2005 9:57:27 AM  
Entered on behalf of Ken Teng.

See attached screen capture.

FROM:jihnmat DATE:11/29/2005 12:58:24 PM  
Duplicate of 6619.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 6955                                                                             |
| Subject: Collect and report Std Engine generated warning and error messages back to Virtis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Duray, Jim              | 11/30/2005 3:06:19 PM |
| Modified By: administrator            | 6/19/2008 4:19:20 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Duray, Jim         | New       | High     | Bug         |
| Ordoobadi, Mehrdad | Suspended |          | Enhancement |

4/19/2016 3:05:15 PM

HRS AASHTO

842

### Complete Issue Information

|                 |           |      |     |
|-----------------|-----------|------|-----|
|                 | Resolved  |      |     |
| Duray, Jim      | New       | High | Bug |
| Goodrich, Brian | Assigned  |      |     |
|                 | Duplicate |      |     |
| Goodrich, Brian | Duplicate | High | Bug |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Peter Szustak  | BSC Group, Inc.  | unknown@unknown.com                 | 617-896-4358 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 6972.14368 | Duplicate     | Low Prestress Shear Rating |

### Description

FROM:hlathia DATE:Wednesday, November 30, 2005 10:06:19 AM  
Currently BAR8 prints input error and computational warning messages to output file produced by a BAR8 run. Virtis should collect these messages so that user can review them.

FROM:hlee DATE:7/10/2006 10:09:06 AM  
Changed Project from Beta Testing/analytical tools/Std Engine (BAR7) to Support Center.

FROM:hlee DATE:1/26/2007 9:32:51 AM  
Resolved in 5.6 Release.

FROM:hlee DATE:2/5/2007 2:54:10 PM  
Resolved by Has Mukh Lathia and Mehrdad Ordoobadi for 5.6 Release.

Alpha tested and accepted by Herman Lee. Messages were displayed in the error dialog during validating the ratings results in the validation database.

|                                     |
|-------------------------------------|
| Issue ID: 6972                      |
| Subject: Low Prestress Shear Rating |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Sullinger, Dean         | 12/5/2005 5:50:25 PM |
| Modified By: administrator            | 6/19/2008 4:19:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
| Lee, Herman     | Assigned           |          | Bug      |
|                 | Information Needed |          |          |
| Lee, Herman     | Information Needed | High     | Bug      |
|                 |                    |          | Unknown  |

### Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

### Documents

| Name | Resource Identifier                              | Description                |
|------|--------------------------------------------------|----------------------------|
|      | 15080.bbd                                        | bad bridge with large skew |
|      | Scan Angle Conversion Utility<br>Read Me 510.pdf |                            |

### Tasks

| Name       | Current State         | Summary                                      |
|------------|-----------------------|----------------------------------------------|
| 6981.14359 | Information<br>Needed | angle adjustment program failing to complete |

### Description

FROM: bgoodrich DATE: Monday, December 05, 2005 12:50:26 PM  
Submitted on behalf of Amin Islam (Arizona DOT):

Mr. Islam is receiving a low shear rating for a prestressed concrete girder. He reports that CONSPAN is giving an Inventory shear rating of 2.14, while BRASS reports 0.463.

4/19/2016 3:05:16 PM

HRS AASHTO

844

Complete Issue Information

FROM:bgoodrich DATE:Monday, December 05, 2005 12:53:58 PM

During my initial investigation, I noticed that although the structure is symmetrical, the shear ratings at the 100 and 210 are different, and the 210 POI controls with the 0.463 rating factor. The rating difference is due a difference in the stirrup spacing at these points. One of the points may be incorrect. Next, the CONSPAN rating of 2.14 is 3 feet away from the support, which is not the same location as the critical BRASS shear rating. The user may be assuming that BRASS is calculating the support POI shear at some distance away from the support, which it is not. If the spacing at the 100 POI is correct (4.5 inches), the shear rating factor would be 1.07. The CONSPAN rating at this same location is 1.24. I do not know what assumption CONSPAN makes in determining the shear rating.

FROM:pszustak DATE:Thursday, December 22, 2005 4:23:10 PM

I have just run into a similar problem comparing BRASS with PENNDOT's PS3. PS3 assumes that you can follow AASHTO 9.20.1.4 and design for the shear at a distance h/2 from the support, rather than designing for the shear at CL brg. It seems that BRASS is rating the bridge using the forces at the 100 POI, which seems unnecessarily conservative. Is there a way to rate the ends of the girder using the shear at h/2?

FROM:bgoodrich DATE:Sunday, March 05, 2006 1:35:29 AM

A decision by WYDOT regarding prestress shear is posted in Incident 3143. Therefore, I am marking this incident as a duplicate.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 6981                                        |
| Subject: angle adjustment program failing to complete |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Jensen, Paul            | 12/8/2005 11:24:31 PM |
| Modified By: hlee                     | 10/26/2012 1:16:10 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:05:16 PM

HRS AASHTO

845



Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:pjensen DATE:Thursday, December 08, 2005 6:25:28 PM

I have been trying to upgrade the VO database for testing (5.4) and having problems with the angle adjustment program in 5.1.1. the program is not running to completion because of several bridges with large skew angles. attached is a typical bridge. these structures would not have been found in the original testing because these are new entries into the system. (our production is still 5.1).

FROM:hlee DATE:12/28/2005 11:05:23 AM

The version of the attached bbd is 5.1.1. Since the angle adjustment program is used in the 5.1.0 to 5.1.1 database migration. Please attach a 5.1.0 version of the bbd so we can reproduce the problem. I have attached the Scan Angle Conversion Utility Read Me file. It details the process and have some suggestions on how to identify and fix those problem bridges in 5.1.0.

FROM:jduray DATE:6/11/2008 11:54:17 AM

Is this still an issue?

|                                                  |
|--------------------------------------------------|
| Issue ID: 7000                                   |
| Subject: Error message on structure plate length |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Thompson, Todd          | 12/20/2005 6:01:03 PM |
| Modified By: administrator            | 6/19/2008 4:19:16 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

4/19/2016 3:05:17 PM

HRS AASHTO

846

## Complete Issue Information

### History

| Primary Contact  | Status             | Priority | Category  |
|------------------|--------------------|----------|-----------|
| Duray, Jim       | New                | High     | Unknown   |
| Li, Xinmei       | Assigned           |          | Bug       |
|                  | Resolved           |          | Education |
|                  | Resubmit           |          |           |
|                  | Information Needed |          |           |
| Kennelly, Krisha | Assigned           |          |           |
| Duray, Jim       |                    |          | Bug       |
| Lee, Herman      | Resolved           |          |           |
| Lee, Herman      | Resolved           | High     | Bug       |

### Contacts

| Name          | Company                 | Email 1                    | Phone 1        |
|---------------|-------------------------|----------------------------|----------------|
| Tim Armbrecht | Illinois DOT            | tim.armbrecht@illinois.gov | 217-782-6266   |
| David Koenig  | Missouri DOT            | david.koenig@modot.mo.gov  | (573) 526-0556 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com      |                |

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | LLDFWrongfor20-24ft<br>(0160046x)(540).xml |             |
|      | VI7007.bmp                                 |             |
|      | LLDFWrongfor20-24ft(2).doc                 |             |

### Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7007.16325 | Resolved      | Wrong LL DF for 20' to 24' roadways? |

### Description

FROM:tthompson DATE:Tuesday, December 20, 2005 1:01:13 PM  
I'm getting some errors on my Girder System and I can't seem to figure out why.

FROM:tthompson DATE:Tuesday, December 20, 2005 1:02:37 PM  
See attached file.

4/19/2016 3:05:17 PM

HRS AASHTO

847

Complete Issue Information

FROM:ttompson DATE:Wednesday, February 01, 2006 8:59:27 AM  
Is there anybody there? Been over one month with no response.

FROM:ttompson DATE:Wednesday, March 01, 2006 11:35:25 AM  
Nobody home. Another month with no response.

Please disregard this Incident. No longer a problem.

FROM:kkennelly DATE:5/1/2006 10:21:42 AM  
Closed based on Todd's comments from 3/1/06

Issue ID: 7007  
Subject: Wrong LL DF for 20' to 24' roadways?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 12/21/2005 4:50:53 PM  
Modified By: administrator 6/19/2008 4:28:16 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tarmbrecht DATE:Wednesday, December 21, 2005 11:50:56 AM

Could you please verify that Viris calculates the correct distribution factor for roadway widths between 20' and 24'? In the attached model (a 4 girder steel composite structure w/28' deck and 22' roadway) Virtis calculates the live load distribution factor based on it carrying only one lane. According to AASHTO Std. Spec. for Highway Bridges, Article 3.6.3 bridges with "...roadway widths from 20 to 24

4/19/2016 3:05:17 PM

HRS AASHTO

848

Complete Issue Information

feet shall have two design lanes..."

FROM:xli DATE:1/17/2006 10:54:44 AM  
Viris calculates correct distribution factor.

In attached bridge, member alt "N Int", Girder spacing is 8.29'. According to AASHTO 3.23.1, Concrete deck on steel I beam,  
Bridge designed for one traffic lane, distribution factor =  $S / 7.0 = 8.29 / 7.0 = 1.184$ ;  
Bridge designed for two or more traffic lanes, distribution factor =  $S / 5.5 = 8.29 / 5.5 = 1.507$ .

In Virtis, open the live load distribution window of member alt "N Int", click "Compute from typical section button", the calculated shear and moment distribution factors match the values calculate according to AASHTO.  
See attached screen shot of the Virtis calculated values.

FROM:tarmbrecht DATE:Wednesday, January 18, 2006 2:46:30 PM

OK, I see that we had the wrong specification checked, i.e. Manual for Condition Evaluation of Bridges (MCEB). When I check the Standard Specs, I get the results for two lanes, as you did. However, shouldn't the results be the same for MCEB and Standard Specs? MCEB 6.7.2.2 says the number of lanes loaded should be in conformance with the design specs plus that in rating evaluation, raters should assume that two lanes are loaded for as little as 18 feet of width. Therefore, it shouldn't matter which one I check, I should get separate distribution factors for one and two (i.e. multi) lanes. I attached the screenshot of the distribution factors when we select the MCEB option. Because I don't think there should be a difference in this case, I'm resubmitting for review.

FROM:tarmbrecht DATE:Wednesday, January 18, 2006 3:02:59 PM

FROM:jduray DATE:Thursday, March 02, 2006 9:53:55 AM  
Is this new to 5.4?

FROM:tarmbrecht DATE:Tuesday, March 07, 2006 3:07:56 PM  
Jim, we don't think so. My consultant reports that this issue existed in 5.3.1 also.

FROM:jduray DATE:Monday, March 27, 2006 9:36:22 AM

FROM:jduray DATE:Monday, March 27, 2006 9:37:32 AM

FROM:jduray DATE:Monday, March 27, 2006 9:37:54 AM  
Change to a Support incident since the issue existed in 5.3.1 release.

FROM:kkennelly DATE:3/27/2006 9:59:40 AM  
This has existed since the user preference was added in version 5.1.

We currently follow this procedure:  
If user has checked follow 3.6.3:  
Travelway between 20' and 24' ==> number of lanes = 2.  
otherwise ==> number of lanes = int(travelway width/12').

4/19/2016 3:05:17 PM

HRS AASHTO

849

Complete Issue Information

If user has checked follow 6.7.2.2:

Travelway between 18' and 20' ==> number of lanes = 2

otherwise ==> number of lanes = int(travelway width/12'). For a 22' travelway, this results in 1 lane.

User is requesting that if they have checked 6.7.2.2 and travelway width is 20' to 24' we should use 2 lanes, each 1/2 the travelway width.

I agree with Tim that based on the wording in 6.7.2.2, we should still follow 3.6.3 if they have selected 6.7.2.2 in Virtis.

Discuss with Jim and Herman since I didn't do the original coding.

FROM:dkoenig DATE:Thursday, April 20, 2006 9:08:11 AM

We had noticed this same issue at MoDOT. I agree with Tim. Roadway widths from 20 to 24 feet should have distribution factors based on two lanes of traffic, regardless of which specification is checked. Even though it is not specifically stated in the MCEB, this is the only thing that would pass the common sense test. You wouldn't use two lane factors for 18 to 20 foot roadways and then turn around and assume one lane factors for roadways from 20 to 24'.

FROM:hlee DATE:6/29/2006 3:30:41 PM

Modified procedure based on the above suggestion.  
Resolved for 5.5 Release.

FROM:tambrecht DATE:Wednesday, September 13, 2006 12:07:31 PM

Accepted.

|                                   |
|-----------------------------------|
| Issue ID: 7055                    |
| Subject: Route Analysis in Virtis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Hasan, Mac              | 1/25/2006 4:16:24 PM |
| Modified By: administrator            | 6/19/2008 4:28:12 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | On Hold  |          |          |

4/19/2016 3:05:17 PM

HRS AASHTO

850

Complete Issue Information

|                    |                    |      |                |
|--------------------|--------------------|------|----------------|
|                    | Assigned           |      |                |
| Duray, Jim         | New                | High | Unknown        |
| Bhanushali, Girish | Assigned           |      | Bug            |
|                    | Investigation      |      |                |
|                    | Information Needed |      |                |
| McCaffrey, Brian   |                    |      |                |
| Bhanushali, Girish |                    |      |                |
| McCaffrey, Brian   |                    |      |                |
| Bhanushali, Girish | Assigned           |      |                |
| Kennelly, Krishna  |                    |      |                |
| Goodrich, Brian    |                    |      | Bug - Export 1 |
|                    | Resolved           |      |                |
| Goodrich, Brian    | Resolved           | High | Bug - Export 1 |

Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1034580.bbd         |             |
|      | v55_VI7100.xml      |             |

Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 7100.16232 | Resolved      | High floorbeam loads |

Description

FROM:mhasan DATE:Wednesday, January 25, 2006 11:16:25 AM

When performing a 'Route Analysis' and if an interior girder controls the operating rating, Virtis reports the Operating RF based on a multi-lane LL distribution factor as a default. The program does not account for the single-lane LL distribution factor (xml tag = 'true') that is prescribed in the xml input file.

FROM:jihnmat DATE:3/13/2006 9:59:24 AM

Same as 7127. Changed status likewise to On Hold.

4/19/2016 3:05:17 PM

HRS AASHTO

851

Complete Issue Information

FROM:kkennelly DATE:5/1/2006 11:46:28 AM  
7127 marked as duplicate of this incident.

FROM:kkennelly DATE:8/15/2006 10:09:41 AM  
I think the problem is the following:

In UiRoutingResultsDlg the following call is made to get the minimum rating results  
DoMemberRatingSummaryPtr->GetMinRatingResultsSummary()  
with TYP\_IMPACTLOAD\_ASREQSTD and TYP\_LANELOAD\_ASREQSTD passed in. The value that  
gets returned from this call is always for the multi lane since it has a higher DF.

When I try to pass in TYP\_LANELOAD\_SINGLE to GetMinRatingResultsSummary() I don't get any  
match for the results so no minimum results are returned.

In the routing each vehicle can have a different specification for the Lane Load type (single or multi). I  
don't see anywhere that I can specify I want only TYP\_LANELOAD\_SINGLE considered for a vehicle  
in the analysis.

Can I somehow get the minimum rating results by specifying TYP\_LANELOAD\_SINGLE or does the  
window have to look through all the results and search for the lowest with TYP\_LANELOAD\_SINGLE ?  
FROM:kkennelly DATE:8/15/2006 10:21:02 AM

FROM:mordoobadi DATE:8/15/2006 10:29:33 AM  
Use TYP\_LANELOAD\_SINGLE or TYP\_LANELOAD\_MULTI with NULL for impact.

FROM:kkennelly DATE:8/15/2006 10:58:49 AM  
That works.

FROM:kkennelly DATE:8/15/2006 1:08:15 PM  
Fixed for 5.5

|                               |
|-------------------------------|
| Issue ID: 7100                |
| Subject: High floorbeam loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 2/13/2006 2:33:27 PM |
| Modified By: administrator            | 6/19/2008 4:28:08 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0450082x(531).bbd   |             |

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 7101.16231 | Resolved      | Prestressed concrete tension rating question |

### Description

FROM:bmccaffrey DATE:Monday, February 13, 2006 9:33:40 AM

The attached bridge is a through girder with only floorbeams. The sidewalk load and resulting actions are much higher than what you get by hand comps. This is happening on all our girder-floorbeam bridges without stringers.

FROM:gbhanushali DATE:2/15/2006 9:59:01 AM  
Can you tell me if you are analysing a floorbeam or girder?  
Also which load case values you are refering to?

FROM:bmccaffrey DATE:Tuesday, February 28, 2006 8:50:09 AM

It's the sidewalk load on the floorbeam that I'm concerned about. Looks like it's taking the two sidewalks and making a uniform load across the entire floorbeam using the actual thickness of the sidewalk, not an equivalent smaller load..

FROM:kkennelly DATE:5/10/2006 8:35:07 AM  
Brian, I checked into this and found the following. In LoadsUtility.cpp Prepare(), line 417.

```
dForce = (DistributedLoad.dForcePerLengthStart +  
          DistributedLoad.dForcePerLengthEnd) / 2.0 *  
          DistributedLoad.dLength * dDeckLength;           <<=====
```

DistributedLoad.dForcePerLengthStart and DistributedLoad.dForcePerLengthEnd were already multiplied by DistributedLoad.dLength so they should not be multiplied by that value again in line 417.

FROM:kkennelly DATE:5/10/2006 8:41:17 AM  
I've attached a version 5.5 xml file of this bridge

4/19/2016 3:05:18 PM

HRS AASHTO

853



Complete Issue Information

FROM:kkennelly DATE:10/30/2006 3:03:29 PM

Line 417 used by other loads not just the sidewalk so fix would be around line 3248

DistributedLoad.dForcePerLengthStart = dWeight \* dAvgWidth; <== being multiplied by  
 dAvgWidth  
 DistributedLoad.dForcePerLengthEnd = dWeight \* dAvgWidth; <== being multiplied by  
 dAvgWidth  
 DistributedLoad.dDistance = dLocation;  
 DistributedLoad.dLength = dAvgWidth; <== will get multiplied  
 by this again in line 417 so change this to = 1.0 so has no effect???  
 DistributedLoad.sName = sAppurtenanceName;

FROM:bgoodrich DATE:Monday, October 30, 2006 3:45:54 PM

The CLoadsUtility::PrepareDeckAppurtenanceLoads function was originally written for longitudinal (girder/stringer) analyses, so the force/length values calculated therein are for longitudinal members. This function is now used for a floorbeam analysis, where the longitudinal force/length and load width values determined. To get the total force from the sidewalk on the floorbeam, the force/length must be multiplied by the deck length (dDeckLength), i.e., the sum of the tributary width on each side of the floorbeam. The average force/length was being mulitplied by the the DistributedLoad.dLength (sidewalk width) as well, which was incorrect. I updated LoadsUtility.cpp file.

FROM:kkennelly DATE:11/1/2006 11:38:10 AM

File was put in Sourcesafe for an update to beta 6.

Issue ID: 7101  
 Subject: Prestressed concrete tension rating question

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Armbrecht, Tim 2/13/2006 4:28:24 PM  
 Modified By: administrator 6/19/2008 4:28:08 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Bug      |
|                   | Resolved |          |          |
|                   | Resubmit |          |          |
| Kennelly, Krishna |          |          |          |
| Goodrich, Brian   | Resolved |          |          |
| Goodrich, Brian   | Resolved | High     | Bug      |

4/19/2016 3:05:18 PM

HRS AASHTO

854

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 7128.16204 | Discard       | Routing interface appears to use the "As-Requested" results only. |

### Description

FROM:bgoodrich DATE:Monday, February 13, 2006 11:28:38 AM

E-mail from Tim Armbrecht:

Hi Brian,

I was wondering if you could take a look inside BRASS for me. The attached structure is telling me that for the "3- 2nd W Int member" of the "2-Span Continuous PSI – Prop." Superstructure, concrete tension controls. By looking at the output, it appears that the controlling equation is in AASHTO 9.15.2.2 and is  $6\sqrt{f'c}$ . The rating factor is 1.0. However, if I change the  $f'c$  property of the beam to 7000 psi (from 6000 psi), I still get the same rating factor. Is this correct? Unfortunately, the output doesn't provide the equation for the serviceability checks (like concrete tension), so I can't check the answers. Could you please verify how this rating factor is determined? Is there something in the help that describes the calculations? Thanks,

Tim

FROM:bgoodrich DATE:Monday, February 13, 2006 11:30:34 AM

I ran your bbd file with 6000 psi concrete and BRASS gave an Inventory rating of 0.945 with concrete tension controlling. Then, I ran it with 7000 psi concrete and BRASS gave an Inventory rating of 1.000. These ratings refer to the HS 20-44 truck.

You're correct that there is no detailed output for the concrete tension check like there is for the concrete compression check. Only the rating factors for concrete tension are reported. You could use the stresses reported in the 9.15.2.2(b) and 9.15.2.2(c) checks to calculate the concrete tension rating factor. I hope this helps.

FROM:mordoobadi DATE:3/20/2006 9:00:02 AM

Comments From Tim Armbrecht:

-----  
4. Incident 7101 (related): (see 0450082x(531).bbd)  
Stress Limits - The concrete material specified in Stress Limits can be changed without the Girder Material under Beam Details being changed. If this is done, unexpected/erroneous results can occur.

4/19/2016 3:05:18 PM

HRS AASHTO

855

### Complete Issue Information

Prestress Properties - The Jacking stress ratio (JSR) is not updated to the correct value when the P/S strand material is changed. e.g., If the strand material had been entered wrongly, say as LR (for which the JSR = 0.75) and is corrected to SR (JSR = 0.7), the JSR stays as it was for the originally entered strand material.

Rating Factor - For v. 5.4.0 (Beta 6) the controlling inventory rating factor is 0.767 @ 57.05' (69.4%) of Span 1 (Member "3 - 2nd W Int"/Alternative "48" PS I-Beam(x)) but for v. 5.3.1 it is 1.246. (Shear is the mode for both.) Same location, same member, different versions, different results.

FROM:kkennelly DATE:3/21/2006 11:47:45 AM

Comments entered on 3/20/06 have been entered as individual incidents and this incident changed back to Resolved status.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 7128                                                             |
| Subject: Routing interface appears to use the "As-Requested" results only. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Duray, Jim              | 2/22/2006 3:40:53 PM |
| Modified By: administrator            | 6/19/2008 4:28:06 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:jduray DATE:2/22/2006 10:39:26 AM

4/19/2016 3:05:18 PM

HRS AASHTO

856

Complete Issue Information

It seems it should be able to consider the scenario that produces a RF greater than 1.0 by evaluating in the following order:

- Multi-lane with impact - no restrictions
- Multi-lane without impact - probably requires an escort
- Single-lane with impact - probably requires an escort and bridge closing
- Single-lane without impact - probably requires an escort and bridge closing

FROM:jduray DATE:2/22/2006 11:01:50 AM  
Can accomplish this by modifying:

MemberRatingSummaryPtr->GetMinRatingResultsSummary(ICurrentVehicleId,  
TYP\_IMPACTLOAD\_ASREQSTD, TYP\_LANELOAD\_ASREQSTD, .....

to request TYP\_LANELOAD\_SINGLE and TYP\_LANELOAD\_MULTI and selecting the appropriate RF based on above suggested order.

FROM:hlee DATE:4/30/2008 2:36:53 PM  
Discarded by TAG 12/07.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7157                                                  |
| Subject: Virtis Std Engine Doesn't Support Fixed End Conditions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Teal, Dean              | 3/7/2006 6:08:10 PM  |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lathia, Hasmukh | Assigned  |          | Enhancement |
|                 | Suspended |          |             |
|                 | Duplicate |          |             |

4/19/2016 3:05:18 PM

HRS AASHTO

857

### Complete Issue Information

|                  |           |      |     |  |
|------------------|-----------|------|-----|--|
|                  | Suspended |      |     |  |
| Duray, Jim       | New       | High | Bug |  |
| Kennelly, Krisha | Assigned  |      |     |  |
|                  | Resolved  |      |     |  |
| Kennelly, Krisha | Resolved  | High | Bug |  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0150007(540B6).xml  |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 7190.16142 | Resolved      | Problems with Listing of Stirrups in RC Beams |

### Description

FROM:dteal DATE:Tuesday, March 07, 2006 1:08:11 PM

Beta 6

In verifying another incident I came across a short coming in the Virtis Std Engine. When I changed my end support to Fixed the std engine will fail to run. Is this a known shortcoming? Fixed end conditions are fairly common, ei: Steel girders embedded in the abutments.

For my example I used the "As Rated" superstructure definition and member #2 of the attached .xml.

FROM:jduray DATE:3/7/2006 1:34:54 PM

Hasmukh - can you verify this?

FROM:dteal DATE:Tuesday, March 07, 2006 5:13:46 PM

I am attaching another example of fixed supports not being handled, this one is a RC bridge, the other one was a welded plate.

FROM:dteal DATE:Tuesday, March 07, 2006 5:19:37 PM

This RC structure I added - keep in mind that to test this you will have to add shear DF's and shear bars to make it run after you fix the non-supported end condition.

FROM:hlathia DATE:Wednesday, March 08, 2006 3:24:21 PM

PennDOT's BAR7 (and hence AASHTO Engine) does not handle structures with fixed ends. All supports must be hinged or roller supports. To handle fixed supports, CBA will require major revisions

4/19/2016 3:05:19 PM

HRS AASHTO

858

Complete Issue Information

FROM:dteal DATE:Monday, March 13, 2006 10:54:05 AM  
In VI #7159 you added the following for the shear limitations:

"Add a summary of limitations topic to the StdEngine engine help file and a note to the mbr alt in the StdEngine engine help to indicate ignore shear is ignored and the analysis may fail without shear reinforcement."

Can we have this topic also listed as a limitation there?

FROM:hlee DATE:3/13/2006 12:05:20 PM  
This will be included in the limitation topic.

FROM:dteal DATE:Tuesday, March 28, 2006 11:24:33 AM  
Due to this limitation of the Std Engine - KS can't rate it's 1024 RC Parabolic Slab structures. All of this type of structure has a monolithic abutment, we assume a fixed abutment support and us a spring to simulate true behavior.  
In order to use the Std engine for this type of structure we would have to modify every file with this type of fixed support.

FROM:kkennelly DATE:6/19/2006 11:21:28 AM  
Duplicate of 6683

|                                                        |
|--------------------------------------------------------|
| Issue ID: 7190                                         |
| Subject: Problems with Listing of Stirrups in RC Beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 3/20/2006 1:04:25 PM |
| Modified By: administrator            | 6/19/2008 4:28:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:05:19 PM

HRS AASHTO

859

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                            |
|------------|---------------|------------------------------------------------------------------------------------|
| 7197.16135 | Resolved      | Concrete material in Stress Limits might not match Girder Material on Beam Details |

Description

FROM:mordoobadi DATE:3/20/2006 9:03:09 AM

From Tim Armbrecht:

6. Problems with Listing of Stirrups in RC Beams - (See 0150007(540B6).xml.) After stirrups are input in a model then the window closed and then re-opened they are listed in order of the stirrup bar Name. They should be listed in sequence along the beam, not by their name. (See 0150007(540B6).)

FROM:jduray DATE:3/20/2006 3:47:31 PM  
Is this problem (if it is a problem) new to 5.4?

FROM:kkennelly DATE:3/21/2006 11:14:33 AM  
This problem exists in previous versions. Code is mistakenly sorting on the name when it should be sorting on the support number. (Stirrups come out of domain in correct order.) Fix for 5.5 since 5.4 almost out the door.

FROM:kkennelly DATE:3/21/2006 11:28:36 AM

FROM:kkennelly DATE:4/10/2006 12:48:02 PM  
Fixed for 5.5

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 7197                                                                              |
| Subject: Concrete material in Stress Limits might not match Girder Material on Beam Details |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Armbrecht, Tim          | 3/21/2006 3:31:59 PM |

Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:28:00 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Assigned  |          | Bug         |
| Duray, Jim      | Assigned  | High     | Bug         |
| Ihnat, Joseph   | Resolved  |          |             |
|                 | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7198.16134 | Assigned      | Update the jacking stress ratio automatically for user |

Description

FROM:kkennelly DATE:3/21/2006 11:29:56 AM  
 Submitted by Tim Armbrecht as part of 5.4 beta testing:

4. Incident 7101 (related): (see 0450082x(531).bbd)  
 Stress Limits - The concrete material specified in Stress Limits can be changed without the Girder Material under Beam Details being changed. If this is done, unexpected/erroneous results can occur.

FROM:kkennelly DATE:3/21/2006 11:32:12 AM  
 This situation has existed since prestress was introduced in Virtis/Opis. Do 1 and 2 for 5.5 since 5.4 almost out the door.



Complete Issue Information

1. The validation performed by the Domain should warn user of this situation.
2. Stress Limit window should check if concrete material matches that used for girder concrete in Beam Details window if the stress limit is assigned to a stress limit range for the mbr. If concretes don't match, don't let user save the stress limit.
3. For Virtis, the allowable stresses entered on the Stress Limits window are not used by either BRASS or the VirtisStd Engine. Those analysis engines internally compute the allowable stresses based on the concrete f'c, etc. Therefore this bug wasn't causing a problem in Virtis.
4. For Opis, these allowable stresses are used by the BRASS LRFD engine.

FROM:kkennelly DATE:3/21/2006 11:42:34 AM

FROM:kkennelly DATE:5/3/2006 11:32:47 AM

1 and 2 are done for version 5.5. 3 and 4 are just informational notes that don't require action.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7198                                                  |
| Subject: Update the jacking stress ratio automatically for user |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Armbrecht, Tim          | 3/21/2006 3:42:30 PM |
| Modified By: jihnat                   | 1/29/2010 3:08:32 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:05:19 PM

HRS AASHTO

862

Complete Issue Information

FROM:kkennelly DATE:3/21/2006 11:33:54 AM  
Submitted by Tim Armbrecht in 5.4 beta testing:

Prestress Properties - The Jacking stress ratio (JSR) is not updated to the correct value when the P/S strand material is changed. e.g., If the strand material had been entered wrongly, say as LR (for which the JSR = 0.75) and is corrected to SR (JSR = 0.7), the JSR stays as it was for the originally entered strand material.

FROM:kkennelly DATE:3/21/2006 11:44:06 AM  
This situation has existed since prestress was introduced in Virtis/Opis. We compute the JSR when user selects the strand material when they create a new Prestress Property. User is requesting we re-compute the JSR if they change the strand material selection on that window. We'll have to prompt user with a question asking if they want us to change the JSR if they change the strand material and the strand type changes from LR to SR and vice versa.

FROM:hlee DATE:5/28/2008 11:09:23 AM  
BUG 12/07 by TAG

FROM: Joseph Ihnat DATE: 6/5/2009 9:45:41 AM Eastern Daylight Time  
Done for version 6.1.0 (Beta Build 2).

FROM: Tim Armbrecht DATE: 7/24/2009 3:00:41 PM Eastern Daylight Time  
The prompt is fine. However, there is still a problem. When you change the strand specification under Materials (which is likely when changing from a wrong material that may have been selected, or if you are using a previously coded model to start a new model), the JS is not recomputed at all. This still needs to be taken care of.

FROM: Joseph Ihnat DATE: 1/29/2010 10:09:40 AM Eastern Standard Time  
Added a message that pops up if the user changes the Strand Type.  
There was never any intent to update the domain under the structdef. We aren't doing anything similar elsewhere in the GUI.  
Could possibly be an enhancement.

Issue ID: 7205  
Subject: File names are too long

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 3/27/2006 12:58:07 PM  
Modified By: administrator 6/19/2008 4:27:59 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:05:19 PM

HRS AASHTO

863

### Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Resolved |      | Education |
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Assigned |      |           |
| Goodrich, Brian  | Resolved |      |           |
| Goodrich, Brian  | Resolved | High | Bug       |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 7219.16113 | Resolved      | Computation of LLDF for adjacent box beams |

### Description

FROM:kkennelly DATE:3/27/2006 8:56:03 AM  
Submitted on behalf of Steve Mample, via email:

>>> "Steve Mample" <Steve.Mample@itd.idaho.gov> 03/24/06 10:59 AM >>>  
Hello, Krisha.

I am having trouble with a new bridge file in Virtis. After entering all the data for the exterior girder (16675e - G1), I had the program run a load analysis on the exterior girder to make sure I had not goofed up any on the input data. The program analyzed the girder without any problems. I then in put the data for the interior girder (16675 - G2), some of which I copied from the ext girder. When I saved and validated the data, no error messages were generated. But now the program will not analyze any member. I get the following error message; ERROR - Unable to open input file!

Would you please look at the bridge file, and tell me what I need to do.

Thank You, Steve.

FROM:kkennelly DATE:3/27/2006 8:58:03 AM  
Reply sent 3/27/06:

Hi Steve,

4/19/2016 3:05:20 PM

HRS AASHTO

864

## Complete Issue Information

It looks like the directory structure and file name created for the member alts in your bridge has too many characters. Try to shorten the name of either your members or your member alts. For example, I removed the word "Branch" from the end of your member alternative names and I was able to analyze your members.

Please let me know if you need additional information.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.  
100 Airside Drive  
Airside Business Park  
Moon Township, PA 15108  
(412) 269-7914

FROM:jduray DATE:Monday, March 27, 2006 9:01:17 AM  
The limit for the length of the path is around 240-250 characters.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 7219                                      |
| Subject: Computation of LLDF for adjacent box beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 3/28/2006 5:01:52 PM |
| Modified By: administrator            | 6/19/2008 4:27:58 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:05:20 PM

HRS AASHTO

865

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:3/28/2006 12:51:06 PM

Enter the superstructure shown in training example PS3.

Superstructure contains adjacent ps box beams. We only have 1 mbr alt defined and a box beam shape assigned to that mbr alt in the Beam Details window. Hit the Compute from Typical Section button on the Live Load Distribution tab, Virtis tries to use the beam shapes assigned to the adjacent mbr alts to determine if the boxes are spread or adjacent. Since no adjacent mbr alts exist, DoGirderSystemStructDef->IsPsBeamGirderSystemAdjacent() returns false as an error. The code in the Compute function just thinks it returned false because it is spread. So the Compute button uses the Spread Box section of the spec to compute distribution factors.

We should change DoGirderSystemStructDef->IsPsBeamGirderSystemAdjacent() to pass a variable to signify if the beams are adjacent. If the function itself returns False, that should be handled as an error, not spread beams.

Compute button code should determine if adjacent mbr alts exist and if they have beam shapes assigned to them. If they don't, we issue message saying Compute button doesn't know if beams are spread or adjacent and don't compute any distribution factors.

FROM:kkennelly DATE:4/11/2006 3:16:47 PM

Fixed for 5.5.

Two new functions added to DoGirderSystemStructDef to return variables to signify if the beams are adjacent and if all mbr alts are defined.

CheckAdjacentPsBeamSystem() and CheckAdjacentPsBeam().

Compute button on Live Load Distribution Factors window fixed.

Brian, you may want to investigate your use of IsPsBeamGirderSystemAdjacent() in BrassLrfdControl.cpp. That function returns false if there is an error, such as member alternatives not existing for all members, that may be causing you to incorrectly assume the beams are spread. I don't know how strict you want to be (if all beams have to have mbr alts and ps boxes assigned to them or just the adjacent beams have ps boxes assigned to them) when you determine if the structure is spread or adjacent.

FROM:bgoodrich DATE:Thursday, October 12, 2006 2:40:17 PM

The export has been revised accordingly. Fixed for version 5.5.

|                                       |
|---------------------------------------|
| Issue ID: 7233                        |
| Subject: BWS Report for Floor Systems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 3/29/2006 3:06:36 PM |

4/19/2016 3:05:20 PM

HRS AASHTO

866

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:57 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Duplicate |          | Enhancement |
| Duray, Jim      | Duplicate | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                  |
|------------|---------------|----------------------------------------------------------------------------------------------------------|
| 7279.16055 | Duplicate     | Utilization of rebar development length not possible in the analysis of concrete structures using BRASS. |

### Description

FROM:kkennelly DATE:3/29/2006 11:00:29 AM

If I sit on a bridge that contains a floor superstructure definition (or truss for 5.5), the "View BWS Report" toolbar button is enabled. Click on the button and get Assertion because these superstructure definitions aren't handled. Report contains data up to where the superstructure definitions would be displayed. That's ok but we should probably put a message in the report that says these structure types aren't handled by this report and user should use the Report Tool instead.

FROM:jduray DATE:4/10/2006 9:34:12 AM

I agree. This is fixed cost maintenance.

FROM:kkennelly DATE:4/10/2006 12:17:49 PM

Fixed for 5.5

Complete Issue Information

Issue ID: 7279  
Subject: Utilization of rebar development length not possible in the analysis of concrete structures using BRASS.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Armbrecht, Tim 5/1/2006 1:48:56 PM  
Modified By: administrator 6/19/2008 4:27:53 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:5/1/2006 9:47:36 AM  
This incident split out from Incident 7193:

From Tim Armbrecht:

Other suggested issues that should be addressed w/program enhancements.

3. Utilization of rebar development length not possible in the analysis of concrete structures using BRASS.

FROM:kkennelly DATE:5/1/2006 9:51:04 AM

I'm assuming this refers to the fact that the area of rebar cannot vary over the length of a range so the analysis ends up being overly conservative. Duplicate of 6704.

4/19/2016 3:05:20 PM

HRS AASHTO

868

Complete Issue Information

Issue ID: 7280  
 Subject: Stage 2 uniformly distributed loads in non-composite structures

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Armbrecht, Tim 5/1/2006 1:50:51 PM  
 Modified By: hlee 6/9/2011 8:24:20 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact  | Status    | Priority | Category           |
|------------------|-----------|----------|--------------------|
| Duray, Jim       | New       | High     | Bug<br>Enhancement |
|                  | Duplicate |          |                    |
|                  | Suspended |          |                    |
| Kennelly, Krisha | Assigned  |          |                    |
| Goodrich, Brian  | Suspended |          |                    |
| Goodrich, Brian  | Suspended | High     | Enhancement        |



Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C-13-038(0WR).bbd   |             |

Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 7298.16036 | Duplicate     | Point of Interest window causes Virtis to crash |

Description

FROM:kkennelly DATE:5/1/2006 9:50:17 AM  
 This incident split out from 7193:

From Tim Armbrecht:

Other suggested issues that should be addressed w/program enhancements.

4. For non-composite structures Stage 2 loads cannot be specified as uniformly distributed. AASHTO specifies that superimposed dead loads (SDL's) such as parapets & wearing surface are distributed uniformly to all beams w/o regard to composite or non-composite beam action. Virtis should be modified to allow system computation of uniformly distributed SDL's for non-composite structures.

FROM:kkennelly DATE:5/1/2006 10:04:25 AM  
 I believe this is an enhancement to either BRASS or the BRASS export.

FROM:kkennelly DATE:5/1/2006 10:53:16 AM  
 Duplicate of 6179

FROM:kkennelly DATE:6/19/2006 10:17:19 AM  
 Not a duplicate of 6179. Can't find what it is a duplicate of so re-opened.

FROM:jduray DATE:12/21/2006 9:01:20 AM  
 Need an est. before we begin dev.

FROM:kkennelly DATE:1/3/2007 11:29:24 AM  
 Only applies to reinforced concrete structures and timber. VirtisStdEngine already handles stage2 loads like user is requesting. I think BRASS export has been adjusted for 5.6. Brian to verify.

I think we have to change Madero to accomodate this request if user wants it for timber bridges.

FROM:kkennelly DATE:Saturday, January 06, 2007 8:21:34 PM

4/19/2016 3:05:21 PM

HRS AASHTO

870

Complete Issue Information

Duplicate of 6971

FROM: bgoodrich DATE: Monday, January 08, 2007 11:22:10 AM

I reviewed the export source and found VI 4643 was addressed for R/C. This appears to be the same issue as VI 7280. For Madero, nothing has been done. The Madero export issues the following message for girder systems:

"Madero does not utilize the dead load distribution methods specified with Virtis! Madero automatically distributes the deck and wearing surface dead loads based on the tributary width. Madero automatically distributes appurtenance loads to exterior stringers."

Because the Virtis dead load distribution methods are not considered in the Madero engine or export, the dead load distribution calculations will have to be done in the export and then exported to the engine. Madero does only supports one component dead load and one wearing surface dead load per stringer, so dead loads will need to be lumped together. Then, the export must be modified such that the deck loads are ignored when the loads are included on the stringers. I think the only file that will change is MaderoDeadLoads.cpp.

FROM: jduray DATE: Wednesday, January 10, 2007 3:25:11 PM

TF decided not to complete this at this time since the issue with the BRASS export has been resolved.

FROM: tarmbrecht DATE: Wednesday, September 19, 2007 2:02:28 PM

We checked the BRASS export in the 5.6 beta. It appears to be working with PPC I-beams and RC T-beams, but not with PPC "box" beams (which we call "deck beams" in Illinois). Please verify.

FROM: hlee DATE: 9/19/2007 2:55:01 PM

Tim, please attach your PPC "box" beam bridge so we can verify.

FROM: tarmbrecht DATE: Thursday, September 20, 2007 10:52:08 AM

Done. Thanks.

FROM: bgoodrich DATE: Thursday, September 20, 2007 11:44:36 AM

I confirmed Tim's observation regarding the PPC "box" beam. Any non-composite P/S beam will behave the same way.

FROM: Herman Lee DATE: 6/9/2011 2:56:46 PM Eastern Daylight Time

As determined by the TAG (April 2011), this issue has been resolved.

Issue ID: 7298

Subject: Point of Interest window causes Virtis to crash

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

5/17/2006 12:05:24 PM

Modified By: administrator

6/19/2008 4:38:36 PM

4/19/2016 3:05:21 PM

HRS AASHTO

871

## Complete Issue Information

Priority: High  
Category: Bug

## History

| Primary Contact | Status             | Priority | Category                     |
|-----------------|--------------------|----------|------------------------------|
| Duray, Jim      | New                | High     | Unknown                      |
| Goodrich, Brian | Assigned           |          |                              |
|                 | Information Needed |          |                              |
|                 | Assigned           |          |                              |
|                 | Suspended          |          | Enhancement                  |
| Goodrich, Brian | Suspended          | High     | Enhancement<br>Enhance BRASS |

## Contacts

| Name            | Company                      | Email 1                             | Phone 1      |
|-----------------|------------------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc.             | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Richard Withers | Mississippi Dept of<br>Trans | rwithers@mdot.state.ms.us           | 601-359-7167 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | old-vs-new.pdf      |             |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 7304.16030 | Suspended     | Member Capacity in output |

## Description

FROM:kkennelly DATE:5/17/2006 8:04:45 AM  
Received via email to Bridgeware:

Hello,

I'm currently rating a 7 span continuous multi-cell reinforced concrete box girder bridge, modeled at continuous I-girders. I've completed the model, except for the input of required additional points of interest. When i try to open the points of interest window i get the following error: "VirtisW.exe has generated errors and will be closed by Windows. You will need to restart the program. An error log is being created." I've attached the exported .bbd file for you information. What is the problem?

Thanks,

4/19/2016 3:05:21 PM

HRS AASHTO

872

Complete Issue Information

Fred Cassellius  
PURCELL ASSOCIATES  
617-288-0900  
www.purcellassociates.com  
<<C-13-038(0WR).bbd>>

FROM:kkennelly DATE:5/17/2006 9:10:44 AM  
I was able to reproduce this in the 5.3.1 release. I believe the following reproduced the error: I created points of interest for each of the girders and then went back to G1 and tried to create a POI. I then got the error and Virtis closed. When I re-open Virtis and try to open the POI window, get error and Virtis closes. When I open BID11, create an RC I beam alternative and try to open the POI window for that mbr alt, get error and Virtis closes.

Cannot reproduce in 5.4 release or 5.5 debug.

FROM:kkennelly DATE:5/17/2006 9:42:02 AM  
Duplicate of 6942. Has been fixed for version 5.4.

|                                    |
|------------------------------------|
| Issue ID: 7304                     |
| Subject: Member Capacity in output |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Ihnat, Joseph           | 5/18/2006 11:39:13 AM |
| Modified By: hlee                     | 7/17/2014 3:42:04 PM  |
| Priority: High                        |                       |
| Category: Enhance BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:jihnna DATE:5/18/2006 7:37:56 AM  
via email:

I was wondering if it is possible to have Virtis 5.4 report the actual member capacity as it did in previous versions.

Previously it would report:

Member Capacity  
DL Effect

Capacity for (LL+I)  
Actual (LL+I)

Rating

I am just trying to verify that the capacity being calculated by Virtis matches what I am calculating by hand.

Thank you-  
Laura Thompson  
Laura.Thompson@tshengineering.com

FROM:bgoodrich DATE:Friday, June 16, 2006 11:39:50 AM  
There have been no recent changes to BRASS-LFD to stop this information from being generated. Please send me some screenshots of what was previously reported, what is now reported, and also where this information was reported, i.e., the BRASS output file or the Virtis GUI. This information should help me better understand the issue.

FROM:bgoodrich DATE:Friday, June 16, 2006 1:52:23 PM  
I attached a PDF file from the user that illustrates the BARS output and the latest output available from within Virtis. This clarified the request. Currently, Virtis only allows the critical rating factor and location to be passed back from the BRASS engine. This is why the reports contain the information they do. For now, this information can be obtained from the BRASS output file.

The user would like to see the member capacity, dead load contribution, and live load contribution in the Virtis reports. I believe this was an enhancement request that was discussed but never approved.

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 7324                                                                               |
| Subject: Virtis Std Engine - Analysis Settings advanced vehicle impact not handled correctly |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Kennelly, Krisha        | 5/24/2006 2:13:07 PM |
| Modified By: administrator            | 6/19/2008 4:27:50 PM |
| Priority: Urgent                      |                      |

4/19/2016 3:05:21 PM

HRS AASHTO

874

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                                                        |
|------------|---------------|------------------------------------------------------------------------------------------------|
| 7328.16006 | Suspended     | Reporting Virtis Std Engine LL Impact in the Virtis Analysis Results window and canned reports |

## Description

FROM:kkennelly DATE:5/24/2006 10:03:40 AM

The impact factor entered on the Advanced Vehicle Properties window on the Analysis Settings window is not being handled correctly.

Virtis help states the following for this impact factor:

### Impact

For the displayed vehicle, enter the factor by which the standard impact factor is to be multiplied to obtain both live load and impact. For example, if the vehicle is a permit vehicle restricted in speed and the standard impact is to be reduced by ½ (50%), enter 0.50. If the vehicle is restricted in speed such that the impact is to be zero, enter 0.0. Leave blank to use the standard impact factor.

The Virtis Std Engine cannot handle this input, it cannot multiply the impact factor internally computed by the engine to get a different IF to use. You can however get the Virtis Std Engine to use no impact.

So we should not use the impact factor on this window if it is a value other than 0.0. If the value is zero the value input to the Virtis Std Engine should be 1.0 which results in no impact.

The following is an explanation of how this number is to be used. (It is being correctly used by the BRASS LFD export.)

For Training Bridge 1,  $IF = 1 + 50 / (161 + 125) = 1.17498$

4/19/2016 3:05:22 PM

HRS AASHTO

875

Complete Issue Information

Enter 2 as impact factor on this window. That means the AASHTO impact factor is to be multiplied by 2. Therefore  $IF = 1 + 2.0(.1748) = 1.3497$

Enter 0 as impact factor on this window. Then  $IF = 1 + 0(.1748) = 1.0$

FROM:hlee DATE:6/20/2006 9:51:29 AM  
Resolved in 5.5 Beta 3.

|                                                                                                         |
|---------------------------------------------------------------------------------------------------------|
| Issue ID: 7328                                                                                          |
| Subject: Reporting Virtis Std Engine LL Impact in the Virtis Analysis Results window and canned reports |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Kennelly, Krisha        | 5/24/2006 7:18:03 PM |
| Modified By: administrator            | 6/19/2008 4:27:50 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:5/24/2006 3:13:39 PM

The Virtis Std Engine output file shows the impact factor used for pos/neg moment and shear. It would be nice to be able to view that data in the Virtis Analysis Results window and in the canned LFD analysis output report available in the Report Tool. The canned LFD analysis output report shows \*\* as not available for these impact factors since they weren't available for BRASS.

FROM:hlee DATE:7/19/2006 11:08:15 AM  
Changed Project to Support Center/Virtis.

Complete Issue Information

Issue ID: 7355  
 Subject: Tolerances should be used when computing rebar development length

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Kennelly, Krisha 6/5/2006 4:37:29 PM  
 Modified By: administrator 6/19/2008 4:27:47 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact  | Status        | Priority | Category |
|------------------|---------------|----------|----------|
| Duray, Jim       | New           | High     | Bug      |
|                  | On Hold       |          |          |
|                  | Investigation |          |          |
|                  | Development   |          |          |
| Kennelly, Krisha | Resolved      |          |          |
| Kennelly, Krisha | Resolved      | High     | Bug      |



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 7363.15971 | Resolved      | Virtis Std Engine export needs to compute additional deck load ... |

### Description

FROM:kkennelly DATE:6/5/2006 12:32:27 PM

Attached bridge was submitted by Ron Love. The following bug in generating reinf concrete cross sections from user input profiles was exposed in their work with the API.

At 206.9269', right side, the Set #24 reinforcement is determined to be zero percent developed. That is correct.

At 207.92708' left side (end of beam), the Set #24 reinforcement is determined to be 100 percent developed due to tolerances not being used in CDoGirderMbrAlt::ComputePercentDev() when comparing the point in question (207.92708') with the end of the bar (207.9269).

FROM:jduray DATE:Monday, June 05, 2006 12:43:14 PM

FROM:kkennelly DATE:8/16/2006 11:31:40 AM

Better fix is to not use tolerances when determining if a point is within the length of the bar. I tested this fix by running schedule based alts in RCTrainingBridge1 and bridge attached to this incident with and without this change. BRASS output files were the same for both with and without this change.

More testing with more scheduled based rc alts is desirable.

Issue ID: 7363

Subject: Virtis Std Engine export needs to compute additional deck load ...

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

6/6/2006 1:49:35 PM

Modified By: administrator

6/19/2008 4:27:47 PM

Priority: High

Category: Bug

4/19/2016 3:05:22 PM

HRS AASHTO

878

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                       |
|------------|---------------|-------------------------------------------------------------------------------|
| 7364.15970 | Resolved      | Virtis Std Engine export needs better message for partial deck configuration. |

### Description

FROM:hlee DATE:6/6/2006 9:46:22 AM  
for girder line when the start and end slab widths are different.

FROM:hlee DATE:8/25/2006 4:29:18 PM  
Resolved for 5.5 Beta 4.

## Complete Issue Information

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 7364                                                                         |
| Subject: Virtis Std Engine export needs better message for partial deck configuration. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 6/6/2006 2:01:12 PM  |
| Modified By: administrator            | 6/19/2008 4:27:47 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Duray, Jim         | New      | High     | Unknown   |
| Ordoobadi, Mehrdad | Assigned |          |           |
|                    | Resolved |          | Education |
| Ordoobadi, Mehrdad | Resolved | High     | Education |

## Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | ERROR.doc           |             |

## Tasks

| Name       | Current State | Summary    |
|------------|---------------|------------|
| 7383.15951 | Resolved      | MSDE error |

## Description

FROM:hlee DATE:8/7/2006 11:04:44 AM  
Resolved for 5.5 Release.

## Complete Issue Information

|                     |
|---------------------|
| Issue ID: 7383      |
| Subject: MSDE error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: McCaffrey, Brian        | 6/7/2006 4:18:15 PM  |
| Modified By: administrator            | 6/19/2008 4:27:45 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:bmccaffrey DATE:Wednesday, June 07, 2006 12:18:16 PM

4/19/2016 3:05:23 PM

HRS AASHTO

881

Complete Issue Information

I got this from one of NYSDOT's consultants - see the attached database error message.

I am getting a database error in VIRTIS 5.4. This has happened twice now. I have attached a screen shot of the error message. When I get this message I am unable to save the VIRTIS file that I am working on and any unsaved data is lost. Have you seen this before and do you know of something I can do to prevent this from happening again? Thanks!

Chris

Chris Jackman, P.E.  
Design Engineer

Fisher Associates, P.E., L.S., P.C.  
(585) 334-1310 tel.  
(585) 334-1361 fax  
cjackman@fisherassoc.com

FROM:mordoobadi DATE:6/9/2006 3:48:08 PM  
The error indicates "Communication Link Failure". It means connection to the database was lost. One of the ways that this could happen is if the database server was on the network (not user's machine) and the network connectivity was disrupted. Another way that this can happen is if the user is using local MSDE database and the Database engine service was terminated (this could be because of a crash in Microsoft SQL Server engine or if the running service was terminated)

If the database server is on the network you may want to ask your system administrator if any network disruptions occurred during the time you had problem.

|                         |
|-------------------------|
| Issue ID: 7434          |
| Subject: Std engine ASD |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jones, Daniel           | 6/14/2006 7:17:25 PM |
| Modified By: administrator            | 6/19/2008 4:27:41 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:05:23 PM

HRS AASHTO

882

### Complete Issue Information

|             |           |      |  |             |
|-------------|-----------|------|--|-------------|
| Lee, Herman | Assigned  |      |  |             |
|             | Resolved  |      |  | Bug         |
| Duray, Jim  | New       | High |  | Enhancement |
|             | Suspended |      |  |             |
| Duray, Jim  | Suspended | High |  | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                                   |
|------------|---------------|---------------------------------------------------------------------------------------------------------------------------|
| 7461.15873 | Suspended     | "Compute From Typical Section" button should be available to just compute Std effective flange width for 2-girder system. |

### Description

FROM:rfulton DATE:Wednesday, June 14, 2006 3:17:26 PM  
Std Engine will run LF but not ASD for RCDG bridges. Sample model attached.

FROM:jduray DATE:6/14/2006 4:24:32 PM  
This is probably a 5.4 issue. We need to determine if it was supposed to do ASD.

FROM:hlee DATE:6/15/2006 9:21:51 AM  
This is a 5.4 bug.  
Resolved in 5.5 Beta 2.

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 7461                                                                                                                     |
| Subject: "Compute From Typical Section" button should be available to just compute Std effective flange width for 2-girder system. |

Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis            |
| Primary Contact: Duray, Jim                      |
| Submitted By: Najjar, Walid 6/21/2006 5:28:59 PM |
| Modified By: administrator 6/19/2008 4:27:39 PM  |
| Priority: High                                   |
| Category: Enhancement                            |

History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Duray, Jim      | New              | High     | Unknown  |
| Ihnat, Joseph   | Assigned         |          | Bug      |
|                 | Not Reproducible |          |          |
| Ihnat, Joseph   | Not Reproducible | High     | Bug      |

Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

Documents

| Name | Resource Identifier | Description                                       |
|------|---------------------|---------------------------------------------------|
|      | sd_64006000_530.bbd | Virtis 5.3.0 - Structure 64006000 - Girder System |

Tasks

| Name       | Current State    | Summary                               |
|------------|------------------|---------------------------------------|
| 7467.15867 | Not Reproducible | Superstructure Window - US units only |

Description

FROM:hlee DATE:6/21/2006 1:21:25 PM  
 Entered on behalf of Walid S. Najjar, CHAS. H. SELLS, INC.

E-mail received on 6/21/06:

=====  
 Herman,

Thanks for your prompt response. Article 10.38.3.2 of the AASHTO Standard Specifications is applicable to the effective flange width of deck over fascia girder, independent of an adjacent interior girder as required by the AASHTO LRFD Specifications. The LFD and ASD methods in the Standard Specifications will continue to be used for load ratings of existing

4/19/2016 3:05:23 PM

HRS AASHTO

884

Complete Issue Information

bridges, particularly those previously designed with the same methods. And therefore, I suggest that an option for automatic Virtis calculation of effective flange width over fascia girder be considered and provided to users of the program.

Sincerely,

Waly

-----Original Message-----

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
Sent: Wednesday, June 21, 2006 11:47 AM  
To: wnajjar@chashsells.com  
Subject: Re: Fwd: Virtis Incident on Effective Flange Width for Two-Girder System

Waly,

Your observation is correct. The "Compute From Typical Section" button is only available for a girder system with more than 2 girders. This button is also not available for prestressed U beam member alternatives. The LRFD effective flange width of an exterior girder is dependent on the effective flange width of the adjacent interior girder. There is no specific guidance in the spec for a 2-girder system, so the button is not available for a 2-girder system.

Sincerely,  
Herman Lee

>>> Mehrdad Ordoobadi 6/21/06 11:13:43 AM >>>

>>> "Walid Najjar" <wnajjar@chashsells.com> 06/21/06 10:41 AM >>>  
Dear Mehrdad,

The Virtis software in its current version (5.4) does not calculate an effective flange width (of deck) for a two-girder span system. In other words an input value must be calculated manually, because there is no "Compute from Typical Sections" select-box in "Member Alternative/Girder/Deck Profile/Deck Concrete", as is the case for three or more girder systems.

Since our brief phone conversation yesterday, I verified this observation on a newly created rolled-steel two-girder simple-span system. Initially I thought that the issue is due to the fact that the subject bridge span was created with an earlier version of Virtis, at a time when manual calculation of effective flange width was required; but it seems that this issue remains in the current version of the program.

4/19/2016 3:05:23 PM

HRS AASHTO

885



Complete Issue Information

I would appreciate it if you could confirm my observation, using any simple-span parameters you may choose. Perhaps a Virtis incident in this regard or suggestion for improvement should be reported to AASHTOWare.

Sincerely,

Waly

Walid S. Najjar, Ph.D., P.E.  
CHAS. H. SELLS, INC.  
Technical Quality Manager  
555 Pleasantville Road, South Building  
Briarcliff Manor, New York 10510  
Tel: 914-747-1120  
Fax: 914-747-1956  
E-mail: wnajjar@chashsells.com

=====

|                                                |
|------------------------------------------------|
| Issue ID: 7467                                 |
| Subject: Superstructure Window - US units only |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Thompson, Todd          | 6/27/2006 12:29:48 PM |
| Modified By: administrator            | 6/19/2008 4:27:39 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:05:24 PM

HRS AASHTO

886

Complete Issue Information

FROM:ttompson DATE:Tuesday, June 27, 2006 8:30:02 AM

I created a Girder System using SI units - but when I'm forced to enter the span lengths and # of spans in the Superstructue window - I'm only given the option for US units.

We really need to get this window to be automatically populated and/or be able to toggle between US and SI units.

Right now, I seem to be somewhat stuck.

FROM:ttompson DATE:Thursday, June 29, 2006 11:58:19 AM

Appears to NOT be able to toggle between US and SI units UNLESS you maximize the Superstructure Window. Once I maximized that window, I could then toggle between units.

Appears to be a parent-child problem (check with Paul Jensen on complete explanation) with the GUI not working correctly unless the one window gets maximized. I'm past my sticking point - but there is still the GUI problem.

FROM:jihnmat DATE:7/11/2006 3:51:51 PM

I haven't been able to reproduce this.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 7469                                                                     |
| Subject: Problem with BRASS Export - Bracing Schedule - SI units entered structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Thompson, Todd          | 6/27/2006 4:13:54 PM |
| Modified By: administrator            | 6/19/2008 4:27:38 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:05:24 PM

HRS AASHTO

887

### Complete Issue Information

|                 |           |      |                |
|-----------------|-----------|------|----------------|
| Duray, Jim      | New       | High | Unknown        |
| Goodrich, Brian | Assigned  |      | Bug - Export 1 |
| Duray, Jim      | New       | High | Unknown        |
|                 | Duplicate |      | Enhancement    |
| Duray, Jim      | Duplicate | High | Enhancement    |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 7470.15864 | Duplicate     | Development at Start of Hook or Bar |

### Description

FROM:ttompson DATE:Tuesday, June 27, 2006 12:14:00 PM

I have a structure that was entered with SI units and analyzed successfully in previous versions of Virtis.

But starting with Virtis 5.3 - the BRACING SCHEDULE that is created gives an error (See attached PDF) that the spacing must be evenly divisible into the Range range +/- ft.

It almost appears to be a problem in converting from the nice SI meters to US feet and not enough significant digits in the BRASS export.

Seems to be a problem in spans 1 and 4.

Was a diaphragm spacing of 7 @ 6.090 meters (sum = 42.63 meters) but the brass commands has 19.9803 ft - sum = 139.8458 ft (but 7 times 19.9803 equals 139.8621)

Again - it worked in previous versions, but not sure if it's a rounding problem or an export problem.

FROM:ttompson DATE:Tuesday, June 27, 2006 12:22:15 PM

Same problem still occurs with 5.5 Beta 2 - noticed this bridge didn't run here and went back to my 5.3.0 production where I noticed it also. But it did run ok in previous versions, just don't remember which one.

FROM:ttompson DATE:Wednesday, September 27, 2006 8:26:37 AM

Problem continues in 5.5 Beta 4.

4/19/2016 3:05:24 PM

HRS AASHTO

888

Complete Issue Information

FROM:ttompson DATE:Wednesday, December 06, 2006 1:39:57 PM  
It's been 5 plus months - any progress or work on this issue?

FROM:jduray DATE:12/21/2006 4:39:41 PM  
Email sent to Brian asking him to investigate.

FROM:hlee DATE:1/5/2007 8:29:50 AM  
We have performed the following investigations:

- [1] Imported the 5.3 BBD and successfully analyzed both interior and exterior girders.
- [2] Migrated the 5.3 database to 5.5 and successfully analyzed both interior and exterior girders. Rating results agree with those in [1].
- [3] Imported the 5.5 XML and successfully analyzed both interior and exterior girders. Rating results agree with those in [1].
- [4] Compared Todd's BRASS data file with the one generated in [1]. Differences are in SPAN-D, BRACING-SCHEDULE, STEEL-GIRDER-CONTROL, and UNIFORM-DL1 commands.

We suspect the unit tolerances set in Todd's database may be the cause of the problem.

Todd: What are the unit tolerances you set in System Defaults?

FROM:hlee DATE:1/22/2007 2:46:25 PM  
E-mail from Todd:

=====

I have the units set to  
ft 0.1  
in 0.01

I believe I had to set these due to some problems I was having with stiffener spacing. If I have to change spacings again now, I'm afraid my stiffener problem(s) will start showing up.

=====

FROM:hlee DATE:1/22/2007 4:00:35 PM  
E-mail from Todd:

=====

Here are 3 other bridges that have the same problem with Bracing. They all used to work but don't anymore.  
The original one I reported was in SI units. All of these others are English units.

5.3.1 bbd files

=====

Attached sd\_14092199.bbd, sd\_16732234.bbd, and sd\_32531001.bbd.

FROM:hlee DATE:1/23/2007 9:38:55 AM  
The problem is stated in the attached 55BracingSchedule.pdf file.  
E-mail sent to Brian for further investigation.

FROM:bgoodrich DATE:Thursday, February 22, 2007 8:37:13 AM

4/19/2016 3:05:24 PM

HRS AASHTO

889

### Complete Issue Information

At the end of January, I added a spacing tolerance similar to method for transverse stiffeners in the code that generates the bracing schedule commands (BrassBracingScheduleCmd.cpp). The new files from Todd will be used to verify these changes.

FROM: bgoodrich DATE: Tuesday, February 27, 2007 11:13:24 AM

I verified the export changes by running Todd's original bridges as well as the three additional bridges. The tolerances were set according to Todd's settings. Fixed for version 5.6.

FROM: tthompson DATE: Monday, April 02, 2007 2:34:31 PM

I checked it with 10 different bridges that I get this failure message with V 5.5 - testing with 5.6 Beta 2 - appears to be fixed. I'll double check when we have an acceptance release.

|                                              |
|----------------------------------------------|
| Issue ID: 7470                               |
| Subject: Development at Start of Hook or Bar |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Teal, Dean              | 6/27/2006 5:53:39 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: dteal DATE: Tuesday, June 27, 2006 1:53:51 PM

It is common place in RC to have bars that extend into the abutments or past the centerline of bearings at abutments. We have two choices, hook the bar or tell opis that it is fully developed.

The problems we will run into here are common among many types of RC slab structures. Bars at the structure ends.

4/19/2016 3:05:24 PM

HRS AASHTO

890

### Complete Issue Information

If we hook them – they are not fully developed at the end of the bar – See VI#7462, so this isn't an answer.

If we check the box on the Reinforcement Tab, we have full development – but at both the start and the end. In many, many case we need full development at the start and not the end on the left end of the structure and visa versa on the right end.

When doing schedule based RC, we can hook the bar at either end or both ends.

We need the same thing with development, we should have 2 check boxes for development, one for the right end and one for the left end.

With out that feature, how can I start a bar at the right end abutment (fully developed – knowing that a hook is not fully developed) and let the bar be actual length at the left end (checking development lengths there). Then set a t POI at the face of abutment (common spot for design). Right now I will get a spec check failure at that POI.

FROM:kkennelly DATE:6/28/2006 8:01:21 AM

The request to allow fully developed at start or end instead of both is a duplicate of 5299.

|                                                      |
|------------------------------------------------------|
| Issue ID: 7472                                       |
| Subject: Validation of new Std LL Dist Factor Ranges |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Kennelly, Krisha        | 6/28/2006 12:26:22 PM |
| Modified By: administrator            | 6/19/2008 4:27:38 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Bug      |

4/19/2016 3:05:24 PM

HRS AASHTO

891

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State     | Summary                              |
|------------|-------------------|--------------------------------------|
| 7476.15858 | Closed - Inactive | ORA-01795 error in orp2: Virtis/Opis |

### Description

FROM:kkennelly DATE:6/28/2006 8:21:07 AM

1. We should only issue the message that the Std LL Dist Factor Range is missing if the user has chosen to use the Advanced method for Std distribution factor input.

2. The string currently being issued is IDS\_VALD\_LRFD\_LLDIST\_FACTOR\_3 which is "LRFD live load distribution factors not defined". This should be changed to refer the Std dist factors, not the LRFD factors.

3. Looks like other LRFD strings are being used in DoStandardLiveLoadDistFactorRangeSet.cpp

FROM:kkennelly DATE:6/28/2006 8:31:47 AM

The validation is occurring in version 5.4 even though the data is not exposed in the user interface until version 5.5.

FROM:mordoobadi DATE:7/5/2006 9:41:52 AM

Fixed for 5.5 Beta 3.

Issue ID: 7476

Subject: ORA-01795 error in orp2: Virtis/Opis

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: McCaffrey, Brian

6/29/2006 6:41:18 PM

4/19/2016 3:05:25 PM

HRS AASHTO

892

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:38 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Internal    |
| Lathia, Hasmukh | Suspended |          | Enhancement |
|                 | Accepted  |          |             |
| Lathia, Hasmukh | Accepted  | High     | Enhancement |

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7480.15854 | Accepted      | Migrate Std Engine code to Intel Fortran |

### Description

FROM:mordoobadi DATE:6/29/2006 2:37:50 PM  
Received by email from Brian McCaffrey: NYDOT

Getting the error on orp2 server:

ORA-01795 maximum number of expressions in a list is 1000.

FROM:mordoobadi DATE:6/29/2006 2:41:58 PM

When does the error happen? Does it happen when you select a certain folder in the bridge explorer (which folder, how many bridges)? Or it happens when you try to open a bridge?

Could you also send me the Debug Description of the errors?

FROM:mordoobadi DATE:9/28/2006 1:33:10 PM  
I received this email from Brian on 7/17/2006.

4/19/2016 3:05:25 PM

HRS AASHTO

893



Complete Issue Information

>>> "Brian McCaffrey" <bmccaffrey@dot.state.ny.us> 07/17/06 10:59 AM >>>

Mehrdad,

As soon as it shows up again, I'll send you the 'debug ' message. It dosen't happen all the time.

Brian

FROM:mordoobadi DATE:9/28/2006 1:41:23 PM  
It is probably related to maximum number of open cursors setting on the Oracle Server.  
Increasing this setting from 1000 to 2000 may fix the problem.

|                                                   |
|---------------------------------------------------|
| Issue ID: 7480                                    |
| Subject: Migrate Std Engine code to Intel Fortran |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Lathia, Hasmukh         | 7/6/2006 3:56:51 PM  |
| Modified By: administrator            | 6/19/2008 4:27:37 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlathia DATE:Thursday, July 06, 2006 11:56:55 AM  
PennDOT has migrated BAR7 and CBA code to Intel. Any exchange of code between PennDOT and AASHTO will be harder to merge if BAR7, CBA and StdEngine codes are on different compilers.

FROM:hlee DATE:2/5/2007 2:52:25 PM  
Resolved by Hasmukh Lathia for 5.6 Release.

4/19/2016 3:05:25 PM

HRS AASHTO

894

## Complete Issue Information

Alpha tested and accepted by Herman Lee. Validated ratings results against 5.5 release with the validation database.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 7481                                                               |
| Subject: Implement PennDOT CBA v3.6 error corrections critical to Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Lathia, Hasmukh         | 7/6/2006 4:00:49 PM  |
| Modified By: administrator            | 6/19/2008 4:27:37 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Lathia, Hasmukh | Assigned  |          |             |
|                 | On Hold   |          |             |
|                 | Suspended |          | Enhancement |

4/19/2016 3:05:25 PM

HRS AASHTO

895

### Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
|                 | Accepted  |      |             |
| Duray, Jim      | New       | High | Enhancement |
|                 | Suspended |      |             |
| Lathia, Hasmukh | Resolved  |      |             |
| Lathia, Hasmukh | Resolved  | High | Enhancement |

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 7482.15852 | Resolved      | Implement PennDOT CBA v3.6 enhancement for exact influence lines at POI |

### Description

FROM:hlathia DATE:Thursday, July 06, 2006 12:00:49 PM

PennDOT has revised CBA to correct some errors uncovered during testing of PSLRFD. These errors also affect Std Engine results, particularly relative to PS enhancement.

FROM:jduray DATE:7/6/2006 1:22:13 PM

I need an estimate so the TF can approve.

FROM:hlathia DATE:Thursday, July 13, 2006 12:03:43 PM

Estimates were provided on 7/6/06.

FROM:hlee DATE:2/5/2007 2:53:44 PM

Resolved by Hasmukh Lathia for 5.6 Release.

Alpha tested and accepted by Herman Lee. Validated ratings results against 5.5 release with the validation database.

Issue ID: 7482

Subject: Implement PennDOT CBA v3.6 enhancement for exact influence lines at POI

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Lathia, Hasmukh         | 7/6/2006 4:06:24 PM  |
| Modified By: administrator            | 6/19/2008 4:27:37 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 7486.15848 | Resolved      | Unable to do Virtis Std analysis more than once |

### Description

FROM:hlathia DATE:Thursday, July 06, 2006 12:06:24 PM  
Implement PennDOT CBA v3.6 that includes enhancement for generating influence line at user defined analysis point and thus avoid interpolating the results.

FROM:hlee DATE:5/7/2007 4:12:19 AM  
Resolved for 5.6 per Hasmukh's e-mail on 5/3/2007.

Complete Issue Information

Issue ID: 7486  
Subject: Unable to do Virtis Std analysis more than once

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Li, Xinmei 7/7/2006 8:51:11 PM  
Modified By: administrator 6/19/2008 4:27:37 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:xli DATE:7/7/2006 4:42:40 PM  
Virtis Std data file is locked after first analysis.

FROM:hlee DATE:7/10/2006 8:08:34 AM  
The input data file will be locked by the engine if there is an exception in the analysis. The engine should catch the exception and close the file.

Complete Issue Information

FROM:hlathia DATE:Tuesday, July 11, 2006 2:20:24 PM  
See if the fix for overflow error in PMCXFY resolves this issue.

FROM:xli DATE:7/12/2006 1:46:20 PM  
Tested with BID4, beta3, this problem is solved

FROM:hlee DATE:8/10/2006 8:24:32 AM  
Added a CLOSE statement in Input.for to close the input data file after all the information has been read.  
Resolved for 5.5 Release.

|                              |
|------------------------------|
| Issue ID: 7520               |
| Subject: Vci Sign Convention |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: White, Pete             | 7/24/2006 7:50:45 PM |
| Modified By: administrator            | 6/19/2008 4:27:34 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                                                                           |
|------------|---------------|-------------------------------------------------------------------------------------------------------------------|
| 7522.15812 | Resolved      | Virtis Std export should allow LL distribution factors to be computed if they are not entered for RC slab bridge. |

Description

FROM:pwhite DATE:Monday, July 24, 2006 3:50:45 PM

I am getting low shear ratings on a 3 span prestressed concrete beam bridge. The low rating occurs at 200.1 under positive flexure. I also ran the structure using Conspan and found that it is calculating a higher value for Vci.

By creating a POI I was able to determine the difference in the two calculations is the sign of the live load shear acting concurrently with the maximum moment. The maximum moment at the POI is a positive moment, due to stage 1 dead loads combined with maximum positive live load moment. Since the positive live load moment is caused by loading in span 3, the shear concurrent with the max live load moment is negative.

In the calculation of Vi, the live load shear holds its negative sign and therefore is reducing the value of Vi ( $V_i = 1.3V_d + (-)2.17V_i - V_d$ ). I agree with the shear values and their corresponding signs, but I want to double check that VIRTIS should not be using the absolute value of Vi, as is being done in Conspan.

Thanks,

Pete White, P.E.  
RQAW Corporation  
4755 Kingsway Drive, Suite 400  
Indianapolis, IN 46205-1547  
317.255.6060 x260  
317.255.8354 (fax)  
www.rqaw.com

FROM:pwhite DATE:Monday, July 24, 2006 4:08:31 PM

FROM:bgoodrich DATE:Monday, August 28, 2006 9:44:20 AM  
This issue has been forwarded to WYDOT.

4/19/2016 3:05:26 PM

HRS AASHTO

900

Complete Issue Information

FROM:bgoodrich DATE:Tuesday, September 05, 2006 11:20:59 AM  
WYDOT assigned this issue to BRASS Problem Log 696.

FROM:bgoodrich DATE:Tuesday, November 21, 2006 10:15:12 AM  
This issue was discussed with WYDOT. WYDOT has decided to document how BRASS calculates the Vi term in the intermediate output and the manual/help. The Vi term is calculated based on the dead load shears and live load shears (considering sign). The absolute value of the Vi term is taken before it is used to calculate the shear capacity.

FROM:bgoodrich DATE:Monday, January 29, 2007 1:14:27 PM  
The BRASS output and help was updated with the following:

"The Vi term in Equation 9-27 is calculated based on the dead load shear (Vd) and the live load shear concurrent with maximum moment (VI). Both of these shears carry sign. The absolute value of the Vi term is taken before it is used to calculate Vci. The Vi term is calculated as:

$$Vi = \text{gamma} * (\text{beta}(\text{DL}) * Vd + \text{beta}(\text{LL}) * VI) - Vd$$

where:

- gamma = load factor
- beta(DL) = dead load coefficient
- beta(LL) = live load coefficient

Issue ID: 7522  
Subject: Virtis Std export should allow LL distribution factors to be computed if they are not entered for RC slab bridge.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 7/25/2006 12:52:18 PM  
Modified By: administrator 6/19/2008 4:27:34 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Resolved | High     | Unknown  |
| Lee, Herman     | Resolved | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7524.15810 | Closed        | Structural vs Effective Slab Thickness |

Description

FROM:hlee DATE:7/25/2006 8:48:30 AM  
Resolved in 5.5 Release.

|                                                 |
|-------------------------------------------------|
| Issue ID: 7524                                  |
| Subject: Structural vs Effective Slab Thickness |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Teal, Dean              | 7/25/2006 1:53:37 PM |
| Modified By: administrator            | 6/19/2008 4:27:34 PM |
| Priority: High                        |                      |

4/19/2016 3:05:27 PM

HRS AASHTO

902

## Complete Issue Information

Category: Help

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Unknown  |

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 7525.15809 | Closed        | Locating Top Steel in RC Slab |

## Description

FROM:dteal DATE:Tuesday, July 25, 2006 9:53:47 AM

I think we have some confusion in definitions on the GUI and in the help.

On the Structural Typ. Section: Deck (Cont'd) help we can find definition for Total Deck Thickness which makes reference to the structural thickness used to compute section properties. This I think is correct and not confusing.

On the Deck Profile:Deck Concrete help we can find definition for Structural Thickness which is used to compute the section properties. It also makes reference to "effective slab thickness" checkboxes on another GUI. Isn't Structural Thickness and Effective Slab Thickness one in the same? Shouldn't the "Consider Effective Slab Thickness" be changed to "Consider Structural Thickness"?

Following the same issue in the Deck Profile: Reinforcement help we have the definition of Row. This definition contains the wording "Top of slab is the effective deck slab thickness". Here again shouldn't this read structural thickness instead? We have never defined "effective slab thickness" in the GUI?

4/19/2016 3:05:27 PM

HRS AASHTO

903

Complete Issue Information

Again following the same issue on the Superstructure Definition: Analysis help and GUI we have Effective Slab Thickness and whether or not to consider it for rating and/or design. This contains references to Effective Thickness (which doesn't have a entry field in the GUI) , Total Thickness and Section Properties but never mentions Structural Thickness (which does have an entry field in the GUI)

Effective slab thickness is also referenced in the RC Slab Girder Profile:Section help.

So in the end – is Effective Slab Thickness and Structural Slab Thickness one in the same?

FROM:kkennelly DATE:8/8/2006 3:54:10 PM

Fixed for 5.5 beta 4. All instances of Effective slab thickness have been changed to structural slab thickness.

FROM:dteal DATE:Wednesday, September 06, 2006 10:00:19 AM

Accepted in 5.5 beta 4

|                                        |
|----------------------------------------|
| Issue ID: 7525                         |
| Subject: Locating Top Steel in RC Slab |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 7/25/2006 1:54:38 PM |
| Modified By: administrator            | 6/19/2008 4:27:33 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Tuesday, July 25, 2006 9:54:38 AM

When defining section depth and locating the rebar with in the section is somewhat confusing. Here is

4/19/2016 3:05:27 PM

HRS AASHTO

904

Complete Issue Information

my question and scenario.

I am looking at a RC slab bridge. I have an 8" total depth of slab. I have a 1" sacrificial wearing surface. My top rebar are to be placed 3" from the top of the slab. For the rebar I would use the "Measured From" set at From Top of Slab. I would enter a Distance of 3" less 1" wear = 2 inches (correct?).

Then when I uncheck the option to consider effective slab thickness for rating or design in the Superstructure Definition: Analysis GUI the 1 inch of wear would be added back in to make my rebar 3" from the top of the slab instead of the 2" (correct?).

FROM:jduray DATE:7/26/2006 1:51:45 PM

I would assume the location of the rebar relative to the top of the slab is independent of the sacrificial wearing surface, i.e. it is 5" from the bottom. So, for the rebar I would use the "Measured From" set at From Top of Slab and I would enter a Distance of 3" . We need to confirm this.

FROM:bgoodrich DATE:Monday, August 28, 2006 9:38:55 AM

For a total slab thickness of 8", where 7" is effective and 1" is sacrificial, and rebar located 5" from the bottom of the slab, you would enter 2" measured from Top of Slab. The top of slab measurement choice references the top of the effective thickness. If the option to consider the effective slab thickness is unchecked, the export would generate the cross section commands with 8" for the slab thickness and 3" for the distance to the rebar from the top of the section.

FROM:dteal DATE:Wednesday, September 06, 2006 9:39:54 AM

I think an example in the Help would be beneficial here.

Issue ID: 7534  
Subject: Fundamentals Workshop Update

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Teal, Dean 8/1/2006 1:30:39 AM  
Modified By: xli 8/22/2008 6:57:09 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|             |          |      |           |
|-------------|----------|------|-----------|
| Li, Xinmei  | Assigned |      |           |
| Li, Xinmei  | Assigned | High | Unknown   |
| Duray, Jim  | New      | High | Unknown   |
| Lee, Herman | Assigned |      |           |
|             | Resolved |      | Education |
| Lee, Herman | Resolved | High | Education |

### Contacts

| Name            | Company            | Email 1                 | Phone 1           |
|-----------------|--------------------|-------------------------|-------------------|
| Sita Ram Pandey | AI Engineers, Inc. | spandey@aiengineers.com | 860-635-7740 x121 |

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | Operating Rating Comparisons.doc |             |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 7565.15770 | Resolved      | BAR7 vs. Virtis Std Engine ratings |

### Description

FROM:dteal DATE:Monday, July 31, 2006 9:30:51 PM  
There is no "Compute from Typ. Section" button on page PS1-33  
It should be added before the class is taught again.

FROM: Xinmei Li DATE: 8/22/2008 2:46:37 PM Eastern Daylight Time  
Fixed for 6.0 training examples.

|                                             |
|---------------------------------------------|
| Issue ID: 7565                              |
| Subject: BAR7 vs. Virtis Std Engine ratings |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Lee, Herman    | 8/17/2006 5:12:42 PM |
| Modified By: administrator   | 6/19/2008 4:27:30 PM |
| Priority: High               |                      |
| Category: Education          |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | Resolved | High     | Education |
| Lee, Herman     | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7599.15736 | Resolved      | Virtis Standard Engine Question |

Description

FROM:hlee DATE:8/17/2006 1:07:13 PM  
 E-mail received from Wes Kellogg, OK DOT.

=====

Mr. Lee -

My name is Wes Kellogg. Walt asked me to take a look at the Virtis 5.5 Beta using the sample BAR7 files that we also gave Michael Baker. In doing so I encountered a few problems that would not allow the bridges to be rated. I discussed these problems with Brian Windsor and he was able to help me determine why the Virtis files had these problems. I went through and fixed these problems and the files would rate. The problems I encountered are as follows:

Steel Sections - The effective flange width had to be entered before the files would rate. This is not entered in the BAR7 files because BAR7 automatically calculates this value for you.

Complete Issue Information

RC Slabs - The distribution factors had to be entered before the file would rate. BAR7 calculates the distribution factors automatically.

RC "T" Beams - A fillet dimension had to be entered. This is due to the fact that BAR7 does not include this dimension in the cross section properties. It is included in the dead load. Also the effective flange width had to be entered due to the fact that BAR7 automatically calculates this value.

Upon fixing these problems, the files would rate. Of the eight files that I have imported into Virtis 5.5, four of them had ratings that were not consistent with the BAR7 ratings. I tried to find the reason for this by deleting the bridges and re-importing them. After doing this, and fixing the problems with the import, I still got the same ratings. I had Brian Windsor check the bridges using BAR7 which resulted in the appropriate numbers. I have included these ratings in the attached word document. I am unsure as to why this is happening and was hoping you could help me to find the cause.

Also, I have recently had Virtis 5.4 installed on my computer and have been importing a few steel bridges and I have discovered that I don't have to enter the effective flange width for the file to rate. This is confusing since in Virtis 5.5 I could only get the file to rate when I did enter this value. Any help or information you could offer would be greatly appreciated.

- Wes Kellogg

=====  
===

Reply e-mail:

=====  
===

Wes,

I have entered your questions into the Support Center as Incident 7565.

1. In Virtis, the number of rebars entered is located within the effective width. Since Virtis Std Engine requires the rebar area to be defined per foot width of the slab, the effective width is required. BAR7 Import reads a BAR7 input data file and put the input data in a Virtis bridge. When you rate the bridge with Virtis Std Engine, the bridge is treated as a Virtis bridge since users may change the data after the bridge is imported.
2. Support Center's Incident 7522 (Virtis Std export should allow LL distribution factors to be computed if they are not entered for RC slab bridge) has been resolved for 5.5 Release. I don't think the fix is in 5.5 Beta 3 (the version that you have).
3. I imported "0512 0799 X", it is a CTB structure with the fillet dimension A not entered. Virtis Std Engine only complains the effective flange width. Please e-mail us the bridge with the fillet dimension

Complete Issue Information

problem or attach that bridge (XML file) to Incident 7565 so we can take a look.

- 4. Some suggestions for investigation when the rating factors are not close:
  - a. Compare the BAR7 input file with the input file that generated by Virtis to see whether they are equivalent to each other.
  - b. Compare section capacities, dead load actions, and live load actions reported by BAR7 and Virtis Std Engine output files.

Please let us know after you have located the discrepancy and e-mail us the BAR7 input data file and the exported Virtis bridge (XML file) for us to investigate.

Let me know if you need additional information. I will be out of the office tomorrow and Wednesday to Friday next week. If you need immediate assistance, please e-mail [bridgeware@mbakercorp.com](mailto:bridgeware@mbakercorp.com).

Herman

=====  
===

|                                          |
|------------------------------------------|
| Issue ID: 7599                           |
| Subject: Virtis Standard Engine Question |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 9/13/2006 3:38:06 PM |
| Modified By: administrator            | 6/19/2008 4:27:27 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:9/13/2006 11:34:57 AM

4/19/2016 3:05:28 PM

HRS AASHTO

909



Complete Issue Information

E-mail from Wes Kellogg, Oklahoma DOT:

=====

Mr. Lee -

I have a question regarding the Virtis Standard Engine that is included in Virtis 5.4. We have noticed some inconsistent ratings between Virtis 5.4 and BAR7. Brian Windsor and I found that the Virtis Standard Engine calculates the dead loads on a beam by calculating the total dead load and dividing that value by the number of beams, effectively distributing the dead loads evenly among the beams. In the version of BAR7 we are using, the dead loads are calculated by the tributary area of the beam and entered accordingly. This difference has led to the Virtis Standard Engine rating bridges higher than the BAR7 software. I am curious if the method Virtis uses to calculate dead loads is standard practice, and if it is not, will this problem be addressed in the next release of Virtis? Any information you could give would be greatly appreciated.

- Wes Kellogg  
Bridge Maintenance  
Oklahoma Department of Transportation

Reply e-mail:

=====

Wes,

Based on your descriptions, I assume you have a structure (with 2 or more members) entered in Virtis 5.4 using the girder system description and you also have a member of that structure entered in BAR7. The stage 2 dead load distribution computed by Virtis 5.4 is uniformly distributed to all members. In Virtis girder system description, you can select how you want stage 2 dead load distributed for the analysis in the Superstructure Loads window (attached).

Please let me know if I misinterpreted your question.

Herman Lee

Issue ID: 7604  
Subject: VSE analysis fails with integral wearing surface

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Armbrecht, Tim 9/13/2006 4:39:41 PM  
Modified By: administrator 6/19/2008 4:27:27 PM  
Priority: High  
Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name          | Company                 | Email 1                    | Phone 1      |
|---------------|-------------------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT            | tim.armbrecht@illinois.gov | 217-782-6266 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com      |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                             |
|------------|---------------|-------------------------------------------------------------------------------------|
| 7608.15727 | Suspended     | Truss-suggestion: add ability to code "I" shaped truss members as built up sections |

### Description

FROM:tarmbrecht DATE:Wednesday, September 13, 2006 12:39:42 PM

VSE will not analyze a steel composite structure with an integral wearing surface (where the deck Structural Thickness is greater than Total Deck Thickness). (See StrSlabGTTotDk(0860037).xml)

FROM:jduray DATE:Thursday, September 14, 2006 8:27:38 PM

How can the structural thickness exceed the total deck thickness?

FROM:tarmbrecht DATE:Friday, September 15, 2006 8:55:21 AM

Jim, this refers to where the original deck has been scarified and a concrete overlay has been added, which the rater wishes to consider as structural, and therefore part of the composite section. Since this can be done in BRASS for P/S and steel composite structures, VSE should be modified to accept this. We also recommend allowing this for R/C structures also.

FROM:hlee DATE:9/15/2006 12:19:33 PM

BRASS requires Total Deck Thickness and Structural Thickness as inputs whereas Virtis Std Engine requires Total Deck Thickness and Integral Wearing Surface Thickness as inputs. Since a negative Integral Wearing Surface Thickness is not a realistic input for the Virtis Std Engine, Jim decided that the export should exit with error message.

FROM:jduray DATE:10/4/2006 9:01:54 AM

4/19/2016 3:05:28 PM

HRS AASHTO

911

## Complete Issue Information

Tim - after the overlay is placed isn't the total deck thickness increased? Which thickness is used to compute the deck DL?

FROM:tarmbrecht DATE:Wednesday, October 04, 2006 4:32:40 PM

Here is my consultant's response:

To the first question, the answer is NO. That is, if one is considering "total deck thickness" in terms of the Virtis data field "Total deck thickness" (under the "Deck (Cont'd)" tab of the "Structure Typical Section" window). This "total deck thickness" is actually reduced by the depth of deck surface scarification. When the new concrete wearing surface is added, the roughness caused by the scarification provides for a mechanical shear bond between it and the reduced thickness original deck, thus the two act together to provide composite structural support for the live load. Therefore, under "Deck Profile" the data field, "Structural Thickness (in)" is entered as the sum of the "Total deck thickness" and the data field "Wearing surface thickness" (under the Wearing Surface tab of the "Structure Typical Section" window). This is not a perfect structural representation of what's going on (since it makes the new wearing surface as part of the support for the Stage 2 DL when in fact it only supports the LL), but it is close enough.

To the second question, The Stage 1 DL uses the value entered for "Total deck thickness" and the Stage 2 DL uses the value entered for "Wearing surface thickness".

Response to hlee (9/15/06 12:19:33 PM):

In part - "BRASS requires Total Deck Thickness and Structural Thickness as inputs whereas Virtis Std Engine requires Total Deck Thickness and Integral Wearing Surface Thickness as inputs."

I know of no field in Virtis that would correspond to entry of VSE's "Integral Wearing Surface Thickness". Where is it? It seems that, for both BRASS and VSE, there could/should be a check box to indicate that a wearing surface is integral with the deck. This would make it so that, when the user does a "Compute Deck Profile from Structure Typical Section", the Structural Thickness field would be computed as the sum of the two data fields, "Total Deck Thickness" and "Wearing Surface".

Additional thought "The term "Total Deck Thickness" should be changed to something like "Base Deck Thickness" or "Stage 1 Deck Thickness" or similar.

FROM:jduray DATE:10/10/2006 1:18:43 PM

The integral wearing surface is computed by subtracting the structural thickness from the total deck thickness.

FROM:jduray DATE:10/10/2006 2:07:37 PM

The intent of the three deck thickness attributes is as follows:

Wearing surface - the thickness of a non-structural overlay

Total Thickness - the total thickness of the deck

Structural thickness - the total thickness minus a thickness to account for sacrificial wearing - so the integral wearing surface is the difference between total deck thickness and structural thickness.

The export for StdEngine was developed based on these thicknesses.

In order for the StdEngine to handle the situation described above it should be enhanced to accept the structural thickness (like BRASS) and it would have to allow the structural thickness to be greater than the total thickness.

4/19/2016 3:05:28 PM

HRS AASHTO

912

Complete Issue Information

FROM:dteal DATE:Wednesday, October 18, 2006 2:37:40 PM

I had entered a duplicate of this incident (#7629)

We have a very similar situation. Every structure that has a silica fume overlay (SFO) in our database will not run in VSE for this reason. Here is how we come up with our thicknesses.

Deck total thickness = 170 mm

SFO = 40 mm

Therefore 170 +40 210 mm

Structural Thickness = 210 – 15 wear = 195 mm

FROM:dteal DATE:Friday, November 03, 2006 10:36:37 AM

Why not come up with a work around or way this can be handled in the migration. We have 1,112 current structures with Silica Fume Overlays (SFO) that would have to be edited to comply with VSE input.

FROM:jduray DATE:11/3/2006 2:41:25 PM

The data entered into Virtis/Opis should describe the bridge. It should not be for a particular engine. If you have massaged data to get results you want from a particular engine then you have to accept that it may not work for another engine.

Why isn't the total deck thickness 210 and the structural thickness 195? I still don't understand how or why the structural thickness can be greater than the total. Is there something going on here with when the loads are applied that forces you to do this way?

I think this is a problem for StdEngine because the input does not include structural thickness. If you want StdEngine to work for this situation (Total < Structural) we need to modify the input commands and the internal computations.

FROM:jduray DATE:11/3/2006 3:05:51 PM

Neither engine handles this scenario correctly.

For BRASS: You specify the load due to SFO as DL2 but the structural properties for DL2 already include the thickness - not exactly correct but maybe acceptable.

You can't use StdEngine at this time because the input to the engine is total thickness and sacrificial thickness (not structural thickness). The StdEngine export defines the total thickness as 7" (which isn't what you want) and computes the sacrificial thickness by subtracting the structural thickness from the total thickness which is negative for this case and is not allowed to be negative so it aborts.

I think if you want to be able to analyze this situation Virtis, BRASS and StdEngine need to be modified.

Issue ID: 7608

Subject: Truss-suggestion: add ability to code "I" shaped truss members as built up sections

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Armbrecht, Tim

9/13/2006 4:55:56 PM

Modified By: administrator

6/19/2008 4:27:26 PM

4/19/2016 3:05:29 PM

HRS AASHTO

913

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
| Goodrich, Brian | Assigned | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 20C0390CA.xml       |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 7639.15696 | Assigned      | Cross Sectional Area of Zero |

### Description

FROM:tarmbrecht DATE:Wednesday, September 13, 2006 12:55:57 PM

In order to enter welded "I" shapes as truss members users must ...

1. Define them as NonDetailed sections

or...

2. Enter them as Steel Beam I Shapes for the Bridge Workspace and then define them as rolled sections

It would be better if they could be directly entered by coding them something like a built-up truss member section.

Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 7639                        |
| Subject: Cross Sectional Area of Zero |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 10/2/2006 12:16:05 PM |
| Modified By: administrator            | 6/19/2008 4:27:23 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:10/2/2006 8:16:12 AM  
Submitted on behalf of Vinacs, Caltrans:

Jim / Krisha / Brian

I have created the attached model. I am able to analyze the stringers. When I tried to analyze the Floorbeam, I am getting the error message which states crosssectional area of Zero in Span 4. I could not locate any error in my input.

Could someone look at the bridge model and let me know where do I go wrong?

Vinacs  
(See attached file: 20C0390CA.xml)

4/19/2016 3:05:29 PM

HRS AASHTO

915

Complete Issue Information

FROM:kkennelly DATE:10/2/2006 8:17:43 AM  
I analyzed Span 1 to 3 MDL 1 of 1 (09/06), Floorbeam1, BC1.

It appears to me that the input commands for BRASS are being computed properly. Cross Section 1 is applied over the length of Span 4:

COMMENT Span 4  
SPAN-A 4, 0.4200, 5  
SPAN-C 1, 0.4200, 1,

I think the problem is an internal BRASS problem when it tries to deal with Span 4 being only 0.42' long. When I changed the length of Span 4 to 15', BRASS ran to completion.

FROM:bgoodrich DATE:Tuesday, October 03, 2006 2:16:37 PM

I reviewed the structure and found one of the end spans to be a cantilever that is 0.42 feet in length. BRASS tries to put nodes at tenth points, i.e., every 0.042 feet (0.504 inches) which is less than the small element length tolerance in BRASS. BRASS adds tenth points to the mesh without checking if they are too close to another node, which leads to the area not being calculated for some nodes.

It appears this issue could be avoided if BRASS could detect these "small" span lengths and generate the mesh with fewer nodes. BRASS could be modified to add node points at some minimum interval when tenth points are less than the small element length.

I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Monday, October 16, 2006 10:09:00 AM  
E-mail from Mike Watters:

That sounds like a good idea, but I would modify the code in the merged engine only. It seems like an easy check to make. I think Vinacs should be instructed to take out that short span.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

FROM:bgoodrich DATE:Friday, October 20, 2006 9:57:00 AM

Please review Mike Watters comments below. WYDOT did not authorize the short span issue in the BRASS-GIRDER engine to be addressed. Floor systems are complicated enough without trying to eliminate a short span in the export or even having the user remove it.

Is this something that could be funded by AASHTO? We are only looking at 16 hours.

FROM:bgoodrich DATE:Wednesday, July 25, 2007 2:10:25 PM

Issue ID: 7688

Subject: Truss LL distribution factor

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:05:29 PM

HRS AASHTO

916

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: McCaffrey, Brian | 11/1/2006 4:14:46 PM |
| Modified By: administrator     | 6/19/2008 4:27:19 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact    | Status             | Priority | Category       |
|--------------------|--------------------|----------|----------------|
| Duray, Jim         | New                | High     | Unknown        |
| Kennelly, Krisha   | Assigned           |          |                |
| McCaffrey, Brian   | Information Needed |          |                |
| Goodrich, Brian    | Assigned           |          |                |
| Ordoobadi, Mehrdad |                    |          | Bug - Export 1 |
| Goodrich, Brian    | Resolved           |          |                |
|                    | Assigned           |          |                |
|                    | Resolved           |          |                |
| Goodrich, Brian    | Resolved           | High     | Bug - Export 1 |

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Mark Nord       | Colorado DOT     | unknown@unknown.com                 | 303-512-4073 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 17858 - 3209950.xml |             |

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 7689.15646 | Resolved      | Floorbeam LLDF's for 19' roadway |

### Description

FROM:bmccaffrey DATE:Wednesday, November 01, 2006 12:14:46 PM

4/19/2016 3:05:29 PM

HRS AASHTO

917



Complete Issue Information

It would be beneficial at some point for the truss LLDF to be calculated based on the geometry of the floor-system similar to how a through-girder LLDF is calculated via the GUI?

|                                           |
|-------------------------------------------|
| Issue ID: 7689                            |
| Subject: Floorbeam LLDF's for 19' roadway |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: McCaffrey, Brian        | 11/2/2006 12:54:43 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM  |
| Priority: High                        |                       |
| Category: Bug - Export 1              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Thursday, November 02, 2006 8:54:43 AM

It appears that the floorbeam LLDF wizard is still following the Standard Specs even if the MCEB method is selected.

This bridge has a 19' roadway which should be two lanes according to the MCEB but it's using one lane.

FROM:jduray DATE:11/2/2006 2:27:19 PM  
Is this for 5.5 beta 6 or was it a problem in 5.4 and earlier?

4/19/2016 3:05:30 PM

HRS AASHTO

918

## Complete Issue Information

FROM:bmccaffrey DATE:Thursday, November 02, 2006 3:20:15 PM

I believe this was an existing problem in 5.4. I never really looked into this or ran the numbers before now so I'm not sure if there's a history of incidents. I had only heard that it wasn't working properly in 5.4 and I confirmed it with in 5.5 Beta 6.

FROM:kkennelly DATE:11/6/2006 9:22:04 AM

Are you questioning the actual number computed on the Floorbeam Mbr Alt: Live Load Distribution tab?

The floorbeam LLDF's from AASHTO Table 3.23.3.1 don't indicate if they are for 1 or multi lanes. So I think the DF being computed by the "Compute" button in Virtis is ok.

The export to BRASS is creating Floorbeam-MPT commands with just 1 lane of vehicle. I think that instead the MPT command should contain 2 vehicles each using the floorbeam DF computed on the Floorbeam Mbr Alt: Live Load Distribution tab.

FROM:bmccaffrey DATE:Monday, November 06, 2006 1:33:27 PM

I think you're correct. The output file has it as one lane. I was able to get the wizard to change but it wasn't reflected in the export and you can't tell if the wizard is generating a one lane DF or a multi-lane DF.

FROM:kkennelly DATE:11/6/2006 2:38:49 PM

Based on Table 3.23.3.1 there is no single lane and multi lane DF for floorbeams. That is why the UI only shows 1 DF for the floorbeam unlike the girders where the UI shows both a single and a multi lane DF.

The export to BRASS should take into account the setting on the Preferences: Bridge Workspace tab to determine if AASHTO 3.6.3 or MCEB 6.7.2.2 should be used to determine how many vehicles to export in the Floorbeam MPT command.

FROM:bgoodrich DATE:Tuesday, November 07, 2006 11:18:04 AM

The CBrassStdLoadControl::ComputeLaneWidths function in the export must be modified to detect when the MCEB minimum two-lane travelway width are to be used instead of the Standard Spec minimum two-lane travelway width. This flag is set in the user preferences and must be conveyed to the export, probably through the analysis event. I estimate the export changes at about 2 hours, which includes the initial investigation. Jim will need to estimate the analysis event and database changes.

FROM:bmccaffrey DATE:Thursday, November 09, 2006 9:21:27 AM

This is a bug, not an enhancement.

FROM:jduray DATE:2/27/2007 3:31:56 PM

Mehrdad - after the event revision is made assign to Brian for the export.

FROM:mordoobadi DATE:5/10/2007 3:15:12 PM

Added a new method to IDoAnalysisEvent that returns the Standard Live Load Distribution Factor setting.

```
IDeType* GetStandardLISsDistFactComputeType();
```

4/19/2016 3:05:30 PM

HRS AASHTO

919

Complete Issue Information

The function returns an IDeType that may hold:

TYP\_STDLLDFSS\_STDSPECHB for AASHTO Standard Spec for Highway Bridges  
TYP\_STDLLDFSS\_MCEB for Manual for Condition Evaluation of Bridges (MCEB)

FROM:hlee DATE:5/16/2007 3:52:56 PM

Updated Virtis Std LFD and Virtis Truss to use the new method in the analysis event to determine the number of lanes in a system definition.

FROM:bgoodrich DATE:Tuesday, June 05, 2007 6:35:32 PM

Updated the BRASS export to use the new analysis event method. The Floorbeam-MPT command will be generated as before with two wheel lines, but the width of the design and traffic lanes will be reduced so two 9.5 ft lanes will fit during the positioning process in the engine.

FROM:jduray DATE:8/31/2007 8:35:08 AM

From Herman:

I think we still have to do the following:

1. In CEngineExport::GetStructDefLanesLoaded(BOOL& bSingleLaneLoaded), instead of adding GetNumLanes of all lane positions we need to calculate the number of lanes on the bridge based on the selected spec.
2. For Madero, it depends on how the "Number of Design Lanes" in GENLDIM used in the engine. Seems like Madero export passes both single and multi distribution factors to the engine.

FROM:bgoodrich DATE:Wednesday, September 05, 2007 1:18:53 PM

Updated the Madero export (CMaderoDimensions::GetDeckGeometry) to calculate the number of lanes based on the MCEB in addition to the Standard spec.

|                                      |
|--------------------------------------|
| Issue ID: 7691                       |
| Subject: Multimedia Attachment Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Kennelly, Krisha        | 11/8/2006 8:10:16 PM |
| Modified By: administrator            | 6/19/2008 4:27:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |

4/19/2016 3:05:30 PM

HRS AASHTO

920

### Complete Issue Information

|                 |          |      |         |
|-----------------|----------|------|---------|
|                 | Resolved |      |         |
| Duray, Jim      | New      | High | Unknown |
| Goodrich, Brian | Assigned |      | Bug     |
| Duray, Jim      |          |      |         |
| Duray, Jim      | Assigned | High | Bug     |
| Goodrich, Brian |          |      |         |
|                 | Closed   |      |         |

### Contacts

| Name           | Company                    | Email 1                             | Phone 1      |
|----------------|----------------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc.           | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Herman Lee     | Michael Baker Jr.,<br>Inc. | hlee@mbakercorp.com                 |              |

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | BrassPOIEngineProperties.png |             |

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 7716.15619 | Assigned      | Section Type in Brass POI Engine Properties. |

### Description

FROM:kkennelly DATE:11/8/2006 3:10:03 PM  
Submitted on behalf of Vinacs, Caltrans via email:

When I tried to attach a file to a bridge, Virtis program got terminated. Could you please review the error messages popped up and advise us as to how to fix this problem.

Li who maintains the database tells me that he thinks that this problem came about after we converted the database of Virtis+Opis licence to Virtis only licence database.

(See attached file: multimediaattachment.doc)

FROM:mordoobadi DATE:11/15/2006 2:57:44 PM  
I found out what is causing both issues.

You have an Integrated database (Virtis/Opis/Pontis). There is a record missing from your COPTIONS table that is required by Virtis/Opis. It defines the location of multimedia server (MULTISERVER option in Pontis). The migration did not populate the record because you had an integrated database and we

4/19/2016 3:05:30 PM

HRS AASHTO

921

Complete Issue Information

do not change PONTIS table contents for integrated databases.

You can fix the problem by adding a record to the COPTIONS table by executing the attached SQL command in Interactive SQL.

- (0) Save the attached file to a folder on your hard disk drive.
- (1) Start Interactive SQL and login to the database.
- (2) Select File/Open and open the SCOptions.SQL file.
- (3) Select SQL/Execute.
- (4) Close the Interactive SQL.

After this you should try to duplicate the problems by:

- A) attempting to open the System Defaults Window
- B) Trying to attach a file to a bridge.

FROM:mordoobadi DATE:11/15/2006 2:59:57 PM  
in an email by Li Zhang:

Mehrdad, both problems fixed. Thanks a lot!!!

Li Zhang

|                                                       |
|-------------------------------------------------------|
| Issue ID: 7716                                        |
| Subject: Section Type in Brass POI Engine Properties. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 12/6/2006 12:33:49 AM |
| Modified By: bgoodrich                | 11/7/2008 9:19:15 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:05:30 PM

HRS AASHTO

922

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:Tuesday, December 05, 2006 7:33:59 PM  
See attached. The first item in the list shouldn't be "ERROR".

FROM:bgoodrich DATE:Monday, January 29, 2007 3:21:14 PM  
This is set in the CDoBrassStdPOIParser::SetCodes function in AboBrass. I am not sure what the intent is here. Jim was the author, so we should check with him.

FROM:hlee DATE:1/30/2007 1:09:56 PM  
"ERROR" is in CDoBrassStdPOIParser::SetCodes since the first version (10/28/99) in SourceSafe. In 5.5, BRASS export will default section type to 2 (Non-composite rolled or welded steel girder) when the section type is "ERROR" in POI engine properties.

FROM: Jim Duray DATE: 11/6/2008 8:04:02 AM Eastern Standard Time  
I don't remember why. Is this causing a problem? If not, I think we should leave it as is. If it is causing a problem we should figure out what is supposed to happen here and fix it.

FROM: Brian Goodrich DATE: 11/6/2008 6:57:18 AM Mountain Standard Time  
Having the "ERROR" option does not appear to cause any problems. Even if the user selects this option, the export will send the conservative non-composite section type to the engine. This engine property option is also only used when NOT generating points of interest, which I believe would be primarily from imported BRASS data files. I assume most users are entering schedule data and generating points of interest.

FROM: Brian Goodrich DATE: 11/7/2008 2:17:04 PM Mountain Standard Time  
Jim Duray directed me to close this issue.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 7727                                      |
| Subject: Runtime error importing 5.4 files into 5.5 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: McCaffrey, Brian        | 12/13/2006 3:47:36 PM |
| Modified By: administrator            | 6/19/2008 4:27:15 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

4/19/2016 3:05:30 PM

HRS AASHTO

923

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug - Export 1 |
| Goodrich, Brian | Assigned |          |                |
|                 | Resolved |          |                |
|                 | Closed   |          |                |
| Goodrich, Brian | Closed   | High     | Bug - Export 1 |

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Jim Duray      | Michael Baker Jr., Inc.        | jduray@mbakercorp.com           |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                               |
|------------|---------------|-----------------------------------------------------------------------|
| 7757.15578 | Closed        | HS vehicles sometimes not considering variable rear axle (BRASS only) |

### Description

FROM:bmccaffrey DATE:Wednesday, December 13, 2006 10:48:26 AM

Virtis terminated after I imported the attached 5.4 file and tried to save it. It imports fine and the members do run. I was able to import and save another 5.4 file into 5.5.

FROM:mordoobadi DATE:12/19/2006 10:20:46 AM

The program termination appears to be in the Bridge Validation. As a work around you will be able to save the bridge if you uncheck the "Validate before saving" check box in Bridge Workspace tab of Preferences window.

We will look into the crash problem.

FROM:mordoobadi DATE:12/19/2006 10:48:44 AM

This problem is caused by the code that fixed Incident 7197. The stress limit smart pointer is NULL. So the program crashes.

4/19/2016 3:05:30 PM

HRS AASHTO

924

Complete Issue Information

FROM:kkennelly DATE:1/16/2007 12:59:35 PM  
Fixed for either 5.5 service patch 1 or 5.6 which ever is released first.

Workaround is to either:

1. Specify a Stress Limit on the Beam Details: Stress Limit Ranges tab. You will first have to create a Stress Limit corresponding to the girder concrete material assigned to the beam.

or 2. Just delete the Stress Limit Range on the Beam Details: Stress Limit Ranges tab since a Stress Limit is not assigned anyway.

Note that BRASS does not use this Stress Limit (that's probably why it was left blank) but the Virtis Std Engine does.

FROM:xli DATE:2/5/2007 1:54:08 PM  
It works fine for 5.6 beta 1

FROM:bmccaffrey DATE:Friday, February 23, 2007 9:23:01 AM

Mehrdad's solution worked to import and save in 5.5.

The bridge will import and save in 5.6 Beta 1 without modification.

Incident resolved.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 7757                                                                 |
| Subject: HS vehicles sometimes not considering variable rear axle (BRASS only) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Teal, Dean              | 1/8/2007 11:50:16 PM |
| Modified By: administrator            | 6/19/2008 4:27:13 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



Complete Issue Information

---

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 7758.15577 | Resolved      | Deck load applied to flared beam systems |

Description

FROM:bgoodrich DATE:Monday, January 08, 2007 6:50:23 PM  
Entered for Dean Teal:

HS vehicles are sometimes not considering the variable rear axle when analyzed with BRASS. Virtis has been relying on the first two characters of the vehicle name to be "HS" to tell BRASS that the rear axle should be varied. As far as I can tell, this is the way it has been coded since the beginning. Now that we are using the SPECIAL-TRUCK command, we can set parameter 6 accordingly.

FROM:dteal DATE:Tuesday, January 09, 2007 11:36:44 AM

FROM:bgoodrich DATE:Tuesday, March 13, 2007 2:15:00 PM  
I revised the ASD/LFD export (BrassStdLoadControl.cpp and BrassStdVehicleExport.cpp) to detect the variable rear axle spacing as was already done for the LRFD export. The "HS Type Truck" flag is now exported on Parameter 6 of the SPECIAL-TRUCK command. Fixed for version 5.6.

FROM:dteal DATE:Wednesday, November 07, 2007 2:06:48 PM  
Accepted

|                                                   |
|---------------------------------------------------|
| Issue ID: 7758                                    |
| Subject: Deck load applied to flared beam systems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: White, Pete             | 1/9/2007 7:30:53 PM  |
| Modified By: administrator            | 6/19/2008 4:27:13 PM |

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 7765.15570 | Resolved      | Schedule based girder profile reinforcement grid |

### Description

FROM:pwhite DATE:Tuesday, January 09, 2007 2:30:54 PM

When we model a flared beam system with skewed bents, we are forced to specify the beam spacing along the support. This spacing is, of course, larger than the spacing measured perpendicular to the beam. The Virtis std engine output shows that the dead load due to deck concrete is based on the tributary width measured along the supports, when it should be based on the tributary width measured perpendicular to the beam. Is there any way to get around this issue other than simply inputting the deck weight manually?

FROM:hlee DATE:1/16/2007 8:10:43 AM

The bug is fixed and resolved for the 5.6 Release.

I cannot think of any way to get around this issue until the 5.6 Release.

FROM:xli DATE:2/5/2007 11:32:37 AM

For 5.6 beta 1, checked SPACING, perpendicular distance between beams is used.

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 7765                                            |
| Subject: Schedule based girder profile reinforcement grid |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Bhanushali, Girish      | 1/10/2007 3:35:15 PM |
| Modified By: administrator            | 6/19/2008 4:27:12 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbhanushali DATE:1/10/2007 10:26:58 AM

Steps:

- 1) Open  
RCTrainigBridge1/Schedule based/ G1/ Girder Profile/ Reinforcement Tab
- 2) Open F2 bar mark definition window.
- 3) keep "Girder Profile /Reinforcement Tab " Open
- 4) Change 65.00 in A: edit box on F2 window to 1.00 and hit apply.
- 5) Notice Straight Length fields in "Girder Profile /Reinforcement Tab " grid , They are not correct.

4/19/2016 3:05:31 PM

HRS AASHTO

928

## Complete Issue Information

6) Also Note that 13 row on "Girder Profile /Reinforcement Tab " grid representing G1 has different straight length then original.

If you reopen the windows then grid straight lengths seem ok.

possibly update handler is not functioning correctly.

This behavior exists in 5.6 and 5.5 I haven't checked in earlier versions.

FROM:jihnat DATE:1/17/2007 10:09:18 AM  
Fixed for 5.6.0

FROM:xli DATE:2/2/2007 4:05:36 PM  
It works fine with 5.6 beta build 1

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 7781                                                     |
| Subject: How can strength and serviceability checks be controlled? |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Crovo, Daniel           | 1/16/2007 5:06:29 PM |
| Modified By: administrator            | 6/19/2008 4:27:11 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

4/19/2016 3:05:32 PM

HRS AASHTO

929

## Complete Issue Information

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | VI7784_Document1.rtf     |             |
|      | VI7784_ERROR MESSAGE.rtf |             |
|      | VI7784_Document3.rtf     |             |
|      | VI7784 truck.xml         |             |
|      | VI7784_Document2.rtf     |             |

### Tasks

| Name       | Current State    | Summary                  |
|------------|------------------|--------------------------|
| 7784.15551 | Not Reproducible | Unable to save a vehicle |

### Description

FROM:bgoodrich DATE:Tuesday, January 16, 2007 12:06:38 PM  
Entered for Elizabeth Befikadu:

I have a question about the LFD rating method when the strength of steel  $FY < 36$ . There was an issue that we have to use serviceability check for overload provision in AASHTO 10.57. Instead of the normal procedure for LFD rating. Can you tell me how Virtis deal with LFD rating for the specified steel strength. AASHTO provision 10.57 is  $DL+1.67LL$  versus the normal procedure we use is  $1.3DL+2.17LL$ . Thank you

Elizabeth Befikadu  
MHD Bridge section  
Room NO. 6500  
Tel. 617-973-7599  
Fax 617-973-7575

FROM:bgoodrich DATE:Tuesday, January 16, 2007 12:12:34 PM

On the engine properties window for each point of interest, there is a checkbox called "Skip Operating Rating Based on Serviceability," which can be used to ignore the serviceability check of 10.57. The only drawback is that this must be set for every point of interest, but in doing so you have to specify everything else at the point of interest as well, i.e., stiffeners, bracing, other engine properties such as section type. Then, on the Analysis tab of the Member Alternative engine properties, you have to select option 0 for the "POI Control" drop-down box.

I don't see an elegant way to get around this issue, short of adding a global "Skip Operating Rating Based on Serviceability" checkbox on the member alternative engine properties. Please let me know if this answers your question.

FROM:bgoodrich DATE:Thursday, January 18, 2007 4:59:13 PM  
E-mail from Elizabeth:

Actually that was not my question. My question is there was an issue between us and

4/19/2016 3:05:32 PM

HRS AASHTO

930

Complete Issue Information

a consultants. The consultants are only checking the serviceability requirement overload Provision of AASHTO 10.57 (DL+1.67LL) versus 1.3DL+2.21LL the normal procedure. The reason they mention is that

for steel FY<36ksi the steel doesn't reach the yield and they said they have only to check the serviceability.

Can you clarify if you are dealing with this is issue this is more of a technical question than an engine. I want to know

how virtis handle structures FY<36ksi for LFD rating

FROM:bgoodrich DATE:Thursday, January 18, 2007 4:59:47 PM

There are currently no options in Virtis that control when or if strength or serviceability checks are performed. Virtis relies on the engines to make this decision. BRASS does nothing different than if the yield strength of the steel is less than 36 ksi. Baker will need to comment on the inner workings of the Standard engine. I couldn't find anything the specification or rating manual to indicate that strength could be ignored under this condition. Is it in the specification or is this based on someone's engineering experience?

FROM:jduray DATE:1/19/2007 3:50:35 PM

Herman - please check wht the StdEngine does relative to this.

FROM:hlee DATE:1/22/2007 1:35:01 PM

There's no option in Virtis to contol when or if strength or serviceability checks are performed in the Virtis Std Engine.

|                                   |
|-----------------------------------|
| Issue ID: 7784                    |
| Subject: Unable to save a vehicle |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Kennelly, Krisha        | 1/17/2007 8:57:37 PM |
| Modified By: administrator            | 6/19/2008 4:27:10 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Duray, Jim         | New              | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned         |          |          |
|                    | Not Reproducible |          |          |
| Ordoobadi, Mehrdad | Not Reproducible | High     | Bug      |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N06070S.dat         |             |
|      | N06070S_revised.dat |             |

Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 7785.15550 | Resolved      | Duplicate BAR7 imported transverse stiffener ranges. |

Description

FROM:kkennelly DATE:1/17/2007 3:57:55 PM  
Submitted on behalf of Kim Armstrong, Bayside Engr via email & phone.

Unable to save a Std Gage vehicle to Library when Virtis has been open a long time. Error msgs & vehicle is attached. If she exits Virtis, re-enters Virtis and re-enters the truck she can then save it.

Email from Kim:

Here are the files that you had requested. If you have any trouble opening them, or if you need anything further, please just give me a call. Thanks!!  
Kim Armstrong

BAYSIDE ENGINEERING, INC.  
Kimberly E. Armstrong, Engineer  
600 Unicorn Park Drive, 3rd Floor  
Woburn, MA 01801  
Phone: (781) 932-3201, ext. 625  
Fax: (781) 932-3413  
karmstrong@baysideengineering.com  
<http://www.baysideengineering.com>

FROM:kkennelly DATE:1/17/2007 4:00:41 PM

FROM:mordoobadi DATE:8/24/2007 10:30:47 AM  
The XML file is corrupt.

I am not able to reproduce this problem.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 7785<br>Subject: Duplicate BAR7 imported transverse stiffener ranges. |
|---------------------------------------------------------------------------------|

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Li, Xinmei                     |
| Submitted By: Lee, Herman 1/18/2007 3:35:36 PM  |
| Modified By: administrator 6/19/2008 4:27:10 PM |
| Priority: High                                  |
| Category: Bug                                   |

History

| Primary Contact | Status        | Priority | Category |
|-----------------|---------------|----------|----------|
| Duray, Jim      | New           | High     | Unknown  |
|                 | Investigation |          |          |
|                 | Resolved      |          |          |
|                 | Development   |          |          |
| Duray, Jim      | Development   | High     | Bug      |
|                 | Resolved      |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name              | Resource Identifier | Description |
|-------------------|---------------------|-------------|
| truss_problem.xml |                     |             |

Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 7788.15547 | Development   | Truss Rating Problem with Virtis v5.5 |

Description

FROM:hlee DATE:1/18/2007 10:13:01 AM  
 E-mail received from Wes Kellogg, OK DOT:

=====

====  
 Mr. Lee -

We are currently trying to import our Bar7 files into Virtis 5.5 using the import utility. We have encountered a problem described as follows:



Complete Issue Information

When a continuous I-beam Bar7 file is imported, an error message is received upon rating the file. The error message relates to the RC Flexural Reinforcement. Upon researching what the cause of the error was, it was noted that the Effective Flange Width (STD) had not been entered. According to Brian Windsor, this value is calculated by the Bar7 engine. When a value is entered, the file will rate as expected. Please take a look at the attached file.

Any help you could give would be greatly appreciated.

- Wes Kellogg  
Bridge Maintenance  
Oklahoma Department of Transportation

=====  
===

FROM:hlee DATE:1/18/2007 10:38:18 AM  
Reply e-mail:

=====  
===

Wes,

If I remember right, this is one of the problem you described in an e-mail last August. Please refer to Incident 7565 in Virtis/Opis Support Center (<http://aashto.bakerprojects.com/>) for more information.

In Virtis, the reinforcement data entered is located within the effective width. When importing a BAR7 input file to Virtis, the Import Utility will try its best to interpret the data. In this case, the Effective flange width (Std) in the Cross Sections window will left blank since it is not in the BAR7 input file. If you look at the reinforcement data in the Cross Sections window, you will also notice that the areas are the same as those in the BAR7 input file (As and A's) which is based on per foot slab width. After the import, you need to fill in the Effective flange width (Std) and also revise the reinforcement data so the reinforcement area per foot slab width is the same. I cannot think of any way to get around this issue.

When I looked at the imported bridge of your attached BAR7 input file, I suspect something is not right in the imported transverse stiffener ranges. I entered this issue into the Support Center as Incident 7785.

Hope this helps!

Herman Lee

=====  
===

FROM:xli DATE:1/23/2007 9:19:56 AM  
Transverse stiffener ranges in the data file should be input as following, because Bar7 assumes an end of a brace point and stiffener spacing at the right end of each span.

SG1T 2 2000

4/19/2016 3:05:32 PM

HRS AASHTO

934

Complete Issue Information

SG2T 2 1667

FROM:hlee DATE:1/23/2007 2:44:41 PM

If BAR7 doesn't double counted the transverse stiffener when the user entered one already, the import utility shouldn't do that also.

FROM:xli DATE:1/31/2007 9:09:25 AM

Fixed by checking if user has entered first stiffener of the first span before creating one.

|                                                |
|------------------------------------------------|
| Issue ID: 7788                                 |
| Subject: Truss Rating Problem with Virtis v5.5 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Bhanushali, Girish      | 1/22/2007 1:04:45 PM |
| Modified By: hlee                     | 4/12/2010 7:36:21 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jihnat DATE:1/22/2007 8:05:53 AM

Received via email (Bridgeware):

I'm trying to rate a 38'-4" long thru-truss with 2-interior floor beams

I'm fairly confident that I have all of my sections, geometry, and load correctly defined. Yet when I analyze the truss it is telling me that the failing members are the verticals that aren't at the floorbeams.

4/19/2016 3:05:33 PM

HRS AASHTO

935

Complete Issue Information

Although the failing member is only a single angle (defined as a nondetailed section in my truss file) I'm pretty sure that there should be basically no axial force in these members in the first place.

Could you take a look at this file and tell me what I'm doing incorrectly?

(See attached file: truss\_problem.xml)

Eric M. Evenson P.E.  
Structural Engineer  
URS Corp. - Minneapolis  
(612) 373-6898

FROM:gbhanushali DATE:1/23/2007 4:00:58 PM

It looks like you are not doing anything wrong.  
There are two vertical members ( L2U2 and L4U4) don't end up carrying any live loads. Hence rating results report shows rating factors as "NAN" (Not a Number).  
That is due to denominator of rating equation is zero since live load is zero for those members. There is small dead load which is due to self weight load case.  
You can find it in "Dead Load Analysis Report" under self weight load case and element 11 and 12. (Or analysis log file.)

For other three vertical members ,  
L1U1 -> Element No = 15 ,  
L3U3 -> Element No = 16 ,  
L5U5 -> Element No = 17  
Each shows dead load = 9.3 kips  
live load = 24 kips  
Tensile Capacity = 35.70 kips

You can verify dead load in dead load analysis report under Element Actions.  
Dead load on these members are zero for Floorbeam load case but other super-structure load cases are also contributing to total load. These loads are applied as a point load on the panel points.  
For details on load management, please refer to "Method of Solution" section 1.2.2 using Virtis Help.

Live load of 24 kips you can verify in Live Load Analysis Summary Report.  
Following is some portion for it.

===== Axial for member 15 - L1U1=====

Vehicle Loading Summary for user-defined truck:

|         | Variable |         |           |          |   |
|---------|----------|---------|-----------|----------|---|
|         | Truck    | Axle    | Travel    | Position |   |
| Action  | Position | Spacing | Direction | Id       |   |
| (kip)   | (ft)     | (ft)    |           |          |   |
| Maximum | 24.000   | 20.333  | 14.000    | L to R   | 2 |
| Minimum | 0.000    | 0.000   | 0.000     | L to R   | 0 |

4/19/2016 3:05:33 PM

HRS AASHTO

936

Complete Issue Information

Loading influence line with Lane HS 15-44  
Vehicle Loading Summary for Lane Load:  
Maximum action = 22.54 kip  
Minimum action = 0.00 kip

=====

You may want to further refer to LLAnalysis\_Detail report.

As you can see when vehicle (Position of first axle) is at 20.33 ft , it can produce 24 kips tensile force in U1L1.

FROM:gbhanushali DATE:1/24/2007 10:27:42 AM  
We acknowledged a bug in live load analysis and we are working on it.  
Bug is related to the case when some panel points have floor beams and some panel points don't.  
VI 7788 is marked as bug and is currently being worked on.

FROM: Herman Lee DATE: 4/12/2010 3:20:19 PM Eastern Daylight Time  
Confirmed the nodal loads due to floorbeams in 6.2 Alpha Build 3.

=====

Computing nodal loads due to floorbeams...  
// Floorbeam1 -> 0.839 kip @ 0.000 ft  
// Applied to L0 - Node Number 1  
// Floorbeam2 -> 0.839 kip @ 12.667 ft  
// Applied to L2 - Node Number 3  
// Floorbeam3 -> 0.839 kip @ 25.667 ft  
// Applied to L4 - Node Number 5  
// Floorbeam4 -> 0.839 kip @ 38.333 ft  
// Applied to L6 - Node Number 7  
// Generating load case - Superstructure Floorbeam DC...  
// Superstructure Floorbeam DC@ L0 : Fx = 0.000 kip , Fy = -0.839 kip, NodeNum 1  
// Superstructure Floorbeam DC@ L2 : Fx = 0.000 kip , Fy = -0.839 kip, NodeNum 3  
// Superstructure Floorbeam DC@ L4 : Fx = 0.000 kip , Fy = -0.839 kip, NodeNum 5  
// Superstructure Floorbeam DC@ L6 : Fx = 0.000 kip , Fy = -0.839 kip, NodeNum 7

=====

Resolved by Girish Bhanushali.

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 7800<br>Subject: Virtis Std Engine: Single lane or multi-lane distribution factor ranges. |
|-----------------------------------------------------------------------------------------------------|

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 1/25/2007 6:19:23 PM |
| Modified By: administrator            | 6/19/2008 4:27:09 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                              | Phone 1       |
|----------------|------------------|--------------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com  | 307 222-4688  |
| Doug Horton    | Virginia DOT     | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description         |
|------|---------------------|---------------------|
|      | E0206113.bbd        | Virtis 5.2 bbd file |

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 7801.15534 | Resolved      | RunTime for a single file |

### Description

FROM:hlee DATE:1/25/2007 9:59:07 AM

When "Advanced Method" is used to input std live load distribution factors, Virtis Std Engine should use the single lane or multi-lane distribution factor ranges based on the number of lanes loaded from the superstructure definition.

FROM:xli DATE:2/2/2007 3:22:10 PM

Only multi-lane factors are used. I used the attached bridge to test, superstruct def "3 Span GirderLine\_SingleLane", member alt "Composite Plate Girder".

The superstructdef is set to single lane in super def window.  
The input in GUI is

| One Lane DF |        |         | Multi Lane DF |        |         |
|-------------|--------|---------|---------------|--------|---------|
| SHEAR       | MOMENT | DEFLECT | SHEAR         | MOMENT | DEFLECT |
| 0.800       | 0.800  | 0.800   | 1.000         | 1.000  | 1.000   |

The Virtis StdEngine output is

4/19/2016 3:05:33 PM

HRS AASHTO

938

Complete Issue Information

DISTRIBUTION FACTORS  
SHEAR MOMENT DEFLECT  
1.000 1.000 1.000

FROM:hlee DATE:2/5/2007 9:09:13 AM

Advanced is selected for the distribution input method. This implies distribution factor ranges are to be used. The distribution factors you listed above on the output are not ranges. Those numbers you listed will not be used since D.F. Ranges is "Y" in Control and Criteria. See the analysis log file, input data file, or Virtis Std Engine User Manual for more information.

FROM:xli DATE:2/5/2007 1:25:12 PM

LIVE LOAD DISTRIBUTION FACTOR RANGES is checked, correct factors are used.

|                                    |
|------------------------------------|
| Issue ID: 7801                     |
| Subject: RunTime for a single file |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Horton, Doug            | 1/25/2007 8:37:43 PM |
| Modified By: administrator            | 6/19/2008 4:27:09 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dhorton DATE:Thursday, January 25, 2007 3:37:43 PM

The attached file took an extremely long time to run (3 minutes per beam - 6 minutes total) on Virtis 5.2. I know we are far past this, but it is still our production version. I tried to import to 5.5, but this one was too far back. We have several files that are exactly the same type structures and have very similar

4/19/2016 3:05:33 PM

HRS AASHTO

939

Complete Issue Information

input, but run in seconds. We would just like to know if there is something obvious that causes this to drag.

The beam overhangs at the Abutments look large, but this structure has Integral Abutments and thus the values shown. As stated above, previous similar files have executed fine.

No need to spend a great deal of time, but we are interested i what might be the cause.

FROM:jduray DATE:1/29/2007 11:55:24 AM

FROM:bgoodrich DATE:Monday, January 29, 2007 12:03:15 PM  
The performance issue was corrected in the BRASS-GIRDER 5.9.3, which was released with Virtis 5.5.

FROM:dhorton DATE:Thursday, February 08, 2007 11:25:13 AM

Issue ID: 7807  
Subject: NSG Analysis - additional user materials

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Hasan, Mac 1/26/2007 2:42:20 PM  
Modified By: administrator 6/19/2008 4:27:09 PM  
Priority: High  
Category: Help

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Help     |
|                  | Resolved |          |          |

4/19/2016 3:05:33 PM

HRS AASHTO

940

Complete Issue Information

|                  |          |      |      |
|------------------|----------|------|------|
| Kennelly, Krisha | Resolved | High | Help |
|------------------|----------|------|------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7811.15524 | Resolved      | Influence line lane loading & second concentrated load |

Description

FROM:mhasan DATE:Friday, January 26, 2007 9:42:20 AM

It would be helpful to have additional information on this subject. For example: a) How nodes are created by the FE Engine from the bridgeware data? b) Connection between the deck elements and the girders for the composite and the non-composite deck system. c) DOF's (degrees of freedom) and different restraints that are used for the 3D and 2D analyses.

FROM:kkennelly DATE:5/9/2007 12:19:16 PM

Help has been updated to include this additional information.

FROM:xli DATE:6/15/2007 3:45:22 PM

Verified that "Distribution Factor Analysis" help is updated for 5.6 beta3.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7811                                                  |
| Subject: Influence line lane loading & second concentrated load |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Bhanushali, Girish   |



### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Duray, Jim   | 1/29/2007 6:59:55 PM |
| Modified By: administrator | 6/19/2008 4:27:08 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Lee, Herman      | Assigned |          |           |
| Kennelly, Krisha | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | ver54<br>Schedule_Based_12__wide_sl<br>ab.dat |             |
|      | ver55<br>Schedule_Based_12__wide_sl<br>ab.dat |             |
|      | TomC Mod1 06365 ver54.xml                     |             |
|      | TomC Mod1 06365.xml                           |             |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 7828.15507 | Resolved      | Ratings Disagreement between Version 5.4 and Version 5.5 |

### Description

FROM:gbhanushali DATE:1/29/2007 2:00:21 PM

Truss influence line needs to apply second concentrated load for lane loading of -ve peaks.

Complete Issue Information

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 7828                                                    |
| Subject: Ratings Disagreement between Version 5.4 and Version 5.5 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Maberry, Steven         | 2/5/2007 8:18:23 PM  |
| Modified By: administrator            | 6/19/2008 4:27:07 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:2/5/2007 3:19:08 PM  
Submitted by Steven Maberry, New Mexico, via email:

Bridgeware,

Find attached an XML Bridge File. When this bridge was rated with Version 5.4, the Rating Factors for an HS20 truck were 0.900 Inventory and 1.503 Operational.

When this SAME Bridge is rated with Version 5.5, the Rating Factors for an HS20 truck CHANGE to 1.012 Inventory and 1.690 Operational.

4/19/2016 3:05:34 PM

HRS AASHTO

943

Complete Issue Information

DID we have a logic error in Version 5.4? Or do we have a logic error in Version 5.5? If there was a logic error in Version 5.4, how can we tell which bridges had that flaw and need to be re-rated?

Steven M

FROM:kkennelly DATE:2/5/2007 3:23:28 PM  
Email did not contain an xml file. I sent back a request for him to resend his xml file.

FROM:kkennelly DATE:2/6/2007 8:18:40 AM  
XML file attached.

FROM:kkennelly DATE:2/7/2007 11:16:13 AM  
The difference in rating factors is not related to any problem with your data. In version 5.4 and previous versions, the BRASS program required the area of reinforcement to be constant over a cross section range. When Virtis exported the cross sections to the BRASS input file it computed the rebar dev lengths and made conservative estimates of the developed rebar so that the rebar exported in a cross section range would have the same area steel at the start and end of the range.

In version 5.5, BRASS allows the area of rebar to vary over the length of the cross section range so Virtis does not have to conservatively export the smaller area when the range is within the development length of the rebar. That is why your rating factors increased.

Refer to Example 3 in the Virtis help topic "Schedule Based Reinforcement Cross Section Export Examples" for more description. The BRASS formerly followed the procedure listed there for the VirtisStdEngine (area of steel had to be the same at start and end of a range).

|                             |
|-----------------------------|
| Issue ID: 7831              |
| Subject: P/S strand library |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: McCaffrey, Brian        | 2/7/2007 2:58:41 PM  |
| Modified By: administrator            | 6/19/2008 4:27:06 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

Complete Issue Information

|                    |          |      |         |
|--------------------|----------|------|---------|
| Ordoobadi, Mehrdad | Resolved | High | Unknown |
|--------------------|----------|------|---------|

Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00002 - 2230219.zip |             |

Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 7835.15500 | Duplicate     | Analysis time for girder-floorsystem bridges bridge |

Description

FROM:bmccaffrey DATE:Wednesday, February 07, 2007 9:58:46 AM

I'm having a problem with the P/S strand library in v/5.5. See attached screen capture of window. This was an upgraded 5.4 Oracle database. The designations are different from my MSDE migrated database. Also, the modulus of elasticity (E) has changed for stress relieved strands from 28,500 ksi to 29,000 ksi which in turn is reflected in the losses, capacity, rating factors, etc.

FROM:mordoobadi DATE:2/9/2007 4:35:12 PM

Prepared and sent Brian SQL Scripts that renews all material and factor librray items in the database.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 7835                                               |
| Subject: Analysis time for girder-floorsystem bridges bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McCaffrey, Brian        | 2/12/2007 7:19:10 PM |

4/19/2016 3:05:35 PM

HRS AASHTO

945

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:27:06 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | 1055789-73609L2R.zip       |             |
|      | InterceptImportFailure.txt |             |
|      | BWSRating.doc              |             |

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 7836.15499 | Resolved      | Analysis time for large multi-girder structures |

### Description

FROM:bmccaffrey DATE:Monday, February 12, 2007 2:21:31 PM

We are having problems on a number of girder-floorsystem structures where they cannot run to completion from the Bridge Explorer. There are no errors. Each component of the bridge can be successfully analyzed from within the Bridge Workspace. Attached is a typical bridge that will run for hours. I'm using both H20 and HS20.

FROM:hlee DATE:2/16/2007 8:20:00 AM

Test that I have done so far:

- Run from Bridge Explorer using both H20 and HS20, FB1 analysis still running after 1 day.
- Run from Bridge Workspace using both H20 and HS20, FB1 analysis still running after 2 days.

We need a better way to reproduce and debug this kind of performance/reliability problem.

4/19/2016 3:05:35 PM

HRS AASHTO

946

Complete Issue Information

FROM:bmccaffrey DATE:Friday, February 16, 2007 12:07:31 PM

You are correct, this dosen't run from the BWS either. We had to break this bridge into seperate structures so it would save in 5.3.1, not run to completion.

FROM:hlee DATE:2/16/2007 1:34:30 PM

After discussed with Krishna, we think this incident is a duplicate of 7839. I changed the Status to Duplicate.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 7836                                           |
| Subject: Analysis time for large multi-girder structures |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McCaffrey, Brian        | 2/13/2007 1:49:52 PM |
| Modified By: administrator            | 6/19/2008 4:27:06 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Tuesday, February 13, 2007 8:50:32 AM

The attached 100+ span bridge will not analyze to completion. If broken up into seperate structures every component on the bridge will analyze.

FROM:hlee DATE:4/17/2007 9:56:27 AM

Modified the search and update algorithms for the analysis tree in the Analysis Progress window.

4/19/2016 3:05:35 PM

HRS AASHTO

947

Complete Issue Information

Please see attached document for comparison.  
For the first 4 superstructures, it's 10 times faster in 5.6.

Resolved for 5.6 Release.

FROM:xli DATE:6/15/2007 2:30:14 PM  
Tested with 5.6 Beta 3.  
I did rating for the whole bridge, it took 10 minutes to rate first superstructure to Location\_33L, the following system error was encountered:

Error loading BRASS DLL!  
(Error Code = 8) Not enough storage is available to process this command.

02:40:18 PM - Line 1487 in source file .\AbxBrassEngine.cpp.

FROM:hlee DATE:6/18/2007 11:15:15 AM  
Most likely the testing computer ran out of memory.

Issue ID: 7838  
Subject: Differences between the migrated and imported bridge

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Jensen, Paul 2/14/2007 4:31:47 PM  
Modified By: administrator 6/19/2008 4:27:06 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | Not Reproducible | High     | Bug      |
| Lee, Herman     | Not Reproducible | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2232019.xml         |             |
|      | BRASS_LFD.zip       |             |

Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 7839.15496 | Suspended     | Floorbeam analysis keeps on going and going... |

Description

FROM:hlee DATE:2/14/2007 11:27:54 AM  
E-mail from Paul Jensen:

I have been wasting my time trying to figure out why this one bridge has two answers. I migrated the bridge from 54 to 55 using the database utility and I am getting an inventory rating of 1.03. when I import an xml file from 54 to 55, I am getting a inventory rating factor of 1.35. there are differences with the brass export files (attached) and the minor differences with the xml files (attached).

This may be a continuation of VI7834.

- vo54\_g1.xml => xml export from vo54
- vo55\_g1.xml => migrated database from vo54 (same bridge)
- vo55q1.dat => brass input file from vo55 database migrated bridge
- vo54q1.dat => brass input file from vo55 xml migrated bridge

I use asa 902 for all of these bridges.

Reply e-mail:

=====  
Paul,

The length of the haunch profile range for the bridge in vo54\_g1.xml is 0m. This value is 44.3m for the bridge in vo55\_g1.xml. Seems like this is the cause of different rating factor.

I'm not able to reproduce what you described. Both xml files and rating results between the migrated and imported bridge are the same. My testing steps are listed below. Could you check to see what might be different between my testing procedure and yours?

1. Import vo54\_g1.xml to a Sybase 54 database
2. Migrate the 54 database to 55
3. Import vo54\_g1.xml to the 55 database
4. Export the bridge in [1] as MigratedWithDB.xml (Attached)

4/19/2016 3:05:35 PM

HRS AASHTO

949



Complete Issue Information

- 5. Export the bridge [3] as Imported54XML.xml (Attached)
- 6. Compare MigratedWithDB.xml with Imported54XML.xml
- 7. Rate the bridge in [1] and [3]
- 8. Compare the rating results

- Herman

=====

|                                                         |
|---------------------------------------------------------|
| Issue ID: 7839                                          |
| Subject: Floorbeam analysis keeps on going and going... |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 2/15/2007 6:54:56 PM |
| Modified By: administrator            | 6/19/2008 4:27:05 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Goodrich, Brian | Assigned  |          | Bug - BRASS |
|                 | Suspended |          |             |
| Goodrich, Brian | Suspended | High     | Bug - BRASS |

Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

4/19/2016 3:05:36 PM

HRS AASHTO

950

Complete Issue Information

FROM:bmccaffrey DATE:Thursday, February 15, 2007 1:55:22 PM

and never ends. The BRASS output file for the floorbeam analysis ends after the section property tables.

The floorbeam error file contains the following text:

Fatal Error Encountered - Unexpected Termination  
Data File: n't\_end)\Floorbeam2\FB2-6\BRASS\_LFD\FB2-6.DAT

The .xml file and analysis results are attached.

FROM:kkennelly DATE:2/16/2007 1:16:08 PM

I think the problem is due to the width of your structure typical section and the BRASS increment values set on the Floorbeam Member Definition: Engine tab. Your travelway width for this structure is slightly under 75' and the settings on the Floorbeam Member Definition: Engine tab are causing a lot of vehicle transverse locations to be considered. Refer to the BRASS engine help on that tab for what these settings do.

The settings on the Floorbeam Member Definition: Engine tab are as follows for your bridge:  
Wheel advancement denominator: 100 Lane advancement increment: 1 ft

These values are causing a lot of transverse vehicle locations to be considered. I changed these settings to wheel adv. denom = 50 and lane advancement increment to 6 ft and the FB2 analyzed very quickly. You will need to adjust these values to provide a run time and accuracy that are suitable for you. (25 and 3' also ran fairly quickly for me but I did get very different RF's between these 2 runs. )

FROM:kkennelly DATE:2/16/2007 1:24:15 PM

This is a duplicate of 4728 which is a suspended enhancement to BRASS. Maybe Brian G. can verify or offer suggestions for these settings.

FROM:kkennelly DATE:2/16/2007 1:43:53 PM

FROM:hlee DATE:2/16/2007 2:27:32 PM  
7835 is a duplicate of this incident.

FROM:bmccaffrey DATE:Friday, February 16, 2007 3:35:04 PM

It's much faster with the larger increments but I'm a little concerned with accuracy. Fix gladly accepted though.

FROM:bmccaffrey DATE:Thursday, February 22, 2007 9:30:47 AM

Any word from Wyoming on a better solution? One member shouldn't take 3 days to analyze with today's technology no matter what the settings are.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 8:23:36 PM

I would keep the wheel advancement denominator at 100 because this controls how fine or coarse of an influence line there is. Setting the lane advancement increment to say 3 ft seems to work well and the actual floorbeam analysis takes less than a minute for Floorbeam1 and Floorbeam3.

4/19/2016 3:05:36 PM

HRS AASHTO

951

Complete Issue Information

Note that this issue is on the enhancement list already (from Incident 4728). This issue has been forwarded to WYDOT.

FROM: bgoodrich DATE: Thursday, March 08, 2007 11:55:31 AM  
E-mail from Mike Watters (WYDOT):

Since this is already on the enhancement list, it is a duplicate of incident 4728, and the user has a work around, we will leave it on the enhancement list.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

|                                       |
|---------------------------------------|
| Issue ID: 7864                        |
| Subject: Incorrect deck type returned |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 2/26/2007 7:34:19 PM |
| Modified By: administrator            | 6/19/2008 4:27:02 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI7864_091-0054.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

|            |          |                              |
|------------|----------|------------------------------|
| 7864.15471 | Resolved | Incorrect deck type returned |
|------------|----------|------------------------------|

Description

FROM:kkennelly DATE:2/26/2007 2:36:06 PM  
Submitted for Ron Love via email:

We have run into a situation with bridges having steel beams supporting a timber deck. The attached xml file contains a sample of this type of bridge.

Here is the segment of code where we check for the deck type. Virtis shows the deck type as 'Timber', however the API returns a value of 36201 for deck type of this structure. The documentation indicates that this value corresponds to a concrete deck.

```
IDeTypePtr ptr = m_DoGSStructDefPtr->GetDeckType();  
long typId = ptr->GetCurrentTypeId();  
if (typId == TYP_DECK_CONCRETE)
```

This is not an urgent issue for us at this time, but wanted to bring it to your attention so we can know whether we are doing something wrong or if there is a flaw in the API.

Also regarding my new email address, as of Feb. 1 CWB ceased to exist and we are all now part of Bentley Systems.

Thanks,

Ron

FROM:kkennelly DATE:5/2/2007 11:21:50 AM

FROM:kkennelly DATE:5/2/2007 11:33:18 AM

There may be some existing bridges out there that have incorrect data for the GirderSystemStructDefPtr->GetDeckType() due to a bug that existed when we introduced timber decks in version 5.0. We found this problem but did not have a foolproof way to determine when we should change the value stored in the Deck Type attribute.

For a girder system structure def, the best way to determine the type of deck is to check the deck panel type in the DeckPanelRangeSet (this is what the GUI is doing):

```
IDoDeckPanelRangeSetPtr DoDeckPanelRangeSetPtr;
```

```
DoDeckPanelRangeSetPtr = DoGirderSystemStructDefPtr->GetDeckPanelRangeSet()  
if(DoDeckPanelRangeSetPtr->MoveFirst())  
{  
    long IDeckPanelType = DoDeckPanelRangeSetPtr->GetDeckPanelTypeId(); // returns types from  
    category DECKPANEL  
}
```

FROM:kkennelly DATE:5/2/2007 11:43:37 AM

We will include a description of this in the API docs.

### Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 7869                |
| Subject: Check In - Check Out |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 2/28/2007 1:33:37 PM |
| Modified By: administrator            | 6/19/2008 4:27:02 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | BatchAnalysisUpdated.doc |             |

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7872.15463 | Resolved      | Batch bridge rating performance |

### Description

FROM:ttompson DATE:Wednesday, February 28, 2007 8:33:44 AM  
When SDDOT first started using Virtis-Opis, we ran a script to enable our ASA db to do check-in and check-out. I've made a copy of our DB, removed all the structures from it and want some of our designers to use as a scratch DB. But I don't need (or want) them to have to necessarily check-out and check-in the structures they are working on. Can you provide me the table and column I need to change from Y to N to turn off the check-out, check-in?  
Thanks,

FROM:ttompson DATE:Wednesday, February 28, 2007 10:41:18 AM  
Never mind - I can do it with the admin utility.....

4/19/2016 3:05:36 PM

HRS AASHTO

954

## Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 7872                           |
| Subject: Batch bridge rating performance |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Jensen, Paul            | 2/28/2007 6:18:48 PM |
| Modified By: administrator            | 6/19/2008 4:27:02 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:hlee DATE:2/28/2007 1:18:22 PM

Paul Jensen reported that he gets very bad performance when analyzing timber bridges in his database.

4/19/2016 3:05:36 PM

HRS AASHTO

955

Complete Issue Information

To reproduce: The timber bridges are in the "Complete Bridges" folder in his database. Sort by BID and select the first 40 bridges and rate.

FROM:hlee DATE:2/28/2007 1:57:26 PM

Attached a performance analysis report for batch bridge rating. We indentified that updating the tree in the Analysis Progress window causes the system to perform badly. The performance can be improved with more efficient searching algorithm.

FROM:hlee DATE:3/1/2007 3:44:29 PM

Modified the tree item search algorithm to start at the second level. An updated performance analysis report is attached. Batch bridge rating performance increased 6 times.  
Resolved for the 5.6 release.

|                                       |                      |
|---------------------------------------|----------------------|
| Issue ID: 7876                        |                      |
| Subject: Bridge ID not unique         |                      |
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Curtis, Beckie          | 2/28/2007 9:13:27 PM |
| Modified By: administrator            | 6/19/2008 4:27:01 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |

Complete Issue Information

|            |           |      |         |
|------------|-----------|------|---------|
| Duray, Jim | Duplicate | High | Unknown |
|------------|-----------|------|---------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 7878.15457 | Closed        | RC cross sections window, reinforcement tab |

Description

FROM:rcurtis DATE:Wednesday, February 28, 2007 4:13:27 PM

We are creating a new, production database. I deleted all of the bridges (training bridges) from the bridge explorer. I also deleted all bridges from the "deleted bridges" folder.

Every structure that I try to import gives the error that the bridge ID is not unique. There are no bridges in the bridge explorer, so I'm not sure how the id is not unique.

Also, how do you import a structure that might have the same BID as a structure in the database that you are attempting to transfer it to?

FROM:hlee DATE:3/9/2007 11:09:30 AM

Duplicate of Incident 7881.

|                                                      |
|------------------------------------------------------|
| Issue ID: 7878                                       |
| Subject: RC cross sections window, reinforcement tab |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|



### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Ihnat, Joseph |                      |
| Submitted By: Li, Xinmei       | 3/1/2007 8:04:30 PM  |
| Modified By: administrator     | 6/19/2008 4:27:01 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
| Goodrich, Brian | Assigned | High     | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Sample.OUT          |             |
|      | Bridge 9396.xml     |             |

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 7880.15455 | Assigned      | BRASS LFD PS strand development length vs. transfer length |

### Description

FROM:xli DATE:3/1/2007 3:04:51 PM  
Bitmap image and grid are overlapped.

FROM:xli DATE:3/9/2007 3:14:26 PM  
Tested with 5.6, it's resolved.

Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 7880                                                      |
| Subject: BRASS LFD PS strand development length vs. transfer length |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Maberry, Steven         | 3/5/2007 1:10:51 PM |
| Modified By: bgoodrich                | 1/8/2010 8:45:15 PM |
| Priority: High                        |                     |
| Category: Bug - BRASS                 |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:3/5/2007 8:09:42 AM  
Submitted for Steven Maberry, New Mexico via email:

Find attached:

- 1) XML Export file for Bridge 9396
- 2) Text output that is an extract from the BRASS output file after rating Bridge 9396 (Sample.OUT)

## Complete Issue Information

We are using Virtis Opis version 5.5

The difficulty we have with the rating output is that BRASS claims a pretension strand Development Length of 2.083 feet (see page 12 of the BRASS output files-the germane detail of which is provided in the Sample.OUT attached).

According to the LFD code (Equation 9-42 in Section 9.28-"Embedment of Prestressed Strand"):

$$\text{Development Length} = 1.6(f_{su}^* - \frac{2}{3} \times f_{se})D$$

Where  $f_{su}^*$  is average stress in prestressing steel at ultimate load  
 $f_{se}$  is effective steel prestress after losses  
 $D$  is the nominal diameter in inches.

The expression in the parenthesis is considered (according to the code) to be without units and  $f_{su}/f_{se}$  are in kips per square inch.

Then:

$$\text{Development Length} = 1.6(270 - \frac{2}{3} \times 157.7) 0.5 \text{ inches} = 131.9 \text{ in} = 10.99 \text{ feet}$$

The apparently erroneous value of 2.083 feet in BRASS results in a significantly greater rating that is not supported by investigating the bridge's capacity by other means (ConSPAN).

We have identified that the value 2.083 feet is equal to the TRANSFER LENGTH (50 diameters ...  $50 \times 0.5 = 25$  inches = 2.083 feet-as per LFD Code Section 9.20.2.4).

### QUESTION:

Is this a BRASS logic error? Have we overlooked or misunderstood something?

Steven Maberry, P.E., Ph.D.  
NMDOT State Bridge Rating Engineer

FROM:bgoodrich DATE:Monday, March 05, 2007 6:07:02 PM  
BRASS LFD only provides input for either the transfer length or the development length. Currently, only the transfer length is exported. Also, BRASS LFD does not calculate the development length. I will forward this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, June 06, 2007 8:43:55 AM  
WYDOT assigned this issue to BRASS Problem Log 749.

FROM: Brian Goodrich DATE: 1/8/2010 1:46:29 PM Mountain Standard Time  
WYDOT has chosen to not make this change in the BRASS-GIRDER(STD) engine because the capability to input both the transfer and development length is present in the merged BRASS-GIRDER engine, which is being released as a beta version in early 2010. Once the export to this new engine is developed, this capability will be available to the Virtis users.

Issue ID: 7892

Subject: Impact Factor in Truss Analysis

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Bhanushali, Girish      | 3/9/2007 7:33:11 PM  |
| Modified By: administrator            | 6/19/2008 4:27:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 7902.15433 | Resolved      | Impact Factor Calculation Std. Engine |

### Description

FROM:gbhanushali DATE:3/9/2007 2:33:37 PM

Impact override factor in vehicle properties window is not override but multiplier to std. Impact.

Currently truss analysis use it as impact override.

FROM:gbhanushali DATE:3/13/2007 3:05:36 PM

fixed

FROM:xli DATE:3/20/2007 1:35:11 PM

When constant impact override is selected in Structure def Impact/Dynamic Load Allowance window, it's not working.

FROM:gbhanushali DATE:3/20/2007 4:45:03 PM

Virtis truss Implementation follows what BRASS does regarding impact factor calculation.

4/19/2016 3:05:37 PM

HRS AASHTO

961

Complete Issue Information

Go to Resolution Tab on this incident for detailed explanation.

FROM:gbhanushali DATE:3/20/2007 4:53:25 PM

FROM:xli DATE:3/21/2007 11:20:39 AM

Tested with TrussTrainingExample in sample database, Select Modified without entering any value and enter a valid value in design setting window for VIM, analyze the structure. The rating results report shows impact factor is "-1.#J".

FROM:xli DATE:3/21/2007 2:34:30 PM

It's tested fine with 5.6 beta 2.

|                                                |
|------------------------------------------------|
| Issue ID: 7902                                 |
| Subject: Impact Factor Calculation Std. Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Bhanushali, Girish      | 3/20/2007 7:03:59 PM |
| Modified By: administrator            | 6/19/2008 4:26:59 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbhanushali DATE:3/20/2007 3:00:13 PM

Std. Engine currently doesn't support impact factor multiplier from vehicle properties window at all. (for all 3 impact factor options on our window)

Also,

For Constant impact override option , Impact factor is not varying based on location on the girder which

4/19/2016 3:05:38 PM

HRS AASHTO

962

Complete Issue Information

is different than Std. AASHTO impact selection on the window.

These things should be verified if that is how they should be since it is not consistent with what BRASS LFD does.

Virtis truss will follow BRASS LFD on this.

FROM:hlee DATE:3/21/2007 9:12:58 AM

"Std. Engine currently doesn't support impact factor multiplier from vehicle properties window at all. (for all 3 impact factor options on our window)"

hlee> True. Multiplier to AASHTO impact is not supported.

"For Constant impact override option , Impact factor is not varying based on location on the girder which is different than Std. AASHTO impact selection on the window."

hlee> True. It's not varying because it's CONSTANT.

"These things should be verified if that is how they should be since it is not consistent with what BRASS LFD does."

hlee> Verified what supported in StdEngine are consistent with what BRASS LFD does.

|                                               |
|-----------------------------------------------|
| Issue ID: 7912                                |
| Subject: PS Girder - Shear Resteel - problems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Thompson, Todd          | 3/29/2007 7:17:09 PM |
| Modified By: administrator            | 6/19/2008 4:26:58 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |

4/19/2016 3:05:38 PM

HRS AASHTO

963

### Complete Issue Information

|                 |          |      |                |
|-----------------|----------|------|----------------|
| Goodrich, Brian | Resolved | High | Bug - Export 1 |
|-----------------|----------|------|----------------|

### Contacts

| Name       | Company                 | Email 1             | Phone 1 |
|------------|-------------------------|---------------------|---------|
| Herman Lee | Michael Baker Jr., Inc. | hlee@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Unknown.xml         |             |

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 7913.15422 | Resolved      | Unknown Exception in Virtis Std Engine export. |

### Description

FROM:ttompson DATE:Thursday, March 29, 2007 3:17:25 PM

I have a new PS Girder Bridge in which I observed low ratings, by Shear. I reviewed my data and I thought it looked correct. But when I review the BRASS data set, I'm noticing that the start distance from beam end does not look correct.

For Str 10309368, PS Girder System, Member G2, Int Girder Member Alternative

I've attached a spreadsheet with what the Shear spacing is for the structure

I've attached the Virtis 5.5 xml file

I've attached the BRASS input/output files.

One caught my attention was an error message that the shear reinforcement was different at one end of the range versus the other end.

For example:

I calculated from plans that one range of shear reinforcement would start at 20.50 ft from end of beam, 6 spaces at 15 inches with a range length of 7.50 ft and ending at 28.00 ft. The BRASS data set shows it starting at 20.25 ft from beam end, with 15 inch spaces, range length of 7.5 ft. Somehow the range start distances are shifted 3 inches.

Maybe I'm missing something obvious?

FROM:bgoodrich DATE:Wednesday, June 06, 2007 9:20:40 AM

For the member alternative engine properties for the BRASS LFD engine, the P/S modeling method is set to "Centerline of simple-span bearing". Therefore, the BRASS model will be slightly different than the Virtis model. Virtis allows the stirrups to be defined in the entire P/S beam; however, BRASS only allows the stirrups between the simple-span bearings (in this case) to be defined. The 3" "shift" that is present in the BRASS commands are due to the 3" overhang at the left end of span 1. The export puts a stirrup at the support and then finds the first interior stirrup (right of left support) to determine the first

4/19/2016 3:05:38 PM

HRS AASHTO

964

Complete Issue Information

spacing. The other interior stirrups are really just adjusted to reference the left support, so the stirrups are not shifted within the beam.

The shear ratings around the 109.11 POI (~48.5 ft from left support) appear to be critical. Is the stirrup spacing the cause of the shear rating difference or is there something else occurring. Was a different shear method/equation used in the design? Virtis only allows the Vci/Vcw method right now.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 7913                                          |
| Subject: Unknown Exception in Virtis Std Engine export. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 3/29/2007 8:40:04 PM |
| Modified By: administrator            | 6/19/2008 4:26:58 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:Thursday, March 29, 2007 4:40:20 PM  
Attached Bridgeware XML file.

FROM:hlee DATE:4/2/2007 10:09:17 AM  
Added check for only one lateral bracing.

4/19/2016 3:05:39 PM

HRS AASHTO

965



Complete Issue Information

Resolved for 5.6 release.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 7916                                                          |
| Subject: Problem with Floorbeams in a Truss, Stringer, Floorbeam System |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Thompson, Todd          | 4/6/2007 1:32:40 PM   |
| Modified By: mordoobadi               | 5/18/2010 12:55:21 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Lee, Herman        | Assigned |          | Bug      |
| Lee, Herman        | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Closed   |          |          |

## Complete Issue Information

### Contacts

| Name           | Company | Email 1                | Phone 1 |
|----------------|---------|------------------------|---------|
| Hasmukh Lathia |         | HLathia@mbakercorp.com |         |

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Bar7Rev151 Report.doc             |             |
|      | Bar7Rev159 Report.doc             |             |
|      | Bar7Rev154 Report.doc             |             |
|      | Bar7Rev158 Report.doc             |             |
|      | Bar7Rev157 Report.doc             |             |
|      | Bar7Rev150 Report.doc             |             |
|      | Bar7Rev155 Report.doc             |             |
|      | BAR7 Revision160 Email.pdf        |             |
|      | Bar7Rev156 Report.doc             |             |
|      | Bar7Rev160 Report.doc             |             |
|      | SUMMARY OF MAY 2007 REVISIONS.doc |             |
|      | Bar7Rev153 Report.doc             |             |
|      | Bar7Rev160 Request Form.doc       |             |

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 7923.15412 | Resolved      | Add corrections made to PennDOT's BAR7 v7.12.0.0 to StdEngine |

### Description

FROM:tthompson DATE:Friday, April 06, 2007 9:32:48 AM

I had made many successful runs on this system, and suddenly I started getting an error message that there was an error generating LFD/ASD load commands. It appears to happen during the virtual loading.

Superstructure Definitions - Span 5 and Span 8  
Floorbeams FB 0 and FB 1

I've attached the error message (as a WORD doc), along with the brass files generated and the bridge XML file.

(I have not completed the Truss portion, so that part does not work yet). But I've made numerous runs of the stringers, floorbeams.

4/19/2016 3:05:39 PM

HRS AASHTO

967

Complete Issue Information

FROM:ttompson DATE:Friday, April 06, 2007 9:39:36 AM

I can't seem to upload any files today - keep getting an error message. Will try later.

Persits.Upload.1 error '800a0005'

The system cannot find the path specified.

/AASHTOVIWeb/Manager/iwupldpr.asp, line 37

FROM:ttompson DATE:Friday, April 06, 2007 9:42:43 AM

FROM:hlee DATE:4/6/2007 2:07:37 PM

The up-to-date flag of the dead load reactions (DoFlrbmStringerDLReaction Line 985) shouldn't return false since virtual stringer analysis had been completed before the floorbeam analysis. Incident 6543 described the same problem.

FROM:ttompson DATE:Tuesday, April 10, 2007 1:36:48 PM

I can "override" the values and get the analysis to work. It's a tedious workaround. Just not sure why I was able to make many valid runs and then it quit working correctly. It did seem to break after I changed the DL Distribution method for Stage 2 loads from Uniformly to All Girders to By Tributary Area. Not sure if this helps track down why it broke or not.

FROM:ttompson DATE:Tuesday, April 10, 2007 2:33:39 PM

I exported the bridge from 5.5 and imported it into 5.6 Beta 2. Appears to run just fine. But as soon as I reviewed the Stringer Unit Reactions, did a select all, then apply. It then generates the error message when ever I run a floorbeam associated with that stringer unit. I think this narrows down where the problem generates. - see attached word document.

FROM:ttompson DATE:Thursday, May 10, 2007 3:19:22 PM

Merdad's workaround did keep me going -

Unfortunately I wasn't able to find a work-around that works through Virtis/Opis application. However, I have a remedy that involves changing the values of some fields in the database.

Here are the instructions on how to correct your data.

- (1) Find the BID of the bridge that you want to correct.
- (2) If your bridge is open in BWS then close it.
- (3) You should run the following SQL scripts to correct the data in your database for your bridge. Note that you must replace the BID in the scripts with the correct BID number for your bridge.

FOR SYBASE ASA:

-- Set the UP\_TO\_DATE flag

```
UPDATE abw_flrbm_stringer_dl_reaction SET up_to_date_ind = 'T' WHERE bridge_id = BID;
```

-- This makes the results timestamp to some time in the future

```
UPDATE abw_stringer_dl_react_detail SET results_timestamp = '2007-04-13 12:00:00.000'  
WHERE bridge_id = BID;
```

FOR ORACLE DATABASE:

4/19/2016 3:05:39 PM

HRS AASHTO

968

## Complete Issue Information

```
-- Set the UP_TO_DATE flag
UPDATE abw_flrbm_stringer_dl_reaction SET up_to_date_ind = 'T' WHERE bridge_id = BID;

-- This makes the results timestamp to some time in the future
UPDATE abw_stringer_dl_react_detail SET results_timestamp = TO_DATE('2007 04 13 12:00:00',
'YYYY MM DD HH24:MI:SS') WHERE bridge_id = BID;
```

FOR SQL SERVER/MSDE:

```
-- Set the UP_TO_DATE flag
UPDATE abw_flrbm_stringer_dl_reaction SET up_to_date_ind = 'T' WHERE bridge_id = BID;

-- This makes the results timestamp to some time in the future
UPDATE abw_stringer_dl_react_detail SET results_timestamp = 'Apr 13 2007 12:00:00' WHERE
bridge_id = BID;
```

Please let us know what you find out after applying the above scripts.

Regards,  
Mehrddad Ordoobadi

Mehrddad

FROM:hlee DATE:9/20/2007 3:20:12 PM

The check for up-to-date stringer DL reaction is broken in 5.5. The checkbox will never get checked in the GUI.

### Description:

1. Floorbeam Stringer Reactions window's AttachData calls UpdateFloorSystemGeometry().
2. UpdateFloorSystemGeometry() updates the span length table (abw\_super\_struct\_mbr\_span) by deleting and re-adding the data. This cause modification status of DoSuperStructMbrSpanSet set to modified.
3. After AttachData is called, the window will call GetUpToDateInd() to see whether the stringer DL reactions are up-to-date.
4. GetUpToDateInd() calls UpdateUpToDateFlag() to determine whether floorbeam member stringer DL reactions are up-to-date.
5. Sine modification flag is set to modified by the UpdateFloorSystemGeometry() before the window is open. The up-to-date checkboxes in the windows will never get checked.

### Option 1:

Do UpdateFloorSystemGeometry() after GetUpToDateInd().

### Option 2:

Remove modification checking for DeSuperStructMbrSpan in DoModificationStatusFunctions2.

FROM: Mehrddad Ordoobadi DATE: 9/22/2009 2:44:37 PM Eastern Daylight Time

Related issues: 8826

4/19/2016 3:05:39 PM

HRS AASHTO

969

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 11/23/2009 1:51:26 PM Eastern Standard Time  
Changes made to the domain to preserve the up-to-date flag values.

FROM: Herman Lee DATE: 5/5/2010 2:51:27 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

FROM: Todd Thompson DATE: 5/11/2010 1:55:50 PM Eastern Daylight Time  
6.2 Beta 1  
Appears to be fixed.

FROM: Mehrdad Ordoobadi DATE: 5/18/2010 8:55:03 AM Eastern Daylight Time  
Accepted by Todd Thompson.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 7923                                                         |
| Subject: Add corrections made to PennDOT's BAR7 v7.12.0.0 to StdEngine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lathia, Hasmukh         | 4/17/2007 7:29:45 PM |
| Modified By: administrator            | 6/19/2008 4:26:57 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlathia DATE:Tuesday, April 17, 2007 3:29:46 PM  
PennDOT has made several revisions to BAR7 and will be included in the next release of BAR7 v7.12.0.0. BAR7 revisions 150, 151, 153, 154, 155, 156, 157, 158, 159, 160 may be added to StdEngine as these are correction to BAR7 code.. See the attached documents for details.

FROM:hlathia DATE:Wednesday, April 18, 2007 1:21:28 PM  
PennDOT informed that BAR7 revision 160 was not included in v7.12.0.0. See attached "BAR7 Revision160 Email.pdf."

FROM:hlee DATE:2/5/2008 10:57:21 AM  
Resolved in Virtis Std Engine for 6.0 Release.

|                                              |
|----------------------------------------------|
| Issue ID: 7947                               |
| Subject: Shear Live Load Distribution Factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lenox, Richard          | 5/22/2007 3:54:28 PM |
| Modified By: administrator            | 6/19/2008 4:26:55 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                 |           |      |           |
|-----------------|-----------|------|-----------|
|                 | Resolved  |      | Education |
| Duray, Jim      | Resolved  | High | Education |
| Duray, Jim      | New       | High | Bug       |
| Goodrich, Brian | Assigned  |      |           |
|                 | Duplicate |      |           |
|                 |           |      | Education |
| Goodrich, Brian | Duplicate | High | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                 |
|------------|---------------|-------------------------------------------------------------------------|
| 7962.15373 | Duplicate     | Design method shows LFD in Analysis results window when using BRASS ASD |

### Description

FROM:rlenox DATE:Tuesday, May 22, 2007 11:54:28 AM

I am having trouble getting the LL shear forces to compute correctly. The LL shear forces and reactions seem to be calculated (based on hand check) using the Distribution Factors input for Moment and not shear when using the BRASS ASD Engine. The bridge is a steel stringer bridge with a corrugated steel planking deck with beams spaced at slightly more than 2 feet on center.

FROM:hlee DATE:5/22/2007 2:44:52 PM

BRASS LFD/ASD Engine only uses the moment live load distribution factor in the Live Load Distribution window. Engine Help has information on what is used and not used by a specific engine.

Issue ID: 7962

Subject: Design method shows LFD in Analysis results window when using BRASS ASD

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Li, Xinmei              | 6/14/2007 6:15:11 PM |
| Modified By: administrator            | 6/19/2008 4:38:36 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
| Kennelly, Krisha | Information Needed | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L-04-053.bbd        |             |

### Tasks

| Name       | Current State      | Summary                              |
|------------|--------------------|--------------------------------------|
| 7964.15371 | Information Needed | Negative moment rating for ps bridge |

### Description

FROM:xli DATE:6/14/2007 2:14:26 PM

To reproduce, use BID8, rate G2 with Brass ASD, design method in analysis results window is LFD.

FROM:bgoodrich DATE:Monday, June 18, 2007 2:12:55 PM

This issue is a duplicate of Incident 3568.



Complete Issue Information

|                                               |
|-----------------------------------------------|
| Issue ID: 7964                                |
| Subject: Negative moment rating for ps bridge |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Kennelly, Krisha        | 6/19/2007 12:02:19 PM |
| Modified By: administrator            | 6/19/2008 4:26:53 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:6/19/2007 8:04:17 AM  
Submitted on behalf of Bhikhu Khalifa, Fay Spofford & Thorndike, LLc. via email:

Hi Krisha,  
As I spoke to you, I am forwarding you the .bbd files.  
The L-04-053 bridge is a three span (10m-30m-10m) PC Box beam bridge, made continuous for the live load.

4/19/2016 3:05:40 PM

HRS AASHTO

974

Complete Issue Information

We have a problem at the negative moment region for this bridge.

Please advise.

Thanks.

Bhikhu Khalifa, P.E.

Fay Spofford & Thorndike, LLC.

781-221-1063

FROM:kkennelly DATE:6/19/2007 9:36:17 AM

I reviewed G2 and the controlling rating is at 6.727 m in span 1. I don't see anything in a cursory review of the output to suspect that BRASS or Virtis is wrong. I suggest the user create a point of interest at the controlling location and review the detailed BRASS output at that point to determine why the rating is so low.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 7967                                              |
| Subject: Hinged girder returns a lower than expected rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Triezenberg, Jeff       | 6/21/2007 7:36:46 PM |
| Modified By: administrator            | 6/19/2008 4:26:53 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | DiamondHeavyHaultruckdefiniton.xml            |             |
|      | DFAnalysis - Path 1<br>_Centered_ Summary.pdf |             |
|      | B017978bridgemodel.xml                        |             |
|      | DFAnalysis - Path 1 (Centered)<br>Summary.txt |             |

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 7972.15363 | Assigned      | Non Standard Gage - Thought this was fixed but apparently not |

### Description

FROM:jtrizeenberg DATE:Thursday, June 21, 2007 3:36:46 PM

I have a girder that is returning a very low rating. In reality, this girder has a rolled shape hinged with a plate girder. Here I have approximated the rolled shape as a plate girder and analyzed it. However, the larger and deeper plate girder shows a very low rating. I'm wondering if this is because it is hinged with a smaller beam.

Is there any better way to have Virtis analyze a rolled beam hinged with a plate girder?  
(this is for the interior girder only)

Thanks,  
Jeff

FROM:hlee DATE:6/22/2007 9:11:37 AM

There is no direct way to input rolled beam hinged with a plate girder. An alternative is the way you used, model the rolled shape as a plate girder.

I reviewed the interior girder input and BRASS output. There are several items you may want to check:

1. The locations of the points of contraflexure specified in the Member Alternative BRASS LFD engine properties.
2. There is no composite action between the deck and the girder.

Issue ID: 7972

Subject: Non Standard Gage - Thought this was fixed but apparently not

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Jones, Daniel           | 6/25/2007 3:35:29 PM |
| Modified By: administrator            | 6/19/2008 4:26:52 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact    | Status                | Priority | Category    |
|--------------------|-----------------------|----------|-------------|
| Duray, Jim         | New                   | High     | Unknown     |
| Ordoobadi, Mehrdad | Assigned              |          | Enhancement |
| Ordoobadi, Mehrdad | Assigned<br>Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7976.15359 | Assigned      | As Requested in Rating Analysis Results |

### Description

FROM:rfulton DATE:Monday, June 25, 2007 11:35:30 AM

We were analyzing a bridge using non-std gage for a permit. The bridge is a 70' simple prestressed multi girder span. The load to not pass and when we started digging found out that the controllin distribution factors were coming from negative moment. This was supposed to have been fixed during the beta tag meeting prior to the 5.5 release. Attached are the truck and bridge models and copy of output.

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 7976                                   |
| Subject: As Requested in Rating Analysis Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Teal, Dean              | 6/26/2007 1:38:35 PM |
| Modified By: hlee                     | 6/10/2011 8:33:19 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Tuesday, June 26, 2007 9:38:35 AM

Being we are messing with the Rating Results report in Beta 3 – I would sure like to see the Impact and Lane columns populated with actual data.

As Requested isn't very useful, especially if someone besides the report creator is reading it.

I would like to see the Impact column populated with – with or without impact or % impact and the Lane column with single or Multi-Lane. Now this would truly make this report meaningful and useful.

4/19/2016 3:05:41 PM

HRS AASHTO

978

Complete Issue Information

FROM:mordoobadi DATE:9/6/2007 9:03:34 AM  
The information is not readily available.  
Incident Category changed to Enhancement.

FROM:hlee DATE:9/13/2007 1:35:50 PM  
Project changed to Support Center.

Issue ID: 7994  
Subject: Output doesn't match Rating Results Summary.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 7/2/2007 1:55:34 PM  
Modified By: administrator 6/19/2008 4:26:50 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Ordoobadi, Mehrdad | Assigned | High     | Unknown<br>Bug |
| Lee, Herman        | Resolved |          |                |
| Lee, Herman        | Resolved | High     | Bug            |

4/19/2016 3:05:41 PM

HRS AASHTO

979

## Complete Issue Information

### Contacts

| Name          | Company          | Email 1                    | Phone 1      |
|---------------|------------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT     | tim.armbrecht@illinois.gov | 217-782-6266 |
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us  | 605-773-3285 |

### Documents

| Name | Resource Identifier  | Description    |
|------|----------------------|----------------|
|      | 00026 - 29299040.xml | bridge         |
|      | 00027 - 29300040.xml | another bridge |

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7998.15337 | Resolved      | NSG - Bridges will not run |

### Description

FROM:hlee DATE:7/2/2007 9:45:25 AM  
See attached file.

To reproduce:

1. Open BID 10 Bridge Workspace.
2. Open "G2 | Interior Member" Member Alternative Description window.
3. Change ASD Analysis Module from "BRASS ASD" to "Virtis ASD".
4. Select Rating Method ASD and Type 3 vehicle in Analysis Settings window.
5. Analyze "G2 | Interior Member".

FROM:mordoobadi DATE:9/12/2007 10:17:43 AM

The PS rating module only reports LFD ratings and no ASD results are available. It is different from the Steel and RC beams.

Based on a discussion with Herman, since the PS module does not support ASD it should warn the user that it will perform an LFD rating instead. It should also pass the corrected rating method 21702 (instead of 21701) for PS bridges.

FROM:hlee DATE:9/12/2007 3:59:00 PM

A message box will pop up and ask user whether to perform an LFD analysis.  
Resolved for 5.6 Release.

|                                     |
|-------------------------------------|
| Issue ID: 7998                      |
| Subject: NSG - Bridges will not run |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Kennelly, Krishna    |

4/19/2016 3:05:41 PM

HRS AASHTO

980

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Thompson, Todd | 7/9/2007 7:08:43 PM  |
| Modified By: administrator   | 6/19/2008 4:26:50 PM |
| Priority: High               |                      |
| Category: Bug - Warranty     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 2240640.xml         |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8002.17067 | Resolved      | BRASS vs Std Engine difference |

### Description

FROM:ttompson DATE:Monday, July 09, 2007 3:08:50 PM

I have 2 bridges that will not run NSG. I get an error message.

Unable to generate model.

02:13:08 PM - Line 1809 in source file .\AbxVirtisDistFactEngine.cpp.

Unknown error while generating finite element model!

02:13:08 PM - Line 712 in source file .\AbxVirtisDistFactModelGen.cpp.

I'll attach the bridge xml files (normal analysis is just fine.)

FROM:kkennelly DATE:7/17/2007 10:21:56 AM

Notes to programmers:

4/19/2016 3:05:42 PM

HRS AASHTO

981



Complete Issue Information

I think I've found a solution to this. In AddMbrNodesInSpan() multiply percentages by 100 when comparing percentages to determine if G2 has nodes at the same percentages as G1. Waiting to discuss this with Jim when he returns from vacation and do some testing to be sure this won't break anything before I mark this as resolved.

FROM:tarmbrecht DATE:Wednesday, July 18, 2007 12:42:04 PM

Krishna, can you tell me if this is related to the incident I reported (7990)? Thanks, Tim

FROM:kkennelly DATE:8/7/2007 12:54:45 PM

Yes Tim this incident is related to your 7990.

Solution stated on 7/17 didn't work. Had to use tolerances when building the model. Also now issue message and stop analysis if all members don't have the same number of nodes when the deck shells are generated.

Fixed for 5.6 Beta 4.

FROM:tthompson DATE:Tuesday, October 02, 2007 1:52:24 PM

Not Sure -

Str 29299040

IN 5.5 Release runs HS20 Analysis OK

IN 5.6 Beta 5 Release - HS20 Analysis fails to run.

Error Message -

Error generating LFD/ASD schedule commands!

Error getting start distance and range for bracing schedule!

Error generating BRACING-SCHEDULE command!

Unable to determine span where range ends!

Error determining start distance and range!

Splayed girders and/or tapered overhangs are not allowed!

Error generating deck commands!

It did appear to do the NSG analysis, but the BRASS analysis failed.

So, not sure if this could be closed since the NSG runs, but now I have a bridge that ran in 5.5 but won't run in 5.6.

For Str No 29300040

This does run NSG now in 5.6 Beta 5.

FROM:hlee DATE:10/3/2007 11:59:53 AM

Str 29299040:

For the "3 Span, 5 Girder System" definition, the left overhang at the start of the bridge is 3.33 ft and the left overhang at the end of the bridge is 3.333 ft. That's why BRASS export is complaining "tapered overhangs are not allowed".

Todd, Are the tolerances set in your 5.5 database the same as those in your 5.6 Beta 5 database?

Issue ID: 8002

4/19/2016 3:05:42 PM

HRS AASHTO

982

### Complete Issue Information

|                                         |                      |
|-----------------------------------------|----------------------|
| Subject: BRASS vs Std Engine difference |                      |
| Folder: /Virtis/Support Center/Virtis   |                      |
| Primary Contact: Goodrich, Brian        |                      |
| Submitted By: McCaffrey, Brian          | 7/10/2007 6:21:33 PM |
| Modified By: administrator              | 6/19/2008 4:36:34 PM |
| Priority: High                          |                      |
| Category: Unknown                       |                      |

### History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned  |          |          |
|                    | Duplicate |          |          |
|                    | Resolved  |          |          |
| Ordoobadi, Mehrdad | Resolved  | High     | Unknown  |

### Contacts

| Name            | Company                 | Email 1                   | Phone 1 |
|-----------------|-------------------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech         | Brian.McCaffrey@aecom.com |         |
| Jim Duray       | Michael Baker Jr., Inc. | jduray@mbakercorp.com     |         |

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | VI-8005-1065590-VO550.zip |             |
|      | 1065590.zip               |             |
|      | 531 save error.JPG        |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 8005.17064 | Resolved      | Saving file in 5.3.1 to import to 5.5 |

### Description

FROM:bmccaffrey DATE:Tuesday, July 10, 2007 2:21:34 PM

Complete Issue Information

It appears that BRASS is calculating the incorrect moment capacity for the attached bridge - see SD5, G5.

This is a non-composite steel riveted girder.

BRASS:  $I_x=110464 \text{ in}^4$   
Std Engine:  $I_x= 110426 \text{ in}^4$

BRASS:  $M_{dl}=2375.8 \text{ ft-k}$   $M_{ll}=1868.9 \text{ ft-k}$   
Std. Engine:  $M_{dl}=2331.1 \text{ ft-k}$   $M_{ll}=1876.8$

Moments and  $I_x$ 's match exactly.

but

BRASS:  $M_u(\text{top})=5178 \text{ ft-k}$   $M_u(\text{bottom})=10356.0 \text{ ft-k}$   
Std. Engine:  $M_u(\text{top})=\text{not reported}$   $M_u(\text{bottom})=10352 \text{ ft-k}$

Looks like BRASS is using  $M_u(\text{top})$  for the controlling rating but reports that bottom flange flexure controls.

$M_u(\text{top})$  should equal  $M_u(\text{bottom})$  for this beam so I think BRASS is incorrect.

FROM:hlee DATE:8/2/2007 10:49:21 AM

Virtis Std LFD Engine also considers the section at 73.25 ft (105 POI) as braced non-compact. In BRASS, the  $F_{cr}$  used in 10-99 is 22.5 ksi calculated using flange thickness (t) equals to 0.5625 in. In Std Engine, the flange thickness (includes the two cover plates) is 1.3125 in.  $F_{cr}$  in Std Engine is maxed out to 45 ksi ( $F_y$ ). As a result, the  $M_u(\text{top})$  is 5178 kft in BRASS and 10352 kft in Std Engine. I think the issue is the same as Incident 5218 and also the resubmitted Incident 8058.

FROM:hlee DATE:8/2/2007 12:38:45 PM

Related to Incident 5218.

Status changed to Resolved as requested by Brian M. e-mail on 8/2.

Issue ID: 8005  
Subject: Saving file in 5.3.1 to import to 5.5

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: McCaffrey, Brian 7/13/2007 3:41:50 PM  
Modified By: administrator 6/19/2008 4:36:33 PM  
Priority: High  
Category: Unknown

History

4/19/2016 3:05:42 PM

HRS AASHTO

984

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description            |
|------|---------------------|------------------------|
|      | R0113061            | Report Tool Output.PDF |
|      | R0113061            | xml file.xml           |
|      | Beam_B              | Virtis Output.txt      |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 8006.17063 | Resolved      | Detailed Rating Results doesn't match Rating Summary. |

### Description

FROM:bmccaffrey DATE:Friday, July 13, 2007 11:43:13 AM

I cannot save the attached .bbd file in v/5.3.1 - see attached error message.

FROM:mordoobadi DATE:7/25/2007 4:43:53 PM

Related to Incident 7113. This issue (problem with abw\_bridge\_design\_param) is resolved in 5.4.0.

FROM:mordoobadi DATE:7/26/2007 8:43:52 AM

The 5.3.1 converted to 5.5.0. XML and BBD files attached in VI-8005-1065590-VO550.zip file.

## Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8006                                                 |
| Subject: Detailed Rating Results doesn't match Rating Summary. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 7/13/2007 6:36:31 PM |
| Modified By: administrator            | 6/19/2008 4:36:33 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Lee, Herman     | Assigned |          |           |
|                 | Resolved |          | Education |
| Lee, Herman     | Resolved | High     | Education |

## Contacts

| Name      | Company                 | Email 1               | Phone 1 |
|-----------|-------------------------|-----------------------|---------|
| Jim Duray | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

## Documents

| Name | Resource Identifier                                          | Description |
|------|--------------------------------------------------------------|-------------|
|      | Beam_B Virtis Output (7-16-2007).txt                         |             |
|      | LFD Rating Analysis Results Comparison Template R0113061.xls |             |
|      | R0113061 xml file (7-16-2007).xml                            |             |
|      | Beam_B Brass Output (7-16-2007).txt                          |             |

## Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 8008.17061 | Resolved      | Virtis Std Engine vs BRASS shear rating differences. |

4/19/2016 3:05:43 PM

HRS AASHTO

986

Complete Issue Information

Description

FROM:hlee DATE:7/13/2007 2:29:31 PM  
 Submitted on behalf of Chris Dombrowski, Williams & Works:

Why do the "detailed rating results" on the report output (see .pdf page 10) show shear as the controlling limit state when the "load factor rating summary" and "strengths and ratings in Virtis LFD Output" show moment is the controlling limit state (see .pdf page 2 and the Virtis LFD Output Line #927)? i.e. Why does .pdf page 10 not match the Virtis LFD Output Line #927? Both files were run using the Virtis Engine. Shouldn't they have the same results?

FROM:hlee DATE:7/26/2007 8:48:26 AM  
 When populating analysis results, the engine shouldn't compare special codes (e.g. 999.99) to determine critical rating factors.  
 Resolved for both 5.6 and 6.0.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8008                                                |
| Subject: Virtis Std Engine vs BRASS shear rating differences. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 7/17/2007 10:07:07 AM |
| Modified By: administrator            | 6/19/2008 4:36:33 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:hlee DATE:7/17/2007 6:02:45 AM

Submitted on behalf of Chris Dombrowski, Williams & Works:

I have another question regarding the Brass vs. Virtis output for this structure. When I run the Brass Engine I get an inventory shear rating of 0.88 at point 209 (54.92 ft) of span 2 (See Line #8751 of Brass Output). However, when I run the Virtis Engine I get an inventory shear rating of 1.56 at the same point (See Line #917 of Virtis Output). Which one, if any, is correct? Why is there such a large difference between these two - is there an error in one of the analysis engines?

FROM:jduray DATE:Thursday, July 19, 2007 3:23:25 PM

FROM:hlee DATE:9/4/2007 11:34:52 AM

The differences in engine capabilities between Virtis Std LFD Engine and Wyoming BRASS-GIRDER are the cause of the difference in rating factor.

1. In shear strength  $V_{ci}$  computation (AASHTO 9.20.2.2), Virtis Std LFD Engine sets no limit on  $M_{cr}/M_{max}$ . BRASS-GIRDER defaults to limit  $M_{cr}/M_{max}$  to 1.0. After the  $M_{cr}/M_{max}$  is set to no limit in the member alternative engine properties, the rating factor increase from 0.88 to 1.02.
2. Virtis Std LFD Engine calculated stresses and strengths of prestressed concrete section using the transformed section properties. BRASS-Girder uses the gross section properties.

Issue ID: 8009

Subject: Truss - Rolled Beam Deterioration

Folder: /Virtis/Support Center/Virtis

Primary Contact: Bhanushali, Girish

Submitted By: McCaffrey, Brian

7/17/2007 2:25:36 PM

Modified By: administrator

6/19/2008 4:36:33 PM

Priority: Urgent

Category: Bug

History

4/19/2016 3:05:43 PM

HRS AASHTO

988

Complete Issue Information

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Bhanushali, Girish | Assigned      | High     | Unknown  |
| Bhanushali, Girish | Assigned      | High     | Unknown  |
|                    |               |          | Bug      |
|                    | Investigation |          |          |
|                    | Development   |          |          |
|                    | Resolved      |          |          |
|                    | Accepted      |          |          |
|                    | Resolved      |          |          |
| Bhanushali, Girish | Resolved      | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 25999 - 1018600_check.xml |             |

Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 8010.17059 | Resolved      | Truss - Deterioration applied to other members |

Description

FROM:kkennelly DATE:7/17/2007 10:27:26 AM  
Submitted on behalf of Brian McCaffrey via email:

1- It looks like when you have a rolled section with deterioratrion, the net area is not calculated using the beam area from the section library. It looks like it's turned into an equivalent plate girder before the deterioration is deducted - can you confirm this? It's not corrcet if it is.

FROM:kkennelly DATE:7/17/2007 10:34:08 AM  
(I'm not sure but the xml file attached to VI8010 may have this problem.)

FROM:gbhanushali DATE:7/30/2007 11:46:18 AM  
This has been fixed for 5.6 beta build 6 ~ Aug/07

FROM:gbhanushali DATE:7/30/2007 11:47:31 AM  
Yes it was being calculated using built up tool - for channel , angle and I.  
changes now reflect only for Area and not for Izz, lyy etc... which will be in future along with other enhancements - ( By Phone : JAD , Brian discussion )

4/19/2016 3:05:43 PM

HRS AASHTO

989



Complete Issue Information

FROM:ssalata DATE:8/3/2007 2:12:07 PM

Verified the net area is being calculated according to Incident 8011 attachments for rolledbeam and channels.

Cannot get net area for angles to match using the following input addition (using the bridge attached to Incident 7949) :

MemberOfInterest

LOU1

Deterioration

Angles

BottomRight HorizontalLeg 25.0 100.0 U5 0.0 8.0

FROM:ssalata DATE:8/3/2007 3:53:57 PM

NOTE: Documentation for the Virtis Truss Command Language is incorrect. <percent\_thickness> and <percent\_with> values shown in the documentation should show values in the 0 to 100 range. Documentation should make that fact explicit.

FROM:gbhanushali DATE:8/8/2007 1:51:40 PM

Help updated.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 8010                                          |
| Subject: Truss - Deterioration applied to other members |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: McCaffrey, Brian        | 7/17/2007 2:28:20 PM |
| Modified By: administrator            | 6/19/2008 4:36:33 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 8011.17058 | Resolved      | Truss - Member Deterioration adds up cumulatively |

Description

FROM:kkennelly DATE:7/17/2007 10:29:24 AM  
Submitted on behalf of Brian McCaffrey via email:

2- Truss member deterioration coded under the Member of Interest Command for a given member is also applied to other members defined with the same cross section name. As an example, in the attached file "1018600 check.xml", Truss 2 member deterioration for LOL1, which is defined as cross section 1, is also applied to all other truss members defined as cross section 1. After running the attached model, it can be seen from the "Truss Member Section Property Summary" that all Truss 2 members defined as cross section 1 have the same deteriorated cross sectional area of 14.01 in<sup>2</sup>.

FROM:gbhanushali DATE:7/30/2007 11:46:13 AM  
This has been fixed for 5.6 beta build 6 ~ Aug/07

FROM:ssalata DATE:8/3/2007 2:15:23 PM  
Verified - fixed in latest debug build.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 8011                                             |
| Subject: Truss - Member Deterioration adds up cumulatively |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: McCaffrey, Brian        | 7/17/2007 2:30:17 PM |
| Modified By: administrator            | 6/19/2008 4:36:33 PM |
| Priority: Urgent                      |                      |

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Education   |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description        |
|------|---------------------|--------------------|
|      | 38C0226             | bridge results.doc |
|      | 38C0226.xml         |                    |

## Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 8019.17050 | Closed        | Error in live load negative moments |

## Description

FROM:kkennelly DATE:7/17/2007 10:32:08 AM  
Submitted on behalf of Brian McCaffrey via email:

3- Truss member deterioration appears to be adding cumulatively when two members assigned with the same cross section name have deterioration coded under the Member of Interest Command. As an example, in the attached file "1018600 check.xml" (attached to VI8010), Truss 1 members LOL1 and L1L2 are both defined as cross section 1 with deterioration coded at 36% and 10% respectively for the top and bottom flanges. After running the attached model, it can be seen from the "Truss Member Section Property Summary" that all members defined as cross section 1 have the same cross sectional area of 13.09 in<sup>2</sup>. This is the net area of cross section 1 when losses of 36% and 10% are deducted cumulatively. See attached files S1 and S2 for sample calculations.

FROM:gbhanushali DATE:7/30/2007 11:45:20 AM  
This has been fixed for 5.6 beta build 6 ~ Aug/07

FROM:ssalata DATE:8/3/2007 2:16:21 PM

4/19/2016 3:05:44 PM

HRS AASHTO

992

Complete Issue Information

Verified - fixed in latest debug build.

|                                              |
|----------------------------------------------|
| Issue ID: 8019                               |
| Subject: Error in live load negative moments |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 7/19/2007 4:15:13 PM |
| Modified By: administrator            | 6/19/2008 4:36:32 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:7/19/2007 12:17:17 PM  
Submitted on behalf of Vinacs, CALTRANS via email:

Krisha

We have performed an analysis on a two span continuous T-beam bridge, the negative demand for one of the bridge seems to be inaccurate.

I attach the one that we think the results was wrong.

(See attached file: 38C0226.xml)

In this model, negative live load moment demand away from the support (0th to 0.7th pt of span 1 and 0.3rd to 1.0th pt of span 2) is reported as ZERO.

4/19/2016 3:05:44 PM

HRS AASHTO

993

Complete Issue Information

We have done another bridge that is similar configuration, but span length was exactly 16.00 (instead of 16.594 ft). For this bridge, results seems to be perfectly correct.

See the comparison of the results in the attachment (See attached file: 38C0226 bridge results.doc)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:kkennelly DATE:7/19/2007 12:21:15 PM  
Email sent to Vinacs:

I took a look at your bridge and I can't find any reason why the negative moments are zero at the ends of the span. I've entered your problem as incident 8019 on the Technical Support website and assigned it to Brian Goodrich so he can investigate the BRASS LFD results.

FROM:bgoodrich DATE:Monday, July 23, 2007 9:58:41 AM  
I reviewed your structure (Incident 8019) and finally noticed the support conditions. The left, middle, and right supports are pinned, fixed, and roller, respectively. Is this correct? Or should the middle support be a roller also?

FROM:bgoodrich DATE:Monday, July 23, 2007 9:59:16 AM  
E-mail from Vinacs (7/23/2007):

Good catch! Sorry to send this bridge to Krisha and You to check this. We should have caught this error.

This bridge was a framed structure, as a result, initially rater checked it as a framed structure. Apparently he never entered the framed connection details. When we were reviewing the bridge for error, the checker was checking whether the 'non' framed case gives him different value (without realizing the framed detail is NOT complete)

Thanks for catching the error.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 8028                                                            |
| Subject: Girder, Stringer, Floorbeam Systems - No Hinges for main girders |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 7/24/2007 3:05:01 PM |
| Modified By: administrator            | 6/19/2008 4:36:32 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

4/19/2016 3:05:44 PM

HRS AASHTO

994

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Todd Thompson  | South Dakota DOT | todd.thompson@state.sd.us           | 605-773-3285 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8030.17039 | Resolved      | Max # of Conc Loads - exceeded |

### Description

FROM:ttompson DATE:Tuesday, July 24, 2007 11:05:10 AM

We're working on coding up a Girder, Stringer, Floorbeam system. The 2 Main Girders each have a couple of hinges in them. But we just noticed that there is no Hinge option for main girder members when you have a floor system. Is this intentional? Is this a bug? Or do we need to add an enhancement to add hinges to steel girder members?

FROM:hlee DATE:7/24/2007 1:20:36 PM

Duplicate of Incident 4840. Also in Incident 7050.

## Complete Issue Information

|                                         |
|-----------------------------------------|
| Issue ID: 8030                          |
| Subject: Max # of Conc Loads - exceeded |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Thompson, Todd          | 7/24/2007 3:15:59 PM |
| Modified By: administrator            | 6/19/2008 4:36:32 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Kennelly, Krisha | Information Needed |          |          |
|                  | Information Needed | High     | Unknown  |

## Contacts

| Name          | Company          | Email 1                   | Phone 1      |
|---------------|------------------|---------------------------|--------------|
| Todd Thompson | South Dakota DOT | todd.thompson@state.sd.us | 605-773-3285 |

## Documents

| Name | Resource Identifier | Description                                |
|------|---------------------|--------------------------------------------|
|      | sd_33100118.zip     | Use 10 Span 1654'-6", 2 Girder System (WB) |

## Tasks

| Name       | Current State      | Summary                          |
|------------|--------------------|----------------------------------|
| 8031.17038 | Information Needed | G, F, S Systems - stringer units |

## Description

FROM:tthompson DATE:Tuesday, July 24, 2007 11:15:59 AM

I believe due to VI 8028, we end up with 80+ Floorbeam conc. loads on the main girders, so we exceed the 70 limit of BRASS.

4/19/2016 3:05:45 PM

HRS AASHTO

996

Complete Issue Information

Will this problem go away when we add the 2 hinges to the main girders? If not, how do we get the main girders to analyze when we have too many floorbeams.

FROM:ttthompson DATE:Tuesday, July 24, 2007 11:18:47 AM

FROM:bgoodrich DATE:Tuesday, July 31, 2007 7:30:58 PM

I don't think the presence of hinges will affect the number of concentrated loads. Could the large number of floorbeams be modeled as a single uniform load along the girder? If not, I'll forward this request to WYDOT.

FROM:bgoodrich DATE:Thursday, August 02, 2007 6:28:41 PM

E-mail from Todd Thompson:

That is our work around. We have still yet to been able to model a complete bridge with a floor system in Virtis. I thought we were close finally.

We've had to break apart our continuous stringers, we have to limit our floor beams. So we are back to what we did in BARS, create a equivalent uniform load on the main girders. So much for modeling the bridge as it stands.

I wasn't sure how BRASS handled the hinges, break it into individual structures (hopeful but doubtful) or still leave it as one long structure with the BRASS limitations of max # loads.

Thanks for checking into it.

Todd S. Thompson, PE

FROM:bgoodrich DATE:Thursday, August 02, 2007 6:31:57 PM

I forwarded this request to WYDOT to see if anything can be done on the engine side. Should the export process combine the floorbeam dead loads and apply an equivalent uniform load to the main girder when the number of floorbeams exceeds the number of concentrated loads allowed by BRASS?

FROM:bgoodrich DATE:Friday, August 03, 2007 10:33:59 AM

E-mail from Todd Thompson:

That would be quite an enhancement to the export process.

We would be agreeable to that approach.

Todd

FROM:bgoodrich DATE:Friday, August 03, 2007 10:34:28 AM

When the number of concentrated loads is greater than the BRASS maximum, I think we could create an equivalent uniform load to be applied to the entire girder. I think we just have to check the concentrated loads array. The export work appears to be limited to the CLoadsUtility::Prepare function under the "Average Stringer Unit Dead Load" heading in the cpp file. Does this sound feasible? I estimate this would only take a few hours to implement.

FROM:bgoodrich DATE:Friday, August 31, 2007 10:59:39 AM

4/19/2016 3:05:45 PM

HRS AASHTO

997



Complete Issue Information

I revised the CLoadsUtility::Prepare function to create an equivalent uniform load along the girder in place numerous concentrated loads. This change needs tested when Todd submits his bridge file.

|                                           |
|-------------------------------------------|
| Issue ID: 8031                            |
| Subject: G, F, S Systems - stringer units |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Thompson, Todd          | 7/24/2007 3:19:04 PM |
| Modified By: administrator            | 6/19/2008 4:36:32 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tthompson DATE:Tuesday, July 24, 2007 11:19:04 AM

We have a 9 span Girder, Stringer, Floorbeam bridge we've been attempting to analyze. The stringers are continuous the entire length of the bridge, except at the 2 main girder hinge locations.

Due to the limitations of BRASS, we created 9 stringer units (1 per each span). But we still end up with problems with the Floorbeams at the Bents/Piers not running correctly. This floor beam is the end of two adjacent stringer units.

We get an error message that we have 17 (or 18) spans and BRASS is limited to 13 spans. Our longest stringer unit is 10 spans, the rest are 8 or 9 span stringer units. It appears to be limiting the number of spans by summing the two adjacent stringer units. (ie. 8 span stringer unit on left, 9 span stringer unit on right - sum of both stringer units = 17) This doesn't seem correct.

FROM:kkennelly DATE:7/30/2007 8:33:47 AM

Can you attach an xml file of the bridge?

FROM:kkennelly DATE:9/25/2007 3:59:35 PM

### Complete Issue Information

Can you double check that you attached the correct bridge? I don't see any 9 span structure definition in the bridge that is attached to this incident.

Can you also identify the floorbeam that gives you this error message?

I tried running 10 span 1654'6", 2 girder system (WB) and I didn't get the error message that you got.

|                                        |
|----------------------------------------|
| Issue ID: 8036                         |
| Subject: Problem defining beam details |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Triezenberg, Jeff       | 7/25/2007 7:11:35 PM |
| Modified By: administrator            | 6/19/2008 4:36:31 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
| Ihnat, Joseph   | Resolved | High     | Unknown  |

### Contacts

| Name             | Company      | Email 1                       | Phone 1      |
|------------------|--------------|-------------------------------|--------------|
| Jeff Triezenberg | TranSystems  | jstriezenberg@transystems.com | 517-332-9632 |
| Beckie Curtis    | Michigan DOT | CurtisR4@michigan.gov         | 517-322-1186 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B06.xml             |             |

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8040.17029 | Resolved      | Error exporting Virtis Std data |

Description

FROM:jtriezenberg DATE:Wednesday, July 25, 2007 3:11:36 PM  
 When I try to define the beam details for the girder called 1966 fascia beam, Virtis unexpectedly shuts down. This is a flared bridge. I don't know if that is the cause of the problem.

FROM:jihnmat DATE:7/26/2007 10:03:20 AM  
 I also noticed that some of the Member Support windows could not be opened. ComputeNumSpans is returning 2 for 1966 Fascia Beam (should be 1). Jeff told me that the number of spans or girders has not been changed.

FROM:jihnmat DATE:7/26/2007 10:08:49 AM  
 All of the members after 1966 Fascia Beam (inclusive) are showing two spans, with second span having length zero.

FROM:jihnmat DATE:7/26/2007 10:26:19 AM  
 This looks like 7891. The same fix seems to work, which is:  
 1) Open "Framing Plan Detail."  
 2) Change Skew degrees from 28.25 to 0 for both supports.  
 3) Click "Apply"  
 4) Change the Skew degrees BACK to 28.25 for both supports.  
 5) Click "Apply" or "OK"

|                                          |
|------------------------------------------|
| Issue ID: 8040                           |
| Subject: Error exporting Virtis Std data |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Triezenberg, Jeff       | 7/30/2007 2:49:30 PM |
| Modified By: administrator            | 6/19/2008 4:36:31 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

4/19/2016 3:05:45 PM

HRS AASHTO

1000

Complete Issue Information

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 8058.17011 | Resolved      | BRASS error in riveted girder capacity calculations |

Description

FROM:jtrizezenberg DATE:Monday, July 30, 2007 10:49:30 AM  
 This is the same bridge as #8036. When analyzing the last bottom girders, I get this message: "Error exporting Virtis Std data!" I'm not sure why this is coming up. See the attached file.

Thanks,  
 Jeff

FROM:hlee DATE:7/30/2007 12:15:15 PM  
 The following error message is logged in the analysis progress window when performing rating for "1992 Inside Girder" and "1992 Fascia Girder".

```
=====
Error - Harped and straight debonded strand layout configuration is not supported!
=====
```

The Virtis Std LFD engine doesn't support the "harped and straight debonded" strand configuration type.

## Complete Issue Information

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 8058                                               |
| Subject: BRASS error in riveted girder capacity calculations |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 8/1/2007 3:31:26 PM  |
| Modified By: administrator            | 6/19/2008 4:36:30 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

## History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Education |
| Goodrich, Brian | Assigned |          |           |
| Duray, Jim      |          |          |           |
| Duray, Jim      | Assigned | High     | Education |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Mark Nord      | Colorado DOT     | unknown@unknown.com                 | 303-512-4073 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 8062.17007 | Assigned      | Virtis not able to calculate desired number of lanes |

## Description

FROM:bmccaffrey DATE:Wednesday, August 01, 2007 11:31:01 AM

I'm resubmitting this BRASS error

4/19/2016 3:05:46 PM

HRS AASHTO

1002

Complete Issue Information

FRFROM:bmccaffrey DATE:Monday, July 12, 2004 3:09:41 PM

Please look at the intermediate output for section 3 of the main girder (girder 1) that is attached along with the .bbd file. The section is at mid-span and does not control. It is a built up member comprised of angles and plates with a 12"x1" top cover plate. A discrepancy was found in the calculation of equation 10-100 (b/t ratio). It appears that the top flange thickness is being ignored in the equation - only the angle thickness is used.

I believe 't' should be:

top angle thickness + top cover plate thickness  
= 1.0781" + 1.0" = 2.0781"

Thanks, Brian McCaffrey, NYSDOT

FROM:bmccaffrey DATE:Monday, July 12, 2004 3:21:20 PM

The correct bbd file is 1042080. You can delete 1020280.

FROM:bmccaffrey DATE:Tuesday, July 13, 2004 8:25:56 AM

FROM:bgoodrich DATE:Monday, August 2, 2004  
WYDOT assigned this issue to BRASS Problem Log 520.

FROM:bgoodrich DATE:Monday, August 16, 2004 11:40:49 AM  
E-mail from WYDOT:

Brian:

Keith and I discussed this issue and reviewed the AASHTO Specifications. No where in the spec does it clearly define which is the "flange" in a built up section with angles and cover plates. It has been WYDOT policy to use the cover plate as the flange dimensions since the spec states specifically that the thickness must be equal to or greater than the angle thickness. In this type of built up section, we consider the angles as acting as fillets as shown on page 9.25 of the user manual. If the user disagrees with our interpretation of the code, he can simply code an equivalent I-beam section and use whatever flange dimensions he desires.

This closes out Problem Log 520.

Micheal J. Watters, P.E.  
Bridge Engineering Systems Manager

FROM:bgoodrich DATE:Monday, August 16, 2004 11:50:29 AM  
I modified the export (BrassStdAnalysisCmd.cpp) to transfer the cover plate dimensions to the flange dimensions, which corresponds to the instructions in the BRASS-GIRDER command manual.

FROM:bgoodrich DATE:Tuesday, June 28, 2005 4:05:05 PM

4/19/2016 3:05:46 PM

HRS AASHTO

1003

Complete Issue Information

On April 14, 2005, Herman Lee commented out all the changes for this incident. The changes had lowered the rating factors.

FROM:hlee DATE:8/1/2007 1:47:41 PM  
Original incident is 5218.

FROM:hlee DATE:8/2/2007 12:35:29 PM  
Status changed to Resolved as requested by Brian M. e-mail on 8/2.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8062                                                |
| Subject: Virtis not able to calculate desired number of lanes |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Goodrich, Brian         | 8/7/2007 1:54:52 PM  |
| Modified By: administrator            | 6/19/2008 4:36:30 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Tuesday, August 07, 2007 9:55:23 AM  
Entered for Yihong Gao:

Hi Brian,

The question that I have is if I can change 12 foot lane width to 11 foot lane width. Current bridge has a 44' wide travel width for each direction and I need to put 4 lane loading each direction on the bridge. The current Virtis file for this existing bridge is line girder but I should be able to change to girder system if needed.

4/19/2016 3:05:46 PM

HRS AASHTO

1004

Complete Issue Information

Thank you

Yihong

Yihong Gao, PE  
Design Engineer  
Bridge Office  
Minnesota Department of Transportation  
Tel: (651)366-4492  
Fax: (651)366-4509

FROM:bgoodrich DATE:Tuesday, August 07, 2007 9:57:09 AM

A user called me with the following question regarding how many lanes fit in a 44' travelway. She would like it to be four (44/11). However, I don't think the MCEB article on lane width (6.7.2.2) is considered when the travelway is 24' or greater. Is this correct? Is there anyway for an 11' lane to be used instead of 12'?

FROM:bgoodrich DATE:Tuesday, August 07, 2007 9:57:37 AM

E-mail from Krisha:

Hi Brian,

The user's email indicates the bridge is a girder line model so the beam will be loaded as per the user's input distribution factors. I don't think the lane width is used at all in a girder line model.

You are correct that the MCEB article doesn't apply when the travelway is 24' or greater. For a girder system model the user can compute the distribution factors for 11' lanes and input them instead of having Virtis compute them. I don't think the lane width is used anywhere else a standard rating or design.

Krisha

FROM:bgoodrich DATE:Tuesday, August 07, 2007 9:57:55 AM

Based on this discussion, the user must input the distribution factors regardless of the structure being input as a girder line or a girder system. There is no way to input an 11' lane even for a girder system structure definition.

FROM:bgoodrich DATE:Tuesday, August 07, 2007 10:20:12 AM

E-mail to user:

I discussed this issue with Krisha Kennelly at Michael Baker. Virtis only uses the MCEB article on lane width (6.7.2.2) when the travelway less than 24'. If you would like the distribution factors calculated based on 11' lanes, you must perform these calculations and then input the distribution factors into Virtis manually. This applies to both a girder line or girder system structure definition.

FROM:bgoodrich DATE:Wednesday, August 15, 2007 12:01:45 PM

Should an input be added where the user can specify the traffic lane width on a superstructure basis?

4/19/2016 3:05:46 PM

HRS AASHTO

1005



## Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8072                                                 |
| Subject: Half of continuous floorbeam has zero negative moment |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 8/14/2007 12:19:32 PM |
| Modified By: administrator            | 6/19/2008 4:36:29 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Closed   |          |          |
| Lee, Herman     | Closed   | High     | Bug      |

## Contacts

| Name             | Company                        | Email 1                       | Phone 1       |
|------------------|--------------------------------|-------------------------------|---------------|
| Dean Teal        | Kansas Dept. of Transportation | teal@ksdot.org                | (785)291-3001 |
| Jeff Triezenberg | TranSystems                    | jstriezenberg@transystems.com | 517-332-9632  |
| Amjad Waheed     | Ohio DOT                       | awaheed@dot.state.oh.us       | 614-752-9972  |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S13.xml             |             |
|      | S13 no wizard.xml   |             |

## Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 8101.16968 | Closed        | Stress Limits |

Complete Issue Information

Description

FROM:kkennelly DATE:8/14/2007 8:21:34 AM  
Submitted on behalf of Vinacs, Caltrans via email:

I am attaching a Floor System model for your review. We are not familiar with entering data for this type of bridge structures. We thought we did pretty good, but find weird results.

Notable Weird Results are:

1. Floor beam 1 rating controlled by Fatigue and rating number is ZERO.
2. Negative moment demand from live load is reported on one side of floor beam only (There are three girders and the floor beam is spanning between the three.)

(Embedded image moved to file: pic00008.jpg)

3. Results are not symmetric

Where did we go wrong?

(See attached file: 08C00097.xml)

FROM:kkennelly DATE:8/14/2007 8:25:01 AM  
reponse sent via email:

I reviewed your Virtis input and I don't see any problems with your input. I've entered this as incident 8072 on the Technical Support website.

FROM:bgoodrich DATE:Wednesday, August 15, 2007 1:50:06 PM

It looks like issue 1 regarding fatigue is a bug. For some reason, the fatigue stress at the 109 POI is calculated as Infinity. I turned on the intermediate output for the 109 POI, and found the section modulus is zero for one case. I'll forward this issue to WYDOT immediately.

Issues 2 and 3 are related and result from the floorbeam spans being considered simple spans, not continuous. A hinge is inserted close to the interior support (at 9.1833' in your structure). The small amount of negative moment seen on the right half of the floorbeam is expected given how the floorbeam is modeled. Any loads applied to the left of the hinge cause a small amount of negative moment to the node points right of the hinge. This issue was reported in Incident 6416.

FROM:bgoodrich DATE:Friday, August 31, 2007 4:11:25 PM

WYDOT assigned this issue to BRASS Problem Log 775. This issue was addressed in the BRASS-GIRDER engine for BRASS-GIRDER(STD) 6.0.0. Fixed for Virtis version 5.6.

Issue ID: 8101

Subject: Stress Limits

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Triezenberg, Jeff

8/22/2007 5:10:16 PM

4/19/2016 3:05:47 PM

HRS AASHTO

1007

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:36:27 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
| Duray, Jim      | Resubmit | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 8104.16965 | Resubmit      | Unable to add vehicle for advanced analysis. |

### Description

FROM:jtriezenberg DATE:Wednesday, August 22, 2007 1:10:17 PM

I created a superstructure definition with the wizard. Virtis is telling me that the concrete specified in the stress limits does not match the concrete in the beams. This is not true. Please see the attached file.

Thanks,  
Jeff

FROM:jtriezenberg DATE:Monday, August 27, 2007 9:37:52 AM

I have re-done the superstructure definition without using the wizard and the same problem comes up.

FROM:jtriezenberg DATE:Thursday, August 30, 2007 12:35:04 PM

Is it possible at all to have a multiple span prestressed girder bridge with more than one strength of prestressed concrete?

-Jeff Triezenberg

FROM:hlee DATE:8/31/2007 11:42:19 AM

There was a defect when validating the concrete used in the stress limit ranges.

4/19/2016 3:05:47 PM

HRS AASHTO

1008

Complete Issue Information

Resolved for 5.6 Release.

You can enter a multiple span prestressed girder bridge with more than one strength of prestressed concrete into Virtis, but both the BRASS and Virtis LFD Engine don't support this configuration. Both engines will use the prestressed concrete in the first span.

FROM:dteal DATE:Tuesday, October 02, 2007 10:10:51 AM  
Verified in 5.5 beta 5

FROM:dteal DATE:Wednesday, November 07, 2007 2:40:44 PM

|                                                       |
|-------------------------------------------------------|
| Issue ID: 8104                                        |
| Subject: Unable to add vehicle for advanced analysis. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lee, Herman             | 8/24/2007 7:00:21 PM |
| Modified By: administrator            | 6/19/2008 4:36:27 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:8/24/2007 2:49:14 PM

To reproduce:

1. Open TrainingBridge1 Bridge Workspace.
2. Open Analysis Settings window.
3. Change Analysis Type from Standard to Advanced.
4. Select "Inventory" in Vehicle Summary tree.

4/19/2016 3:05:47 PM

HRS AASHTO

1009

Complete Issue Information

- 5. Select Type 3 vehicle in Vehicle Selection tree.
- 6. Click >> button to add to Inventory.
- 7. Select "Operating" in Vehicle Summary tree.
- 8. Select Typs 3-3 vehicle in Vehicle Selection tree.
- 9. Click >> button doesn't add to Operating.

FROM:mordoobadi DATE:8/24/2007 3:36:51 PM

I think this was a requirement that an NSG analysis is only for one NSG truck/Adjacent truck combination.

FROM:jduray DATE:9/10/2007 8:55:46 AM

Correct.

FROM:hlee DATE:9/17/2007 8:45:50 AM

The Analysis Settings window needs to provide better feedbacks. I think this information needs to be in the Help.

Option 1: When "Inventory" is selected, add to Inventory will also add to Operating.

Option 2: If Type 3 already added to Inventory, disable the >> button when other vehicles are selected.

Option 3: Message box.

|                             |
|-----------------------------|
| Issue ID: 8110              |
| Subject: Library tree items |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Waheed, Amjad           | 8/28/2007 4:21:50 PM |
| Modified By: administrator            | 6/19/2008 4:36:26 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lee, Herman     | Assigned  |          |             |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |

4/19/2016 3:05:47 PM

HRS AASHTO

1010

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description     |
|------|----------------------|-----------------|
|      | new-n19047-truss.xml | explanation.PDF |

### Tasks

| Name       | Current State | Summary                                          |
|------------|---------------|--------------------------------------------------|
| 8111.16958 | Suspended     | Truss LLDistribution command in wheels or lanes. |

### Description

FROM:awaheed DATE:Tuesday, August 28, 2007 12:21:50 PM

Library items in the tree view are not sorted alphabetically. If they are sorted alphabetically by default, it would make the search easier and quicker.

Issue ID: 8111

Subject: Truss LLDistribution command in wheels or lanes.

Folder: /Virtis/Support Center/Virtis

Primary Contact: Li, Xinmei

Submitted By: Ha, Binh

8/28/2007 7:17:43 PM

Complete Issue Information

|                   |                     |
|-------------------|---------------------|
| Modified By: hlee | 8/7/2009 2:11:20 PM |
| Priority: High    |                     |
| Category: Unknown |                     |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 8130.16939 | Suspended     | Virtis Truss - Unsupported member cross section |

Description

FROM:hlee DATE:8/28/2007 3:10:11 PM  
 Entered on behalf of Binh Ha (MassHighway):

=====

Hi,

I am very positive about my opinion. If you look at the Rating Results Report output, the circled numbers are for one truck load (these numbers are matched to my model analyzed with one truck load using GTSTRUDL). Therefore if we input LLDistribution = 1.235294 (wheels) (instead of using 0.61765 truck) the live load effect will be doubled on each truss (using new-n19047-truss.xml; East Truss). Let me inform your finding. Thanks,

Binh Ha, P.E.  
 MassHighway - Bridge Section  
 10 Park Plaza, Room 6500  
 Boston, Ma 02116

4/19/2016 3:05:48 PM

HRS AASHTO

1012

Complete Issue Information

(P) 617-973-7561 (F) 617-973-7575  
E-mail:binh.ha@mhd.state.ma.us

>-----Original Message-----

>From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
>Sent: Tuesday, August 28, 2007 12:23 PM  
>To: Binh (MHD) Ha  
>Subject: RE:

>

>Hi Binh,

>

>The Truss LLDistribution command specifies the use of wheel  
>fraction. This is consistent with what specified in the Live  
>Load Distribution window (Standard tab) for other  
>superstructure definitions. The Standard Spec also specifies  
>the use of wheel fraction for distribution of loads. BRASS  
>LFD output states that "BRASS uses the dist. factors for  
>moment as wheel fractions.". Could you elaborate on the  
>reasoning for the use of truck distribution factors?

>

>Thanks,  
>Herman

>

>>>> "Ha, Binh (MHD)" <Binh.Ha@state.ma.us> 8/28/07 10:06 AM >>>  
>Hi Herman and Krisha,

>

>On page T1-29 of Truss Floorbeam Stringer Example (T1 - Virtis  
>Training), instead of using wheel distribution factors it should be  
>truck distribution factors (that means the numbers should be divided by  
>2). In my opinion, the FE engine and Brass engine is different when the  
>LL distribution factors are used under truck and wheel respectively.  
>Please reconsider and let us know.

>

>Thanks,

>

>Binh Ha, P.E.  
>MassHighway - Bridge Section  
>10 Park Plaza, Room 6500  
>Boston, Ma 02116  
>(P) 617-973-7561 (F) 617-973-7575  
>E-mail:binh.ha@mhd.state.ma.us

>

>

>

>>-----Original Message-----

>>From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
>>Sent: Tuesday, August 28, 2007 9:20 AM  
>>To: Binh (MHD) Ha  
>>Cc: Girish Bhanushali; Krisha Kennelly

4/19/2016 3:05:48 PM

HRS AASHTO

1013



Complete Issue Information

>>Subject: Re:  
>>  
>>Hi Binh,  
>>  
>>Good to know that the results from all three models agree.  
>>  
>>Thanks,  
>>Herman  
>>  
>>>>> "Ha, Binh (MHD)" <Binh.Ha@state.ma.us> 8/28/07 9:11 AM >>>>  
>>Hi Krishna and Herman  
>>  
>>After I have gone through a lot of checking of the truss  
>input commands  
>>(provided by consultants), I am very happy that is nothing wrong with  
>>the FE engine form Virtis due to the consultants input the height of  
>>truss wrong (it should be 22.17', they input 18.837'). So after I  
>>changed the truss panel height to 22.17' the analysis results from FE  
>>engine and my model in Staad.Pro and GTSTRUDL are the same.  
>>  
>>Enclosed are truss\_command\_input.pdf and new-n19047-truss.xml.  
>>  
>>  
>>  
>>Binh Ha, P.E.  
>>MassHighway - Bridge Section  
>>10 Park Plaza, Room 6500  
>>Boston, Ma 02116  
>>(P) 617-973-7561 (F) 617-973-7575  
>>E-mail:binh.ha@mhd.state.ma.us  
>>  
>>  
>>  
>>  
>  
>

=====

FROM:gbhanushali DATE:9/18/2007 1:20:50 PM

FROM:gbhanushali DATE:9/19/2007 6:43:58 PM  
Truss input Live load distribution factors should be Lane and not the wheels.  
Help has been updated for 5.6 .  
Training example yet to be updated .

FROM:gbhanushali DATE:9/20/2007 9:41:44 AM

FROM:hlee DATE:9/20/2007 11:32:58 AM  
Please include this when we update the examples for the training.

FROM: Herman Lee DATE: 8/11/2008 3:09:02 PM Eastern Daylight Time

4/19/2016 3:05:48 PM

HRS AASHTO

1014

Complete Issue Information

The live load distribution factors listed on page 48 and page 61 in the Truss Input Command Language PDF file need to be converted from wheel line to lane.

FROM: Xinmei Li DATE: 8/22/2008 1:40:55 PM Eastern Daylight Time  
Page 48 and page 61 in the Truss Input Command Language PDF file is corrected.

FROM: Herman Lee DATE: 5/27/2009 3:05:02 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

FROM: Ryan Nataluk DATE: 8/6/2009 7:21:56 PM Eastern Daylight Time  
What is the final decision on this discrepancy. The most recent examples still show utilizing a wheel based distribution factor yet the truss command language guide identifies lane??

FROM: Herman Lee DATE: 8/7/2009 9:36:45 AM Eastern Daylight Time  
Truss live load distribution factors should be based on lane. I entered Incident 9418 for updating the training example.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 8130                                           |
| Subject: Virtis Truss - Unsupported member cross section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Bhanushali, Girish      | 9/7/2007 1:15:21 PM  |
| Modified By: administrator            | 6/19/2008 4:36:25 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:gbhanushali DATE:9/7/2007 9:12:56 AM

While at PUG '07 Brian Mccaffrey requested to see if we can support the truss member cross section that has only two angles back to back forming a T.

Issue ID: 8139

Subject: Girders with longitudinal stiffener gives lesser rating than that of without longitudinal stiffener

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: vinayagamoorthy, vinacs 9/11/2007 4:33:04 PM

Modified By: bgoodrich 7/16/2008 5:22:39 PM

Priority: High

Category: Unknown

### History

4/19/2016 3:05:48 PM

HRS AASHTO

1016

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Unknown  |
| Goodrich, Brian | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 23 0138Caltrans.xml |             |

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 8141.16928 | Resolved      | Reaction demand is not symmetrical for 11 axle Truck |

### Description

FROM:kkennelly DATE:9/11/2007 12:34:49 PM  
Submitted on behalf of Vinacs from Caltrans:

We have been modelling a bridge that has 29 simple spans.

One of our rating engineer modelled a few spans. These girders are composite with deck. The girders has transverse and longitudinal stiffeners. When he rated the girder with and without longitudinal stiffeners, he had different rating numbers (that is expected). However, what is not expected was that the rating of the girder that has the longitudinal stiffener is less than that of the girder without longitudinal stiffeners.

In my opinion, the girder with transverse and longitudinal stiffeners should be able reach it's Full Composite Capacity, but the program limited its capacity to moment at first yield.

Could you please review the bridge and let me know, what could be done to obtain proper rating?

Structure Definition : Span 27L MDL(1/1) 09/07

Member : G2

Member Alternative: Girder E (Span27L) (This one has long and transverse stiffeners)

Member Alternative: Copy of Girder E (Span27L) (This one has transverse stiffeners only)

(See attached file: 24 0069LCaltrans.xml)

4/19/2016 3:05:48 PM

HRS AASHTO

1017

Complete Issue Information

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: September 12, 2007  
I reviewed the BRASS results and also Article 10.50.1.1 and 10.50.1.1.2. The last paragraph of Article 10.50.1.1.2 indicates that steel sections with longitudinal stiffeners are limited to the noncompact bending strength of Article 10.50.1.2, i.e.,  $F_y$  or  $F_y \cdot R_b$ . Therefore, it appears that adding a longitudinal stiffener can actually reduce the bending strength as far as the specification is concerned. Please let me know if you agree with this assessment.

FROM: bgoodrich DATE: Saturday, September 15, 2007 12:47:47 AM  
E-mail from Vinacs:

Lian

Yes, Specs reads the way Brian stated here. Should a modification to the spec considered? How does the LRFD spec reads on this regard?

Vinacs M Vinayagamoorthy  
916-227-8657

#####

Hi Vinasc,

1. Yes, AASHTO Standard Specifications or Caltrans BDS 10.50.1.1.2 states that "For composite sections in positive-moment regions, .... or with longitudinal web stiffeners, ..., the design bending strength shall be determined as specified in Article 10.50.1.2 (Non-Compact Sections)".
2. AASHTO-LRFD (3rd Edition) Page 6-98, Article 6.10.6.2.2 or 4th Edition, Page 6-115, Article 6.10.6.2.2 - Composite Section in Positive Flexure - It seems that as long as web meet Eq. (6.10.6.2.2-1) and other requirements are met, the section qualifies as Composite Compact Section. AASHTO Commentary does address sections with longitudinal stiffeners for deep beams. It is stated that "composite sections in positive flexure in which the web does not satisfy Article 6.10.2.1.1 - ( $D/t_w \leq 150$ ) are categorized as noncompact sections."
3. My personal opinion is that, for the purpose of evaluation, as long as  $D_{cp}$  meets AASHTO Standard Eq. (10-129) or AASHTO - 6.10.6.2.2-1 and all other requirements are met, composite sections in positive-moment regions can be considered as Composite Compact Sections.

Thanks

4/19/2016 3:05:48 PM

HRS AASHTO

1018

Complete Issue Information

Lian

#####

Brian

Thanks for getting back to us soon.

I discussed this finding with Technical specialist. (see his comments below). Yes, He agreed with your point that BRASS is estimating the capacity per AASHTO Spec. However, the capacity calculation within the LRFD spec does not require us to automatically default to Non Compact Section whenever longitudinal stiffener present in a composite girder.

LRFD requires that whenever the D/tw exceeds 150 the capacity of a composite section with longitudinal stiffener be evaluated using Non-Compact Sections.

Since LRFD code is based on the latest research work, it is my opinion, the method recommended in the LRFD spec is reasonable and AASHTO Standard Specification needs revision. Unfortunately, AASHTO Standard Specification will no longer be updated and therefore, we need to an option (within Virtis/BRASS) for rating engineers to over-write the specification. With the option, rating engineers should be able use the composite section capacity (provided the D/tw <150).

This option button should be available within the longitudinal stiffener ranges are defined.

In the mean time, Brian can you suggest/think of a trick to obtain a rating using composite section capacity? We are thinking of analyzing twice (with and without) longitudinal stiffener. Without long stiffener to provide rating for moment and with stiffener to provide rating for shear (if that controls)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:bgoodrich DATE:Saturday, September 15, 2007 12:53:40 AM  
Thank you for your detailed comments. I have forwarded this issue to WYDOT.

Making two runs, as you indicated, appears to be the only workaround.

FROM:bgoodrich DATE:Friday, December 28, 2007 3:22:00 PM  
E-mail from WYDOT:

I agree that we should not put in a switch to override the spec. If we start with one, we could get every state/consultant asking for a switch to correspond to their office practices.

Keith

>>> Micheal Watters 9/25/2007 1:10 PM >>>  
Brian,

The BRASS code conforms to the AASHTO Standard Specifications. I don't think we should put in a switch to override the specs. The Standard Specs are not going to change and putting in a switch only benefits a few users.

Would there be a way for the user to run this in LRFD by using LFD load factors?

4/19/2016 3:05:48 PM

HRS AASHTO

1019

Complete Issue Information

Keith, what is your opinion?

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

FROM: Brian Goodrich DATE: 7/16/2008 1:22:39 PM Eastern Daylight Time  
An alternative has been discussed for BRASS to allow input of user-defined capacities for flexure, shear, etc. This would address several issues where the user does not agree with the specification or the BRASS engine assumptions.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8141                                                |
| Subject: Reaction demand is not symmetrical for 11 axle Truck |

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                                                |
| Primary Contact: Goodrich, Brian                                                     |
| Submitted By: vinayagamoorthy, vinacs                      9/12/2007 4:23:55 PM      |
| Modified By: administrator                                      6/19/2008 4:36:24 PM |
| Priority: High                                                                       |
| Category: Unknown                                                                    |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:9/12/2007 12:25:57 PM  
Submitted on behalf of Vinacs from Caltrans via email:

I am reporting a strange behavior of BRASS program.

We are rating a 90 ft simple span bridge, where we usually rate the bridge using 10 different trucks.

4/19/2016 3:05:49 PM

HRS AASHTO

1020

Complete Issue Information

The reactions at left and right end of the girder for 9 of the specified trucks were reported as same. However, for one particular truck (that has 11 axles), reactions at both ends were not reported the same.

Details review of the results showed, BRASS estimated an impact factor value of 30% for left end and 23.26% for right end. The correct value is 23.26%. I could not understand the logic behind this. Again, as I said it occurs only for the 11 axle trucks that we specified. I repeated this with different 11 axle trucks and I got unsymmetrical results

Here the trucks I used:

```
# 910 TRUCK-IMP
# 940 SPECIAL-TRUCK 1, 13.000, 15.750, 12.000, 4.500
# 940 SPECIAL-TRUCK 1, 12.000, 13.500, 12.000, 4.500
# 940 SPECIAL-TRUCK 1, 12.000, 13.500, 12.000, 4.500
# 940 SPECIAL-TRUCK 1, 12.000, 13.500, 12.000, 4.500
# 940 SPECIAL-TRUCK 1, 12.000, 13.500, 12.000, 4.500
# 940 SPECIAL-TRUCK 1, 12.000, , , , ,
      P11_-_SPLI~1,/
      Truck:
# 940 SPECIAL-TRUCK 2, 13.000, 14.000, 12.000, 14.000
# 940 SPECIAL-TRUCK 2, 12.000, 14.000, 12.000, 14.000
# 940 SPECIAL-TRUCK 2, 12.000, 14.000, 12.000, 14.000
# 940 SPECIAL-TRUCK 2, 12.000, 14.000, 12.000, 14.000
# 940 SPECIAL-TRUCK 2, 12.000, 14.000, 12.000, 14.000
# 940 SPECIAL-TRUCK 2, 12.000, , , , ,
```

LENGTH OF SPAN NO. 1 = 90.00 FEET MAX ACTIONS AND DISPLACEMENTS FOR LIVE LOAD NO. 1: Truck:

WHEEL DISTRIBUTION FACTOR = 1.455  
 POINT POS NEG POS NEG POS NEG POS NEG  
 POS NEG POS NEG POS NEG  
 MOMENT MOMENT AXIAL AXIAL SHEAR SHEAR REACT. REACT.  
 X X Y Y REACT. REACT.

| DEF.   | DEF.   | DEF.   | DEF.   | IMPACT | IMPACT |       |       |     |  |
|--------|--------|--------|--------|--------|--------|-------|-------|-----|--|
| K-FT   | K-FT   | KIPS   | KIPS   | KIPS   | KIPS   | KIPS  | KIPS  |     |  |
| FEET   | FEET   | FEET   | FEET   | %      | %      |       |       |     |  |
| 1.000R | 0.0    | 0.0    | 0.0    | 0.0    | 130.1  | 0.0   | 130.1 | 0.0 |  |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 30.00  | 0.00   |       |       |     |  |
| 1.100  | 927.1  | 0.0    | 0.0    | 0.0    | 103.4  | -3.3  |       |     |  |
| 0.0000 | 0.0000 | 0.0412 | 0.0000 |        |        |       |       |     |  |
| 1.200  | 1557.2 | 0.0    | 0.0    | 0.0    | 86.1   | -7.7  |       |     |  |
| 0.0000 | 0.0000 | 0.0761 | 0.0000 |        |        |       |       |     |  |
| 1.300  | 2096.9 | 0.0    | 0.0    | 0.0    | 66.0   | -15.6 |       |     |  |
| 0.0000 | 0.0000 | 0.1027 | 0.0000 |        |        |       |       |     |  |
| 1.400  | 2339.7 | 0.0    | 0.0    | 0.0    | 50.0   | -24.7 |       |     |  |
| 0.0000 | 0.0000 | 0.1195 | 0.0000 |        |        |       |       |     |  |
| 1.500  | 2479.1 | 0.0    | 0.0    | 0.0    | 37.1   | -37.4 |       |     |  |
| 0.0000 | 0.0000 | 0.1252 | 0.0000 |        |        |       |       |     |  |



Complete Issue Information

|        |        |        |        |       |      |        |       |     |  |
|--------|--------|--------|--------|-------|------|--------|-------|-----|--|
| 1.600  | 2339.7 | 0.0    | 0.0    | 0.0   | 24.4 | -51.3  |       |     |  |
| 0.0000 | 0.0000 | 0.1194 | 0.0000 |       |      |        |       |     |  |
| 1.700  | 2094.4 | 0.0    | 0.0    | 0.0   | 15.3 | -68.4  |       |     |  |
| 0.0000 | 0.0000 | 0.1026 | 0.0000 |       |      |        |       |     |  |
| 1.800  | 1559.8 | 0.0    | 0.0    | 0.0   | 7.6  | -86.4  |       |     |  |
| 0.0000 | 0.0000 | 0.0760 | 0.0000 |       |      |        |       |     |  |
| 1.900  | 923.2  | 0.0    | 0.0    | 0.0   | 3.2  | -108.0 |       |     |  |
| 0.0000 | 0.0000 | 0.0411 | 0.0000 |       |      |        |       |     |  |
| 1.100L | 0.0    | 0.0    | 0.0    | 0.0   | 0.0  | -122.5 | 122.5 | 0.0 |  |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 23.26 | 0.00 |        |       |     |  |

LENGTH OF SPAN NO. 1 = 90.00 FEET MAX ACTIONS AND DISPLACEMENTS FOR LIVE LOAD NO. 2: Truck:

WHEEL DISTRIBUTION FACTOR = 1.455  
 POINT POS NEG POS NEG POS NEG POS NEG  
 POS NEG POS NEG POS NEG  
 MOMENT MOMENT AXIAL AXIAL SHEAR SHEAR REACT. REACT.  
 X X Y Y REACT. REACT.

| DEF.   | DEF.   | DEF.   | DEF.   | IMPACT | IMPACT |       |      |      |      |
|--------|--------|--------|--------|--------|--------|-------|------|------|------|
| K-FT   | K-FT   | KIPS   | KIPS   | KIPS   | KIPS   | KIPS  | KIPS | KIPS | KIPS |
| FEET   | FEET   | FEET   | FEET   | %      | %      |       |      |      |      |
| 1.000R | 0.0    | 0.0    | 0.0    | 0.0    | 85.9   | 0.0   | 85.9 | 0.0  |      |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 30.00  | 0.00   |       |      |      |      |
| 1.100  | 611.1  | 0.0    | 0.0    | 0.0    | 71.6   | -2.4  |      |      |      |
| 0.0000 | 0.0000 | 0.0264 | 0.0000 |        |        |       |      |      |      |
| 1.200  | 1033.8 | 0.0    | 0.0    | 0.0    | 57.8   | -5.8  |      |      |      |
| 0.0000 | 0.0000 | 0.0488 | 0.0000 |        |        |       |      |      |      |
| 1.300  | 1346.5 | 0.0    | 0.0    | 0.0    | 45.7   | -10.4 |      |      |      |
| 0.0000 | 0.0000 | 0.0658 | 0.0000 |        |        |       |      |      |      |
| 1.400  | 1535.3 | 0.0    | 0.0    | 0.0    | 34.6   | -17.1 |      |      |      |
| 0.0000 | 0.0000 | 0.0765 | 0.0000 |        |        |       |      |      |      |
| 1.500  | 1584.4 | 0.0    | 0.0    | 0.0    | 25.2   | -25.0 |      |      |      |
| 0.0000 | 0.0000 | 0.0801 | 0.0000 |        |        |       |      |      |      |
| 1.600  | 1534.8 | 0.0    | 0.0    | 0.0    | 17.3   | -34.4 |      |      |      |
| 0.0000 | 0.0000 | 0.0764 | 0.0000 |        |        |       |      |      |      |
| 1.700  | 1338.8 | 0.0    | 0.0    | 0.0    | 10.4   | -45.5 |      |      |      |
| 0.0000 | 0.0000 | 0.0657 | 0.0000 |        |        |       |      |      |      |
| 1.800  | 1028.7 | 0.0    | 0.0    | 0.0    | 5.8    | -57.5 |      |      |      |
| 0.0000 | 0.0000 | 0.0486 | 0.0000 |        |        |       |      |      |      |
| 1.900  | 608.5  | 0.0    | 0.0    | 0.0    | 2.4    | -71.3 |      |      |      |
| 0.0000 | 0.0000 | 0.0263 | 0.0000 |        |        |       |      |      |      |
| 1.100L | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | -81.3 | 81.3 | 0.0  |      |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 23.26  | 0.00   |       |      |      |      |

Could please let me know what is going on?

Structure Alternative : Span 1,2, and 3 (1961) 09/07  
 Member G1: Alternative: Exterior Steel Girder  
 (See attached file: 23 0138Caltrans.xml)

Complete Issue Information

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: Saturday, September 15, 2007 1:48:07 AM  
I suspect there is a problem with determining impact when both the lead and rear axle are not located on the bridge. The first truck is 93.5 feet long while the span length is only 90 feet. The second truck is longer than the first. I will forward this issue to WYDOT for assignment to a BRASS problem log.

FROM: bgoodrich DATE: Thursday, September 20, 2007 12:05:04 PM  
E-mail from Vinacs:

Thanks for checking this out for us.

One observation that doesn't make sense is that the impact factor in the one end is estimated as 30%, but the impact at the other end is estimated as 23.26%.

Typically, I presume that BRASS runs all the trucks forward and backwards in order to obtain the results. If this is true, the program should have listed the same impact at both ends.

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: Wednesday, October 03, 2007 11:39:11 AM  
WYDOT assigned this to BRASS Problem Log 782.

FROM: bgoodrich DATE: Friday, December 14, 2007 1:39:29 PM  
I investigated the impact calculations and found the number of axles was not the issue but rather the total length of the truck. The span length was 90 ft and the truck length was 92.25 ft. BRASS did not correctly handle the case when the rear and/or lead axles were off the bridge for the shear impact or for the end reaction impact. This issue was corrected in the BRASS-GIRDER(STD) 6.0.1 engine, which should be released with the next version of Virtis.

Issue ID: 8142  
Subject: GFS Floorbeam Location Wizard Apparently Creates Erroneous Floorbeam Locations

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 9/12/2007 6:52:17 PM  
Modified By: administrator 6/19/2008 4:36:24 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:05:49 PM

HRS AASHTO

1023

### Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
| Duray, Jim  | New       | High | Unknown     |
| Lee, Herman | Assigned  |      |             |
| Duray, Jim  | New       | High | Unknown     |
|             | Suspended |      | Enhancement |
| Duray, Jim  | Suspended | High | Enhancement |

### Contacts

| Name          | Company      | Email 1                    | Phone 1      |
|---------------|--------------|----------------------------|--------------|
| Tim Armbrecht | Illinois DOT | tim.armbrecht@illinois.gov | 217-782-6266 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 8143.16926 | Suspended     | GFS Girder Member Schematic Shows Stringer Diaphragms |

### Description

FROM:tarmbrecht DATE:Wednesday, September 12, 2007 2:52:23 PM

Please verify that after entering the correct information in the Floorbeam Location Wizard the locations of the floorbeams are found to be incorrect. In the referenced example there should be a floorbeam at each diaphragm location along the main girder between 0.5834' from each end bearing.

FROM:jduray DATE:9/13/2007 11:20:17 AM  
Is this new to 5.6?

FROM:hlee DATE:9/19/2007 9:11:14 AM  
Fixed a defect in determining the previous row end distance in the wizard. The test case for the above described floorbeam locations is attached.  
Resolved for 5.6 Release.

FROM:ssalata DATE:10/3/2007 8:39:05 AM  
Tested in 5.6 Beta 5

FROM:tarmbrecht DATE:Friday, October 05, 2007 3:02:18 PM  
Accepted

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8143                                                 |
| Subject: GFS Girder Member Schematic Shows Stringer Diaphragms |

## Complete Issue Information

|                  |                               |                      |  |
|------------------|-------------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Virtis |                      |  |
| Primary Contact: | Duray, Jim                    |                      |  |
| Submitted By:    | Armbrecht, Tim                | 9/12/2007 6:55:34 PM |  |
| Modified By:     | administrator                 | 6/19/2008 4:36:24 PM |  |
| Priority:        | High                          |                      |  |
| Category:        | Enhancement                   |                      |  |

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Lee, Herman     | Assigned  |          |          |
|                 | Duplicate |          |          |
| Lee, Herman     | Duplicate | High     | Unknown  |

## Contacts

| Name         | Company     | Email 1                  | Phone 1      |
|--------------|-------------|--------------------------|--------------|
| Daniel Jones | Alabama DOT | jonesdan@dot.state.al.us | 334-242-6752 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | fb.pdf              |             |

## Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 8148.16921 | Duplicate     | Floor beam location wizard |

## Description

FROM:tarmbrecht DATE:Wednesday, September 12, 2007 2:55:34 PM

It appears that in the schematic view of the main Girder Member of a Girder-Floorbeam-Stringer system bridge, the diaphragms for the stringers are indicated. Since these diaphragms only affect the stringers and not the main girders, we don't feel that they should be shown in the Girder Member schematic. It lends to confusion in the diagram.

FROM:jduray DATE:9/13/2007 11:18:25 AM  
Is this new to 5.6?

4/19/2016 3:05:49 PM

HRS AASHTO

1025

Complete Issue Information

FROM:hlee DATE:9/14/2007 9:32:52 AM

May be the color used for the main girder diaphragm should be different than the color for stringer diaphragm. Currently, both are red.

FROM:tarmbrecht DATE:Tuesday, September 18, 2007 1:58:19 PM

Jim, the answer to your question is "no" - we checked it in 5.5 and it is still there. We only now discovered it. We agree with Herman's suggestion. Thanks.

|                                     |
|-------------------------------------|
| Issue ID: 8148                      |
| Subject: Floor beam location wizard |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jones, Daniel           | 9/13/2007 3:44:10 PM |
| Modified By: administrator            | 6/19/2008 4:36:24 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:rfulton DATE:Thursday, September 13, 2007 11:44:10 AM

this wizard does not work. It resets the location back to zero when you get past the first span. Attached adobe document to show.

FROM:hlee DATE:9/19/2007 9:18:30 AM

Duplicate of Incident 8142.

Complete Issue Information

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 8151                                                           |
| Subject: Questions on Distributed Dead Load Summary and P/S shear rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 9/17/2007 2:46:37 PM |
| Modified By: administrator            | 6/19/2008 4:36:24 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Education |
| Goodrich, Brian | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier             | Description                        |
|------|---------------------------------|------------------------------------|
|      | Book1.xls                       | Error screen shot (in spreadsheet) |
|      | W-12-<br>002_VIRTIS5.5_0906.bbd | BBD file                           |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 8152.16917 | Resolved      | Error trying to rate timber bridge |

### Description

FROM:bgoodrich DATE:Monday, September 17, 2007 10:46:38 AM  
E-mail from Michelle Salas via Mike Watters:

From: Micheal Watters [mailto:Micheal.Watters@dot.state.wy.us]  
Sent: Thursday, September 13, 2007 3:46 PM  
To: Goodrich@BridgeTech-Laramie.com  
Subject: Fwd: BRASS Question

Brian,

This e-mail is from a Virtis user. She should go through Baker first to have an incident number assigned. Since it is basically a question of the terminology used in the GIRDER(STD) engine, I thought you might have a quick answer. If not, I will have her send it off to Baker.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

>>> "Michelle Salas, PE" <msalas@qpec.org> 9/13/2007 2:05 PM >>>  
Mike,

Here is the BRASS output file that we discussed. The question that I have is in regards to the Distributed Dead Load Summary Table on page 9 of the output. What does it mean when it refers to Span No. "All". I can account for the loads in the last two rows of the table. Load Group 1 is for the haunch (0.0635 klf) and Load Group 2 is for the stay in place forms (0.0820 klf). I can not trace where the loads in the first two rows come from; Load Group 1 (0.7125 klf) and Load Group 2 (0.3205 klf). The diaphragms are

4/19/2016 3:05:50 PM

HRS AASHTO

1028

Complete Issue Information

supposed to be concentrated loads (0.925 k per diaphragm location), but it says that a concentrated dead load summary is not available.

The load rating is controlled by shear so I need to know how the program is calculating shear. If you can shed any light on this problem, I would appreciate it. If the answer does not come easily to you, let me know and I can then refer my question to the Virtis technical support.

Thank you,

Michelle Salas, P.E.  
Quiroga-Pfeiffer Engineering Corp.  
6621 Gulton Court NE  
Albuquerque, New Mexico, 87109  
Phone: (505)858-1456, ext. 206  
Fax: (505)858-1609

FROM:bgoodrich DATE:Monday, September 17, 2007 10:47:29 AM

The most recent version lists the following note under the Distributed Dead Load Summary:

"Note: A span number denoted as "All" indicates all TOP spans."

In the Distributed Dead Load Summary, the first line is for the slab load calculated by the dead load distribution module and shown earlier in the GIRDER LOADS SUMMARY REPORT. The second line is the combination of the wearing surface load and the barrier loads.

BRASS-GIRDER(STD) does not provide a concentrated load summary (even when concentrated loads were entered), which is why the note was provided.

To obtain details on the shear rating, the user must create a point of interest at the point in question, select the Engine tab, open the engine properties window, and turn on the intermediate output. Then, rerun the analysis for the member alternative. The BRASS output file will then contain details on the shear capacity.

|                                             |
|---------------------------------------------|
| Issue ID: 8152                              |
| Subject: Error trying to rate timber bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Ha, Binh                | 9/17/2007 3:38:41 PM |
| Modified By: administrator            | 6/19/2008 4:36:24 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Goodrich, Brian | Assigned  |          |          |
|                 | Duplicate |          |          |
| Goodrich, Brian | Duplicate | High     | Unknown  |

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 5512411.xml         |             |
|      | deck load.JPG       |             |

### Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 8160.16909 | Duplicate     | Deck load on cantilever floorbeam |

### Description

FROM:bgoodrich DATE:Monday, September 17, 2007 11:38:50 AM  
E-mail from Elizabeth Befikadu:

I was running a Timber bridge I keep getting this error I have attached the error message and the BBD file. Please can you look in to it and tell me what to do.

Thanks

Elizabeth Befikadu  
MHD Bridge section  
Room NO. 6500  
Tel. 617-973-7599  
Fax 617-973-7575

FROM:bgoodrich DATE:Monday, September 17, 2007 11:42:21 AM

It looks like the Madero libraries are missing from your hard-drive. These two files (Channel.mlb and

4/19/2016 3:05:50 PM

HRS AASHTO

1030

Complete Issue Information

Str\_asd.mlb) should be located in the same directory as the Virtis/Opis executable. If they are located elsewhere or are missing, there could be an installation problem. For my computer, this is the ..\Program Files\AASHTOWARE\VirtisOpis550 directory. I attached a zip file with these two files. Let me know if this works or not.

|                                            |
|--------------------------------------------|
| Issue ID: 8160                             |
| Subject: Deck load on cantilever floorbeam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: McCaffrey, Brian        | 9/25/2007 1:17:14 PM |
| Modified By: administrator            | 6/19/2008 4:38:37 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Tuesday, September 25, 2007 9:17:14 AM

This is a 5.5 problem also in 5.6 B4. See Floorbeam 7 in Spans 2-4. There is no load effect on the right side cantilever due to the deck.

See attached .xml file and moment diagram.

FROM:bgoodrich DATE:Tuesday, September 25, 2007 7:02:33 PM

This is a duplicate of Incident 7984.

## Complete Issue Information

Issue ID: 8162  
Subject: Truss member addition

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: McCaffrey, Brian 9/25/2007 1:22:11 PM  
Modified By: administrator 6/19/2008 4:36:23 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

4/19/2016 3:05:51 PM

HRS AASHTO

1032

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 8165.16904 | Resolved      | BRASS engine giving BOGUS rating |

Description

FROM:bmccaffrey DATE:Tuesday, September 25, 2007 9:22:11 AM

Add double angle only member capability.

FROM:hlee DATE:9/25/2007 11:30:56 AM  
Duplicate of Incident 8130.

|                                           |
|-------------------------------------------|
| Issue ID: 8165                            |
| Subject: BRASS engine giving BOGUS rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Leatherwood, Terry      | 9/25/2007 7:10:00 PM |
| Modified By: administrator            | 6/19/2008 4:36:23 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Education |
| Goodrich, Brian | Assigned |          |           |
| Lee, Herman     | Resolved |          |           |
| Lee, Herman     | Resolved | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 8166.16903 | Resolved      | sidewalk dead load and distribution questions |

### Description

FROM:tleatherwood DATE:Tuesday, September 25, 2007 3:10:00 PM

We recently encountered a problem in building the Virtis model for a new bridge.

When we build a model, we like to check it against its expected design loading. If we develop a rating factor of about 1.0 under the design loading and assumed design conditions, then it is some indication that we have a good model.

In building this model, the following conditions applied:

- 1) The bridge is a metric design. It was designed using the load factor method in 1999. It is basically a HS-20 (MS18 actually) design. We converted the metric units to English units when building our model.
- 2) The bridge was designed for a future wearing surface load of 1580 N/M. This works out to be about 2 ¾ inches of asphalt.
- 3) The bridge carries four (4) lanes of traffic and the designer undoubtedly reduced the live load distribution factor by 25% (as per AASHTO 3.12.1) as a result. The standard multi-lane distribution factors, computed by Virtis, do not take this reduction into account. They compute a multi-lane DF of 2.318. As an alternate value, we computed the DF using simple beam reaction and then multiplied it by 0.75. This gives a DF of 1.985 (interior girder – multi-lane) which is what we used in the analysis.

4/19/2016 3:05:51 PM

HRS AASHTO

1034

## Complete Issue Information

Once the model was created, we ran it with the HS-20 vehicle using both the Virtis Std. and BRASS engines. Both engines report that the interior girders control the ratings for the bridge.

The Virtis Std. engine gave us good results. It gave us an Inventory rating factor of 1.006 at the 2.5 point (middle of span #2). Given that span #2 is by far the longest span, this is exactly the result we expected. It seems to indicate that we have a good model.

However, the BRASS engine gives us a RF of only 0.857 and IS TELLING US THAT THE RATINGS ARE CONTROLLED AT THE 2.3 POINT!

Frankly, this is impossible. The beam cross section at the 2.3 point is IDENTICAL to the section at the 2.5 point. The steel yield strength is also IDENTICAL. The composite action with the concrete slab is IDENTICAL. The cross-bracing spacing is IDENTICAL.

It therefore follows that the capacity of the beam at the 2.3 point is IDENTICAL to the capacity at the 2.5 point. However, the dead and live loads at the 2.5 point are much greater than those at the 2.3 point. Therefore, this BRASS result is WRONG!

There are two (2) possible reasons as to why BRASS is giving us this bogus rating:

- A) We have made a subtle error in our Virtis model. This error affects the BRASS engine but does not affect the Virtis Std. engine.
- B) The BRASS engine has a bug in it.

We have looked through the BRASS output file so as to try to determine why it is giving us this bogus rating. Frankly, we do not have any real BRASS experts in our office. About the only guess we could come up with is that BRASS might be using the wrong capacity. Since the 2.3 point is near where the stresses in the beam reverse, BRASS seems to be calculating a capacity for both positive and negative bending. The capacity in negative bending is much lower, of course, since the slab does not contribute.

Note that the controlling load seems to be positive. If BRASS is combining the lower, negative capacity with the larger, positive moments, it might cause this result.

However, that is just a guess and might well be wrong.

Therefore, I have decided to submit this problem as an incident and ask your help in resolving it. I am sending you the XML file for the bridge model along with a PDF file that contains excerpts from the bridge plans.

If we have made an error in the bridge model that is causing BRASS to give us bogus results, we would greatly appreciate you pointing out where we went wrong.

On the other hand, if it is a bug in the BRASS engine, we would like you to report it to the BRASS folks so that it can be corrected.

Thanks,

Terry D. Leatherwood, P.E.  
Civil Engineering Manager 1

4/19/2016 3:05:51 PM

HRS AASHTO

1035

Complete Issue Information

Tennessee Department of Transportation  
Structure Inventory and Appraisal Office  
Suite 1200, James K. Polk Building  
505 Deaderick Street  
Nashville, TN 37243-0338  
Tel: (615) 741-0806  
Fax: (615) 532-5990  
Email: Terry.D.L Leatherwood@state.tn.us

FROM:tleatherwood DATE:Tuesday, September 25, 2007 3:11:05 PM

FROM:bgoodrich DATE:Wednesday, October 03, 2007 1:00:36 PM

I reviewed the plans and the bridge file. The low BRASS rating can be corrected by adjusting the dead load contraflexure locations in the member alternative engine properties. BRASS LFD requires that the user specify which bending sense to check for regions along the bridge. Both bending senses are NOT checked - only one. For Virtis users, these contraflexure locations must be set as a percentage of the span length. By default, these are set to 30 and 70 depending on the location of the span. You can run the structure once and look at the dead load actions for a uniform load on all spans to determine the percentages to input. I entered the following approximate contraflexure locations:

Span 1: 66  
Span 2: 21 and 79  
Span 3: 34

This changed the BRASS rating to 1.04.

FROM:bgoodrich DATE:Thursday, October 04, 2007 7:39:34 AM  
E-mail from Terry Leatherwood (10/3/2007):

Hi Brian,

Thanks very much for the information. I thought that it must have been some kind of problem related to the contraflexure locations. Unfortunately, we don't have a whole lot of experience with the BRASS engine and did not realize that it may need to be "tweaked" when dealing with a bridge with an unusual span ratio.

Your prompt response to this incident is much appreciated.

Terry D. Leatherwood, P.E.  
Civil Engineering Manager 1  
Tennessee Department of Transportation  
Structure Inventory and Appraisal Office Suite 1200, James K. Polk Building  
505 Deaderick Street  
Nashville, TN 37243-0338  
Tel: (615) 741-0806  
Fax: (615) 532-5990  
Email: Terry.D.L Leatherwood@state.tn.us

---

4/19/2016 3:05:51 PM

HRS AASHTO

1036

### Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 8166                                         |
| Subject: sidewalk dead load and distribution questions |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Goodrich, Brian         | 9/25/2007 10:04:32 PM |
| Modified By: administrator            | 6/19/2008 4:36:22 PM  |
| Priority: High                        |                       |
| Category: Education                   |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Unknown  |
| Goodrich, Brian | Assigned | High     | Unknown  |

### Contacts

| Name             | Company          | Email 1                             | Phone 1      |
|------------------|------------------|-------------------------------------|--------------|
| Brian Goodrich   | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Jeff Triezenberg | TranSystems      | jstriezenberg@transystems.<br>com   | 517-332-9632 |

### Documents

| Name | Resource Identifier                        | Description                            |
|------|--------------------------------------------|----------------------------------------|
|      | BrassShearCalcs.pdf                        | BRASS Shear Calculations at POI=209.09 |
|      | R01-13061_Calcs.pdf                        |                                        |
|      | R01-13061-PCI Suporting<br>Calculation.pdf |                                        |
|      | R01-13061 Hand Calcs.doc                   |                                        |
|      | Incident8167_Mich.zip                      | BRASS Data and Output files            |
|      | R01-13061.xml                              |                                        |

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 8167.16902 | Assigned      | Prestress I girder rates less than 1 - problem with shear capacity |



Complete Issue Information

Description

FROM:bgoodrich DATE:Tuesday, September 25, 2007 6:04:51 PM  
Entered for Yihong Gao:

I have a question on sidewalk:

I enter sidewalk dimensions in Structure Typical Section Window, does Virtis compute sidewalk deadload automatically from structure typical section window? How does it distribute deadload of sidewalk or rails? Does Virtis evenly distribute them over all beams? Thanks

Yihong

Yihong Gao, PE  
Design Engineer  
Bridge Office  
Minnesota Department of Transportation  
Tel: (651)366-4492  
Fax: (651)366-4509

FROM:hlee DATE:10/1/2007 11:15:42 AM  
E-mail reply to Yihong Gao:

=====  
I have attached the BRASS LFD engine related Dead Load topic in Virtis/Opis Help. For other analysis engines, please refer to the Dead Loads Help topic for that particular engine. When you enter sidewalk load, the load is assigned to the selected load case. The load is applied to the stage selected for that load case. The load distribution for each stage is defined in the Superstructure Loads window DL Distribution tab. Each engine also has assumptions on load distributions. These assumptions are listed in the Analysis Progress window.  
=====

Issue ID: 8167  
Subject: Prestress I girder rates less than 1 - problem with shear capacity

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 9/26/2007 12:08:43 PM  
Modified By: bgoodrich 9/26/2012 6:42:24 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 8185.16884 | On Hold       | Floorbeam Definition Window (GF) |

Description

FROM:kkennelly DATE:9/26/2007 8:09:52 AM  
Entered on behalf of Ziad Hanna, via email:

Dear Sir,

I'm doing independent check for prestress I girder bridge, this bridge is rated less than one in shear using Virtis. Performing the independent check using other tools and some hand calculation, I noticed that the capacity is higher than what is calculated from Virtis, leading to higher rating factor. I'm attaching my hand calculation with the Virtis (xml file). I want to know the reason behind this, I really appreciate your help.

Thanks.

Ziad Hanna, M.A.Sc.,P.E., P.Eng  
Project Manager  
Alfred Benesh and Company  
222 North Washington Square, Suite 200  
Lansing, Michigan 48933  
Phone: 517-482-1682-ext-28  
Fax: 517-482-7180

zhanna@benesch.com  
<mailto:z@benesch.com>

FROM:jtrizeenberg DATE:Thursday, September 27, 2007 8:16:33 AM  
We tried to verify the BRASS results with the Virtis engine. This gave some unexpected results.

The rating for the fascia girder is -99. I'm not sure why this is happening.

The interior girder is rated quite low and is controlled by the positive moment capacity at 1.5% of the span. This location is the centerline of bearing for the prestressed beam. I believe this is happening

4/19/2016 3:05:52 PM

HRS AASHTO

1039



Complete Issue Information

This issue was assigned to BRASS Problem Log 844.

FROM: Brian Goodrich DATE: 1/21/2010 4:32:09 PM Mountain Standard Time  
Upon further investigation of the difference into the Vci term, we have found the following differences between the hand calculations and BRASS:

1. The section properties are slightly different.
2. BRASS considers the harped strands.
3. The unfactored live load moment used in the BRASS shear calculations is that for positive flexure.
4. The unfactored negative live load moment in BRASS does not match the live load moment from the hand calculations.
5. The shear concurrent with maximum moment is different. In BRASS, it is in the opposite direction of the dead load. In the hand calculations, it is in the same direction.
6. BRASS limits the ratio of  $M_{cr}/M_{max}$  to 1.0 when  $M_{max} < M_{cr}$ .

FROM: Brian Goodrich DATE: 1/28/2010 2:50:20 PM Mountain Standard Time  
I forwarded these latest comments to the user.

FROM: Brian Goodrich DATE: 5/18/2011 8:17:09 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 49.

FROM: Brian Goodrich DATE: 9/26/2012 12:10:04 PM Mountain Daylight Time  
Further investigation revealed the following:

1. BRASS considers the sign of the dead load shear when combining it with the shear concurrent live load. This leads to a much lower "V<sub>i</sub>" value.
2. BRASS was being run with a control option that limited the ratio  $M_{cr}/M_{max}$  to 1.0. See the shear options on the BRASS LFD engine properties for the Member Alternative in question. I changed this option to match the user's calculations.
3. BRASS determines if the positive or negative live load moment is used by checking if the moment concurrent with shear plus the dead load moment is greater than 1 or not.
4. BRASS calculates the shear depth to the centroid of the prestressing force at the point of interest. This leads to a slightly lower "d" value.

A PDF file illustrating how the BRASS values are obtained and the data and output files were attached (BrassShearCalcs.pdf and Incident8167\_Mich.zip).

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 8185<br>Subject: Floorbeam Definition Window (GF)           |
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Lee, Herman |

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Submitted By: Bhanushali, Girish | 10/5/2007 1:53:45 PM |
| Modified By: administrator       | 6/19/2008 4:36:21 PM |
| Priority: High                   |                      |
| Category: Unknown                |                      |

### History

| Primary Contact    | Status   | Priority | Category  |
|--------------------|----------|----------|-----------|
| Bhanushali, Girish | New      | High     | Unknown   |
|                    | Assigned |          |           |
|                    | Resolved |          | Education |
| Bhanushali, Girish | Resolved | High     | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 8186.16883 | Resolved      | Virtis Truss Analysis - UnSupported XSections |

### Description

FROM:gbhanushali DATE:10/5/2007 9:50:49 AM

I came across this as part of support email investigation.

Cantilever Input for floorbeam:

Virtis help says ,

This input field is only available for girder-floorbeam-stringer and floorbeam-stringer superstructure definitions.

I see those fields also on FSys GF struct. def. floorbeam def. window.

Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 8186                                         |
| Subject: Virtis Truss Analysis - UnSupported XSections |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Bhanushali, Girish      | 10/5/2007 2:00:17 PM |
| Modified By: administrator            | 6/19/2008 4:36:21 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbhanushali DATE:10/5/2007 10:01:03 AM  
Following is abstract of bridgeware emails from : Ai Fen Jimenezwu" <AJimenezwu@bryant-engrs.com>

-----

Hi, thank you for your help with the floorbeam locations last time. This time is the truss input. Attached is the bbd file and a pdf file that contains information about the truss member sections (sections 1 and 2 only) . I keep on getting the following error message.

Complete Issue Information

Parsing input commands...

WARNING: DefaultMemConnection command skipped...

ERROR\_INFO: Please check if any anglebox components are specified correctly...

ERROR\_INFO: Unsupported angle box cross section...

ERROR\_INFO: Error parsing anglebox cross section " Section1 "...

### Error at line 32 ###:

?

ERROR\_INFO: Please check if any anglebox components are specified correctly...

ERROR\_INFO: Unsupported angle box cross section...

ERROR\_INFO: Error parsing anglebox cross section " Section2 "...

### Error at line 43 ###:

?

-----

FROM:gbhanushali DATE:10/5/2007 10:04:42 AM

FROM:gbhanushali DATE:10/5/2007 10:05:36 AM

Following is abstract from bridgeware emails from : Ai Fen Jimenezwu" <AJimenezwu@bryant-engrs.com>

I have these other questions:

-----

1. How do you input diaphragms for the Floorbeams? (It's a Truss-Floorbeam System w/o stringers)
2. Can you model the Floorbeams with a cantilever going beyond the centerline of the truss? (The floorbeams are cantilevers and support the sidewalks outside of the truss)

-----

FROM:gbhanushali DATE:10/5/2007 10:07:13 AM

FROM:gbhanushali DATE:10/5/2007 10:10:12 AM

Email reply:

--

VirtisTruss command language.pdf (help) page 22 shows the list of supported cross sections . Section 1 and Section 2 partial cross sections are not currently supported. Using non-detailed cross section can be an option for unsupported cross sections.

Method of Solution. pdf on page 3 and page 4 describes how deck load and floor beam loads are applied to the truss.  
Deck load and side walk load UDLs are converted by virtis to panel point load and applied on truss. Similarly floorbeam self wt converted to point load and applied on the truss.  
So floorbeam modeled as cantilevers beyond truss center line should be ok.

4/19/2016 3:05:52 PM

HRS AASHTO

1044

Complete Issue Information

TF structure definition - if your diaphragms are connecting the main truss members then you can define them on Framing Plan Details Window - Diaphragm tab.  
 Diaphragms connecting floor beam to floor beam case is not supported.

FROM:gbhanushali DATE:10/5/2007 10:12:07 AM  
 Email reply:

1. Truss Floor System Structure Definition  
 Cantilever Floor beams are not supported

2. Truss Floor Line Structure Definition  
 Cantilever Floor beams are supported : You can enter data on Floor beam member definition window.  
 (See Virtis help on floor beam member definition)  
 Note: For TF Line struct. def. you will have to manually compute super structure load and then apply them on truss panel points. (See Truss Method of Solution 1.2.2)

Same applies to Girder Floor System and Girder Floor Line Struct. Defs. (regards to supporting cantilever floor beams )

Issue ID: 8191  
 Subject: Unable to rate Steel Non-Detailed Beam.

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Lee, Herman 10/8/2007 1:22:33 PM  
 Modified By: administrator 6/19/2008 4:36:21 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 8192.16877 | Resolved      | Check vehicle at the beginning of truss rating. |

Description

FROM:hlee DATE:10/8/2007 9:18:53 AM  
Attached Steel Non-Detailed Beam BARS data file.

Error message:

=====  
Error initiating BRASS engine properties parsers!  
09:24:58 AM - Line 87 in source file .\BrassEngineProperties.cpp.

Invalid analysis module component!  
09:24:58 AM - Line 1242 in source file .\EngineExport.cpp.  
=====

FROM:hlee DATE:12/27/2007 8:32:55 AM  
The cause is the database modifications for Incident 7014.  
Updated BRASS export to handle the database modifications for Incident 7014.  
Resolved for 6.0.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 8192                                           |
| Subject: Check vehicle at the beginning of truss rating. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 10/8/2007 1:31:02 PM |
| Modified By: administrator            | 6/19/2008 4:36:20 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 25462022.dat           |             |
|      | 25462022.log           |             |
|      | 25462022-BAR710.OUT    |             |
|      | Mbr_Alt_1-Virtis56.OUT |             |

### Tasks

| Name       | Current State | Summary                                                                      |
|------------|---------------|------------------------------------------------------------------------------|
| 8194.16875 | Resolved      | Virtis Std LFD Engine ratings for continuous span composite steel structure. |

### Description

FROM:hlee DATE:10/8/2007 9:27:04 AM

Currently, if there is no rating vehicle selected, truss rating will not complain until after the finite element analysis.

FROM:hlee DATE:11/13/2007 9:18:53 AM

Resolved for 6.0 Release.

### Complete Issue Information

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 8194                                                                        |
| Subject: Virtis Std LFD Engine ratings for continuous span composite steel structure. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 10/8/2007 7:21:54 PM |
| Modified By: administrator            | 6/19/2008 4:36:20 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Goodrich, Brian | Assigned | High     | Education |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

### Contacts

| Name           | Company          | Email 1                         | Phone 1       |
|----------------|------------------|---------------------------------|---------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Yihong Gao     | Minnesota DOT    | Yihong.Gao@dot.state.mn.us      | (651)366-4492 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 8195.16874 | Resolved      | Section properties for composite section. |

### Description

FROM:hlee DATE:10/8/2007 2:27:26 PM  
Submitted on behalf of Wes Kellogg, OK DOT.

Attached BAR7 data and log files.

Virtis rating results are not comparable with standalone BAR7 program.

FROM:hlee DATE:11/8/2007 2:34:42 PM

4/19/2016 3:05:53 PM

HRS AASHTO

1048

Complete Issue Information

Attached Virtis rating results and BAR710 rating results. The rating results are comparable, IR: 0.95 vs 0.92 and OR: 1.59 vs 1.53.

|                                                    |
|----------------------------------------------------|
| Issue ID: 8195                                     |
| Subject: Section properties for composite section. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Gao, Yihong             | 10/9/2007 4:35:40 PM |
| Modified By: administrator            | 6/19/2008 4:36:20 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:10/9/2007 12:32:10 PM

Submitted on behalf of Yihong Gao, Minnesota Department of Transportation:

4/19/2016 3:05:53 PM

HRS AASHTO

1049

Complete Issue Information

Received Bridgeware e-mail:

=====

I would like to know how Virtis calculate the section properties of the composite sections for positive and negative moment area.  
 Positive moment area, do composite sections include steel beam+deck rebar+deck conc?  
 Negative moment area, do composite sections include steel beam+deck rebar only?  
 Is there difference between stiffness calculations and stress calculations?

=====

Received Bridgeware e-mail:

=====

I am using BRASS LFD for rating. It is a steel girder with concrete deck continuous 4-span bridge.  
 Thanks

=====

FROM:hlee DATE:10/9/2007 3:18:34 PM

Received Bridgeware e-mail:

=====

Once you are done investigation, please reply it by email because I don't have username and password set up for support center yet.

=====

FROM:bgoodrich DATE:Thursday, October 11, 2007 9:28:42 AM

For positive moment area, BRASS LFD includes the steel beam and deck concrete.  
 For negative moment area, BRASS LFD includes the steel beam and deck reinforcement.  
 There is not a difference between the section properties used for stiffness and those used for the stress calculations.

|                                             |
|---------------------------------------------|
| Issue ID: 8197                              |
| Subject: Effective flange width computation |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: McCaffrey, Brian        | 10/10/2007 7:24:01 PM |
| Modified By: administrator            | 6/19/2008 4:36:20 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

4/19/2016 3:05:53 PM

HRS AASHTO

1050

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name        | Company                        | Email 1        | Phone 1       |
|-------------|--------------------------------|----------------|---------------|
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Paul Jensen | Montana DOT                    | pjensen@mt.gov | 406-444-9245  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8204.16865 | Suspended     | Reports from the Toolbar |

### Description

FROM:bmccaffrey DATE:Wednesday, October 10, 2007 3:24:12 PM

The attached bridge has the beam spacing set along the support. If you try to calculate the eff. flange width automatically, then the 'End flange width' is set to zero. You cannot override that field if the beam spacing is set along the suport.

See the first superstructure definition. This only happens on member alt G3.

This has worked in previous versions and does not work in either 5.5 or 5.6 B6.

FROM:hlee DATE:10/16/2007 8:50:30 AM

Fixed a bug in locating the span number when given a distance along the structure.  
Resolved for 5.6 Release.

## Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 8204                    |
| Subject: Reports from the Toolbar |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Teal, Dean              | 10/11/2007 6:22:44 PM |
| Modified By: administrator            | 6/19/2008 4:38:37 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Beckie Curtis  | Michigan DOT     | CurtisR4@michigan.gov               | 517-322-1186 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L-08-041new.bbd     |             |

## Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8212.16857 | Resolved      | Hybrid plate girder questions. |

## Description

FROM:dteal DATE:Thursday, October 11, 2007 2:22:44 PM  
We have at the top of the Report a pull down for report type.

This contains  
BWS  
LFD analysis

4/19/2016 3:05:54 PM

HRS AASHTO

1052

Complete Issue Information

LRFD analysis

The LFD analysis gives us a report for LFD load rating  
The LRFD analysis gives us LRFD design information

If I do a LRFR rating – the report is blank  
It should be populated

I am using IE 7 if that makes any difference

FROM:pjensen DATE:Friday, October 12, 2007 4:44:47 PM  
I have ie 7 - I had to reinstall the xml parser plugging. This is the same issue i had with acrobat after upgrade.... The system dose not update because is sees that it is installed.

FROM:jduray DATE:10/15/2007 8:53:23 AM  
Populating that report was not part of our work plan for LRFR. I agree it is needed.

|                                         |
|-----------------------------------------|
| Issue ID: 8212                          |
| Subject: Hybrid plate girder questions. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 10/15/2007 8:02:33 PM |
| Modified By: administrator            | 6/19/2008 4:36:19 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:05:54 PM

HRS AASHTO

1053



Complete Issue Information

FROM:hlee DATE:10/15/2007 3:56:37 PM  
Received via e-mail (Elizabeth.Befikadu@state.ma.us):

=====

I was working on one hybrid plate girder and I have a couple of questions.

- 1) Does Virtis consider the hybrid factor
- 2) If I have a 46 ksi steel what will be the allowable bending stress at positive region. I was looking at the brass output and I have two different type of bending stress which stated one based on input spacing and the other based on maximum spacing I don't know why it depends on the transverse stiffener for positive moment region at midspan.

I have attached the bbd file please look at the North side girder system and go to copy of g2

Thanks for you help

Elizabeth Befikadu  
MHD Bridge section

=====

Please e-mail the reply to Elizabeth.

FROM:hlee DATE:10/16/2007 7:15:37 AM  
Received via e-mail (Elizabeth.Befikadu@state.ma.us):

=====

I checked that Virtis consider hybrid factor that part is solved the only part remaining is what is the allowable bending stress calculated based on the spacing of stiffener spacing. Where is it used for ? I found out that is not for flexural rating.

Please use this bbd file I found an error in the previous one

=====

FROM:bgoodrich DATE:Monday, October 22, 2007 2:48:11 PM  
I looked into the allowable bending stress that BRASS is calculating. As far as I can tell, BRASS limits the bending stress based on Article 10.34.4.4 (Equation 10-30). This appears to be a flexure-shear interaction issue.

FROM:bgoodrich DATE:Monday, October 22, 2007 2:49:00 PM  
E-mail from Elizabeth (10/19/2007):

Bin told me he has contacted you about the hybrid factor before he said Virtis doesn't consider hybrid factor. Can you clarify this for me I have a number of hybrid bridges .

FROM:bgoodrich DATE:Monday, October 22, 2007 2:49:58 PM

4/19/2016 3:05:54 PM

HRS AASHTO

1054

### Complete Issue Information

BRASS is calculating the hybrid factor based on AASHTO Article 10.40.2.1. This is apparent in the allowable stresses, which are  $0.543 * F_y * R$ .

|                                                 |
|-------------------------------------------------|
| Issue ID: 8233                                  |
| Subject: Truss Input Command Language PDF file. |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Li, Xinmei           |                        |
| Submitted By: Lee, Herman             | 10/24/2007 12:12:07 PM |
| Modified By: hlee                     | 5/27/2009 8:47:29 PM   |
| Priority: High                        |                        |
| Category: Bug                         |                        |

### History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Bhanushali, Girish | Assigned | High     | Unknown<br>Bug |
| Bhanushali, Girish | Assigned | High     | Bug            |
| Li, Xinmei         | Resolved |          |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 8233.16836 | Assigned      | Truss Input Command Language PDF file. |

### Description

FROM:hlee DATE:10/24/2007 8:10:44 AM  
All references to "command 8" should be "command 6.8".

FROM:hlee DATE:10/24/2007 9:33:57 AM

4/19/2016 3:05:54 PM

HRS AASHTO

1055

Complete Issue Information

Starting form MemberCrossSection, links in "LIST OF TRUSS INPUT COMMANDS" are incorrect.

FROM:hlee DATE:10/24/2007 10:52:48 AM  
PanelPoint Command is not bookmarked.

FROM: Xinmei Li DATE: 8/19/2008 4:11:10 PM Eastern Daylight Time  
All above 3 items are fixed.

FROM: Herman Lee DATE: 5/27/2009 3:08:23 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

|                                            |
|--------------------------------------------|
| Issue ID: 8238                             |
| Subject: Continuous Truss Analysis problem |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Barnhill, Gale          | 10/25/2007 5:14:49 PM |
| Modified By: administrator            | 6/19/2008 4:36:17 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Bhanushali, Girish | Assigned |          |          |
| Lee, Herman        | Resolved |          | Bug      |
| Lee, Herman        | Resolved | High     | Bug      |

Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

Documents

4/19/2016 3:05:55 PM

HRS AASHTO

1056

Complete Issue Information

| Name | Resource Identifier                                                        | Description        |
|------|----------------------------------------------------------------------------|--------------------|
|      | Continuous Truss from Gale<br>Barnhill.xml<br>25462022.dat<br>25462022.log | XML from Virtis5.5 |

Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 8244.16825 | Assigned      | Imported BAR7 effective deck thickness for symmetrical structure |

Description

FROM:gbarnhill DATE:Thursday, October 25, 2007 1:14:58 PM  
I have modeled a 3 span continuous deck truss. Verify does not give any errors and the schematic shows the geometry I intended.  
The stringers are continuous over FB 1 thru FB 29. In order to get Virtis to run, I created 3 stringer units.  
Unit1 from FB 1 to FB 9, Unit2 from FB 9 to FB 21 and Unit3 from FB 21 to FB 29.  
When I try to analyze the Truss, it stops with the following final few lines--  
Performing Live Load Analysis...  
Generating nodes...  
Generating truss elements...  
Generating panelpoint liveload cases...  
// LL@ U1 : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 3  
// LL@ U2 : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 4  
// LL@ U3 : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 7  
.....  
// LL@ U4' : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 52  
// LL@ U3' : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 54  
// LL@ U2' : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 56  
// LL@ U1' : Fx = 0.000 kip , Fy = -1.000 kip, NodeNum 58  
Initiating finite element analysis...  
FEA - Building model...  
FEA - Creating nodes...  
FEA - Creating elements...  
FEA - Creating constraints...  
FEA - Adding load cases...  
Verifying finite element model...  
Performing linear solution...  
Successful finite element analysis.  
???Error - Live load analysis failed...

Analysis failed!

Thanks for you help.  
Gale

Complete Issue Information

402-745-0375  
gale.barnhill@earthtech.com

FROM:hlee DATE:11/14/2007 2:36:13 PM  
Tested the truss in 5.6, the analysis completed. Some members (eg. L5U5) have very small live load forces, the resulting rating factors are huge.  
I updated the Rating Results report to output 99.00 when the calculated rating factor is greater than 99. Please note that although the Symmetry command is used, the support conditions will not be symmetrical. The entered support is L0 Roller and L9 Roller. The generated symmetrical supports will be pinned by default (L9' Pinned and L0' Pinned).

Resolved for 6.0 Release.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 8244                                                            |
| Subject: Imported BAR7 effective deck thickness for symmetrical structure |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Li, Xinmei           |                        |
| Submitted By: Lee, Herman             | 10/29/2007 12:15:36 PM |
| Modified By: hlee                     | 5/27/2009 8:42:31 PM   |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Li, Xinmei      | Assigned | High     | Unknown<br>Bug |
| Li, Xinmei      | Assigned | High     | Bug            |
|                 | Resolved |          |                |
|                 | Resubmit |          |                |
|                 | Resolved |          |                |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Complete Issue Information

Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8253.16816 | Resolved      | Error using varying distribution factors |

Description

FROM:hlee DATE:10/29/2007 8:11:53 AM  
Submitted on behalf of Wes Kellogg, OK DOT.

Attached BAR7 data and log files.

FROM:hlee DATE:11/8/2007 2:10:13 PM  
In Cross Section 3, 4, 5, 6, 9 and 10, the effective deck thickness should be 0.5" less than the total deck thickness.

FROM: Xinmei Li DATE: 7/15/2008 3:36:36 PM Eastern Daylight Time  
Cross Sections 3, 4, 5, 6, 9 and 10 are non-composite cross sections.  
In Bar7 User Manual, page 5-25, SLAB THICK, "For concrete T-beam bridges and composite sections, one-half inch will be subtracted from the total thickness to find the effective slab thickness."  
This bridge is a steel girder bridge, for composite sections, 0.5" is subtracted from the total thickness 7.5" to find the structural thickness.  
For non- composite sections, the total thickness 7.5" is the same as the structural thickness.

FROM: Herman Lee DATE: 7/17/2008 10:25:41 AM Eastern Daylight Time  
For non-composite section, the import should either don't populate the structural deck thickness or conservatively set the structural thickness 0.5 in less than the total thickness.

FROM: Xinmei Li DATE: 8/1/2008 9:54:21 AM Eastern Daylight Time  
For non-composite section, structural deck thickness is left blank.

FROM: Herman Lee DATE: 5/27/2009 3:42:04 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

|                                                   |
|---------------------------------------------------|
| Issue ID: 8253                                    |
| Subject: Error using varying distribution factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Kennelly, Krisha        | 11/1/2007 4:31:15 PM |
| Modified By: administrator            | 6/19/2008 4:36:16 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

Complete Issue Information

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Bug      |
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |

Contacts

| Name        | Company     | Email 1        | Phone 1      |
|-------------|-------------|----------------|--------------|
| Paul Jensen | Montana DOT | pjensen@mt.gov | 406-444-9245 |

Documents

| Name | Resource Identifier     | Description                                                            |
|------|-------------------------|------------------------------------------------------------------------|
|      | pontis_rating_error.xml | timber deck still girder- incorrect rating factor when updating pontis |

Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 8254.16815 | Assigned      | pontis update is reporting incorrect tons and rating factors |

Description

FROM:kkennelly DATE:11/1/2007 12:33:10 PM  
 Submitted on behalf of Bothas Engineering:

Run attached girderline using Virtis Std Engine. Get the following error in the output file produced by the engine:

```
=====
FORMAT ERROR OCCURRED ON THE FOLLOWING LINE
1M 16500500050005000500

THE PROGRAM WAS EXPECTING GIRDER MEMBER PROPERTIES
BUT THE ABOVE DATA LINE WAS ENCOUNTERED.
=====
```

FROM:hlee DATE:11/6/2007 1:37:49 PM  
 I verified the exported data.  
 Attached 5.6 Virtis Std Engine files.

Complete Issue Information

FROM:hlathia DATE:Tuesday, November 06, 2007 4:02:03 PM

Virtis Std Engine 5.6 does not handle non-composite girder with varying distribution factors properly as input. It will require code changes to handle this situation properly. The work around is to specify that there is a deck, but it does not have any reinforcement. F'c of concrete deck needs to be specified. Steel Member properties specified as non-composite are correct. Attached are the revised input and output files with above input modifications.

FROM:hlathia DATE:Thursday, November 08, 2007 4:02:39 PM

The problem has been corrected. The correction will be available in Virtis 6.0. Meanwhile, use the work around specified above. The output file with this correction is attached.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 8254                                                        |
| Subject: pontis update is reporting incorrect tons and rating factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Jensen, Paul            | 11/1/2007 7:05:19 PM |
| Modified By: hlee                     | 5/9/2010 2:18:02 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:pjensen DATE:Thursday, November 01, 2007 3:05:19 PM

the attached bridge is a timber deck with steel girders. the deck is the controlling rating not the girders. The girders are rated with LFD and deck is ASD. When running the rating from the bridge explorer, the controlling ratings are correct but for the UPR it is the girders. when drilling down it shows the deck controlling.....

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 9:42:18 AM Eastern Standard Time

4/19/2016 3:05:56 PM

HRS AASHTO

1061



Complete Issue Information

The deck is not being considered when the grid is populated.

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 12:04:00 PM Eastern Standard Time  
Fixed for Version 6.2.

Changes to Source Code: Abgdtop/UiPontisRatingResults.cpp

FROM: Mehrdad Ordoobadi DATE: 11/19/2009 12:37:13 PM Eastern Standard Time  
Changes repinned in 6.1 SP1.

FROM: Herman Lee DATE: 5/9/2010 9:38:43 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

|                                         |
|-----------------------------------------|
| Issue ID: 8262                          |
| Subject: Results differ in Hinged spans |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Barnhill, Gale          | 11/11/2007 8:39:58 PM |
| Modified By: administrator            | 6/19/2008 4:36:15 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 8271.16798 | Assigned      | Schematic for truss with the Symmetry command. |

### Description

FROM:gbarnhill DATE:Sunday, November 11, 2007 3:40:18 PM

The attached model was created in Virtis 5.5.

There are two superstructures. Both 3 span 95'-0", 133'-10", 95'-0" with two hinges in Span 2.

In SuperDef 1338333 the middle span is modeled 133.8333 ft.

In SuperDef 1338400 the middle span is modeled 133.8400 ft.

As far as I can tell, except for the appropriate structure length adjustments, the two SuperDef's are the same.

Analyze Member G2. 1338333 gives critical HS20 Inv rating at 110. 1338400 gives critical HS20 Inv rating at 203.

In the BRASS output file. in 1338333 at 202 and 203 BRASS shows N/A for rating results.

In 1338400, BRASS shows N/A at 202, and rating results at 203.

If I adjust the lengths in 1338333 to match 1838400, then the BRASS output shows N/A at 202 and results at 203 ( the same results as 1338400).

Thanks,

Gale

402-745-0375

FROM:gbarnhill DATE:Sunday, November 11, 2007 4:20:00 PM

Use the file commented "newest model" in the Documents list. I'm not sure the other one is correct.

FROM:gbarnhill DATE:Monday, November 12, 2007 10:21:16 AM

Brian G.

Hint- put a POI at 3/10 Span 2 for both the 1338333 and 1338400 G2 member. Notice the difference in the BRASS intermediate output.

Gale

FROM:bgoodrich DATE:Thursday, November 15, 2007 11:41:12 AM

I was able to duplicate Gale's issue. I found one difference in the input. The Camber Strip dead load case was applied to Stage 2 in one of the structures. However, this was not the source of the problem. I believe the problem is with how BRASS is interpreting the schedule of STEEL-GIRDER-CONTROL commands. The Section Type for the range left of the 203 POI is 5, and for the range right of the POI, it is 41. I believe that BRASS is choosing 5 for one of the bridges and 41 for the other. BRASS does

4/19/2016 3:05:56 PM

HRS AASHTO

1063

Complete Issue Information

not know which side to look at when a POI is at the junction of two ranges. BRASS just finds the first range in which the POI is located. For transverse stiffeners, BRASS does look at the ranges left and right and uses the one with the larger spacing. Maybe this could be done for the Section Type as well. I have forwarded this issue to WYDOT.

FROM:gbarnhill DATE:Thursday, November 15, 2007 4:04:22 PM  
Brian G, Per our phone conversation, I changed the BRASS LFD Engine Properties Counterflexure locations to Span 1-75%, Span 2-14.5% and 85.5% (the hinge locations), Span 3-25%. Span 1 & 3 based on moment results graph for deck deadload.  
The structure 1338400 now rates the same as 1338333 with critical ratings at the Pier. The BRASS output shows normal rating results at all 10th points.

FROM:bgoodrich DATE:Monday, November 19, 2007 12:10:07 PM  
Gale suggested a warning be added to the BRASS export to inform users that the contraflexure locations should be set to coincide with hinge locations. This remains to be done.

FROM:bgoodrich DATE:Monday, December 10, 2007 5:18:18 PM  
BrassStdSpans.cpp has been revised to issue the following error message:

Hinges were detected in Span 2.  
Contraflexure locations should be set to coincide with hinge locations.  
See the Member Alternative engine properties for the BRASS LFD/ASD Analysis Module.

Issue ID: 8271  
Subject: Schematic for truss with the Symmetry command.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Bhanushali, Girish  
Submitted By: Lee, Herman 11/13/2007 8:46:01 PM  
Modified By: gbhanushali 9/15/2009 2:19:22 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact    | Status               | Priority | Category               |
|--------------------|----------------------|----------|------------------------|
| Bhanushali, Girish | Assigned             | High     | Unknown<br>Bug         |
| Bhanushali, Girish | Assigned<br>Resolved | High     | Bug<br><br>Enhancement |

## Complete Issue Information

### Contacts

| Name            | Company         | Email 1                                                                  | Phone 1       |
|-----------------|-----------------|--------------------------------------------------------------------------|---------------|
| Gale Barnhill   | Earth Tech      | <a href="mailto:gale.barnhill@aecom.com">gale.barnhill@aecom.com</a>     | (402)363-9515 |
| Brian McCaffrey | AECOM/EarthTech | <a href="mailto:Brian.McCaffrey@aecom.com">Brian.McCaffrey@aecom.com</a> |               |

### Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | Continuous Truss from Gale Barnhill V560.xml |             |

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8276.16793 | Resolved      | Continuous Truss results not symmetrical |

### Description

FROM:hlee DATE:11/13/2007 3:40:26 PM

After the BWS is opened, the truss schematic will not show the other half unless the truss has been verified once even though the truss had already been verified ok before.

FROM: Girish Bhanushali DATE: 9/14/2009 1:36:13 PM Eastern Daylight Time

This was by design.

Issue ID: 8276

Subject: Continuous Truss results not symmetrical

Folder: /Virtis/Support Center/Virtis

Primary Contact: Bhanushali, Girish

Submitted By: Barnhill, Gale

11/15/2007 2:38:37 PM

Modified By: administrator

6/19/2008 4:36:14 PM

Priority: High

4/19/2016 3:05:57 PM

HRS AASHTO

1065

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

## Contacts

| Name           | Company          | Email 1                             | Phone 1       |
|----------------|------------------|-------------------------------------|---------------|
| Gale Barnhill  | Earth Tech       | gale.barnhill@aecom.com             | (402)363-9515 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |
| Yihong Gao     | Minnesota DOT    | Yihong.Gao@dot.state.mn.us          | (651)366-4492 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS V550 Gale.xml    |             |
|      | PS V560 Gale.xml    |             |

## Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 8282.16787 | Resolved      | PS rating results not same in V5.5 and V5.6 |

## Description

FROM:garnhill DATE:Thursday, November 15, 2007 9:38:55 AM

This is an updated model of the truss from Incident 8238.

I've analyzed the truss named No Symmetry with Virtis 5.6.

The results are still not symmetrical. The problem seems to be with dead load cases Appurtance and Deck.

The Nodal Loads look symmetrical, but the Support Reactions and Element Actions are not.

Other load cases seem symmetrical.

FROM:garnhill DATE:Wednesday, December 26, 2007 2:19:09 PM

The Nodal Loads for Appurtance and Deck are not correctly placed.

There is no load placed on the last upper node (60).

4/19/2016 3:05:57 PM

HRS AASHTO

1066

Complete Issue Information

The load that should be there is on node 59 and the load on 59 should be doubled.

The Lane Live Loads are not symmetrical for all members.  
They are off significantly (50% in one case).

FROM:hlee DATE:1/30/2008 3:49:21 PM  
There are two issues in 8276.

- 1. The nodal loads for appurtenance and deck are not correctly placed.

Fixed a bug in determining the tributary length when typical section loads are not starting from the leftmost node. Resolved.

- 2. The lane live loads are not symmetrical for all members.

When determining the contribution of the concentrated load in the max positive action in CLmInfluenceLineLoader::LoadLane(), it should look for the peak with the largest value instead of the first peak. Not fixed yet. LoadLaneDf() also need to be fixed.

FROM:hlee DATE:2/6/2008 1:26:00 PM  
#2 is resolved in 5.6 SP1.

FROM:jduray DATE:2/20/2008 8:51:14 AM  
While fixing #2 we noticed that for the concentrated loads for lane loading we are using the maximum of the shear and moment concentrated loads for all members. I think standard practice is to use the conc. load for moment for the chords and the conc. load for shear for the verticals and diagonals. We also found that the 2nd conc. load for continuous spans is not being handled properly. I think standard practice is to use the 2nd conc. load for tension in the top chord and compression in the bottom chord (at least that is what PennDOT's BAR7 program does). These changes are being made to the live loading.

FROM:xli DATE:4/7/2008 10:32:27 AM  
Analyzed the symmetrical truss with 6.0 Beta 3, support reactions and element actions are symmetrical with dead load and live load. HS 20-44 is used as live load.

Dead Load: Load Case: Appurtenance DC

Support reactions

|         |         |      |
|---------|---------|------|
| Node1   | 17.024  | kips |
| Node 10 | 105.020 | kips |
| Node 22 | 105.020 | kips |
| Node 31 | 17.024  | kips |

Element actions

|             |        |      |
|-------------|--------|------|
| Element 78  | 30.700 | kips |
| Element 100 | 30.700 | kips |
| Element 42  | 7.276  | kips |
| Element 49  | 7.276  | kips |
| Element 8   | 29.109 | kips |
| Element 23  | 29.109 | kips |

4/19/2016 3:05:57 PM

HRS AASHTO

1067

Complete Issue Information

Live Load

Support reactions

```

===== Vertical reaction for node 1 =====
Maximum action = 71.7420 kip
Minimum action = -22.4383 kip
===== Vertical reaction for node 19 =====
Maximum action = 234.1751 kip
Minimum action = -19.7480 kip
===== Vertical reaction for node 43 =====
Maximum action = 234.1751 kip
Minimum action = -19.7480 kip
===== Vertical reaction for node 60 =====
Maximum action = 71.7420 kip
Minimum action = -22.4383 kip

```

Element actions

```

===== Axial for member 78 - U9L10=====
Maximum action = 96.4827 kip
Minimum action = -16.0837 kip
===== Axial for member 100 -L20U21=====
Maximum action = 96.4827 kip
Minimum action = -16.0837 kip

===== Axial for member 42 - U11U12=====
Maximum action = 76.4234 kip
Minimum action = -68.2286 kip
===== Axial for member 49 - U18U19=====
Maximum action = 76.4234 kip
Minimum action = -68.2286 kip

===== Axial for member 8 - L7L8=====
Maximum action = 59.4272 kip
Minimum action = -116.4950 kip
===== Axial for member 23 - L22L23=====
Maximum action = 59.4272 kip
Minimum action = -116.4950 kip

```

|                                                                                   |
|-----------------------------------------------------------------------------------|
| <p>Issue ID: 8282</p> <p>Subject: PS rating results not same in V5.5 and V5.6</p> |
|-----------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Folder: /Virtis/Support Center/Virtis</p> <p>Primary Contact: Goodrich, Brian</p> <p>Submitted By: Barnhill, Gale 11/20/2007 2:14:22 PM</p> <p>Modified By: administrator 6/19/2008 4:36:14 PM</p> <p>Priority: High</p> <p>Category: Unknown</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Complete Issue Information

### History

| Primary Contact | Status                | Priority | Category       |
|-----------------|-----------------------|----------|----------------|
| Goodrich, Brian | Assigned              | High     | Unknown<br>Bug |
| Goodrich, Brian | Assigned<br>Suspended | High     | Bug            |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C04019k.xml         |             |

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 8343.16726 | Assigned      | Questions about BRASS LFD Shear results |

### Description

FROM:gbarnhill DATE:Tuesday, November 20, 2007 9:14:34 AM

I installed Virtis5.6 and migrated a Virtis5.5 database.

I compared rating results of both versions. All bridges compared exact except for one PS 3 span continuous.

The Critical RF increased from 0.855 to 0.887. See attached files from V5.5 and V5.6 - Member G3.

It appears the shear capacity for Truck1(HS20 truck) increased at POI 307.

I also noticed that on the Special-Truck command, parameter 6 is input as 1 on V5.6 and not input on V5.5.

Thanks,

Gale

402-745-0375

FROM:bgoodrich DATE:Thursday, December 13, 2007 3:35:28 PM

Changes were made to the BRASS LFD engine regarding the concurrent actions. BRASS finds the truck position causing a maximum action and then determines the concurrent actions based on this position. However, if the truck position one foot to the left or right of this position produces a higher magnitude concurrent action, the higher concurrent action value is stored. The shear concurrent with maximum moment increased, which caused the Vi term in the P/S shear capacity equation to increase leading to a higher shear capacity, which finally resulted in a higher rating factor at the 307 POI.

4/19/2016 3:05:57 PM

HRS AASHTO

1069



Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 8343                                   |
| Subject: Questions about BRASS LFD Shear results |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 12/10/2007 4:03:38 PM |
| Modified By: bgoodrich                | 11/4/2008 4:48:33 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:12/10/2007 11:06:28 AM  
 Submitted on behalf of Elizabeth Befikadu, Mass Hwy via email:

I am doing a prestress beam continuous for live load. I see point of interests which are not user defined or 10Th points does Virtis generate point of interest by itself other than 10th points.

The point of interest is just for curiosity for example 7.33' span 2 what is that point. The other important issue I have is on the calculation of shear capacity. When Virtis pick shear values concurrent with maximum moment sometimes it is the negative shear sometimes it is the positive shear can you explain to me specially at the supports this bridge is 6 span made continuous for SDL and Live load . The bridge is a brand new bridge and it is failing for shear for HS20 loading at 10th points of span 6 and it was designed for HS20.

FROM:bgoodrich DATE:Thursday, December 11, 2007 10:22:00 AM  
 I spoke with Elizabeth regarding the concurrent shear. I explained that as BRASS is determining the

4/19/2016 3:05:57 PM

HRS AASHTO

1070

Complete Issue Information

maximum or minimum moment, it looks at the concurrent shear for the corresponding truck position as well as the truck positions one foot to the left and one foot to the right. The shear with the largest magnitude is saved as the concurrent shear.

FROM: bgoodrich DATE: Thursday, December 13, 2007 12:28:04 PM

Here is what I found when I reviewed BRASS-LFD regarding the P/S shear capacity. For a composite structure, BRASS takes the shear concurrent with the maximum POSITIVE moment. There are no comments to explain why this is done. For a non-composite structure, the positive/negative sense is set based on the sum of the dead load moment and the moment concurrent with maximum shear.

I have forwarded the incident and these questions to Mike Watters at WYDOT.

FROM: Brian Goodrich DATE: 7/16/2008 1:56:01 PM Eastern Daylight Time

WYDOT has instructed BridgeTech to address P/S shear issues during the process of merging the LRFD and LFD BRASS-GIRDER engines. Therefore, no plans are in place to update the current BRASS-GIRDER(STD) engine with respect to P/S shear.

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 8348                                                                 |
| Subject: Incorrect roller support description in Truss Command Language Manual |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Lee, Herman             | 12/10/2007 6:15:13 PM |
| Modified By: hlee                     | 5/5/2010 7:01:05 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | Assigned | High     | Unknown  |
|                    |          |          | Bug      |
| Bhanushali, Girish | Assigned | High     | Bug      |
| Li, Xinmei         | Resolved |          |          |
|                    | Resubmit |          |          |
|                    | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | w17006.xml          |             |

### Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 8370.16699 | Resolved      | Unable to rate floorbeams in Truss-Floorbeam System. |

### Description

FROM:hlee DATE:12/10/2007 1:16:10 PM  
See attached.

FROM: Xinmei Li DATE: 8/19/2008 4:12:13 PM Eastern Daylight Time  
Fixed

FROM: Herman Lee DATE: 5/27/2009 3:11:24 PM Eastern Daylight Time  
The description should be "Enter spring constant in y direction" instead of x direction.

FROM: Herman Lee DATE: 4/7/2010 4:44:08 PM Eastern Daylight Time  
Updated Truss Command Language Manual for 6.2 Release.

FROM: Herman Lee DATE: 5/5/2010 3:01:08 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8370                                                |
| Subject: Unable to rate floorbeams in Truss-Floorbeam System. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Lee, Herman             | 12/12/2007 1:12:08 PM |
| Modified By: administrator            | 6/19/2008 4:36:08 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:05:58 PM

HRS AASHTO

1072

### Complete Issue Information

|                  |          |      |                |
|------------------|----------|------|----------------|
| Ihnat, Joseph    | Assigned | High | Unknown<br>Bug |
| Kennelly, Krisha | Assigned | High | Bug            |
| Kennelly, Krisha | Assigned | High | Bug            |
|                  | Resolved |      |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | ValidationMsg.png<br>w17006.xml |             |

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 8371.16698 | Assigned      | Incorrect validation message in Truss-Floorbeam System. |

### Description

FROM:hlee DATE:12/12/2007 8:03:19 AM  
Submitted on behalf of Ai Fen Jimenezwu, Bryant Associates.

Bridgeware received e-mail:

Virtis 5.5.0 seems to support a Truss-Floorbeam System (No Stringers). For the bridge I am working on, I can run the truss analysis without any problem, but when I try to run the Floorbeams, I keep on getting these error messages:

Error generating LFD/ASD load commands!  
Error occurred for BRASS live load: H\_20-44\_\_\_~1  
Error generating FLOORBEAM-MPT command!  
Error computing virtual stringer live load reactions!  
Invalid or unsupported structure definition!  
Unable to retrieve the distribution factor!  
Error occurred for BRASS live load: H\_20-44\_\_\_~1  
Error generating FLOORBEAM-TRUCK command!  
Error computing virtual stringer live load reactions!  
Invalid or unsupported structure definition!  
Unable to retrieve the distribution factor!

I just want to know if 5.5.0 can support this kind of system (I know it can analyze the truss, but does it support the floorbeams as well?). If it

4/19/2016 3:05:58 PM

HRS AASHTO

1073

Complete Issue Information

does, what should I look for to address the error messages above. I have check my input multiple times and couldn't figure out what is wrong. Thank you for your time.

FROM:jihnat DATE:12/12/2007 9:59:13 AM  
Bug in handling this particular floorbeam configuration. Fixed in 6.0.0.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 8371                                                   |
| Subject: Incorrect validation message in Truss-Floorbeam System. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Lee, Herman             | 12/12/2007 1:21:25 PM |
| Modified By: kkennelly                | 6/23/2008 4:49:22 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:12/12/2007 8:17:30 AM  
Noticed this during investigation of Incident 8370.  
See attached screen capture.

FROM: Krisha Kennelly DATE: 6/23/2008 12:44:39 PM Eastern Daylight Time  
Fixed for 6.0 Beta 5

## Complete Issue Information

Issue ID: 8372  
Subject: BRASS LFD Intermediate Output

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Lee, Herman 12/12/2007 1:36:44 PM  
Modified By: administrator 6/19/2008 4:36:08 PM  
Priority: High  
Category: Education

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Goodrich, Brian | Assigned | High     | Education |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | High     | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

4/19/2016 3:05:58 PM

HRS AASHTO

1075

## Complete Issue Information

### Documents

| Name | Resource Identifier  | Description     |
|------|----------------------|-----------------|
|      | B40-I-PCB-IV-100.xml | Bridge XML file |

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 8380.16689 | Resolved      | Questions on LRFR and P/S losses |

### Description

FROM:hlee DATE:12/12/2007 8:33:38 AM

Submitted on behalf of Christopher Dombrowski, Williams & Works.

Bridgeware received e-mail:

Can you please tell me where I can select the BRASS LFD "Intermediate Output" Feature to give detailed output similar to that shown in the attached .pdf file from the BRASS LFD Help Menu?

Under the Engine Properties Tab I selected option 1 - Print Floorbeam Intermediate Output, but the output does not look like what is shown in the attached .pdf file.

How I do I get this type of output?

FROM:bgoodrich DATE:Thursday, December 13, 2007 12:00:19 PM

The intermediate output you are looking for can be turned on using the point-of-interest engine properties located on the Engine tab of the Point of Interest window. Select the BRASS LFD engine and click the Properties button to open the BRASS-Standard Point of Interest Properties window. Then, check the "Detailed output report" box on the BRASS-Standard Point of Interest Properties. You must do this for every point for which you wish to receive intermediate output. Let me know if this addresses your question.

FROM:hlee DATE:12/13/2007 12:48:26 PM

E-mailed response to Christopher Dombrowski (dombrowski@williams-works.com).

|                                           |
|-------------------------------------------|
| Issue ID: 8380                            |
| Subject: Questions on LRFR and P/S losses |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

4/19/2016 3:05:59 PM

HRS AASHTO

1076

### Complete Issue Information

|                               |                       |
|-------------------------------|-----------------------|
| Primary Contact: Lee, Herman  |                       |
| Submitted By: Goodrich, Brian | 12/14/2007 3:59:20 PM |
| Modified By: administrator    | 6/19/2008 4:36:07 PM  |
| Priority: High                |                       |
| Category: Bug                 |                       |

### History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Lee, Herman        | New       | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned  |          |          |
|                    | Duplicate |          |          |
| Ordoobadi, Mehrdad | Duplicate | High     | Unknown  |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Mem Alt No Delete.xml |             |

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 8382.16687 | Duplicate     | Unable to delete Member Alt |

### Description

FROM:bgoodrich DATE:Friday, December 14, 2007 10:59:28 AM  
E-mail from Wes Kellogg (12/12/07):

Herman -

We here at ODOT now have Virtis 5.6 and I have a question about the LRFR ratings that I am getting. I am getting H ratings that are higher than my HS ratings. Is it possible that there is a bug in the software that is allowing this to occur? Also, I get an error message when I try to load rate a PC beam without entering the age of the beam at deck placement and the design life of the beam. In the help section of Virtis it states that this information is used in calculateing prestess losses for Opis, and doesn't mention that it has any bearing on a Virtis load rating. I've varied the ages for these fields and does not seem to have any effect on the ratings, yet the the engine has to have this information for the engine to perform the analysis.

4/19/2016 3:05:59 PM

HRS AASHTO

1077



Complete Issue Information

Any information you could provide would be greatly appreciated.

- Wes Kellogg

FROM:bgoodrich DATE:Friday, December 14, 2007 11:02:06 AM

I know of no problems with the H vs. HS ratings. Please export your bridge and send it to me so I can investigate this further.

The BRASS engine requires the age of the beam at deck placement and the design life when "refined" AASHTO losses are requested. However, the only AASHTO loss method available in the Virtis Prestress Properties window is the "approximate" method. Virtis doesn't have an option for the "refined" AASHTO method. The export process will need to be changed accordingly. These times were never used, which is why your results didn't differ when the times were changed.

The help topic should be updated to reflect the need to enter these times for an LRFD/LRFR analysis rather than saying Opis.

FROM:bgoodrich DATE:Wednesday, March 19, 2008 12:05:12 PM

I re-requested information from the user.

FROM:bgoodrich DATE:Thursday, March 20, 2008 10:50:41 AM

E-mail from Wes Kellogg:

Brian -

Attached is the exported XML file for a bridge standard that I checked using LRFR vs LFR. The difference between the LRFR and LFR ratings is understandable, but the fact that the HS rating is less than the H rating is a bit confusing to us. Any information you could lend would be greatly appreciated.

Thanks for your help.

- Wes Kellogg  
Acting Field Service Engineer

FROM:bgoodrich DATE:Thursday, March 20, 2008 1:15:18 PM

I imported the bridge into Virtis and analyzed the interior girder with BRASS LFD to obtain ratings. For your structure, BRASS lists the critical inventory rating location at mid-span and indicates that concrete tension is controlling. The live load moments at this location are higher for the HS truck loading than the H truck loading. The same lane load is used for both HS and H. For this length of bridge (98.5 ft), the HS truck loading governs over its lane loading, but the H lane loading governs over its truck loading. I also confirmed this with Appendix A of the Standard Spec. The HS loading with the higher live load moment should give the lower rating. The rating results I received for the interior girder are:

| Live Load Span-(%) | Live Load Type | Inventory Rating | Factor     | Inventory Location |
|--------------------|----------------|------------------|------------|--------------------|
| H 20-44            | Design Truck   | 1.870            | 1 – (50.0) | Concrete Tension   |
| H 20-44            | Design Lane    | 1.426            | 1 – (50.0) | Concrete Tension   |

4/19/2016 3:05:59 PM

HRS AASHTO

1078

Complete Issue Information

|          |              |       |            |                  |
|----------|--------------|-------|------------|------------------|
| HS 20-44 | Design Truck | 1.161 | 1 – (50.0) | Concrete Tension |
| HS 20-44 | Design Lane  | 1.426 | 1 – (50.0) | Concrete Tension |

Are these the same results you are receiving from BRASS? I just want to make sure I'm using the same live loads and settings that you are. Are there any special live load settings that you are using on the Analysis Settings window?

Please send any screen shots of the settings and/or results that might help with this issue. Also send any spreadsheets or hand calculations that show what you calculate the rating to be.

FROM:bgoodrich DATE:Thursday, March 20, 2008 4:32:53 PM  
E-mail from Wes Kellogg:

Brian -

I am getting the exact same numbers you got with BRASS LFR using Virtis set to LFR.

We are confident in the LFR analysis. I guess I should have been more clear in my question to you. Our concern is with the LRFR analysis. In the LRFR analysis, we are getting an H rating factor that is far greater than the HS rating factor. (Roughly 33% higher)

This is very concerning to us since we are on the verge of switching to LRFR across the board and implementing an automated routing/rating system for overloads using Virtis/Opis as the analysis platform. We feel that there shouldn't be that much difference between the LFR and LRFR ratings and this difference in ratings will greatly affect the outcome of this endeavor. Are we the only state that has this issue with the LRFR engine, or are we making a mistake in imputing our LRFR distribution factors, or some other factor? Any info you could provide would be greatly appreciated.

Thanks for your help.

- Wes Kellogg  
Acting Field Service Engineer

FROM:bgoodrich DATE:Thursday, March 20, 2008 4:33:53 PM  
Thanks for clarifying your concern. I see the issue now.

I ran the bridge with version 5.6, and I get the same LRFR results as you. However, there is an error with that version that results in scaled down live load actions. In short, the LRFR live load actions are not correct in version 5.6, which ultimately affects the ratings. I ran the bridge with version 5.6.1 and received the following ratings:

4/19/2016 3:05:59 PM

HRS AASHTO

1079

Complete Issue Information

The ratings are now much closer. Note that the LRFR load module combines the actions from the axle loading with those of the lane loading. Combining that increase with a higher impact on the truck loading and effectively a higher distribution factor, it stands to reason that the rating would be lower than that for LFR.

Herman – Please comment on the timeline for the release of the service pack that corrects this issue.

FROM: bgoodrich DATE: Thursday, March 20, 2008 4:34:54 PM  
The help topic should be updated to reflect the need to enter times for an "LRFD/LRFR analysis" rather than saying "Opis". See the original e-mail at the top of this discussion.

FROM: hlee DATE: 3/21/2008 8:49:28 AM  
Related to Incident 8450.

FROM: hlee DATE: 4/23/2008 2:38:06 PM  
Updated Virtis/Opis Help. Resolved for 6.0 Release.

|                                      |
|--------------------------------------|
| Issue ID: 8382                       |
| Subject: Unable to delete Member Alt |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ordoobadi, Mehrdad   |                        |
| Submitted By: Barnhill, Gale          | 12/17/2007 10:06:12 PM |
| Modified By: administrator            | 6/19/2008 4:36:07 PM   |
| Priority: High                        |                        |
| Category: Unknown                     |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 8384.16685 | Assigned      | Area used for Truss Member Capacity |

Description

FROM:gbarnhill DATE:Monday, December 17, 2007 5:06:24 PM

In the attached model, I copied the Superstructure Def "Three Span.....".

In the Superstructure Def "Three Span .... GAB" Member G2, I copied the first Member Alt in the list to make the other two member alts shown.

I delete the first member alt in the list and then SAVE.

I get the error, "Unable to save Bridge Data".

FROM:mordoobadi DATE:12/27/2007 10:57:57 AM

The problem appears to be related to the existing points of interest. After removing the points of interest from all member alternatives I was able to delete the member alternative.

This is not a resolution to the problem, it is just a work around. We have to further investigate this to find out what is happening.

FROM:mordoobadi DATE:1/23/2008 9:19:48 AM

Duplicate of incident 8258.

|                                              |
|----------------------------------------------|
| Issue ID: 8384                               |
| Subject: Area used for Truss Member Capacity |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: White, Pete             | 12/18/2007 1:25:41 PM |
| Modified By: hlee                     | 5/5/2010 6:59:17 PM   |
| Priority: High                        |                       |

4/19/2016 3:06:00 PM

HRS AASHTO

1081

## Complete Issue Information

Category: Support

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | Assigned | High     | Bug      |
| Bhanushali, Girish | Assigned | High     | Bug      |
|                    | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | w17006.xml          |             |

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 8385.16684 | Assigned      | Rating factor "NaN" for a truss member |

## Description

FROM:pwhite DATE:Tuesday, December 18, 2007 8:25:42 AM

It appears that Virtis 5.6 is using the net area for all truss member capacity checks. For example, when checking for yielding of a tension member it appears to be using  $A_{net} \times F_y$ , rather than  $A_{gross} \times F_y$ . It also appears to not use  $F_u$  at all in the fracture check of the tension members. Since the Virtis truss engine doesn't show the rating calculations, I can't be entirely certain of this, but I can match the Virtis capacity by using  $A_{net}$  and  $F_y$  together.

FROM:hlee DATE:12/18/2007 9:47:04 AM

Virtis uses the net area when calculating the tension capacity. The Virtis Truss Method of Solution Manual Section 1.4 describes how Virtis computes the tension and compression capacities. The link to the manual is on the F1 Help of the Truss window.

FROM:pwhite DATE:Wednesday, December 19, 2007 8:54:33 AM

Yes, I agree that Virtis is calculating the axial tension incorrectly. The possible failures for tensile capacity are  $A_{net} \times F_u$  or  $A_{gross} \times F_y$ , not  $A_{net} \times F_y$ . In addition, it appears that the compression capacity is also being based on  $A_{net}$ , contrary to the manual. Is it possible to have these issues corrected in the next release?

FROM: Girish Bhanushali DATE: 9/11/2009 4:51:41 PM Eastern Daylight Time

Hi Pete,

Virtis Truss follows LFD methodology. Expectations reflected in your comments are based on LRFR

4/19/2016 3:06:00 PM

HRS AASHTO

1082

Complete Issue Information

Spec.

It is not known at this time when Virtis truss would implement LRFR Spec.

Virtis Truss does not use Anet in computing compression capacity. For Compression capacity, it uses Agross. Please refer to "Section Property Report" generated after Virtis Analysis for more information.

You can also verify this in latest version of Virtis if It is still an outstanding issue for you.

Thanks.

Girish J. Bhanushali  
Michael Baker Jr., Inc.

|                                                 |
|-------------------------------------------------|
| Issue ID: 8385                                  |
| Subject: Rating factor "NaN" for a truss member |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Lee, Herman             | 12/18/2007 7:44:31 PM |
| Modified By: jduray                   | 4/29/2010 6:07:23 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:12/18/2007 2:42:51 PM

Received via email (Bridgeware):

When Virtis gives a rating factor = "NaN" for a truss member, what is that mean? Zero member?

4/19/2016 3:06:00 PM

HRS AASHTO

1083

Complete Issue Information

Ai Fen Jimenezwu <AJimenezwu@bryant-engrs.com>

Received via email (Bridgeware):

Attached please find XML file. The trucks used are H-20, Type3, Type 3S2 and HS20. And the members in question are U3L3, U5L5 and maybe U7L7. When I run the analysis for Truss 1. Virtis gives rating factors for U3L3 and U5L5 as NaN and rating factors for U7L7 is huge (typical for all trucks). I notice they all are vertical members. Please let me know of your findings. Thank you for your time.

FROM:hlee DATE:12/18/2007 2:50:23 PM  
May be related to Incident 7788.

FROM: Girish Bhanushali DATE: 9/11/2009 4:55:32 PM Eastern Daylight Time  
I imported your xml and ran the analysis. Reports do not show any NAN values. This is not reproducible in the latest version (Virtis 6.x). Please resubmit this with more information if you can still reproduce this problem.

FROM: Jim Duray DATE: 4/29/2010 2:06:58 PM Eastern Daylight Time  
Verified - 6.2 alpha 4.

FROM: Jim Duray DATE: 4/29/2010 2:07:18 PM Eastern Daylight Time

Issue ID: 8403  
Subject: Shear shouldn't be ignored when no limit is selected for Mcr/Mmax in engine properties

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Lee, Herman 1/4/2008 1:47:08 PM  
Modified By: administrator 6/19/2008 4:36:05 PM  
Priority: High  
Category: Bug - Export 1

History

| Primary Contact   | Status   | Priority | Category       |
|-------------------|----------|----------|----------------|
| Lee, Herman       | Assigned | High     | Bug            |
| Kennelly, Krishna |          |          | Bug - Export 2 |

4/19/2016 3:06:00 PM

HRS AASHTO

1084

### Complete Issue Information

|             |                    |      |                           |
|-------------|--------------------|------|---------------------------|
| Lee, Herman | New                | High | Bug - Export 1<br>Unknown |
|             | Information Needed |      |                           |
|             | Resolved           |      | Bug                       |
| Lee, Herman | Resolved           | High | Bug                       |

### Contacts

| Name            | Company     | Email 1                  | Phone 1      |
|-----------------|-------------|--------------------------|--------------|
| Randall Mullins | Alabama DOT | mullinsr@dot.state.al.us | 334-242-6015 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | 19743-3.pdf                |             |
|      | 19743.xml                  |             |
|      | 19743.pdf                  |             |
|      | InterceptImportFailure.txt |             |
|      | VI 8404.pdf                |             |
|      | VirtualMemory.png          |             |
|      | 19743-2.pdf                |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 8404.16665 | Resolved      | Error loading BRASS DLL |

### Description

FROM:hlee DATE:1/4/2008 8:37:26 AM

Submitted on behalf of Ziad Hanna (zhanna@benesch.com), Alfred Benesh and Company:

when trying to modify the enginer properties in BRASS to remove the limit of 1 of (Mcr/Mmax), in the output page one I found the highlighted statment printed below in red and the results ignore the shear.

(Shear will be ignored as requested by either the ANALYSIS or the STIRRUP-SCHEDULE command).

FROM:hlee DATE:1/4/2008 8:52:37 AM

In BRASS ANALYSIS command, "Ignore Prestress Shear" should be coded as 2 instead of 1 (prestress shear rating is to be ignored).

4/19/2016 3:06:00 PM

HRS AASHTO

1085



Complete Issue Information

Related to the fix for Incident 7593.

FROM:bgoodrich DATE:Wednesday, March 05, 2008 11:48:22 AM

It looks like the fix for Incident 7593 affected the values that were ultimately stored in the engine properties for the Vci Method indicator. Previously, the values were stored as 0, 1, or 2 and accounted for the user ignoring shear from the member alt window. Now that this has been changed, the Vci Method indicator is only a 0 or 1. The export must be changed accordingly.

FROM:bgoodrich DATE:Wednesday, March 05, 2008 12:11:45 PM

I revised the CBrassStdAnalysisCmd::Prepare function in the BRASS export to handle a Vci Method indicator of 0 or 1 from the engine properties. The ANALYSIS command is now generated as expected. Fixed for version 6.0.

FROM:bgoodrich DATE:Wednesday, March 10, 2008

The change I made assumes the engine properties will return only a 0 or 1 for the Vci Method Indicator. Now that I look at the domain, it can still store a 2 and return that value from one of its member functions.

It would be cleaner if the domain converted the 2 to a 1 for internal purposes rather than keep around a value that is no longer applicable.

There are also no comments in the code to explain why a 2 is handled differently.

At the end of the CDoBrassStdMbrAltParser::ParseData function, I suggest adding the following code:

```
// A Vci Moment Indicator of 2 was changed to 1.  
if (m_iVciMomentInd == 2)  
    m_iVciMomentInd = 1;
```

Then, the other Abobrass functions could be revised to eliminate the m\_iVciMomentInd value of 2.

FROM:bgoodrich DATE:Wednesday, March 19, 2008 11:33:26 AM

E-mail from Herman Lee (3/18/2008):

We decided to include 8403 in 5.6.1. I agree with what you suggested for m\_iVciMomentInd. It is cleaner and also avoid future confusion and mistake. Please make the changes and send us the files to merge to SourceSafe.

FROM:bgoodrich DATE:Wednesday, March 19, 2008 11:33:57 AM

I actually ended up revising the ParseVersion\_5\_03\_01\_01 and ParseVersion\_5\_04\_00\_01 functions in CDoBrassStdMbrAltParser in the Abobrass project as described above. I removed references to iVciMomentInd = 2.

Issue ID: 8404

Subject: Error loading BRASS DLL

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

4/19/2016 3:06:01 PM

HRS AASHTO

1086

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Mullins, Randall | 1/4/2008 9:12:24 PM  |
| Modified By: administrator     | 6/19/2008 4:36:05 PM |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact    | Status   | Priority | Category       |
|--------------------|----------|----------|----------------|
| Goodrich, Brian    | Assigned | High     | Unknown<br>Bug |
| Ordoobadi, Mehrdad |          |          |                |
| Ordoobadi, Mehrdad | Assigned | High     | Bug            |
|                    | Resolved |          |                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 8410.16659 | Assigned      | Zero legal and permit rating factors for timber deck. |

### Description

FROM:rmullins DATE:Friday, January 04, 2008 4:12:25 PM  
Attached is a screen print of the error I incurred while running Virtis ver. 5.6.  
The model has 17 PS girder lines that are fully defined.  
Is the problem my computer or is it something else?  
Error Code = 8

FROM:jihnata DATE:1/7/2008 7:34:01 AM  
Error Code 8 indicates not enough memory.  
What version of Windows are you running?  
Try bumping up virtual memory settings.

FROM:rmullins DATE:Friday, June 13, 2008 1:09:09 PM  
I have attached four files.

4/19/2016 3:06:01 PM

HRS AASHTO

1087

Complete Issue Information

One is the source file in 6.0 beta-3.  
Two files show the "error" screen shot.  
One shows the lane width too narrow. It should be 94' and not 93'.

FROM:jihnat DATE:6/13/2008 2:16:21 PM  
Looks like Windows XP.  
How much memory (RAM) does your computer have?  
What are the virtual memory settings?

FROM:hlee DATE:6/18/2008 9:33:11 AM  
E-mail received (6/16/08):

=====  
Jim,

I uploaded the additional information you requested for VI 8404.  
I also checked my computer and I have plenty of disk space and my computer has 2.00 GB of RAM.

Thanks,

Randall  
=====

Reply e-mail (6/18/08):  
=====

Hi Randall,

Could you check and send us the virtual memory settings in your machine? Steps to check the virtual memory settings are listed below. Attached is a screen capture of the Virtual Memory dialog.

1. Select Control Panel in the Start Menu.
2. Select System in the Control Panel to display the System Properties dialog.
3. Select the Advanced tab in the System Properties dialog.
4. Click on the Performance Settings button in the System Properties dialog to display the Performance Options dialog.
5. Select the Advanced tab in the Performance Options dialog.
6. Click on the Change button to display the Virtual Memory dialog.
7. Please do a screen capture of the Virtual Memory dialog and send it to us.

Thanks,  
Herman  
=====

FROM:hlee DATE:6/18/2008 11:37:09 AM  
Virtual memory settings in Randall's machine attached (VI 8404.pdf).

FROM:hlee DATE:6/18/2008 11:43:16 AM  
E-mail sent (6/18/08):  
=====

Please try to change the initial paging file size from 2046 to 4092 MB. You may need to restart you machine after the change. See whether this will resolve the error loading BRASS DLL problem you reported in Incident 8404.

Complete Issue Information

Thanks,  
Herman

=====

FROM:hlee DATE:6/19/2008 8:10:20 AM  
E-mail received (6/18/08):

=====

Herman,  
Changing the paging file settings did help until I opened another program that was a memory hog. The error started up again after the other program got its share of memory. I guess the solution is to close most of the programs that are running while running V/O.

Thanks,

Randall  
By-the-way this is only half of the bridge.

=====

Reply e-mail (6/19/08):

=====

Randall,

I guess what you suggested is a solution for now. Hopefully, the BRASS combined (LFD/LRFD) engine has better memory management.

For the Beta 4 installation problem, the error code indicates you got a bad disk. We are going to send you another one today. Sorry for the inconvenience.

Herman

=====

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 8410<br>Subject: Zero legal and permit rating factors for timber deck. |
|----------------------------------------------------------------------------------|

|                                                                                                                                                                   |                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Ordoobadi, Mehrdad<br>Submitted By: Lee, Herman<br>Modified By: hlee<br>Priority: High<br>Category: Bug | 1/10/2008 8:44:22 PM<br>5/5/2010 7:03:20 PM |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Steven Maberry |                  | steven.maberry@state.nm.us          |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8413.16656 | Duplicate     | March 2005 Errata for 9.28.1 |

### Description

FROM:hlee DATE:1/10/2008 3:30:25 PM

To reproduce:

1. Select TimberTrainingBridge1 in Bridge Explorer.
2. Open Analysis Settings window and select the "HS 20 Rating" template.
3. Click OK to start the rating. Click OK to close the Analysis Progress window.
4. Bridge Rating Results window shows 0.000 Legal Rating Factor.
5. Member Rating Results window shows 0.000 Legal Rating Factor and Permit Rating Factor for the DECK.

Brian, please see whether it's related to populating the results object.

FROM:bgoodrich DATE:Monday, February 11, 2008 4:46:07 PM

The Madero engine is populating the results object with inventory and operating results. The posting (legal) and safe-load (permit) results are set to null using the null bitmask variable.

FROM: Mehرداد Ordoobadi DATE: 11/19/2009 12:39:22 PM Eastern Standard Time  
Fixed for 6.1 SP1.

FROM: Herman Lee DATE: 5/5/2010 3:00:47 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

Issue ID: 8413

Subject: March 2005 Errata for 9.28.1

4/19/2016 3:06:01 PM

HRS AASHTO

1090

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Lee, Herman 1/14/2008 2:43:48 PM  |
| Modified By: administrator 6/19/2008 4:38:37 PM |
| Priority: High                                  |
| Category: Bug                                   |

History

| Primary Contact | Status               | Priority | Category       |
|-----------------|----------------------|----------|----------------|
| Duray, Jim      | Assigned             | High     | Unknown<br>Bug |
| Duray, Jim      | Assigned<br>Resolved | High     | Bug            |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 8424.16645 | Assigned      | Lane loading is not used in Distribution Factor Analysis |

Description

FROM:hlee DATE:1/14/2008 9:41:48 AM  
 Submitted for Steven Maberry, New Mexico DOT via bridgeware e-mail:

REFERENCE INCIDENT ID 7880

We believe that BRASS ratings for PS Concrete beams may be erroneous in some circumstances. We no longer think it is a development length vs transfer length problem. Instead, we believe that BRASS has failed to incorporate March 2005 Errata for 9.28.1. When we analyze some bridges with Virtis/BRASS and with other means (e.g., ConSPAN), we find the results agree ONLY when we alter the "other means" by changing the 1.6 factor added in the March 2005 Errata back to 1.0.

ORIGINAL

Complete Issue Information

--AASHTO. Standard Specifications for Highway Bridges. 17th Edition. (Washington DC: AASHTO 2002)

Errata correction March 2005:

--AASHTO. "Standard Specifications for Design of Highway Bridges—17th Edition ERRATA." (Washington DC: AASHTO March 2005) p 249.

Also available at <http://downloads.transportation.org/Errata-HB-17-E4.pdf>

FROM:smaberry DATE:Monday, January 14, 2008 10:31:11 AM

I observe that the pasted images of the original AASHTO 17th edition text and that of the Errata did not make it through the Bridgeware email system. The original Equation 9-42 in paragraph 9.28 was written as:

"Three- or seven wire pretensioning strand shall be bonded beyond the critical section for a development length in inches not less than  $(f^*su - 2/3 \times fse) D \dots$ "

The errata corrects that to: "... 1.6 x  $(f^*su - 2/3 \times fse) D \dots$ "

FROM:bgoodrich DATE:Thursday, February 07, 2008 5:09:45 PM

Neither the BRASS engine or export utilize the development length equation in question. The BRASS engine is set up to accept either the transfer or development length (not both) on the STRAND-ST2 command. The export generates the STRAND-ST2 command using only the transfer length.

FROM:hlee DATE:2/14/2008 12:40:03 PM

As commented in Incident 7880 by Brian Goodrich, BRASS LFD does not calculate the development length. This issue had been forwarded to WYDOT (BRASS Problem Log 749). Status changed to Duplicate since it is related to Incident 7880.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 8424                                                                       |
| Subject: Lane loading is not used in Distribution Factor Analysis - need warning msg |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Lee, Herman             | 1/17/2008 7:02:29 PM |
| Modified By: jduray                   | 4/29/2010 6:28:23 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name         | Company             | Email 1             | Phone 1      |
|--------------|---------------------|---------------------|--------------|
| Michael Cruz | Green International | mcruz@greenintl.com | 978-923-0400 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | H-01-012=N-19-018(OUU).xml |             |

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 8439.16630 | Assigned      | P/S Spread Box Beam Distribution Factor - LFD |

### Description

FROM:hlee DATE:1/17/2008 1:57:49 PM

User can select a Standard vehicle which may have lane loading to perform Distribution Factor Analysis. Analysis log needs to issue a warning message.

FROM: Herman Lee DATE: 3/18/2010 4:27:55 PM Eastern Daylight Time

Added warning messages for tandem and lane loads.

Resolved for 6.2 Release.

FROM: Jim Duray DATE: 4/29/2010 2:27:29 PM Eastern Daylight Time

Verified - 6.2 alpha 4.

Issue ID: 8439

Subject: P/S Spread Box Beam Distribution Factor - LFD

4/19/2016 3:06:02 PM

HRS AASHTO

1093



### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Cruz, Michael           | 1/24/2008 1:55:23 PM |
| Modified By: hlee                     | 5/5/2010 7:07:13 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          |                |
|                 | Resolved |          |                |
|                 |          |          | Bug - Export 1 |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Paul Campisi   | NYS DOT          | pcampisi@dot.state.ny.us            |              |

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 29206 - 1004250_LRFR.xml |             |

### Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 8450.16619 | Resolved      | LRFR - Problem with Live Load Distribution Factor |

### Description

FROM:mcruz DATE:Thursday, January 24, 2008 8:55:23 AM

It appears that Virtis does not apply the reduction in load intensity (AASHTO 3.12) when calculating the distribution factor for an interior spread box beam (AASHTO 3.28.1) as noted in AASHTO by \*\*. Why? Also, it appears that it uses the simple span (of length S) when analyzing an interior beam with  $S < 6.57$ , does AASHTO recommend this?

FROM:kkennelly DATE:1/30/2008 3:53:52 PM

1. It appears to be a bug that the reduction in load intensity from Article 3.12 is not being applied to

4/19/2016 3:06:02 PM

HRS AASHTO

1094

Complete Issue Information

interior spread box beams.

2. Can you export and attach your bridge to this incident so I can check the spacing being used when  $S < 6.57$ ?

FROM:hlee DATE:3/18/2008 3:12:47 PM

May be related to Incident 8506. Please use the bridge attached in 8506 to test the fix.

FROM:macruz DATE:Wednesday, June 11, 2008 1:27:46 PM

I have attached the file you requested, but please note that I ended up inputting my own distributioun factors.

FROM:macruz DATE:Wednesday, June 11, 2008 1:33:23 PM

FROM: Herman Lee DATE: 3/4/2010 8:23:11 AM Eastern Standard Time

Included reduction in load intensity (AASHTO 3.12) when calculating the distribution factors for spread box beam (AASHTO 3.28.1 and 3.28.2). Resolved for 6.2 Release.

When  $S < 6.57$ , AASHTO 3.28.1 is no longer applicable. Virtis will issue a warning message and compute based on simple beam distribution. Virtis could provide an option to ask whether the user wants to compute based on simple beam distribution when 3.28.1 is not applicable.

The bridge attached in 8506 is an adjacent box beam. The distribution factor computations are based on AASHTO 3.23.4.3. For the "2 - 1st N Int" member (number of lanes is 5), the multi-lane distribution factor is 0.5315 (3/5.6443, with  $C = K = 0.8645$ ). Reduction in load intensity (AASHTO 3.12) is not included in the computation since it is not explicitly specified like the note \* in AASHTO 3.28.

FROM: Herman Lee DATE: 5/5/2010 3:06:23 PM Eastern Daylight Time

Verified in 6.2 Alpha 4.

Issue ID: 8450  
Subject: LRFR - Problem with Live Load Distribution Factor

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Campisi, Paul 1/30/2008 10:20:29 PM  
Modified By: administrator 6/19/2008 4:36:01 PM  
Priority: High  
Category: Bug - Export 1

History

4/19/2016 3:06:03 PM

HRS AASHTO

1095

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Beam Section Properties.pdf |             |
|      | G-1.OUT                     |             |
|      | G-4.OUT                     |             |
|      | G-3.OUT                     |             |
|      | 00020 - C-09-007_(3A8).xml  |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 8454.16615 | Resolved      | Incorrect section properties |

### Description

FROM:pcampisi DATE:Wednesday, January 30, 2008 5:20:30 PM

When the attached bridge is load rated LRFR, the inventory and operating rating factors are substantially higher than the LRFD design ratio. The live load moment calculated in the LRFR run is lower than the LRFD critical moment, as the LRFR run is using a scale factor of 0.833 with a single lane live load distribution factor. It is using the Fatigue Limit state to calculate the moment for inventory and operating ratings(i.e. 0.833 scale factor and single lane loaded per LRFD 3.6.1.1.2). The analysis settings are not set to the single lane loaded option.

Moments as follows:

LRFR - Truck Train: AASHTO LRFD Live Load - US (TKT) = -1108.5 m-KN

LRFD - Truck Train: AASHTO LRFD Live Load - SI (TKT) = -1956.4 m-KN

Are some of my settings wrong?

FROM:pcampisi DATE:Wednesday, January 30, 2008 5:22:01 PM

The Superstructure Definition used is "11 girders Lightweight Concrete (LOAD RATING)", rating the interior girder.

FROM:pcampisi DATE:Tuesday, February 05, 2008 10:28:32 AM

4/19/2016 3:06:03 PM

HRS AASHTO

1096

Complete Issue Information

FROM:pcampisi DATE:Tuesday, February 05, 2008 3:13:54 PM

FROM:bgoodrich DATE:Thursday, February 07, 2008 5:02:41 PM

It appears that the scale factor of 0.833 is being applied to all the HL-93 loads and not just the fatigue truck. Additionally, the one-lane loaded distribution factors are being applied as well. For LRFD, the fatigue truck was specified as a separate vehicle and assigned to the Fatigue Loads event category. The export made certain assumptions based on this; however, for LRFR, these assumptions cause the behavior we are now seeing with the scale factor and the lanes loaded. I revised the export to correct this issue.

FROM:pcampisi DATE:Friday, February 08, 2008 9:06:19 AM

How do I fix this on my end?

FROM:bgoodrich DATE:Tuesday, February 12, 2008 11:25:45 AM

There is no workaround that I can see. A new export module must be distributed to correct this issue.

This has been addressed in the 6.0.0 source code.

FROM:hlee DATE:2/25/2008 2:14:53 PM

Tested in 5.6 Service Pack 1 Debug Build. Compared BRASS files before and after the fix.

FROM:hlee DATE:3/21/2008 8:54:10 AM

Use the bridge attached in Incident 8380 for testing.

FROM:xli DATE:4/7/2008 3:14:14 PM

Retested the attached bridge with 6.0 Beta 3. Live load actions of LRFD analysis and LRFR rating are exactly the same.

|                                       |
|---------------------------------------|
| Issue ID: 8454                        |
| Subject: Incorrect section properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kennelly, Krisha        | 2/4/2008 1:06:55 PM  |
| Modified By: administrator            | 6/19/2008 4:36:00 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:03 PM

HRS AASHTO

1097

### Complete Issue Information

|                 |          |      |           |
|-----------------|----------|------|-----------|
| Lee, Herman     | New      | High | Unknown   |
| Goodrich, Brian | Assigned |      |           |
| Lee, Herman     | New      | High | Unknown   |
| Goodrich, Brian | Assigned |      |           |
|                 | Resolved |      | Education |
| Goodrich, Brian | Resolved | High | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 38C0010.xml         |             |
|      | pic16870.jpg        |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 8465.16604 | Resolved      | Overriding the Cb value calculated by BRASS |

### Description

FROM:kkennelly DATE:2/4/2008 8:09:58 AM  
Submitted on behalf of Linda Hager via email:

I spoke with you the beginning of this week concerning a discrepancy I have found with the calculated section properties of the built-up beams and Virtis output section properties. I reviewed the input and compared the output results for the section properties to my hand calculated section properties and the properties do not match..

In addition to the above, when I run Virtis, the rating output for all the beams of this structure show that shear controls at the beam ends. This result does not make sense to us. Attached is a copy of our section property hand calculation and the Vertis xml file for your review. The attached section property calculations are labeled for each beam.

Please contact me if you need additional information or have any questions. My contact information is noted below.

Thank you for your assistance,.

Linda

4/19/2016 3:06:03 PM

HRS AASHTO

1098

Complete Issue Information

Linda C. Hager

Senior Engineer  
Project Manager

TranSystems  
One Cabot Road  
Medford, MA 02155  
Main: 781-396-7775

Direct: 781-333-3796

Fax: 781-396-7757

www.transystems.com

FROM:kkennelly DATE:2/4/2008 3:44:41 PM  
User's hand calcs for I, A and y of steel builtup section don't match those in the BRASS LFD output.  
May be related to cover plates being merged.

FROM:kkennelly DATE:2/4/2008 3:57:09 PM  
Email sent to lchager@transystems.com:

Hi Linda,

Someone is going to look into your problem with the section properties.

As for the shear controlling your bridge, I noticed that your input does not contain any bearing stiffeners or transverse stiffeners. The BRASS output file lists warnings that the transverse stiffener spacing does not meet current spec requirements. I think the lack of stiffeners is why the shear is controlling.

FROM:kkennelly DATE:2/5/2008 8:05:40 AM  
email received from Linda:  
Hi Krishna,

Thank you for your prompt response. In reference to my question concerning the shear controlling, one of the members in the input is titled G-4 with stiffeners, which I set up with the bearing and intermediate stiffeners. Flexure did control for my LFD run with the stiffeners, but the ratings from this run were extremely high and did not make sense to me. I created the Member G-4 with stiffeners by copying my original G-4 input and adding the intermediate and bearing stiffeners. I would appreciate it if you can also look at this member run.

Thank you again,

Linda

FROM:kkennelly DATE:2/5/2008 8:39:51 AM  
email response to Linda:  
Hi Linda,

I took a quick look at G-4 but I don't see anything out of the ordinary. You should review the dead load

4/19/2016 3:06:03 PM

HRS AASHTO

1099

## Complete Issue Information

and live load forces and the section properties computed by BRASS. Create a point of interest in Virtis at the controlling rating location and then review the rating computations in the BRASS output text file. If you find a problem with any of the computations or forces we can look into that. Otherwise you have to review your input to determine if it is correct, we can't really help you with that.

Regards,  
Krisha Kennelly, PE

FROM:bgoodrich DATE:Thursday, February 07, 2008 2:15:56 PM

I investigated the issue you reported regarding differences in section properties between your hand calculations and those reported by BRASS. I found the source of the difference to be in the process that exports the built-up sections to BRASS. For your structure, the top cover plate and horizontal legs of the top angles are merged due to limitations with BRASS. This results in equivalent top angles that have an increased horizontal thickness. BRASS only supports one thickness for both legs of an angle. The thickness of the horizontal legs was sent to BRASS, which led to a higher area.

Now that I know what is going on, I plan on revising the export process to adjust the vertical leg length passed to BRASS to account for the thicker angle thickness. I don't have any suggestions for a work-around.

FROM:bgoodrich DATE:Friday, February 08, 2008 11:35:32 AM  
E-mail from Linda:

Hi Brian,

Thank you for looking into the section property issue with BRASS. For this particular project, we are running the program using the line girder method. Is there a way I can input the beam section properties into Virtis/BRASS so the program can then use this information to compute the member composite properties? I noticed there is a properties screen under the I-shape option in the beginning of the program under beam shapes.

Also, will the program export process be available as a patch for the current version we are running (version 5.6)?

Regards,

Linda Hager  
TranSystems

FROM:bgoodrich DATE:Friday, February 08, 2008 11:36:24 AM

The BRASS engines compute the section properties based on the input dimensions regardless of whether or not the section properties are specified directly. I don't know of any way to bypass this problem.

Krisha Kennelly will need to comment on the availability of a patch to version 5.6.

FROM:bgoodrich DATE:Tuesday, February 12, 2008 11:31:13 AM  
This has been addressed in the 6.0.0 source code.

4/19/2016 3:06:03 PM

HRS AASHTO

1100

Complete Issue Information

FROM:xli DATE:4/7/2008 2:16:49 PM

Retested the attached bridge with 6.0 Beta 3. Brass output files of G1, G3 and G4 are attached. The following is comparison of cross section properties in Brass output and Linda's hand calcs. The biggest difference found is the y of G4 with bottom plate, 4.75%.

G1 with bottom plate

|                  | I     | A     | y     |       |
|------------------|-------|-------|-------|-------|
| Brass Output     | 66759 | 95.64 | 25.26 |       |
| Linda hand calcs |       | 65917 | 95.26 | 26.36 |

G1 without bottom plate

|                  | I     | A     | y     |       |
|------------------|-------|-------|-------|-------|
| Brass Output     | 58009 | 84.39 | 28.75 |       |
| Linda hand calcs |       | 57259 | 84.01 | 29.23 |

G3 with bottom plate

|                  | I     | A     | y     |    |
|------------------|-------|-------|-------|----|
| Brass Output     | 61454 | 89.32 | 24.9  |    |
| Linda hand calcs |       | 60596 | 88.94 | 26 |

G3 without bottom plate

|                  | I     | A     | y     |       |
|------------------|-------|-------|-------|-------|
| Brass Output     | 52859 | 78.07 | 28.63 |       |
| Linda hand calcs |       | 52098 | 77.69 | 29.09 |

G4 with bottom plate

|                  | I     | A     | y     |       |
|------------------|-------|-------|-------|-------|
| Brass Output     | 68311 | 97.89 | 24.65 |       |
| Linda hand calcs |       | 67452 | 97.51 | 25.88 |

G4 without bottom plate

|                  | I     | A     | y     |       |
|------------------|-------|-------|-------|-------|
| Brass Output     | 59908 | 86.64 | 27.99 |       |
| Linda hand calcs |       | 59139 | 86.26 | 28.59 |

Issue ID: 8465  
 Subject: Overriding the Cb value calculated by BRASS

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Kennelly, Krisha 2/11/2008 8:00:38 PM  
 Modified By: administrator 6/19/2008 4:36:00 PM  
 Priority: High



## Complete Issue Information

Category: Education

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Unknown     |
|                 | Resolved |          | Bug - BRASS |
|                 | Closed   |          | N/A         |
| Goodrich, Brian | Closed   | High     | N/A         |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | ROWE_ERL.xml        | Bridge file |

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 8468.16601 | Closed        | Ductility Limits in BRASS |

## Description

FROM:kkennelly DATE:2/11/2008 3:03:21 PM  
Submitted on behalf of Vinacs, Caltrans via email:

We tried to override the value calculated by the BRASS software by entering the Cb values. However, program does not consider our entry. Could you please check it and let me know where did we go wrong?

SuperStrucutre Definition: Span 13-18  
Member G2

At all the point of interests, we did the following: However, program used its estimated value (1.043) in rating the bridge.

Please note that we are using Virtis Version 5.5  
(Embedded image moved to file: pic16870.jpg)

(See attached file: 38C0010.xml)

4/19/2016 3:06:04 PM

HRS AASHTO

1102

Complete Issue Information

Vinacs M Vinayagamoorthy  
916-227-8657

FROM: bgoodrich DATE: Monday, February 11, 2008 4:45:03 PM  
I reviewed the log file and found the following warning near the end of the file:

WARNING (High):

The POI control parameter on the ANALYSIS command indicates to generate points of interest from the schedule data. BRASS currently does not allow the generated data to be overridden with the data entered on the point-of-interest commands.

The help also states:

"BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows."

|                                    |
|------------------------------------|
| Issue ID: 8468                     |
| Subject: Ductility Limits in BRASS |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Maberry, Steven         | 2/18/2008 4:36:47 PM |
| Modified By: administrator            | 6/19/2008 4:35:59 PM |
| Priority: High                        |                      |
| Category: N/A                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                                                                                  |
|------------|---------------|------------------------------------------------------------------------------------------|
| 8469.16600 | Resolved      | Validate travelway at the same elevation is not necessary for Truss line superstructure. |

Description

FROM:hlee DATE:2/18/2008 11:34:57 AM  
Submitted for Steven Maberry, New Mexico DOT via bridgeware e-mail:

From: Lowe, Eric R., NMDOT  
Sent: Tuesday, February 12, 2008 3:05 PM  
To: Maberry, Steven R., NMDOT  
Subject: Virtis, Ductility Limits

Ductility limits

AASHTO Standard 9.18

When selecting the equation to calculate the flexural capacity of a prestressed beam, section 9.18 is considered. Section 9.18 states that the reinforcement index shall not exceed  $0.36 * \text{Beta } 1$ . It is my understanding that Beta 1 is based on the compressive strength of the concrete deck. It appears that Brass calculates Beta 1 for the prestressed beam concrete. With a concrete strength at or greater than 8000psi the Beta 1 factor is reduced to 0.65 from 0.85 resulting in a smaller acceptable reinforcement index. Ordinarily this is not a problem. However, when rating beams with small depth dimensions, the calculated reinforcement index is larger than usual. When limited to  $0.36 * \text{Beta } 1$  brass may select and use a flexural capacity equation that is insufficient.

Thanks,

Eric Lowe, P.E.

Bridge Design Engineer

NMDOT - Bridge Design

FROM:bgoodrich DATE:Wednesday, February 20, 2008 12:15:19 PM

4/19/2016 3:06:04 PM

HRS AASHTO

1104

## Complete Issue Information

I've been assigned the ductility issue you submitted for Eric Lowe (Incident 8468). Please export Eric's bridge to the XML format and send it to me, so I can attach it to the incident and use it for duplicating the issue.

FROM:bgoodrich DATE:Wednesday, February 20, 2008 12:28:40 PM

I reviewed the BRASS engine and found that the compressive strength of the prestressed concrete girder is used to calculate beta1 for a composite section that is considered "flanged".

FROM:bgoodrich DATE:Wednesday, February 20, 2008 4:26:56 PM

E-mail from Steven Maberry:

Brian,

Find ROWE\_ERL.xml attached. This is a bridge that exhibits the described logic behavior. (VirtisOpis 5.6.0; BRASS Girder Version 6.0.0)

The BRASS output file reports:

0.36 beta1 = 0.2340

Which reveals that BRASS is using  $\beta_1 = 0.2340/0.36 = 0.65$

HOWEVER the compression flange for the composite beam is deck concrete with compressive strength = 4 ksi (NMDOT Class AA). This concrete's  $\beta_1 = 0.85$

Running the same girder-deck composite beam in ConSPAN results in the beam passing this reinforcement check. BRASS reports:

So, over reinforced, PMU = 0.00 kip-ft AASHTO 9-22

We believe BRASS is using the wrong beta1 (the one associated with the prestress concrete instead of the deck concrete, which is the compression flange) and, therefore, reporting an erroneous over-reinforced failure mode. The actual error occurs in equation 9-20 ... not equation 9-22. With  $\beta_1 = 0.85$ , the reinforcement index passes equation 9-20 so that 9-22 does not apply.

Such an issue is rare because standard AASHTO beams are much taller than the special rectangular beams in ROWE\_ERL. In standard AASHTO beams  $A_s/bd_t$  will be MUCH smaller because  $d_t$  is so large. This probably explains why the error has not previously shown up.

Thanks,

Steven M and Eric L

FROM:bgoodrich DATE:Wednesday, February 20, 2008 4:29:29 PM

I was able to duplicate the issue using the ROWE\_ERL.xml file. See the "G2" member under the "Span 2" structure definition. I generated the BRASS data file and have forwarded it and the issue discussion to WYDOT.

FROM:bgoodrich DATE:Wednesday, March 05, 2008 1:56:49 PM

4/19/2016 3:06:04 PM

HRS AASHTO

1105

Complete Issue Information

WYDOT assigned this issue to BRASS Problem Log 808.

FROM:bgoodrich DATE:Friday, March 07, 2008 12:16:32 PM

I am investigating the ductility issue again. I found that BRASS is using the beam f'c in the ductility calculations because the girders are input as non-composite. Unless there are shear reinforcement ranges that tie the beam and slab together, the structure will be considered non-composite. Please let me know if this addresses your concern.

FROM:bgoodrich DATE:Friday, March 07, 2008 12:17:22 PM

E-mail from Steven Maberry:

Brian,

Thanks very much. This was Eric's bridge—he actually works for a separate design unit. I had not noted that composite bridge structure was not communicated to Virtis. Once Eric installed horizontal shear transfer reinforcement, BRASS responded correctly.

Thank you very much. We are very grateful for your help in resolving this issue.

Steven M

FROM:bgoodrich DATE:Friday, March 07, 2008 12:19:42 PM

User made the bridge composite and results are as expected. Closed.

Issue ID: 8469  
Subject: Validate travelway at the same elevation is not necessary for Truss line superstructure.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 2/18/2008 6:24:57 PM  
Modified By: administrator 6/19/2008 4:35:59 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
| Lee, Herman     | Resolved | High     | Bug      |

Contacts

4/19/2016 3:06:04 PM

HRS AASHTO

1106

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                              |
|------------|---------------|--------------------------------------------------------------------------------------|
| 8472.16597 | Resolved      | "Vehicle cannot be added as an LFD/ASD rating vehicle" message with strange behavior |

### Description

FROM:hlee DATE:2/18/2008 1:11:02 PM

Submitted for Shasta O'Donnell, Volkert & Associates Inc. via e-mail:

The file is attached. I only went through and entered up to the truss. I have not put in alternative descriptions yet or descriptions for the FBs and stringers since these were not needed to verify the truss input. Thank you.

Shasta O'Donnell, P.E.  
Volkert & Associates Inc.  
3809 Moffett Road  
Mobile, AL 36618

-----Original Message-----

From: Herman Lee [mailto:HLee@mbakercorp.com]

Sent: Thursday, February 14, 2008 1:03 PM

To: Shasta O'Donnell

Subject: RE: Truss Load Rating using Virtis

Could you export and e-mail the truss line superstructure to us for investigation?

Thanks,  
Herman

>>> O'Donnell, Shasta <sodonnell@volkert.com> 2/14/08 11:49 AM >>>

I have entered the input in as a truss line superstructure and am still getting an error concerning the lower panel points. It states that panel point L1 is not on the truss deck, please correct panel point L1 coordinates. I don't understand why it didn't complain about L0.

Shasta O'Donnell, P.E.  
Volkert & Associates Inc.

4/19/2016 3:06:04 PM

HRS AASHTO

1107

Complete Issue Information

3809 Moffett Road  
Mobile, AL 36618

-----Original Message-----

From: Herman Lee [mailto:HLee@mbakercorp.com]  
Sent: Wednesday, February 06, 2008 11:12 AM  
To: Shasta O'Donnell  
Subject: RE: Truss Load Rating using Virtis

Lower panel points with different elevations can be entered into Virtis. I think the problem you are having is the Virtis computed dead loads for truss system superstructure. You may want to enter the truss as a truss line superstructure and enter the floor system dead load as panel point loads in the PanelPointLoad command for those lower panel points that support the deck.

Herman

>>> O'Donnell, Shasta <sodonnell@volkert.com> 2/6/08 11:57 AM >>>  
It is similar but it is still a through truss. I assume that the lower panel points have to be at the same elevation. Will different elevations for the lower panel points be supported by virtis in the future? thanks

Shasta O'Donnell, P.E.  
Volkert & Associates Inc.  
3809 Moffett Road  
Mobile, AL 36618

-----Original Message-----

From: Herman Lee [mailto:HLee@mbakercorp.com]  
Sent: Wednesday, February 06, 2008 10:51 AM  
To: Shasta O'Donnell  
Subject: RE: Truss Load Rating using Virtis

Seems like what you describe is similar to a deck-thru truss. Virtis doesn't support this configuration.

Herman Lee

>>> O'Donnell, Shasta <sodonnell@volkert.com> 2/6/08 9:11 AM >>>  
I have a truss with lower panel pints below the bridge and level with the bridge. I have only been able to model the truss with all the lower panel points at the same elevation. Is there any way to model them at different elevations?

Shasta O'Donnell, P.E.

4/19/2016 3:06:04 PM

HRS AASHTO

1108

Complete Issue Information

Volkert & Associates Inc.  
 3809 Moffett Road  
 Mobile, AL 36618

FROM:hlee DATE:2/18/2008 1:42:03 PM  
 For truss line superstructure, the user is responsible for computing and entering the dead loads as panel point loads. So validating travelway at the same elevation is not necessary for truss line superstructure.  
 Resolved for 6.0 Release.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 8472                                                                                |
| Subject: "Vehicle cannot be added as an LFD/ASD rating vehicle" message with strange behavior |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Boukamp, Sabine         | 2/23/2008 4:31:57 AM |
| Modified By: administrator            | 6/19/2008 4:35:59 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Unknown  |

Contacts

| Name           | Company | Email 1                 | Phone 1 |
|----------------|---------|-------------------------|---------|
| Sabine Boukamp |         | SBoukamp@mbakercorp.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:06:05 PM

HRS AASHTO

1109



Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:sboukamp DATE:Friday, February 22, 2008 11:31:57 PM

While testing the Virtis Std. Engine 6.0 I noticed in the Analysis Settings window the following:  
 Opening the Analysis Setting windows from a bridge alternative; Rating Method: Member Alt.;  
 Analysis Type: Standard; on right side: having either Inventory or Operating in the LFD/ASD tree  
 selected  
 and on the left side a vehicle which has the LFD/ASD Rating option as property NOT checked (e.g.  
 HL-93(US), HL-93(SI) or Lane-Type Legal Load vehicle); trying to add this vehicle  
 produces a message but still adds the selected vehicle to the selected right tree branch.  
 Error message: "This vehicle cannot be added as an LFD/ASD rating vehicle."

This happens also with a non-LRFR vehicle when trying to add it to either Inventory or Operating  
 branch of the LRFR tree.

FROM:mordoobadi DATE:3/3/2008 12:14:35 PM  
 Fixed for 6.0 Beta 3.

|                                        |
|----------------------------------------|
| Issue ID: 8474                         |
| Subject: Girder Shear Capacity at pier |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Frick, James            | 2/25/2008 3:18:57 PM |
| Modified By: administrator            | 6/19/2008 4:35:59 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |

4/19/2016 3:06:05 PM

HRS AASHTO

1110

Complete Issue Information

|                  |                    |      |           |
|------------------|--------------------|------|-----------|
| Goodrich, Brian  | Assigned           |      |           |
|                  | Resolved           |      |           |
| Lee, Herman      | New                | High | Unknown   |
|                  | Assigned           |      |           |
|                  | Information Needed |      |           |
|                  | Assigned           |      |           |
|                  | Resolved           |      | Education |
| Kennelly, Krisha | Assigned           |      | Unknown   |
| Kennelly, Krisha | Assigned           | High | Unknown   |
| Lee, Herman      |                    |      |           |
|                  | Resolved           |      |           |

Contacts

| Name          | Company                        | Email 1                 | Phone 1       |
|---------------|--------------------------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech                     | gale.barnhill@aecom.com | (402)363-9515 |
| Dean Teal     | Kansas Dept. of Transportation | teal@ksdot.org          | (785)291-3001 |

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Barnhill - 2C_500.xml |             |

Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 8475.16594 | Assigned      | Results of COMPUTE for LL Dist Factor - Roadway less than 24 ft |

Description

FROM:jfrick DATE:Monday, February 25, 2008 10:18:57 AM

Virtis calculates web shear capacity as unstiffened at the pier of two span continuous girder structure - appears to ignore diaphragm connection plates/intermediate stiffeners or bearing stiffener at pier when calculating shear capacity. Current rating governed by web shear capacity. Previous run in 2005 rated out with moment governing at pier. Hand-calculation using AASHTO 17th Edition LFD, yields adequate results similar to 2005 results. Bridge originally designed using Merlin-Dash software.

FROM:hlee DATE:2/25/2008 1:44:06 PM

Please export the bridge to the XML format and attach it to the incident for duplicating the issue.

FROM:jfrick DATE:Wednesday, February 27, 2008 9:42:12 AM

4/19/2016 3:06:05 PM

HRS AASHTO

1111

Complete Issue Information

See attached .xml file.

FROM:hlee DATE:2/28/2008 9:33:54 AM

I rated G-1, G-2 and G-4 with both Virtis LFD and BRASS LFD engines. For G-1 and G-4, both engines reported the critical location is at the pier with shear strength controls. For G-2, Virtis LFD engine reported shear strength controls but the critical location is not at the pier. Which member do you have problem with the web shear capacity? From the 2008 Notes in the description of the bridge, loads were added and analysis engine was switched to Virtis LFD. Please provide hand calculation for the shear strength capacity check.

FROM:jfrick DATE:Friday, February 29, 2008 10:05:14 AM

We ran using both the Virtis and BRASS engines with simialr results although Virtis LFD were slightly higher. Girders 1, 3, 4 and 6 do not rate out with either engine. Attached is our shear calc at the pier

FROM:hlee DATE:2/29/2008 10:37:15 AM

Brian, please investigate the reported issue in the BRASS run.

FROM:bgoodrich DATE:Tuesday, March 04, 2008 11:24:52 AM

I investigated G1 using the BRASS LFD engine. I confirmed it is calculating the shear capacity based on an unstiffened web. BRASS checks the stiffener spacing left and right of the support and chooses the larger spacing, which is 240 inches. BRASS calculates a maximum spacing limit (Article 10.48.8.3) of  $3D = 204"$ . Because the actual spacing exceeds this maximum, BRASS considers the web to be unstiffened. This simply explains what the engine is actually doing. It should also be noted that the stiffeners are not actually required because  $D/tw$  is 136, which is less than the 150 limit; however, they are still provided.

The hand calculations did not consider the spacing limit of  $3D$ , which leads to a higher shear capacity than BRASS is calculating. If you do not agree with the method by which BRASS is performing this calculation, I will submit this issue to the Wyoming DOT for review and possible assignment to a BRASS problem log. Please provide any justification or considerations for performing these calculations differently.

FROM:bgoodrich DATE:Wednesday, March 05, 2008 12:20:25 PM

E-mail from James Frick (3/4/2008):

Brian:

I reviewed your comments and I am in complete agreement with you and Virtis' calculation. When the ratings came up low and knowing that the previous rating summary I was provided with showed higher ratings and that flexure governed, I wanted find out why before notifying the owner. I began manually calculating the web capacity and didn't go all the way through AASHTO 10.48.8 - I stopped once I calculated the web capacity and thus did not check paragraph 10.48.8.3. Thank you for identifying this for me.

James A. Frick, P.E.  
Vice President  
DiDonato Associates, P.C.

4/19/2016 3:06:05 PM

HRS AASHTO

1112

Complete Issue Information

689 Main Street  
Buffalo, New York 14203  
Phone: 716-656-1900  
Fax: 716-656-1987  
Email: jfrick@didonato.cc

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 8475                                                           |
| Subject: Results of COMPUTE for LL Dist Factor - Roadway less than 24 ft |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Barnhill, Gale          | 2/25/2008 4:00:11 PM |
| Modified By: xli                      | 5/28/2009 1:46:02 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbarnhill DATE:Monday, February 25, 2008 11:00:24 AM

The attached structure is a 3 girder system. 10 ft girder spacing and 22'-6" Travelway.

With PREFERENCES/BRIDGE WORKSPACE Live Load Dist Factors set for Standard Spec, Virtis COMPUTES LL DF for G1 (Exterior member) as 1.25. This is based on wheels placed within 2'-0" of the curb.

With PREFERENCES/BRIDGE WORKSPACE Live Load Dist Factors set for MCE, Virtis COMPUTES LL DF for G1 (Exterior member) as 1.125. This is based on wheels centered within a 11'-3" Lane.

MCE 6.7.2.2 says to center wheels in lanes for Roadway 18 to 20 ft.

4/19/2016 3:06:05 PM

HRS AASHTO

1113

## Complete Issue Information

Standard Spec 3.6.3 and 3.6.4 imply wheels at maximum locations for Roadway 20 to 24 ft.

It seems that the Virtis COMPUTE should be the same for Stand Spec and MCEB for roadways 20 to 24 ft.

FROM:hlee DATE:2/26/2008 9:59:35 AM

This is related to Incident 7007. For roadway width 18 to 24 ft and MCEB selected, Virtis computes distribution factors based on 2 lanes and wheels centered within the lane. Gale, please let us know your comment.

FROM:gbarnhill DATE:Tuesday, February 26, 2008 11:17:00 AM

I agree with all the conclusions in Incident 7007 and the number of lanes used with MCEB selected. I'm questioning if the wheels should be centered in the lane for roadway widths of 20 to 24 ft.

FROM:hlee DATE:2/27/2008 8:26:48 AM

Since the number of lanes criteria in MCEB is extended from 20 to 24 ft, the wheels centering criteria is also extended when MCEB is selected as the spec to use.

FROM:hlee DATE:4/3/2008 11:28:20 AM

Since there is no more comments on the investigation, the status is changed to Resolved.

FROM:dteal DATE:Thursday, April 10, 2008 12:13:03 PM

email from David Koenig

I have been so busy on other things that I have not had time to keep up with the incidents on the website. I am in full agreement with you on this one. The wheel line should be placed to cause maximum loadings for roadways from 20 to 24 feet. Basically, they should be placing the wheel line 2 feet from the curb so as to produce the maximum loading on the exterior girder. At MoDOT, our standard practice is to always place the wheel lines 2 feet from the curb and then place additional trucks according to AASHTO. Some engineers get caught up on trying to place the vehicle within the lane to calculate DF's. That approach doesn't pass the common sense test for me. I guess that some people think that the magic white line painted on the roadway is going to keep the truck from getting closer to the curb.

FROM:hlee DATE:4/10/2008 2:45:27 PM

I agree that the wheels should be placed to obtain the maximum effect for roadways from 20 to 24 feet. At the same time, in what purpose does the selection of spec serves in the calculation of DFs. If the goal is to obtain maximum effect, the selection of Standard Spec or MCEB Spec is not needed after all.

FROM:gbarnhill DATE:Friday, April 11, 2008 11:06:02 AM

I'm not sure what the discussion was when we implemented the Preference for Stand Spec or MCEB, but I think it may have been related to Design vs Rating. I assume the Preference is available for Opis modeling, so at design time the effects would need to be placed according to the Standard Spec. At Rating time, the effects need to be placed according to MCEB.

FROM: Herman Lee DATE: 10/2/2008 1:35:05 PM Eastern Daylight Time

Modified the computation to place the wheel line 2 ft from the curb when MCEB is selected and roadways from 20' to 24'.  
Resolved for 6.0.1 and 6.1.

4/19/2016 3:06:05 PM

HRS AASHTO

1114

Complete Issue Information

FROM: Xinmei Li DATE: 5/28/2009 9:20:17 AM Eastern Daylight Time  
 Verified with 6.1 Beta 1, DF is calculated as 1.25 for both std spec and MCEB selected, incident is resolved.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 8480                                        |
| Subject: Truss-Floorbeam-stringer Distribution Factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Doerr, Gary             | 2/28/2008 7:07:04 PM |
| Modified By: xli                      | 5/28/2009 2:46:20 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
| Goodrich, Brian  |          |          |          |
| Kennelly, Krisha |          |          |          |
| Kennelly, Krisha | Assigned | High     | Bug      |
| Lee, Herman      |          |          |          |
| Duray, Jim       |          |          |          |
|                  | Resolved |          |          |
| Lee, Herman      |          |          |          |

Contacts

| Name           | Company                     | Email 1                         | Phone 1      |
|----------------|-----------------------------|---------------------------------|--------------|
| Gary Doerr     | North Dakota Dept. of Trans | gldoerr@nd.gov                  | 701-328-4844 |
| Brian Goodrich | BridgeTech, Inc.            | Goodrich@BridgeTech-Laramie.com | 307 222-4688 |

Documents

Complete Issue Information

| Name | Resource Identifier                                            | Description                                   |
|------|----------------------------------------------------------------|-----------------------------------------------|
|      | 85-126.562_Long_X_Bridge.xml<br>0F_7 Ignore Shear Question.xml | This is the file that is giving me the errors |

Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 8487.16582 | Duplicate     | PS Shear ignored when IGNORE SHEAR setting is unchecked |

Description

FROM:gdoerr DATE:Thursday, February 28, 2008 2:07:05 PM

I am trying to rate a continuous truss that gives me the following error. Floorbeam Members

Fb1 (Floor System Floorbeam Member)

Existing member alternative: south end floorbeam

Current member alternative: south end floorbeam

south end floorbeam (Floorbeam Member Alternative)

Warning: LFD single lane moment distribution factor not

defined.

Warning: LFD single lane shear distribution factor not defined.

Warning: LFD single lane shear at support distribution factor

not defined.

Warning: LFD single lane deflection distribution factor not

defined.

Warning: LFD multi-lane moment distribution factor not

defined.

Warning: LFD multi-lane shear distribution factor not defined.

Warning: LFD multi-lane shear at support distribution factor

not defined.

Warning: LFD multi-lane deflection distribution factor not

defined.

Warning: Shear connector ranges are not defined.

Warning: Composite deck values have been defined but shear

connectors have not. Check for correct composite action.

Warning: LRFD live load distribution factors not defined.

ERROR: Haunch ranges are not continuous over the length of

the member alternative.

ERROR: Haunch range not defined for entire length of

member alternative.

Where do I input the DF for the floorbeams? I have not been able to find it. This may be the only thing that keeps the file from running but this is as far as I can get. The above errors show up in the validation and save operations.

The following error shows up while trying to run the analysis:

4/19/2016 3:06:06 PM

HRS AASHTO

1116

Complete Issue Information

Unable to convert steel beam to BRASS cross sections!  
Error generating BRASS cross section commands!  
Unable to get cross section dimensions!  
Error generating BRASS cross section commands!  
Unable to compute modular ratio for slab rebar!  
The concrete modulus of elasticity must be greater than zero!

Any hints as to were to solve these items?

Gary

FROM:hlee DATE:2/29/2008 8:51:14 AM  
Distribution factor input is not required for floorbeams. The validation shouldn't report those distribution factor warning messages.

Based on the error messages during analysis, check the accuracy of the length input in the Floorbeam Profile window. If this still doesn't resolve the problem, please attach your bridge so we can take a look here.

FROM:gdoerr DATE:Monday, March 03, 2008 11:30:01 AM  
The floorbeam lengths seem correct to me. I attached the file for your review. thanks gary

FROM:hlee DATE:3/4/2008 10:05:26 AM  
Brian, please assign to Krishna to fix the distribution factor warning messages after you are done.

There are a couple of issues in Fb1 (End floorbeam) after I modified the start distance and length of the deck reinforcement to match the deck concrete. I tried the bridge in both 5.5 and 5.6.

1. The analysis locations defined in the Floorbeam Member Alternative window.

----- Contents of BRASS Error File -----  
File: C:\Program Files\AASHTOWARE\VirtisOpis55\0085126562  
\Existing\_truss\_girder\_floorbeam\_system\Fb1  
\south\_end\_floorbeam\BRASS\_LFD\south\_end\_floorbeam.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: d\_floorbeam\BRASS\_LFD\south\_end\_floorbeam.DAT

-----  
Error No.: 1875  
Type : Input Error  
Location : Input Data File

\*\*ERROR\*\* A POINT-OF\_INTEREST command is required when.  
parameter 6 of the ANALYSIS command is 3, 4, or 5.

----- End of Contents of BRASS Error File -----

4/19/2016 3:06:06 PM

HRS AASHTO

1117



Complete Issue Information

2. Removed the analysis locations in the Floorbeam Member Alternative window.

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\VirtisOpis55\0085126562  
\Existing\_truss\_girder\_floorbeam\_system\Fb1  
\south\_end\_floorbeam\BRASS\_LFD\south\_end\_floorbeam.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: d\_floorbeam\BRASS\_LFD\south\_end\_floorbeam.DAT

-----  
Error No.: 1103  
Type : Input Error  
Location : prgen.for  
\*\*\*\*ERROR\*\*\*\* A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN  
1 SPAN POINT = 1  
RUN STOPPED.  
REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

----- End of Contents of BRASS Error File -----

FROM:gdoerr DATE:Tuesday, March 04, 2008 4:10:41 PM

I have gotten the same error A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS in a different (3 span) girder floor beam bridge. Is it something that I am inputting incorrectly? Gary

FROM:bgoodrich DATE:Tuesday, March 11, 2008 9:12:19 AM

I changed the haunch profile to match the deck and reinforcement profiles. There should be about a 1 foot section at the start and end of the floorbeam that consists of only the rolled beam. However, when the export calls for the cross section at the left end of the member (0.0 ft), a section with a haunch is returned. The cross sections are generated using the domain functions: ResetChangePointGeneration and GenerateCrossSectionInfo. Do you have any idea why a haunch is being found at the start of the floorbeam? Could there be a problem with the haunch range set MoveDistance function? I don't have the domain code. Please let me know what you find.

FROM:bgoodrich DATE:Tuesday, March 11, 2008 9:16:31 AM

E-mail from Krisha:

I've fixed a bug in abognrl that was causing this problem. I've attached the abognrl.dll for Debug Version 6.0.

As a workaround, entering a "fake"(all dimensions equal zero) haunch over the first 1.04' of the fb will solve the problem of the haunch being returned at the start of the fb. But then I think the export will require a "fake" deck over this portion of the fb as well. When I try this workaround of entering both a fake haunch and fake deck I get an export error about the concrete modulus of elasticity not being defined. I'm not sure where that is coming from. Can you look into that and see if this workaround can work for the user?

4/19/2016 3:06:06 PM

HRS AASHTO

1118

## Complete Issue Information

FROM:bgoodrich DATE:Tuesday, March 11, 2008 9:17:45 AM

Regarding the workaround, I entered fake slab and haunch for the first part of the floorbeam and was able to analyze the alt for "Fb1". Before adding the fake slab, I received the error about the concrete modulus of elasticity.

I also confirmed the new abognrl DLL fixed the problem.

FROM:bgoodrich DATE:Tuesday, March 11, 2008 9:18:13 AM

I still need to update the export to include the floorbeam member alt analysis locations.

FROM:gdoerr DATE:Wednesday, April 02, 2008 2:25:11 PM

Any help here? I'm supposed to have this rating done this month.

FROM:bgoodrich DATE:Monday, April 07, 2008 1:42:08 PM

Please try this workaround:

1. Expand the tree so the items under "End floorbeam" are shown.
2. Add a dummy range to the Haunch Profile window that starts at 0.0 ft with a range of 1.04167 ft. All the haunch dimensions in this row must be entered as zero.
3. Add a dummy range to the Deck Concrete tab on the Deck Profile window that starts at 0.0 ft with a range of 1.04167 ft. Enter the same data as the existing row, except for the Structural Thickness, which should be entered as 0.0 in.
4. Revise the entry on the Reinforcement tab of the Deck Profile window so the reinforcement range matches the range of the slab, i.e., starting at 1.04167 ft with a range of 33 ft.
5. Expand the tree to view Floor System Geometry > FLOORBEAM MEMBERS > Fb1 > FLOORBEAM MEMBER ALTERNATIVES > "south end floorbeam".
6. Delete the entries on the Analysis Locations tab of the Floorbeam Member Alternative window for "south end floorbeam". These could also be moved to the Points of Interest for the "End floorbeam".

FROM:hlee DATE:4/9/2008 3:32:21 PM

I tried to rate "Truss 1" in the attached bridge in 6.0 development. Following are the error messages:

```
Computing nodal loads due to floorbeams...
???Error - Unable to compute dead load of floorbeam!
???Error - Unable to compute floorbeam loads ...
???Error - Unable to compute floorsystem loads...
```

6.0 Development asserted at Line 1751 in DoSteelBeamDef. Looks like there is a bug when haunch data doesn't start from the start of the member.

```
if( !IsEqualTo( m_BmDefHaunchDataArray[i].dConcreteDensity,
               m_BmDefHaunchDataArray[i+1].dConcreteDensity) )
{
    ASSERT(FALSE);
    return FALSE;
}
```

Brian, please assign to Krishna after you are done with your export changes. There is no workaround for this problem in 5.5.

4/19/2016 3:06:06 PM

HRS AASHTO

1119

Complete Issue Information

FROM:hlee DATE:4/10/2008 2:01:05 PM

I tried to rate the truss (with Brian Goodrich's workaround) in 5.6. After I added a dummy end range (1.04163 ft) to the Haunch Profile window and the Deck Concrete tab on the Deck Profile window, "Truss 1" rating completed without any error messages. Although the analysis was completed, the element actions and support reactions listed in the Dead Load Analysis Report are either missing or with a value "NaN". I suspect there is a defect in building the truss FE model.

Krishna, please assign to Girish after you are done.

FROM:bgoodrich DATE:Tuesday, April 15, 2008 10:31:40 AM

Addressed the floorbeam (and stringer) alternative analysis points in the BRASS export. Assigned to Krishna.

FROM: Krishna Kennelly DATE: 6/23/2008 11:37:48 AM Eastern Daylight Time

I've removed the FB distribution factor validation for this type of structure def.

FROM: Krishna Kennelly DATE: 6/23/2008 11:38:48 AM Eastern Daylight Time

FROM: Krishna Kennelly DATE: 6/23/2008 11:40:18 AM Eastern Daylight Time

Assigned to Herman to fix building the FE model.

FROM: Herman Lee DATE: 8/28/2008 9:50:07 AM Eastern Daylight Time

Two issues need to be investigated and fixed:

1. I tried to rate "Truss 1" in the attached bridge (85-126.562\_Long\_X\_Bridge.xml) in 6.0 Release. Following are the error messages. This issue was reported above on 4/9/2008. It is a bug when haunch data doesn't start from the start of the member.

Computing nodal loads due to floorbeams...  
???Error - Unable to compute dead load of floorbeam!  
???Error - Unable to compute floorbeam loads ...  
???Error - Unable to compute floorsystem loads...

2. After I added a dummy range at the start and end of the floorbeam haunch profile and deck profile to bypass the first issue, I tried to rate "Truss 1" in the attached bridge (8480-v60.xml) in 6.0 Release and all influence line ordinates are -1.#IND. I copied "Truss 1" to "Truss 2" and removed all the joints that connect to only two members in the upper chord. Live load analysis was successfully completed but the impact factor computation failed due to the limitation listed in Incident 8067. Also attached the 6.1 Development version (8480-v61.xml) of the modified bridge.

FROM: Krishna Kennelly DATE: 12/9/2008 10:22:58 AM Eastern Standard Time

Error message 1 reported on 8/28 is fixed for 6.1

Jim, incident assigned to you to fix #2 reported on 8/28

FROM: Krishna Kennelly DATE: 12/9/2008 10:23:40 AM Eastern Standard Time

4/19/2016 3:06:06 PM

HRS AASHTO

1120

Complete Issue Information

FROM: Herman Lee DATE: 2/18/2009 9:16:13 AM Eastern Standard Time  
 The truss is statically unstable (Number of members + Number of constraints < 2 x Number of panel points). A validation check for stability is added in 6.1 Release. For the truss member above each interior support, Virtis can't determine which span they fall in. This configuration for the truss member is not supported.

FROM: Jim Duray DATE: 2/21/2009 9:22:03 AM Eastern Standard Time

FROM: Xinmei Li DATE: 5/28/2009 10:21:32 AM Eastern Daylight Time  
 Verified with 6.1 beta1, #1 error message is fixed, #2 validation is added.

Issue ID: 8487  
 Subject: PS Shear ignored when IGNORE SHEAR setting is unchecked

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Barnhill, Gale 3/4/2008 3:26:13 PM  
 Modified By: administrator 6/19/2008 4:38:37 PM  
 Priority: High  
 Category: Bug - Export 1

History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Lee, Herman     | New       | High     | Unknown        |
| Goodrich, Brian | Assigned  |          |                |
|                 | Duplicate |          | Bug - Export 1 |
| Goodrich, Brian | Duplicate | High     | Bug - Export 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1       |
|----------------|------------------|-------------------------------------|---------------|
| Gale Barnhill  | Earth Tech       | gale.barnhill@aecom.com             | (402)363-9515 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688  |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 8489.16580 | Resolved      | over-riding VIRTIS selection of LL distribution factor |

Description

FROM:gbarnhill DATE:Tuesday, March 04, 2008 10:26:25 AM

In the attached model, Member G3 is intended to be analyzed for PS shear.

We have not checked the IGNORE SHEAR item in the member alt, but the ANALYSIS command in BRASS, parameter 7 is set to 1 = ignore PS shear.

When we built this model, we created member G2 as the moment analysis member and checked IGNORE SHEAR. Then we copied G2 member alt to G3 and unchecked the IGNORE SHEAR.

FROM:hlee DATE:3/4/2008 11:32:52 AM

Brian, please see whether this is related to Incident 8403.

FROM:gbarnhill DATE:Tuesday, March 04, 2008 3:22:58 PM

For my model, Engine Prop for G3 were set to NO LIMIT for Vci. Changing the Engine Prop to 1.0 gives a shear analysis. I did not create the model, so I'm not sure why the Engine Prop was different for this member. We usually don't change the default setting of 1.0.

FROM:bgoodrich DATE:Wednesday, March 05, 2008 12:08:55 PM

This issue is a duplicate of 8403.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 8489                                                  |
| Subject: over-riding VIRTIS selection of LL distribution factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Onysko, Jim             | 3/6/2008 12:23:56 AM |
| Modified By: rlenox                   | 9/18/2008 8:15:58 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

### Complete Issue Information

|                    |          |      |           |
|--------------------|----------|------|-----------|
|                    | Resolved |      | Education |
| Lee, Herman        | Resolved | High | Education |
| Lee, Herman        | New      | High | Unknown   |
| Ordoobadi, Mehrdad | Assigned |      |           |
|                    | Resolved |      |           |
| Ordoobadi, Mehrdad | Resolved | High | Unknown   |

### Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0766188-Fixed.bbd   |             |
|      | 0766188.bbd         |             |
|      | ImportError.jpg     |             |

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 8516.16553 | Resolved      | Import failure |

### Description

FROM:jonyisko DATE:Wednesday, March 05, 2008 7:23:56 PM

I am rating a single span steel thru-truss with a roadway width of 18'-2". Although the multiple lane live load distribution factor controls, VIRTIS automatically uses the single lane live load case as the controlling case for the truss. I presume this is because the roadway width is less than 20', and based on AASHTO standard specs Section 3.6, it seems that roadway widths less than 20' should be loaded with only a single lane (although AASHTO does not address this case specifically). However, I came across the following excerpt in AASHTO Manual for Condition Evaluation of Bridges, Section 6.7.2.2, which states that:

"Roadway widths from 18-20 should have two design lanes, each equal to one-half the roadway width. Live loadings should be centered in these lanes."

Based on this, I need to use the multiple lane case as the controlling case. Now, it is not a problem to work around this in the VIRTIS truss input window. I can simply enter in the multi-lane distribution factors for both the "OneLane" and "MultiLane" sub-commands under the "LLDistribution" command, thereby ensuring VIRTIS uses the correct factors. However, I was wondering if it is possible to override VIRTIS and tell it which live load distribution factors (one lane or multi-lane) to use, as opposed to the software automatically selecting the controlling case. I know that for a Girder Line Superstructure, the

4/19/2016 3:06:07 PM

HRS AASHTO

1123

## Complete Issue Information

user must specify which live load distribution factor to use, but I don't know if this is possible for a Truss Superstructure.

FROM:hlee DATE:3/6/2008 10:35:19 AM

If you select MCEB in the View | Preferences window's Bridge Workspace tab, Virtis will use those multi-lane distribution factors you entered in the truss input window.

|                         |
|-------------------------|
| Issue ID: 8516          |
| Subject: Import failure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Horton, Doug            | 3/20/2008 6:54:15 PM |
| Modified By: administrator            | 6/19/2008 4:35:56 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM:dhorton DATE:Thursday, March 20, 2008 2:54:16 PM

When exporting and importing a structure from Virtis 5.2, the export and import seem to work fine. When I try to save the file however, I receive the attached error message and the file does not save. We have not experienced this problem previously and would like to know what might be the cause. The file runs fine in both databases, but will not save to the import database. The exported file is also attached.

FROM:mordoobadi DATE:3/21/2008 11:23:18 AM

The error indicates that there is a data integrity issue in the BBD file. The original bridge may have been imported from BARS or BRASS and it refers to an import event ID that existed on the original database but does not exist on the current database. This has caused the save operation to fail.

4/19/2016 3:06:07 PM

HRS AASHTO

1124

Complete Issue Information

FROM:mordoobadi DATE:3/21/2008 11:30:18 AM  
This is a duplicate of incident 7655 and is fixed in version 5.5.

Symptoms:  
ORA-02291: integrity constraint (VIRTIS.R\_1814) violated - parent key not found

FROM:mordoobadi DATE:3/21/2008 11:44:03 AM  
Please use the attached BBD file "0766188-Fixed.bbd". This BBD file should save successfully.

FROM:dhorton DATE:Tuesday, March 25, 2008 10:11:06 AM  
Is the correction to the file something that can be done locally or does it require special tools?

FROM:mordoobadi DATE:3/31/2008 10:06:31 AM  
Yes, you can do same thing that I did. This is what I did to produce the new BBD file:

- (1) Imported the BBD file into a different database DB2 (not the original database DB1)
- (2) Exported the bridge from DB2
- (3) This new BBD file should save successfully on the original database DB1.

|                                          |
|------------------------------------------|
| Issue ID: 8520                           |
| Subject: Question on BRASS LRFR analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Curtis, Beckie          | 3/24/2008 2:27:51 PM |
| Modified By: hlee                     | 7/16/2008 6:23:14 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | Assigned | High     | Unknown   |
| Goodrich, Brian | Resolved |          | Education |
|                 | ReOpen   |          |           |
|                 | Assigned |          |           |
| Goodrich, Brian | Assigned | High     | Education |
|                 | Resolved |          |           |



Complete Issue Information

Contacts

| Name         | Company | Email 1                  | Phone 1 |
|--------------|---------|--------------------------|---------|
| Paul Campisi | NYSDOT  | pcampisi@dot.state.ny.us |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 8525.16544 | Assigned      | Truss Command Language |

Description

FROM:hlee DATE:3/24/2008 10:27:37 AM  
 Entered on behalf of Beckie Curtis, MDOT. Received via Bridgewater e-mail.

=====

That was my guess. A couple of follow up questions then to clarify.  
 If that box is NOT checked, will Virtis check a truck for the .2klf lane load and two truck loading?

If that box IS checked, will Virtis also check the single truck case?  
 If that box IS checked, does Virtis automatically add the lane load?

We have a very complicated legal/permit truck system, and switching to LRFR is not making anything less complicated. I am trying to set up our various loading scenarios.

Is there a truck limit in BRASS LRFR?

Finally, I used the HL-93 (US) loading and ran a structure. I was looking at the output, and the "scale factors" for the Truck, Tandem, Truck Train, Lane, and Fatigue Truck were listed as 0.8333 while the AASHTO legal loads were listed as 1.0. I didn't manually input any scale factors, could you explain what is meant by this?

Thanks,

Beckie Curtis  
 Load Rating Engineer  
 MDOT - Construction and Technology Division  
 Bridge Operations Unit  
 direct: 517.322.1186  
 email: curtisre@michigan.gov

>>> "Bridgewater" <Bridgewater@mbakercorp.com> 3/24/2008 9:57AM >>>

## Complete Issue Information

The check box "Legal Pair" is used to specify the model on page B.6-3 (c) Lane-Type Legal Load Model in the AASHTO LRFR Manual.

Herman Lee

>>> "Rebecca (Beckie) Curtis" <CurtisRe@michigan.gov> 3/24/08 9:32 AM >>>  
Hello,

I am wondering what the check box "Legal Pair" does under the Advanced tab of the Analysis Settings window.

I've looked around briefly in the help, but the description didn't really clarify.

Thanks,

FROM:hlee DATE:4/3/2008 12:09:12 PM  
E-mail reply by Brian Goodrich:

Here are answers to the questions.

If that box is NOT checked, will Virtis check a truck for the .2klf lane load and two truck loading?

No. BRASS will check the loading from LRFR Figure B.6-6 only if the Legal Pair box is checked.

If that box IS checked, will Virtis also check the single truck case?

Yes. BRASS will also check the loading from LRFR Figure B.6-5 if the Legal Pair box is checked.

If that box IS checked, does Virtis automatically add the lane load?

If there is a lane load specified on the Lane tab, BRASS will also consider this loading and combine it with the corresponding axle loads.

Is there a truck limit in BRASS LRFR?

BRASS LRFR has the same 20-truck limit as BRASS LRFD. A single Virtis vehicle definition may consist of a design truck, tandem, lane, train, legal pair, or fatigue truck, which BRASS will consider as individual trucks.

Regards,  
Brian

FROM:bgoodrich DATE:Monday, April 07, 2008 11:47:14 AM  
More questions from Beckie Curtis:

I have a few follow up questions.

4/19/2016 3:06:08 PM

HRS AASHTO

1127

Complete Issue Information

From the table in the LRFR output:

| Limit State  | DC   |      | DW   |      | LL     | LL    | LL     |
|--------------|------|------|------|------|--------|-------|--------|
|              | MAX  | MIN  | MAX  | MIN  | Design | Legal | Permit |
| STRENGTH I   | 1.25 | 0.90 | 1.50 | 0.65 | 1.75   | 1.80  | 0.00   |
| STRENGTH II  | 1.25 | 0.90 | 1.50 | 0.65 | 1.35   | 0.00  | 0.00   |
| STRENGTH III | 1.25 | 0.90 | 1.50 | 0.65 | 0.00   | 0.00  | 0.00   |
| STRENGTH IV  | 1.50 | 1.50 | 1.50 | 0.65 | 0.00   | 0.00  | 0.00   |
| SERVICE I    | 1.00 | 1.00 | 1.00 | 1.00 | 1.00   | 0.00  | 1.00   |
| SERVICE II   | 1.00 | 1.00 | 1.00 | 1.00 | 1.30   | 1.30  | 1.00   |
| SERVICE III  | 1.00 | 1.00 | 1.00 | 1.00 | 0.80   | 1.00  | 0.00   |
| SERVICE II-O | 1.00 | 1.00 | 1.00 | 1.00 | 1.00   | 0.00  | 0.00   |
| FATIGUE      | 1.00 | 1.00 | 1.00 | 1.00 | 0.75   | 0.00  | 0.00   |

1. In this table, the Permit LL factor for Strength II is listed as 0. Is this really how Brass is checking Strength II for Permit Vehicles, or is it just listed as 0 because the LL factor varies?
2. Service I and II are entered as 1 in the table, but listed as optional for Permits in the LRFR Guide Manual. Is there a way to make the service check for Permit Vehicles Optional?
3. When you adjust the live load factor for the permit vehicle, does this only affect strength I?
4. We are going to be modifying our live load factors for all of our legal loads for Strength I. I know that you can adjust the live load factor for the Permit vehicle (assuming that it only changes Strength I). Is there a way to change the live load factors for Legal Vehicles? This is allowed if WIM data available for the site. I thought about using a scale factor or putting the truck in as a Permit Vehicle, but it seems that would invalidate the Service Checks as the load factors are different.

Thanks in advance for your help.

Beckie Curtis  
 Load Rating Engineer  
 MDOT - Construction and Technology Division  
 Bridge Operations Unit  
 direct: 517.322.1186  
 email: curtisre@michigan.gov

FROM: bgoodrich DATE: Monday, April 07, 2008 12:17:40 PM  
 Here are answers to your latest questions. I am using Virtis/Opis 5.6.

1. My table shows a 1.35 permit live load factor for Strength II. This factor would only be zero if this is what was entered in Virtis. Please send your bridge, so we can take a look at why your factors are different. If you have not added the LRFR factors to the bridge, we need a copy of your LRFR factors from the library.
2. On the Load Factors tab of the Factors – LRFR window, you can uncheck the boxes in the desired Vehicle Consider columns. BRASS still performs the calculations for each of these, but it does not

4/19/2016 3:06:08 PM

HRS AASHTO

1128

## Complete Issue Information

consider them in the search for the critical rating factor for each vehicle.

3. The factors table allows you to input a fixed permit live load factor for Strength I, Service II, and Fatigue for steel. The Strength II permit live load factor is based on the type of permit, ADTT, and/or weight. The first vehicle encountered is used to determine which weight to use. Note that there is an incident to change this behavior, so each permit vehicle could have its own live load factor for Strength II.

4. You're correct that you cannot use the scale factor or your Service checks will be invalid. How are your new legal live load factors organized? This would help us understand what you're looking for. The only way I see to change the Strength I live load factor for legal vehicles is to change the factors on the Legal Loads tab of the Factors – LRFR window. You can only adjust the factors assigned to the fixed ADTT ranges.

FROM: bgoodrich DATE: Monday, April 21, 2008 8:51:51 AM  
E-mail from Beckie (4/11/08):

1. Here is the bridge, and also the truck #18 that was used in that table. While this is a "legal" load for Michigan, it is heavy enough to be treated as a permit vehicle according to LRFR.

2. Hmm... all of these boxes are unchecked in my model, which must be the default because I didn't edit it. If we don't check anything, then what is the default that happens? Should I be opening this box for every model?

3. I will try and explain what we are doing for our legal loads. Since our legal loads are so much heavier than what AASHTO used in development of the code, we did WIM studies and have calibrated all of our vehicles (legal and routine permit) so that each has a separate live load factor. This live load factor is NOT a straight line interpolation, although it is calculated from a pretty straightforward equation of  $1.8 * (\text{Actual Truck Weight} + \text{Truck from ADTT}) / 240 * 72 / (\text{Actual Truck Weight})$  with a maximum value of 1.8 and a minimum value of 1.1. The "Truck from ADTT" value is from our Weight In Motion Data and is specific to a certain ADTT. These load factors would only be applied to the strength limit states and are not meant for the service.

Also, the trucks less than 100kips will be treated as "legal" loads according to AASHTO, and those greater than 100kips will be treated as routine permit (even if they might be called "legal" per MI legislature). This really only affects the service check as we are modifying all strength factors as described above.

My initial thought was to enter everything as a routine permit, and modify the LL factor, but then I realized that the service II check for steel bridges would be done incorrectly for trucks less than 100-kips since they should be done at the 1.3 level per table 6-1. I also wasn't sure if the Load Factor we could input on the truck analysis window was for just strength II, or if it would change the Service I or II checks also.

Ideally, we will be able to set up analysis templates for all of our trucks without having to manipulate the factors tabs between runs because that obviously creates a large possibility of user error and makes quality control difficult.

Finally, I'm still a little unclear of what steps we need to take to follow 6.4.4.2.1 and 6.4.5.4.1. For negative moments and reactions at interior supports of continuous spans, we need to apply a lane load

4/19/2016 3:06:08 PM

HRS AASHTO

1129

## Complete Issue Information

with two trucks. But I don't want the lane load/extra truck to be applied for positive moments and reactions at exterior supports. Is Virtis able to make this distinction?

Thanks for the help,  
Beck

Beckie Curtis  
Load Rating Engineer  
MDOT - Construction and Technology Division  
Bridge Operations Unit  
direct: 517.322.1186  
email: curtisre@michigan.gov  
ie

FROM:bgoodrich DATE:Monday, April 21, 2008 8:56:04 AM  
E-mail from Beckie (4/11/08):

I may have a bit of insight into the permit truck load factor. The truck I was trying to run is a 154kip vehicle. When I ran a truck less than 150 ft, BRASS correctly computed the live load factor for Strength II. When I ran the 154kip vehicle alone, it uses 0 as the live load factor. If I run the 117kip vehicle and the 154kip vehicle at the same time, BRASS uses the LL factor for the 117kip vehicle for BOTH vehicles.

A little bit more information regarding the permit issue that will hopefully be of help to you. If I select the "LRFR Factor Override" check box from the Factors tab of the member alternative, then the load factors are calculated according to the factors table in the bridge, with the exception of trucks greater than 150kips. If this is not selected, than service ii is 0 for all permit trucks.

FROM:bgoodrich DATE:Monday, April 21, 2008 8:57:28 AM  
E-mail to Beckie (4/11/08):

We'll take a look at your questions in detail and get back to you. I did open your bridge but didn't see any LRFR factors in the bridge or any references to any Agency factors from the library. Is the where the boxes are from item 2? Or are you referring to the Vehicle Properties opened from the Analysis Settings window?

FROM:bgoodrich DATE:Monday, April 21, 2008 8:58:05 AM  
E-mail from Beckie (4/11/08):

Sorry for the confusion, I meant that there wasn't a factor set created.

FROM:bgoodrich DATE:Monday, April 21, 2008 8:58:38 AM  
E-mail to Beckie (4/14/08):

The Vehicle Consider boxes are initially unchecked when a new Factors – LRFR set is added. To load the defaults, you could use the Copy from Library... button and then change the fields as necessary. Or you might want to set up your own LRFR factors in the Agency folder of the library.

4/19/2016 3:06:08 PM

HRS AASHTO

1130

## Complete Issue Information

I don't see how you are going to enter your legal load factors that vary by truck weight and the ADTT truck weight. Virtis was designed to use the values from Table 6-5 for the Strength I legal load factors. Virtis does not allow the live load factor to be specified for a particular vehicle and limit state. Based on Table 6-5, there would be a constant legal load factor based on the bridge's ADTT. However, your legal load factors can vary by each vehicle on each bridge.

The same issue will occur with the permit load factors and Table 6-6 will apply. The only difference here is the presence of the permit load factor override on the Vehicle Properties window. The help does not state if this permit load factor override applies to all limit states or to only the Strength II limit state. It seems like this should only override the Strength II limit state. Herman – Please comment on this? Should there be one of these for the legal loads to override the Table 6-5 value for the Strength I limit state?

For LRFR, add the "Lane-Type Legal Load" vehicle to the Legal Load Rating category. Then, click the Advanced... button to open the Vehicle Properties window where you can check the Legal Pair checkbox. The legal vehicles will be exported to BRASS, and BRASS will determine whether or not a vehicle should be used based on the span length and number of spans. BRASS will also take care of figuring out when only the negative moments and interior reactions apply.

FROM:bgoodrich DATE:Monday, April 21, 2008 8:59:14 AM  
E-mail from Beckie (4/18/08):

Have you been able to look into the issue of running multiple permit vehicles at one time? No matter what I enter as the over-ride permit factor, all of the trucks in the analysis appear to use the live load factor from the first truck. If I run the trucks one at a time this doesn't seem to happen, but with 48 legal/overload vehicles running each truck individually is time-prohibitive.

FROM:bgoodrich DATE:Monday, April 21, 2008 8:59:52 AM

The short answer to your question is we know about this issue and running each truck separately is the workaround. BRASS only supports a single permit live load factor for each limit state, which is why the factor for the first truck is used. I will be revising the BRASS engine to support separate permit live load factors for each vehicle for each limit state over the next few weeks. I would like to have this ready for the 6.0 release of Virtis.

FROM:bgoodrich DATE:Monday, April 21, 2008 9:00:14 AM  
E-mail from Beckie (4/18/08):

One additional question: when the lane and truck load are run for legal loads, are the two events super-imposed, or is the lane load "gapped out" at the location of the truck?

FROM:bgoodrich DATE:Monday, April 21, 2008 9:00:37 AM

The truck and lane loads are analyzed separately and then the results are superimposed. The lane

4/19/2016 3:06:08 PM

HRS AASHTO

1131

Complete Issue Information

load is not "gapped out" for the location of the truck.

|                                 |
|---------------------------------|
| Issue ID: 8525                  |
| Subject: Truss Command Language |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Campisi, Paul           | 3/27/2008 1:44:35 PM |
| Modified By: hlee                     | 7/17/2014 3:02:41 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Lee, Herman        | New       | High     | Unknown     |
| Bhanushali, Girish | Assigned  |          | Bug         |
| Bhanushali, Girish | Assigned  | High     | Bug         |
|                    | Suspended |          | Enhancement |
|                    | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:pcampisi DATE:Thursday, March 27, 2008 9:44:35 AM

I am unable to get the angle box sections with the case of only 2 angles to work. There are no examples in the help file(Truss Input Command Language). Can you provide some double angle examples to work with?

Thanks

4/19/2016 3:06:08 PM

HRS AASHTO

1132

Complete Issue Information

FROM: Jim Duray DATE: 11/10/2008 9:26:07 AM Eastern Standard Time  
Angle box section with just two angles is not supported. Refer to page 22 in the Truss Input Command Language manual.

FROM: Herman Lee DATE: 7/17/2014 10:55:59 AM Eastern Daylight Time  
Implemented in version 6.4.

|                                       |
|---------------------------------------|
| Issue ID: 8533                        |
| Subject: Truss Deterioration Modeling |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Campisi, Paul           | 4/2/2008 5:39:27 PM  |
| Modified By: hlee                     | 5/27/2009 8:40:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Bhanushali, Girish | Assigned |          | Bug      |
| Bhanushali, Girish | Assigned | High     | Bug      |
| Li, Xinmei         | Resolved |          |          |

Contacts

| Name         | Company | Email 1                  | Phone 1 |
|--------------|---------|--------------------------|---------|
| Paul Campisi | NYSDOT  | pcampisi@dot.state.ny.us |         |



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 57C0023.xml         |             |

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 8550.16519 | Resolved      | Problem exporting intermediate stiffeners |

Description

FROM:pcampisi DATE:Wednesday, April 02, 2008 1:39:28 PM

Subject: Truss Deterioration Modeling

The deterioration modeling for Channel Box Sections appears to be giving incorrect results. When I code channel deterioration for Left Truss - Member L4L5, the "Truss Member Section Property Summary" shows the Gross Area Compression, Gross Area Tension and Net Area Tension equal to zero. The section loss was also incorrectly applied to all other members with the same section name (i.e. "section2").

The same error occurs with plate deterioration for channel sections.

Is there a problem with the way I coded the deterioration? The truss validates.

Refer to the attached file "Truss Deterioration". The "Left Truss" is coded for channel deterioration.

Note: I checked the "AngleBox" deterioration in the "Right Truss" and did not find any problems. I did not check the "Built-Up" sections.

Thanks

Paul  
NYS DOT  
Load Rating Unit

FROM:pcampisi DATE:Wednesday, April 02, 2008 1:42:06 PM

FROM: Brian McCaffrey DATE: 7/28/2008 8:47:38 AM Eastern Daylight Time  
Will this issue be resolved in v/6.0?

FROM: Herman Lee DATE: 7/28/2008 12:12:18 PM Eastern Daylight Time  
8533 hasn't been fixed yet.

FROM: Xinmei Li DATE: 8/27/2008 10:58:47 AM Eastern Daylight Time  
I checked the "Built-Up" sections, no such problems.

4/19/2016 3:06:09 PM

HRS AASHTO

1134

Complete Issue Information

The ResetDeterioration function was missing for Channel Box Sections. It's fixed.

FROM: Herman Lee DATE: 5/27/2009 4:28:18 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

|                                                    |
|----------------------------------------------------|
| Issue ID: 8550                                     |
| Subject: Problem exporting intermediate stiffeners |

|                                                           |
|-----------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                     |
| Primary Contact: Goodrich, Brian                          |
| Submitted By: vinayagamoorthy, vinacs 4/4/2008 6:01:53 PM |
| Modified By: administrator 6/19/2008 4:35:52 PM           |
| Priority: High                                            |
| Category: Unknown                                         |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:4/4/2008 2:03:56 PM  
Received e-mail from Vinacs Vinayagamoorthy:

Complete Issue Information

We are working on a steel built up section. Though we entered the intermediate stiffeners, BRASS export program did not export the stiffeners when creating the input file for analysis. As a result, we are getting ZERO rating factor.

Please check the data entry first and give us your finding (to insure our data entry is correct or not)

(See attached file: 57C0023.xml)

FROM:bgoodrich DATE:Monday, April 07, 2008 12:38:53 PM

For each member alternative, you need to visit the BRASS LFD engine properties and turn on an option to generate schedule information at points of interest.

Open the Member Alternative Description window, navigate the Engine tab, select the BRASS LFD engine, and click the Properties button. On the BRASS-Standard Member Alternative/Beam Definition Properties window, change the POI Control drop-down box to either Option 3 or 5. The various schedule input will then be generated and applied to the points of interest.

FROM:bgoodrich DATE:Tuesday, April 08, 2008 12:47:28 PM

E-mail from Vinacs:

Thanks Brian!

Vinacs M Vinayagamoorthy  
916-227-8657

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 8613                                                        |
| Subject: Incorrectly Calculated Unbraced Length of Compression Flange |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Campisi, Paul           | 4/25/2008 6:44:01 PM |
| Modified By: bgoodrich                | 11/4/2008 4:31:11 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:06:09 PM

HRS AASHTO

1136

### Complete Issue Information

|                 |          |      |  |             |
|-----------------|----------|------|--|-------------|
| Goodrich, Brian | Assigned |      |  | Bug - BRASS |
| Lee, Herman     | Assigned | High |  | Bug         |
| Lee, Herman     | Assigned | High |  | Bug         |
|                 | Closed   |      |  |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                                                       |
|------------|---------------|---------------------------------------------------------------------------------------------------------------|
| 8626.16443 | Assigned      | Statements for skew correction factor should be removed from Live Load Distribution: Standard tab Help topic. |

### Description

FROM:pcampisi DATE:Friday, April 25, 2008 2:44:43 PM

For the attached bridge, it appears Virtis is ignoring the presence of the diaphragm at support 2 of G6 and incorrectly calculating Lb, the unbraced length of the compression flange. This causes Virtis to miscalculate Mr and therefore Mu.

I have attached the bridge for reference. The output indicates no cross frame at the point of analysis (support 2) even though there is a diaphragm entered at the support. The rating shows Lb = 35.554 ft., when it should show Lb = 18.75 ft.

Thanks

Paul Campisi

FROM:pcampisi DATE:Friday, April 25, 2008 2:52:39 PM

FROM:bgoodrich DATE:Wednesday, April 30, 2008 10:01:29 AM

I was able to duplicate the user's findings regarding the incorrect unbraced length. I forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Wednesday, June 04, 2008 10:38:59 PM

WYDOT assigned this issue to BRASS Problem Log 818.

4/19/2016 3:06:09 PM

HRS AASHTO

1137

### Complete Issue Information

FROM: Brian Goodrich DATE: 11/4/2008 9:28:34 AM Mountain Standard Time

An error in the bracing logic was corrected. This occurred when generating points of interest from the schedule input. This issue has been addressed in the BRASS engine.

|                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 8626                                                                                                                            |
| Subject: Statements for skew correction factor should be removed from Live Load Distribution:<br><a href="#">Standard tab Help topic.</a> |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 4/30/2008 1:25:47 PM |
| Modified By: hlee                     | 6/24/2008 4:36:02 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 6/24/2008 12:09:34 PM Eastern Daylight Time

After discussing with Krisha Kennelly, we decided to keep the statement since skew correction factor is mentioned in one of AASHTO Guide.

## Complete Issue Information

Issue ID: 8644  
Subject: Truss Input from STADD

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 5/9/2008 1:14:07 PM  
Modified By: administrator 6/19/2008 4:35:45 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LLDF.xml            |             |

### Tasks

| Name       | Current State | Summary                                                      |
|------------|---------------|--------------------------------------------------------------|
| 8652.16417 | Assigned      | LLDF Shear at Supports - can't verify Virtis Compute results |

### Description

FROM:dteal DATE:Friday, May 09, 2008 9:14:07 AM

Do you know if it is possible to import a stadd file that defines a truss into Virtis?

FROM:jduray DATE:5/13/2008 9:05:19 AM

That may be a strong feature to add but at this time it is not supported.

Issue ID: 8652

Subject: LLDF Shear at Supports - can't verify Virtis Compute results

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Barnhill, Gale

5/14/2008 12:11:43 PM

Modified By: kkennelly

7/17/2008 5:27:27 PM

Priority: High

Category: Bug

### History

4/19/2016 3:06:10 PM

HRS AASHTO

1140

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
| Lee, Herman     | Suspended | High     | Enhancement |
| Lee, Herman     | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary    |
|------------|---------------|------------|
| 8658.16411 | Suspended     | MCEB 7.4.2 |

### Description

FROM:gbarnhill DATE:Wednesday, May 14, 2008 8:11:59 AM

In the attached bridge, I created two superstructure definitions.

One with 7 ft spacing, the other with 14 ft spacing. 8 Girder system.

Using the Member Alt-Live Load-Compute from Typical Section, I get unexpected results for Member G4 and G5 for the Shear at Supports LLDF (lever rule).

For the 7 ft spacing, it appears Virtis is applying 90% to the result for G4 and G5. I think the result should be the same as for G3 and G6.

For the 14 ft spacing, I can't hand verify the result for G4 and the result for G5 is the same as G2 and G7. I think both G4 and G5 should be the same as G3 and G6.

FROM: Krisha Kennelly DATE: 7/17/2008 1:29:45 PM Eastern Daylight Time

Fixed for version 6.0.

Two issues were identified:

1. The incorrect multiple presence factor was sometimes being used (that caused problem experienced in 7' spacing structure).
2. When computing the DF due to multi-lanes of trucks the program did not always first consider the trucks closest to the girder. (that caused problem in 14' structure)



Complete Issue Information

|                     |
|---------------------|
| Issue ID: 8658      |
| Subject: MCEB 7.4.2 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 5/14/2008 5:51:32 PM  |
| Modified By: hlee                     | 7/16/2010 11:28:18 AM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Duray, Jim       | New       | High     | Unknown  |
| Kennelly, Krisha | Assigned  |          |          |
| Kennelly, Krisha | Assigned  | High     | Unknown  |
| Lee, Herman      |           |          |          |
|                  | Duplicate |          |          |

Contacts

| Name           | Company      | Email 1                     | Phone 1      |
|----------------|--------------|-----------------------------|--------------|
| Tim Armbrrecht | Illinois DOT | tim.armbrrecht@illinois.gov | 217-782-6266 |

Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | LLDFExtBmError(0160046-600B3).xml |             |

Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 8662.16407 | Assigned      | Multi-lane "Shear at Supports" wheel DF < Single-lane (Inc. #) |

Description

FROM:hlee DATE:5/14/2008 1:32:16 PM

4/19/2016 3:06:11 PM

HRS AASHTO

1142

Complete Issue Information

Entered on behalf of Elizabeth Befikadu, MHD. Received via e-mail.

=====

According to Manual for condition evaluation of bridges part 7.4.2. referring Type 3 and Type 3S2 for spans over 200 feet in length the selected legal load should be spaced with 30 feet clear distance between vehicles to simulate a train of vehicles in one lane and a single vehicle load should be in adjacent lanes.

Question

- 1) In Virtis there is no way to input the adjacent vehicle.
- 2) In virtis even when a Type 3 and Type 3S2 vehicle are created as a serious of concentrated load to represent the lane loading. Virtis includes axle loads at all locations even if they didn't contribute to the maximum force effect for a particular member. ( The vehicles were created as both the Temporary vehicle and also as Agency vehicles.)
- 3) In the LRFR guide for condition and Evaluation of bridges in Appendix B.6.2 there is a lane loading shown on the diagram for Type 3 and Type 3S2 loading. Can this be adopted for standard and Truss engines for the enhancement ?

=====

FROM: Herman Lee DATE: 7/16/2010 7:24:31 AM Eastern Daylight Time  
Duplicate of Incident 9965.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 8662                                                          |
| Subject: Multi-lane "Shear at Supports" wheel DF < Single-lane (Inc. #) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 5/14/2008 6:44:53 PM |
| Modified By: hlee                     | 10/2/2008 6:16:15 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 45-53-06238.xml     |             |

Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 8679.16390 | Assigned      | RC Slab reinforcing area |

Description

FROM:tarmbrecht DATE:Wednesday, May 14, 2008 2:44:53 PM

Not sure if this is new or old, but was discovered during the beta testing. Multi-lane "Shear at Supports" wheel distribution factor for exterior beam is less than for single-lane, which I don't believe is correct. In the example, LLDExtBmDistError(0160046-600B3).xml, which has a 22' roadway supported by 4 beams spaced 8'-3½", the Shear at Supports factor calculated by Virtis is .525 for multi-lane and .585 for single lane.

FROM: Krisha Kennelly DATE: 7/3/2008 12:00:52 PM Eastern Daylight Time  
If the LL DF preference is set to MCEB 6.7.2.2 on the Preference: Bridge Workspace tab, Virtis computes the multi lane = 0.525 and the single lane =0.585

If the preference is set to 3.6.3, Virtis computes both DF's as 0.585

FROM: Krisha Kennelly DATE: 7/3/2008 1:33:55 PM Eastern Daylight Time  
This is related to 8475.

IF MCEB is selected, we are centering the vehicle in the lanes for roadway widths 18' to 24'. Since the roadway width is 22' we should follow the Std Spec even though they have picked MCEB.

FROM: Herman Lee DATE: 10/2/2008 2:02:19 PM Eastern Daylight Time  
Duplicate of Incident 8475.  
Incident 8475 has been resolved for 6.0.1 and 6.1.  
Tested attached bridge that both single and multi-lane Shear at Supports DFs are computed as 0.585.

|                                   |
|-----------------------------------|
| Issue ID: 8679                    |
| Subject: RC Slab reinforcing area |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: White, Pete             | 5/22/2008 8:09:48 PM |

4/19/2016 3:06:11 PM

HRS AASHTO

1144

### Complete Issue Information

|                       |                     |
|-----------------------|---------------------|
| Modified By: hlee     | 5/7/2010 1:55:54 PM |
| Priority: High        |                     |
| Category: Bug - BRASS |                     |

### History

| Primary Contact | Status    | Priority | Category               |
|-----------------|-----------|----------|------------------------|
| Duray, Jim      | New       | High     | Unknown<br>Enhancement |
| Duray, Jim      | Assigned  | High     | Enhancement            |
|                 | Suspended |          |                        |

### Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 8721.16348 | Assigned      | TRUSS/FLOOR SYSTEMS: Deck Profile - Compute from Cross Section |

### Description

FROM:pwhite DATE:Thursday, May 22, 2008 4:09:53 PM

We are rating a three span symmetric rc slab structure and are getting a low rating at 30% of span 3. However, the rating at 70% of span 1 is much higher than 30% of span 3. The BRASS output shows 0.79sq.in. of top steel at 70% of span 1, but only 0.42sq.in. of top steel at 30% of span 3. I have double checked that the reinforcing has been input properly in Virtis. In order to attempt to debug the problem, I have selected the bars as "fully developed" or doubled the bar quantity. Selecting fully developed does not change the rating and doubling the quantity does not double the area at 30% of span 3. It appears that there is a bug at this one location. I have attached the xml file for your reference.

Thanks for your help.

Pete White

4/19/2016 3:06:11 PM

HRS AASHTO

1145

Complete Issue Information

RQAW Corporation  
(317)815-7200  
pwhite@rqaw.com

FROM: bgoodrich DATE: Wednesday, June 04, 2008 4:44:49 PM  
I was able to duplicate the issue. I am forwarding this issue to WYDOT for assignment to a BRASS problem log. It is unclear how BRASS is determining 0.42 in^2 at the 303 POI.

FROM: bgoodrich DATE: Wednesday, June 04, 2008 4:45:40 PM

FROM: Brian Goodrich DATE: 7/11/2008 12:13:48 PM Eastern Daylight Time  
WYDOT assigned this issue to BRASS Problem Log 827.

FROM: Brian Goodrich DATE: 10/16/2009 3:32:10 PM Mountain Daylight Time  
Within BRASS, the algorithm that transfers valid cross section ranges to a local array and ultimately into the structural analysis mesh was corrected. Now the correct reinforcement area is being determined along the structure. Fixed in BRASS-GIRDER(STD) 6.0.2.

FROM: Herman Lee DATE: 5/7/2010 9:53:11 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 8721                                                          |
| Subject: TRUSS/FLOOR SYSTEMS: Deck Profile - Compute from Cross Section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Colgrove, George        | 6/4/2008 5:22:39 PM  |
| Modified By: hlee                     | 6/10/2011 8:35:49 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:06:12 PM

HRS AASHTO

1146

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gcolgrove DATE:Wednesday, June 04, 2008 1:22:40 PM

This is an enhancement request. No big urgency. Would it be easy to use similar code for girder deck profiles to create the same button that computes the deck profile from cross section in the deck profile dialogs for both the stringers and floor beams. Also, once defined for one, could this data be automatically entered into the other with respect to that member. So in the case the data was entered for Floor Beams, the appropriate data would also be entered into the deck profile dialog for stringers.

|                                       |
|---------------------------------------|
| Issue ID: 8788                        |
| Subject: NSG analysis -> virtis crash |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Metcalf, William        | 7/9/2008 2:42:46 PM   |
| Modified By: hlee                     | 7/14/2008 12:40:03 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

4/19/2016 3:06:12 PM

HRS AASHTO

1147

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Assigned           |          |          |
| Goodrich, Brian | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sample bridge.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 7/9/2008 10:46:11 AM Eastern Daylight Time

If I every run an NSG analysis and for some reason it fails (i.e. i set the truck of the span, or in don't have an existing /current member alt selected for one of the girders, ect.) if I go back and fix the problem then try to run NSG analysis again Virtis crashes.

FROM: William Metcalf DATE: 7/9/2008 11:39:23 AM Eastern Daylight Time

every = ever (sorry :( lol...)

FROM: Herman Lee DATE: 7/14/2008 8:33:48 AM Eastern Daylight Time

This defect affects only Release build.

Resolved for 6.0 Release.

Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 8789                                         |
| Subject: steel rolled be rating issues (file attached) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Metcalf, William        | 7/9/2008 3:23:46 PM  |
| Modified By: bgoodrich                | 8/27/2008 6:31:12 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00030 - L-15-11.bbd |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 7/9/2008 11:33:43 AM Eastern Daylight Time

The following file contains 2 steel roll beams spans. The first span is rated using the following setting:

Points of Interest Control: 0 - No point of interest data will be generated

It results in a rating of 47.24 tons (inv) and 78.9 tons (opp).

The second member is exactly the same (copied and paste) as the first except i removed the POI and the setting were:

Points of Interest Control: 1 - Generate points of interest at all tenth points along TOP spans

4/19/2016 3:06:12 PM

HRS AASHTO

1149



Complete Issue Information

now the rating is 3.3 tons (inv) and 5.5 tons (opp).

obviously some thing is wrong. Any help you can give me would be much appreciated. The Bridge file is attached.

FROM: Herman Lee DATE: 7/11/2008 9:54:45 AM Eastern Daylight Time  
Could you attach the bridge for this issue? Thanks.

FROM: Brian Goodrich DATE: 7/11/2008 12:01:08 PM Eastern Daylight Time  
BRASS analyzes/rates only the points of interest that are specified by the user. This may be done explicitly using the Points of Interest window and/or with the engine's Points of Interest Control box.

For Points of Interest Control option 0, BRASS only rates those points of interest that have been manually specified in the Points of Interest window. In addition, only the override information on the Points of Interest window will be used in the analysis, i.e., any stiffener, bracing, etc. data input on the various schedule windows will NOT be used. For Points of Interest Control option 1, BRASS generates points of interest at 10th points and populates the stiffener, bracing, etc. data from the various schedules.

Points of Interest Control option 0 is provided for users that only want to check a handful of points and do not want to input schedules of information. This was the only method available to users prior to about 10 years ago.

I prefer to input the schedules of bracing, stiffeners, etc. and use Points of Interest Control option 3. That way if points of interest are manually input on the Points of Interest window, I don't have to change the Points of Interest Control option.

The file is not yet attached, so I cannot comment yet on the structures in question.

FROM: William Metcalf DATE: 7/14/2008 11:17:01 AM Eastern Daylight Time  
file attached

FROM: Brian Goodrich DATE: 8/15/2008 1:49:17 PM Mountain Daylight Time  
When using Points of Interest Control option 0, the bracing should be entered for each point of interest. If this is not set, BRASS assumes the unbraced length is zero and does not check Equation 10-96. When one of the other control options is used, BRASS generates the bracing schedule. If no bracing ranges are input in Virtis, one bracing range is exported (start of span to end of span). This is why you are seeing a difference in the ratings - Example 1 used an unbraced length of 0 ft and Example 2 used an unbraced length of 27.67 ft.

Issue ID: 8791  
Subject: Floorbeam intermediate supports at the start and end of the floorbeam

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Lee, Herman 7/11/2008 1:28:59 PM  
Modified By: nnakrani 10/30/2008 8:04:23 PM

4/19/2016 3:06:13 PM

HRS AASHTO

1150

Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier             | Description                       |
|------|---------------------------------|-----------------------------------|
|      | AASHTO_Type_4_I-Beam.dat        | 5.6 Virtis Std Engine input file  |
|      | AASHTO_Type_4_I-Beam.OUT        | 5.6 Virtis Std Engine output file |
|      | 8792_AASHTO_Type_4_I-BeamA.dat  |                                   |
|      | error with debonded strands.xml |                                   |
|      | 8792_AASHTO_Type_4_I-BeamA.OUT  |                                   |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/11/2008 9:29:30 AM Eastern Daylight Time  
Submitted on behalf of Morteza Najafabadi, AI Engineers.

Rate "FB1 ALT" in the first truss system will complain:

=====  
Error filling general change point array!  
09:37:12 AM - Line 3884 in source file .\BrassCmd.cpp.

Error computing span length!  
09:37:12 AM - Line 6912 in source file .\EngineExport.cpp.

Unknown exception in the Analysis Module.  
09:37:12 AM - Line 6911 in source file .\EngineExport.cpp.

=====

## Complete Issue Information

User has floorbeam intermediate supports defined at the start and end of the floorbeam and Virtis thinks the floorbeam has 3 spans instead of 1.

FROM: Krisha Kennelly DATE: 7/16/2008 3:58:17 PM Eastern Daylight Time  
Fixed for version 6.0.

User has placed Intermediate Supports at start and end of floorbeam where the floorbeam frames into the truss. The Help for the Intermediate Supports window indicates that intermediate supports should not be placed at the same locations as main girders (or trusses in this case).

Warning message has been added to alert user when Intermediate Support is located at the same location as the main girder or truss. Analysis will then stop.

|                                            |
|--------------------------------------------|
| Issue ID: 8792                             |
| Subject: Debonded Strands in Virtis engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 7/11/2008 1:32:40 PM |
| Modified By: hlathia                  | 7/23/2008 4:00:53 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 7/11/2008 9:57:54 AM Eastern Daylight Time  
In attached file, I am getting an error when running the bridge with Virtis engine.  
There are no strands in bottom row. The strands in the second row have some debonding. The error is:

4/19/2016 3:06:13 PM

HRS AASHTO

1152

Complete Issue Information

Internal Errors (1) - Invalid index

Structural Analysis Errors (2410) - Input or computational error encountered.

Input Errors (1715) - Number of debonded strands per row is greater than the number of strands in the row.

When I modify the girder and remove the bottom row of strands from the Beam description, the beam analyzes. Please see Span 1, First Interior Beam, and then the two member alternatives.

FROM: Herman Lee DATE: 7/11/2008 2:30:10 PM Eastern Daylight Time  
Attached 5.6 Virtis Std Engine input and output files.

FROM: Has Mukh Lathia DATE: 7/11/2008 7:30:26 PM Eastern Daylight Time  
Virtis Std Engine assumes that the bottom most row is numbered as row 1. By inputting the first row (row number 1) at 4 inch from the bottom and the second row at 6 inch from the bottom should correct this problems. Debonded strands must also be identified with these rows. Revised input and output files are attached. Additional input edit checks and expanding the current error message may help.

FROM: Herman Lee DATE: 7/14/2008 10:59:16 AM Eastern Daylight Time  
Renumbered the bottom most row of all strands to row 1.  
Resolved in 6.0 Release.

Issue ID: 8793  
Subject: Floorbeam does not get live load.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Lee, Herman 7/11/2008 4:13:41 PM  
Modified By: bgoodrich 11/10/2008 9:30:30 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Goodrich, Brian | Assigned | High     | Bug<br>Bug - BRASS |

Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Version 56 VI8802.xml |             |
|      | VI8802.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/11/2008 12:14:42 PM Eastern Daylight Time  
 Submitted on behalf of Morteza Najafabadi, AI Engineers. Please use the bridge attached in Incident 8791.

=====  
 Herman,  
 Thanks for the information. I did both of those things and was able to get the floor beams analyzed, but still the live load moment on the floor beam is zero. Somehow the floor beam does not get the live load. Any ideas? Thanks.

-----Original Message-----  
 From: Herman Lee [mailto:HLee@mbakercorp.com]  
 Sent: Friday, July 11, 2008 9:26 AM  
 To: Morteza Najafabadi  
 Subject: RE: Virtis

Morteza,  
 You have intermediate supports defined at the start and end of the floorbeam. If you remove these two intermediate supports and enter the slab information in the cross section, the floorbeam will run. Note that Virtis computes the dead load of the floor system and applies it to the truss panel points as point loads.

Herman  
 >>> "Morteza Najafabadi" <mnajafabadi@aiengineers.com> 7/10/08 3:21 PM >>>  
 I used 0.1 ft and 0.1 in. But I can't get the floor beams to run. It gives me an error message. Thanks.

-----Original Message-----  
 From: Herman Lee [mailto:HLee@mbakercorp.com]

Complete Issue Information

Sent: Thursday, July 10, 2008 3:05 PM  
To: Morteza Najafabadi  
Subject: RE: Virtis

Morteza,

What tolerances do you use to get it to run?

Herman

>>> "Morteza Najafabadi" <mnajafabadi@aiengineers.com> 7/10/08 2:26 PM >>>

Herman,

I am having difficulty analyzing the floor beams for a truss, which we discussed over the phone. My floor beams are built-up members, and they don't seem to get any live load. I was wondering if you could figure out what the problem is. I have attached the file. Thanks,

Morteza Najafabadi, P.E.

=====

FROM: Brian Goodrich DATE: 7/11/2008 4:57:49 PM Eastern Daylight Time  
I was able to get live load actions if I used one 24.5' travelway instead of two 12.25' travelways. This is on the Lane Position tab of the Structure Typical Section window. I am submitting this issue to WYDOT because live load actions should be found even when there are multiple travelways.

FROM: Brian Goodrich DATE: 7/11/2008 5:02:52 PM Eastern Daylight Time  
My earlier comments are only intended as a workaround until the source of the problem in the engine can be identified and corrected.

FROM: Brian Goodrich DATE: 11/4/2008 9:44:25 AM Mountain Standard Time  
This issue was assigned to BRASS Problem Log 833.

FROM: Brian Goodrich DATE: 11/10/2008 2:27:34 PM Mountain Standard Time  
The BRASS engine has been corrected. Fixed for version 6.1.

Issue ID: 8802  
Subject: Distribution of structure typical section loads by simple beam method

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Kennelly, Krisha 7/21/2008 4:53:08 PM  
Modified By: xli 5/28/2009 4:02:26 PM  
Priority: High  
Category: Bug

4/19/2016 3:06:13 PM

HRS AASHTO

1155

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
|                    | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 29993 - 2224840.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krishna Kennelly DATE: 7/21/2008 12:53:47 PM Eastern Daylight Time

An error in the distribution of appurtenance loads on the deck cantilever when load distribution by simple beam method is chosen was found during beta testing of the new Opus LRFD engine. (Refer to incident 8608)

This change affects Std analysis runs using the Virtis Std Engine and Virtis Truss Engine.

For appurtenance (and sidewalk and FWS) loads on the deck cantilever, the program was previously applying the appurtenance load to the exterior beam using the tributary area method. The simple beam method should have been used, this approach results in a larger load applied to the exterior girder by considering the cantilever effect. Note that the load to the next interior beam is not reduced by this cantilever effect.

Attached xml file tests new code.

In Version 5.6 the following Appurtenance Loads were computed:

G1 & G4: parapet 0.505 k/ft

Sidewalk  $6"/12*2*0.150$  kcf = 0.150 k/ft

FWS  $2.78"/12*108pcf * (2.5' + 6.5')$  = 0.225 k/ft

4/19/2016 3:06:13 PM

HRS AASHTO

1156

Complete Issue Information

In Version 6.0 the following Appurtenance Loads are computed:  
G1 & G4: parapet 0.505 k/ft \* (17.25' - 7.88"/12)/13' = 0.645 k/ft

Sidewalk 6"/12\*2'\*0.150 kcf \*16.25'/13' = 0.1875 k/ft

FWS (2.78"/12\*108pcf \* 15.5' \* 15.5'/2) /13' = 0.231 k/ft

FROM: Xinmei Li DATE: 7/24/2008 2:46:17 PM Eastern Daylight Time  
Verified fix for 6.0 release.

FROM: Herman Lee DATE: 7/25/2008 8:45:33 AM Eastern Daylight Time  
This will be included in the patch/release after 6.0 release.

FROM: Xinmei Li DATE: 5/28/2009 11:12:31 AM Eastern Daylight Time  
Tested with 6.1 Beta1, DL2 = 0.876 k/ft, it should be 0.645 k/ft+0.1875 k/ft+0.231 k/ft = 1.0635 k/ft.

Issue ID: 8810  
Subject: Virtis Application Crashes When Bridge is Analyzed

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Campisi, Paul 7/29/2008 3:57:14 PM  
Modified By: jduray 5/6/2010 6:12:53 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 7/29/2008 12:03:16 PM Eastern Daylight Time

4/19/2016 3:06:14 PM

HRS AASHTO

1157



Complete Issue Information

The attached file was working in April. Now the Virtis Application crashes and kicks you out of the program when the bridge is run. No changes were made to the file, yet the bridge now crashed the program.

FROM: Herman Lee DATE: 7/30/2008 1:37:34 PM Eastern Daylight Time  
I'm able to reproduce the crash in 5.6 Release and 6.0 Release. Virtis crashes after rating of "Unit2 Stringer1" stringer member.

Developer Notes:

6.1 Development asserts inside CUiAnalysisProgressDlg::PopulateDeadLoadReactionObjects (line 14795). Virtis is not able to locate the second floorbeam and crashes while cleaning up memory.

FROM: Paul Campisi DATE: 10/24/2008 12:16:32 PM Eastern Daylight Time  
I ran each element separately from within Virtis and found that the stringers in Panel 2 were crashing the program. I tried replacing them, but that didn't help. I then removed them from the analysis since all the panels are identical and so far there is no section loss. This allows me to run the analysis from outside for now.

FROM: Mehrdad Ordoobadi DATE: 9/15/2009 1:15:00 PM Eastern Daylight Time  
This is related to VI 9185, 9312, and 8176.  
The crash was fixed in 6.1 Acceptance build.

FROM: Jim Duray DATE: 5/6/2010 2:08:54 PM Eastern Daylight Time  
No crash.  
Verified - 6.2 alpha 4.

Issue ID: 8811  
Subject: Truss Member With Deterioration

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Baumann, Ed 7/30/2008 4:34:41 PM  
Modified By: ebaumann 8/19/2008 6:48:51 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:06:14 PM

HRS AASHTO

1158

### Complete Issue Information

|                    |           |      |     |
|--------------------|-----------|------|-----|
| Li, Xinmei         | Assigned  |      |     |
|                    | Duplicate |      |     |
| Lee, Herman        | New       | High | Bug |
| Ordoobadi, Mehrdad | Assigned  |      |     |
|                    | Resolved  |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Ed Baumann DATE: 7/30/2008 1:08:11 PM Eastern Daylight Time

I'm rating a truss line superstructure in virtis 5.6. I had the model running without deterioration. Then i tried to add deterioration to one diagonal member (U1L0) consisting of two inward channels. following are the command lines i used.

### MemberOfInterest

U1L0

Deterioration

Channels

Right TopFlange 9.6 99.9 L0 3.0 1.0

The section properties in the output show gross and net areas equal to zero with I, C, R and Fy called NaN.

The Rating Summary shows 1.#R for Capacity and Rating Factors.

These resulted are mirred in member U11L12 which is symetrical with the same section.

I've attached the xml file. The superstructure definition in question is "interior truss" in the file.

FROM: Herman Lee DATE: 8/13/2008 12:20:17 PM Eastern Daylight Time

May, please see whether this is a duplicate of Incident 8533.

FROM: Xinmei Li DATE: 8/13/2008 4:21:31 PM Eastern Daylight Time

I think this is a duplicate of Incident 8533.

FROM: Ed Baumann DATE: 8/19/2008 2:48:51 PM Eastern Daylight Time

4/19/2016 3:06:14 PM

HRS AASHTO

1159

Complete Issue Information

We have updated to virtis version 6.0.0, the problem remains.

|                                          |
|------------------------------------------|
| Issue ID: 8819                           |
| Subject: VirtisOpisDBMigrationWizard.exe |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Ordoobadi, Mehrdad   |                     |
| Submitted By: Ziegler, Michael        | 8/6/2008 2:02:00 PM |
| Modified By: hlee                     | 5/9/2010 2:27:03 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Michael Ziegler DATE: 8/6/2008 10:10:15 AM Eastern Daylight Time  
 The migration wizard list the ability to upgrade databases from 4.0.0 through 5.6 to 6.0.0. However db prior to 5.1 need to run the ScanAngleConversion\_510.exe utility prior to migration. This utility is not included in 6.0.0 or 5.6, 5.5 or 5.4. and the utility if downloaded will not run without the dll's from 5.1. This utility needs to be updated to run under 6.0.0 and be included in future release.

FROM: Mehrdad Ordoobadi DATE: 4/6/2010 10:40:34 AM Eastern Daylight Time  
 In order to address this issue in 6.2, it was decided that the migration wizard only supports the migration of versions 5.3 and later. No domain dependent migration step exists after 5.3.

FROM: Herman Lee DATE: 5/9/2010 10:24:07 AM Eastern Daylight Time  
 Verified in 6.2 Beta 1.

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 8822                                  |
| Subject: incorrect results from timber analysis |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Jensen, Paul            | 8/6/2008 7:50:56 PM |
| Modified By: hlee                     | 5/7/2010 2:06:02 PM |
| Priority: High                        |                     |
| Category: Bug - Madero                |                     |

### History

| Primary Contact | Status   | Priority | Category     |
|-----------------|----------|----------|--------------|
| Lee, Herman     | New      | High     | Bug          |
|                 | Assigned |          |              |
| Goodrich, Brian |          |          | Bug - Madero |
|                 | Resolved |          |              |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:06:15 PM

HRS AASHTO

1161

### Complete Issue Information

| Name | Resource Identifier                                          | Description |
|------|--------------------------------------------------------------|-------------|
|      | TIMBER-FACTORS-IN-VIRTIS.DOC<br>16570.xml<br>Truss Error.doc |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 8/6/2008 3:52:59 PM Eastern Daylight Time  
several factors are not used in computations of the rating. see attached document for discussion

FROM: Herman Lee DATE: 8/13/2008 12:09:13 PM Eastern Daylight Time  
Brian, please make sure the exported adjustment factors are correct and those that are not used are listed in the Engine Help.

FROM: Brian Goodrich DATE: 8/15/2008 12:31:19 PM Mountain Daylight Time  
The export is generating the commands correctly, so the bug may be within Madero.

FROM: Brian Goodrich DATE: 8/17/2009 9:36:58 AM Mountain Daylight Time  
The repetitive use factor is not being read in correctly by Madero. The default value is not being overridden by the input value. I corrected the subroutine in the Madero engine that reads in commands. This engine will need to be implemented in version 6.2.

The main output file lists only the commonly used adjustment factors. To view all the factors that are used to adjust a particular stress, turn on the "Timber Adjustment Factor Calculations" option in the Analysis Settings engine properites for the Madero engine.

FROM: Herman Lee DATE: 5/7/2010 9:56:35 AM Eastern Daylight Time  
Tested TimberTrainingBridge1 with overridden repetitive use factor.  
Verified in 6.2 Beta 1.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 8826                                                       |
| Subject: Error preparing stringer dead load reactions for floorbeam. |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Ordoobadi, Mehrdad   |                     |
| Submitted By: Lee, Herman             | 8/8/2008 7:06:44 PM |
| Modified By: jduray                   | 5/6/2010 6:21:23 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

4/19/2016 3:06:15 PM

HRS AASHTO

1162

## Complete Issue Information

---

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |
| Duplicate       |        |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/8/2008 3:09:36 PM Eastern Daylight Time  
Attached bridge xml file and error message.

Floorbeam rating workaround:

1. Rate the whole bridge (All floorbeams will have this problem).
2. For each Stringer Unit Layout, open Computed Stringer Reactions window and Accept All New Reactions.
3. For each Floorbeam Stringer Reactions window, select Override Computed and copy the Computed Reaction to User Defined Reaction.

FROM: Mehrdad Ordoobadi DATE: 9/22/2009 2:44:56 PM Eastern Daylight Time  
Related issues: 7916

FROM: Mehrdad Ordoobadi DATE: 11/23/2009 10:07:14 AM Eastern Standard Time  
"Error preparing stringer dead load reactions for floorbeam" Fixed in 6.2.

FROM: Jim Duray DATE: 5/6/2010 2:13:44 PM Eastern Daylight Time  
I rated all members - no errors.  
I followed 1 and 2 in the instructions above - no errors.  
I tested one floorbeam stringer reactions window - no errors.  
Verified - 6.2 alpha 4.

Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 8827                           |
| Subject: Report Tool Missing LRFR Report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Teal, Dean              | 8/8/2008 8:10:31 PM  |
| Modified By: hlee                     | 8/13/2008 4:45:30 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 8/8/2008 4:11:02 PM Eastern Daylight Time  
After an LFD rating or LRFD analysis I can select the Report Tool and get a LRFD or LFD Analysis Output. But I can't get a LRFR Analysis Output (I wanted to see the Overall Summary Report) like I have for LFD.

Is this an oversight?  
How can we find LRFR rating reports besides the View Analysis Report?  
Is the only way to mine out the data by going to the .out file in the directory?

FROM: Herman Lee DATE: 8/13/2008 12:40:16 PM Eastern Daylight Time  
Duplicate of Incident 8204 (Reports from the Toolbar).

Complete Issue Information

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 8828                                                     |
| Subject: Multi-lane scenario for RC deck slab bridge LRFR analysis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 8/11/2008 11:54:19 AM |
| Modified By: bgoodrich                | 11/20/2008 5:47:38 PM |
| Priority: High                        |                       |
| Category: Bug - Export 1              |                       |

History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Goodrich, Brian | Assigned  | High     | Bug            |
|                 | Duplicate |          | Bug - Export 1 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



Complete Issue Information

Description

FROM: Herman Lee DATE: 8/11/2008 7:56:03 AM Eastern Daylight Time  
Submitted on behalf of Jeffrey Sam (Jeffrey.Sam@dmjmharris.com). The second question is a previously reported defect (Incident 8450: LRFR - Problem with Live Load Distribution Factor). Incident 8450 had been fixed in Virtis 6.0 Release.

=====

Hello,

I have several questions regarding the modeling of a reinforced concrete deck slab bridge by LRFR analysis. These questions are not addressed in the attached example from the Tech Support website.

1) The analysis is not checking multi loaded lanes. I have entered single and multi-lane LL distribution factors (the multi-lane equivalent strip width would control the analysis). I set the single lane to 0.001 in an attempt to force the multi-lane scenario to govern; however VIRTIS is still only giving me the single lane rating. In the 'Superstructure Definition' I have the Live Load Lanes - Multi-Lane checked. How do I get VIRTIS to analyze the multi-lane case?

2) I am doing a check of the VIRTIS calculation for the single lane loaded analysis and I am calculating a lower rating factor than VIRTIS produces. The resistance factor, systems factor, condition factor, moment capacity, DL factors, DL moments & LL factor are all the same however the LL moments differ. The LL moment that I am using in my hand calc is exactly 1.2 times greater than the LL moment produced by VIRTIS. I believe that VIRTIS is applying the multiple presence factor ( $m=1.20$ ) to the live load moment twice thus yielding the lower LL and higher rating factor. Article 4.6.2.3 of the AASHTO LRFD specs states that the single lane loaded equivalent strip width equation already includes the 1.20 multiple presence factor. Am I correct and is the VIRTIS calculation incorrect?

Any assistance is greatly appreciated.

Thanks.

Jeffrey A. Sam, E.I.T.  
Structural Engineer

DMJM Harris | AECOM  
10 Orms Street, Suite 405  
Providence, RI 02904

=====

FROM: Brian Goodrich DATE: 11/20/2008 9:28:20 AM Mountain Standard Time  
Question 1 is also attributed to Incident 8450. Using the Live Load Lanes buttons is the correct method for controlling which distribution factors get used. Both questions have already been addressed in version 6.0.

4/19/2016 3:06:15 PM

HRS AASHTO

1166

Complete Issue Information

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 8829                                                                            |
| Subject: Request for more information on writing results back to the Bridgewater database |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Love, Ron               | 8/11/2008 1:45:53 PM |
| Modified By: hlee                     | 10/1/2008 5:30:22 PM |
| Priority: High                        |                      |
| Category: Third Party                 |                      |

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Third Party |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | LFD Report Type.doc       |             |
|      | Virtis Results Object.doc |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 9:46:29 AM Eastern Daylight Time  
Submitted on behalf of Ron Love at the User Group meeting.

Request for more information on how to write results back to the Bridgewater database.

FROM: Herman Lee DATE: 8/14/2008 3:02:26 PM Eastern Daylight Time  
Please provide specific request information. Is this request for the next version of the API

4/19/2016 3:06:16 PM

HRS AASHTO

1167

Complete Issue Information  
documentations?

FROM: Herman Lee DATE: 8/18/2008 1:47:08 PM Eastern Daylight Time  
E-mail sent to and reply from Ron Love:

=====  
Hi Herman,

I will get the information to you later this week. And my thanks to  
Krisha please.

Ron

-----Original Message-----

From: Herman Lee [mailto:HLee@mbakercorp.com]  
Sent: Monday, August 18, 2008 12:28 PM  
To: Ron Love  
Subject: Incident 8829: Request for more information on writing  
resultsback to the Bridgeware database

Hi Ron,

Krisha submitted Incident 8829 on your behalf to Virtis/Opis Support  
Center.

Please provide us specific request information. Is there any particular  
results object you would like to have more information? Or, your  
request is for the next version of the API documentation?

Thanks,  
Herman Lee

=====

FROM: Herman Lee DATE: 9/30/2008 3:05:19 PM Eastern Daylight Time  
E-mail received from Ron Love and reply e-mail:

=====  
Hi Ron,

The option to include or exclude wearing surface is located in the Analysis tab of the Superstructure  
Definition window. The GetConsiderWearingSurfaceForRatingInd() is available for all the system  
superstructure definitions (IDoGirderSystemStructDef, IDoGfsFloorSystemStructDef,  
IDoGfFloorSystemStructDef, IDoFsFloorSystemStructDef, IDoTfsFloorSystemStructDef and  
IDoTffFloorSystemStructDef).

Attached is the list of results objects that the Virtis Std Engine and BRASS Engine used. The steps to  
create and populate those objects are described on page 81 of the API Guide. Basically, first check  
whether it is requested by the user, then call GetNew... to create one and AddRow to populate the

4/19/2016 3:06:16 PM

HRS AASHTO

1168

Complete Issue Information

object.

Please let us know if you need more information.

Herman

>>> <Ron.Love@bentley.com> 9/29/08 10:59 AM >>>  
Hi Herman,

Sorry for taking so long to get back to you on this. Regarding the results object the main thing we are interested in is what I have indicated in the attachment.

Also, I recall seeing some other options on the Virtis interface, which I cannot seem to locate on the 6.0 developer version, that allow the user to indicate that the wearing surface is to be included/excluded from the analysis. This was a radio button as I recall.

Generally we need to have access to any GUI items that have engine implications. These would be items other than the engine properties, which are documented in the material you have already prepared.

Thanks and once again sorry for the delay. I appreciate you and Krishna helping us out with this.

Ron

=====

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 8842                                                                                        |
| Subject: Specify how the Stress Limit Coefficient is used in the final allowable tension calculation. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Lee, Herman             | 8/11/2008 7:40:47 PM |
| Modified By: jduray                   | 5/6/2010 12:32:36 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |

4/19/2016 3:06:16 PM

HRS AASHTO

1169

Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Resubmit  |      |             |
|                  | Resolved  |      |             |
| Duray, Jim       | Assigned  | High | Bug         |
|                  | Resolved  |      | Education   |
| Lee, Herman      | Assigned  |      |             |
|                  |           |      | Bug - GUI 2 |
| Kennelly, Krisha |           |      | Bug         |
|                  | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | PSBoxBridgeWithAllGirdersDefi<br>ned.xml |             |
|      | PS3-<br>PSAdjBoxTrainingBridge.xml       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/11/2008 3:40:57 PM Eastern Daylight Time  
Submitted on behalf of Mary Walker, Idaho DOT.

The help for Final allowable tension in the Stress Limit window needs to specify how the Stress Limit Coefficient is used in the calculation.

FROM: Xinmei Li DATE: 11/3/2008 4:58:42 PM Eastern Standard Time

The folowing line was already added to help.

"Virtis/Opis will use the Stress Limit Coefficient entered in the System Defaults: Bridge Workspace window to calculate this value. The value of this coefficient is dependent on the moderate or severe corrosive condition to which the member is exposed."

FROM: Herman Lee DATE: 11/4/2008 10:37:43 AM Eastern Standard Time

The user would like to know how the coefficient is used in the calculation, not just saying it's used. If there's a article number, refer to that article in the help. Otherwise, state how we do the calculation.

FROM: Xinmei Li DATE: 10/13/2009 9:30:37 AM Eastern Daylight Time

It's calculated based on AASHTO table 5.9.4.2.2-1

4/19/2016 3:06:16 PM

HRS AASHTO

1170

Complete Issue Information

FROM: Xinmei Li DATE: 10/20/2009 1:48:47 PM Eastern Daylight Time  
Added AASHTO article number to the help.

FROM: Jim Duray DATE: 5/6/2010 8:28:48 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 8845                                                    |
| Subject: NSG will not run on Adjacent PS Box bridge with no deck. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Lee, Herman             | 8/12/2008 1:45:12 PM |
| Modified By: hlee                     | 3/30/2010 2:45:20 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/12/2008 9:47:34 AM Eastern Daylight Time  
Submitted on behalf of Elizabeth Befikadu, MHD.

Attached the PS3 Adjacent PS Box training bridge.

FROM: Jim Duray DATE: 11/10/2008 8:49:46 AM Eastern Standard Time  
Only G2 is defined in the system. All girders must be defined (or linked to ones that are defined).

FROM: Herman Lee DATE: 1/16/2009 9:44:46 AM Eastern Standard Time  
All girders are defined in the attached PSBoxBridgeWithAllGirdersDefined.xml file. Belows are the

4/19/2016 3:06:16 PM

HRS AASHTO

1171

Complete Issue Information  
 messages from NSG analysis.

```
=====
Retrieving engine specific settings for controlling output and model generation...
Maximum number of nodes for in-memory storage of results reset to 2000.
Generating advanced analysis finite element models...
Generating 3D finite element model for superstructure...
Generating beam elements for the girders/stringers...
Generating 2D finite element models for each girder/stringer...
Deck thickness must be greater than zero for analysis to run!
```

Analysis failed!

```
=====
FROM: Herman Lee DATE: 3/30/2010 10:30:32 AM Eastern Daylight Time
Deck is required in the generation of the 3D FE model during the Distribution Factor Analysis.
```

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 8850                                                                     |
| Subject: Member Spacing Orientation should be disabled for Floor and Truss systems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Lee, Herman             | 8/14/2008 1:22:43 PM |
| Modified By: xli                      | 5/28/2009 6:20:51 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:06:17 PM

HRS AASHTO

1172

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/14/2008 9:24:05 AM Eastern Daylight Time  
Following is copied from Virtis/Opis Help:

#### Member spacing orientation

Specify the spacing orientation for the main member spacing table as either perpendicular to member or along support. Member spacings cannot vary along the length of the bridge (that is, the members must be parallel to one another), in a floor system superstructure definition.

FROM: Joseph Ihnat DATE: 8/19/2008 1:03:03 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:18:04 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

Issue ID: 8853

Subject: problem obtaining desired prestress force after losses

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Lee, Herman

8/15/2008 5:31:02 PM

Modified By: bgoodrich

10/15/2008 4:49:58 PM

Priority: High

Category: Education

4/19/2016 3:06:17 PM

HRS AASHTO

1173



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Li, Xinmei      | Assigned | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FramingPlan.pdf     |             |
|      | 1022300-8-17-08.xml |             |
|      | FML.png             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 8/15/2008 11:34:52 AM Mountain Daylight Time  
Herman,

I have a problem I hope you can help me solve regarding prestress strand calculation and losses. I am trying to get Virtis to calculate a final prestressing force of 674 KIP. I have input a AASHTO Type III beam with the prescribed prestressing arrangement. I have assigned losses in the "Prestress Properties" folder, however when I calculate stresses due to prestress, I am not matching Virtis. How do I input the data in the "Prestress Properties" folder to account for a lower initial prestress force?

I have attached the virtis file and stress calculation (page 4) of the calculations.

Thanks

PK

PLEASE NOTE THE NEW PHONE NUMBER

Paul Kettleson

MS 610

3485 Hadley Ave North

Oakdale, MN 55128-3307

Phone: 651-366-4521

Emergency: 612-788-9042

4/19/2016 3:06:17 PM

HRS AASHTO

1174

Complete Issue Information

FROM: Brian Goodrich DATE: 8/15/2008 11:41:14 AM Mountain Daylight Time  
The final prestressing force of 674 kips can be obtained by making a couple changes to the input on the Prestress Properties window.

First, change the "Jacking stress ratio" to 0.7. Second, enter 45 ksi in the "Composite loss" field. Keep the "Final loss" at 45 ksi also.

FROM: Brian Goodrich DATE: 8/18/2008 10:42:02 AM Mountain Daylight Time  
E-mail from user:

Thanks Brian

I was trying to use the P/S transfer stress ratio. Plus, I am just learning this software. I appreciate the help.

I will plug it in over the weekend to see how it works.

Thanks

PK

PLEASE NOTE THE NEW PHONE NUMBER  
Paul Kettleon  
MS 610  
3485 Hadley Ave North  
Oakdale, MN 55128-3307  
Phone: 651-366-4521  
Emergency: 612-788-9042

Issue ID: 8856  
Subject: Unable to enter floorbeam member location for skewed truss system.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Lee, Herman 8/18/2008 7:49:19 PM  
Modified By: xli 9/30/2008 8:33:18 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:06:17 PM

HRS AASHTO

1175

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Fascia_Beam_0.OUT      |             |
|      | Fascia_Beam_A.OUT      |             |
|      | compression flange.xml |             |
|      | Fascia_Beam.dat        |             |
|      | Fascia_Beam_BRASS.OUT  |             |
|      | virtis output.jpg      |             |
|      | brass output.jpg       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/18/2008 3:50:16 PM Eastern Daylight Time  
Submitted on behalf of Anna Lager (alager@haks.net), Haks Engineers.

Attached bridge file and error message.

FROM: Xinmei Li DATE: 9/30/2008 4:22:45 PM Eastern Daylight Time  
The floorbeam 11 offset should entered as "20.844" instead of '21". See attached pdf.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 8859                                         |
| Subject: Compression Flange Difference between engines |

Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lathia, Hasmukh      |                       |
| Submitted By: Curtis, Beckie          | 8/25/2008 12:55:15 PM |
| Modified By: hlee                     | 11/6/2008 6:08:38 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Assigned |          |           |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | reaction at support.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 8/25/2008 9:00:57 AM Eastern Daylight Time  
 In attached file, see fascia girder. This is a built-up section analyzed by LFR with no cover plates, only angles.  
 Brass gives HS-20 Inv Rating of 0, Virtis gives 0.64.

Compression flange in brass moment capacity is calculated by 10-99, I can't tell if Virtis checks this or not, but the full fy instead of fcr is used. Screen shots of output attached.

Beckie Curtis - MDOT

FROM: Herman Lee DATE: 8/25/2008 1:07:19 PM Eastern Daylight Time  
 Attached Virtis Std Engine input and output files.

FROM: Herman Lee DATE: 8/25/2008 2:03:46 PM Eastern Daylight Time  
 Attached BRASS output file (Fascia\_Beam\_BRASS.OUT).

4/19/2016 3:06:17 PM

HRS AASHTO

1177

## Complete Issue Information

FROM: Hasmukh Lathia DATE: 8/26/2008 12:07:20 PM Eastern Daylight Time  
AASHTO Eqn 10-99 is  $b'/t \leq 2200/\sqrt{F_y}$  whereas BRASS seems to be using the equation for  $F_{cr}$  given in Maintenance Manual C.2.1.3. which is the same as Eqn 10-99 assuming  $b'=b/2$  and  $F_y$  replaced by  $F_{cr}$ . Anyway, BAR7 does not reduce the capacity using  $F_{cr}$ , but flags the rating factor as 888.88. That seems to be the reason for differences in ratings reported by BRASS and Virtis Std Engine. I will also question the 56.5 inch wearing surface.

Also, see the following correspondence with BRASS contractor.

From: "Brian L. Goodrich" <Goodrich@BridgeTech-Laramie.com>  
To: "Hasmukh Lathia" <HLathia@mbakercorp.com>  
CC: "Herman Lee" <HLee@mbakercorp.com>, "Jim Duray" <JDURAY@mbakercorp.c...>  
Date: 8/25/2008 6:32 PM  
Subject: RE: Virtis Incident 8859

The "F critical..." line that BRASS reports is used in Eq. 10 99. Please clarify your comment regarding  $b' = b/2$ . BRASS does not reduce the capacity when Eq. 10 100 and/or Art. 10.48.2.1(b) are not satisfied. If Eq. 10 101 is not satisfied, the capacity from 10 99 is calculated but subject to the limiting capacity from Art. 10.48.4.1.

Also, is there really a 56.5 inch wearing surface on this bridge?

Brian Goodrich  
BridgeTech, Inc.

### Original Message

From: Hasmukh Lathia [mailto:HLathia@mbakercorp.com]  
Sent: Monday, August 25, 2008 1:58 PM  
To: Goodrich@BridgeTech Laramie.com  
Cc: Herman Lee; Jim Duray  
Subject: Virtis Incident 8859

Brian:

You might have received an earlier email from Herman regarding BRASS checking "F critical for compression flange( $[4400 t/b]^2 \leq F_y$ )" for Incident 8859. Is this the same check for AASHTO 10.48.2.1 Eqn (10 99) where BRASS may assume  $b' = b/2$ ?

Virtis Std Engine (derived from PennDOT BAR7) checks provisions of AASHTO 10.48.2.1, but does not reduce the strength if any of the provisions is violated. It gives a rating factor or 888.88 indicating that there may be a potential fatigue problem.

How does BRASS use the provisions of AASHTO 10.48.2.1 if Eqns (10 99), (10 100) and (10 101) are not satisfied?

Thanks,

4/19/2016 3:06:17 PM

HRS AASHTO

1178

Complete Issue Information

Hasmukh

FROM: HasMukh Lathia DATE: 8/26/2008 4:13:02 PM Eastern Daylight Time  
Virtis Std Engine is using the AASHTO Standard Specifications 15th Edition - 1996 whereas BRASS is using the AASHTO Standard Specifications 17th Edition - 2002. There is an incident 6961 pending the Task Force approval to bring Virtis Std Engine to the AASHTO Standard Specifications 17th Edition 2002.

|                              |
|------------------------------|
| Issue ID: 8861               |
| Subject: Reaction at Support |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 8/25/2008 9:00:29 PM |
| Modified By: hlathia                  | 9/12/2008 1:12:07 AM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 8/25/2008 5:04:32 PM Eastern Daylight Time  
When Analyzing attached bridge, different results for reactions depending on engine used.

It appears to me that Brass is using shear distribution factor for reaction also.

Beckie - MDOT

FROM: Herman Lee DATE: 8/26/2008 3:14:47 PM Eastern Daylight Time  
BRASS only allows one distribution factor in the input. The moment distribution factor is used by BRASS.

4/19/2016 3:06:18 PM

HRS AASHTO

1179

Complete Issue Information

Virtis Std Engine uses the Shear At Supports distribution factor for reactions.

FROM: Hasmukh Lathia DATE: 8/27/2008 2:10:40 PM Eastern Daylight Time

Virtis Std Engine actually uses both shear and moment distribution factors for calculating reactions at end supports. For the axle load placed at the end support, it uses the shear distribution factor, and for the axle loads that are not placed at the support, it uses the moment distribution factor. For a reaction at an interior support, it uses the moment distribution factor for all axle loads. Live load shears at all supports are calculated using the both distribution factors same as the reactions at end supports.

FROM: Hasmukh Lathia DATE: 9/11/2008 9:12:00 PM Eastern Daylight Time

Per email from Beckie:

>>> "Rebecca (Beckie) Curtis" <CurtisRe@michigan.gov> 9/11/08 10:31 AM >>>

According to the post,

"Virtis Std Engine actually uses both shear and moment distribution factors for calculating reactions at end supports. For the axle load placed at the end support, it uses the shear distribution factor, and for the axle loads that are not placed at the support, it uses the moment distribution factor. For a reaction at an interior support, it uses the moment distribution factor for all axle loads. Live load shears at all supports are calculated using the both distribution factors same as the reactions at end supports."

If live load shears at all supports are calculated using both distribution factors, would this also apply to checking  $h/2$  shear in a prestressed beam?

Thanks,  
Beckie

Hasmukh Lathia's Response:

In calculating live load shears at  $h/2$  in a prestressed beam, only the moment distribution factor will be used since the axle load will most likely be placed at a distance  $h/2$  from the support. To find the maximum live load shear at  $h/2$ , if any of the axle loads is placed at a support, then the shear effect of that load will be multiplied by the shear distribution factor, but the effects of other loads falling within the span will be multiplied by the moment distribution factor. In calculating the live load shear at  $h/2$ , most likely the distribution factor for shear will not be used due to the nature of the shear influence line at  $h/2$  as the influence line ordinate at the support near  $h/2$  will have a zero value. The above provisions are automatically applied by the routines in Virtis Std Engine while analyzing the shear influence lines.

Issue ID: 8863

Subject: Virtis Std Engine export for effective flange width.

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Lee, Herman

8/26/2008 5:59:09 PM

Modified By: xli

5/28/2009 6:43:08 PM

Priority: High

Category: Bug

4/19/2016 3:06:18 PM

HRS AASHTO

1180

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | AnalysisOutputs.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/26/2008 2:00:23 PM Eastern Daylight Time  
Effective flange width should be optional for steel and ps girders when deck reinforcement is not entered.

FROM: Herman Lee DATE: 8/26/2008 2:01:42 PM Eastern Daylight Time  
Resolved for 6.0 Service Pack.

FROM: Herman Lee DATE: 9/3/2008 10:16:42 AM Eastern Daylight Time  
Also fixed a defect when an effective width range is defined across spans.

FROM: Xinmei Li DATE: 5/28/2009 2:39:45 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.



Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 8872                                         |
| Subject: Panel Point Loads results from Truss Analysis |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Barnhill, Gale          | 9/3/2008 6:08:23 PM |
| Modified By: gbarnhill                | 9/3/2008 6:46:54 PM |
| Priority: High                        |                     |
| Category: Education                   |                     |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Deck Truss - 4 Span.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gale Barnhill DATE: 9/3/2008 2:14:39 PM Eastern Daylight Time  
I've migrated a 5.6.0 database in SQL Server to 6.0.0  
I analyzed the Truss used in Oklahoma City Truss training (Simple Span Pony Truss).  
I don't see the Panel Point Loads results in the Analysis Output.

FROM: Herman Lee DATE: 9/3/2008 2:18:42 PM Eastern Daylight Time  
Please make sure the two new output reports are selected in the Output tab of the Analysis Settings window. See attached screen capture.

## Complete Issue Information

Issue ID: 8873  
Subject: Program crashes after Unit 8 of the stringers

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Lee, Herman 9/11/2008 6:50:17 PM  
Modified By: mordoobadi 9/15/2009 5:34:29 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 9/11/2008 2:50:49 PM Eastern Daylight Time  
Submitted by Frederick Swindle, Thompson Engineering (FSwindle@thompsonengineering.com) via  
Bridgeware e-mail:

4/19/2016 3:06:19 PM

HRS AASHTO

1183

Complete Issue Information

=====
Good Morning:

I have taken the privilege of attaching an .xml file of my deck truss. The program stops running after Unit 8 of the stringers with a message that Virtis has encountered a problem and needs to shut down. What's up????

Thanks for your assistance.

Frederick E. Swindle, P.E.
.... Senior Structural Engineer
thompsonENGINEERING,INC.
2970 Cottage Hill Road, Suite 190
Mobile, Alabama 36606
251.378.6120 / 251.666.6422 fax
www.thompsonengineering.com
=====

I'm able to reproduce the crash in 6.0 Release.

FROM: Mehrdad Ordoobadi DATE: 9/15/2009 1:20:53 PM Eastern Daylight Time
The crash is fixed in the 6.1 Acceptance build.
Related issues 9185, 9312, 8176, 8810.

Issue ID: 8876
Subject: NSG crash due to missing data

Folder: /Virtis/Support Center/Virtis
Primary Contact: Lee, Herman
Submitted By: Metcalf, William 9/17/2008 6:50:23 PM
Modified By: hlee 6/16/2010 3:47:11 PM
Priority: High
Category: Bug

History

Table with 4 columns: Primary Contact, Status, Priority, Category. Row 1: Lee, Herman, New, High, Bug. Row 2: Information Needed

Complete Issue Information

|             |                    |      |           |
|-------------|--------------------|------|-----------|
| Lee, Herman | Assigned           |      |           |
|             | Not Reproducible   |      |           |
|             | New                | High | Bug       |
|             | Resolved           |      | Education |
|             | Assigned           |      | Unknown   |
|             | Information Needed |      |           |
|             | Assigned           |      |           |
|             | Duplicate          |      |           |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Defrag.png          |             |
|      | VirtualMemory.png   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 9/17/2008 2:55:47 PM Eastern Daylight Time

Hello,

I posted incident #8788 b/c any time if i run NSG and it does not run due to input mistake or some thing of that nature then if you fix the issue and try to run NSG again virtis crashes. That incident was declaired resolved b/c the problem was fixed in 6.0; however we are now running virtis 6.0 and the problem is NOT fixed it still is happening the same as it was in the previous release.

FROM: Herman Lee DATE: 9/19/2008 1:20:09 PM Eastern Daylight Time

Do you recall the issue you fixed before you run NSG the second time? Is the issue the same as those listed (set the truck off the bridge and no existing member alternative selected) in Incident 8788?

In Incident 8788, we fixed a memory cleanup problem when the first NSG failed. Since this a memory related problem, we need to know exactly what failed in the first run in order to reproduce the problem. Thanks.

FROM: William Metcalf DATE: 9/19/2008 2:08:09 PM Eastern Daylight Time

It has happened several time, but the only ones I can remember at this time was we changed the wheel

4/19/2016 3:06:19 PM

HRS AASHTO

1185

Complete Issue Information

spacing for several of the axels and we changed some details of the bridge but I can not remember what.

FROM: William Metcalf DATE: 9/23/2008 5:31:07 PM Eastern Daylight Time  
Also I think you might not have to change anything to make it happen, I will try to test it if it happens again. It is my suspicion that it has something to do with the clean up of the crash, but I do not know this and I'm no computer or software expert.

FROM: Herman Lee DATE: 6/16/2010 11:35:35 AM Eastern Daylight Time  
I tried but unable to reproduce the crash in the second NSG analysis after the first NSG analysis failed using 6.2 Beta 2.

I changed the Status to Not Reproducible for now. We should reopen this incident when we know what failed in the first analysis causes the crash in the second analysis.

|                                              |
|----------------------------------------------|
| Issue ID: 8877                               |
| Subject: (Error Code = 8) Not enough storage |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Metcalf, William        | 9/17/2008 6:58:47 PM |
| Modified By: hlee                     | 7/14/2010 3:05:13 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 9/17/2008 3:01:28 PM Eastern Daylight Time  
If I used virtis to analysiz several bridges in one session eventually the will stop running and give me a error that says some thing to the effect of 'not enough storage'. If you exit virtis and restart it, it work

4/19/2016 3:06:19 PM

HRS AASHTO

1186

## Complete Issue Information

normally. Not sure if this maybe a memmory leak causing this.

FROM: Herman Lee DATE: 9/19/2008 2:04:44 PM Eastern Daylight Time

How many bridges (member alternatives) are you trying to analyze in one session? How much RAM is available in your computer?

Some users also have the same experience. The computer ran out of memory. This is not a memory leak problem. If you are running Windows XP, try to increase the size of the virtual memory in your computer. Attached is the virtual memory settings in my computer.

Error loading BRASS DLL!

(Error Code = 8) Not enough storage is available to process this command.

FROM: William Metcalf DATE: 9/23/2008 5:27:50 PM Eastern Daylight Time

could be close to 100 up to 200 member alternatives. It also will happen if I try to run a bridge will several spans in NSG (this is more understandable). I Have 3 GB of ram

FROM: David Koenig DATE: 9/25/2008 8:53:25 AM Eastern Daylight Time

We have seen similar issues at MoDOT. They were turned in as Incident 7455. At that time, it was attributed to problems that Windows 2000 has with the way it does Virtual Memory. If you are running Windows 2000, then there is apparently nothing that can be done about it. If you are running something besides Windows 2000, then I think that this needs to be investigated more by the developer to make sure that the program is freeing things up as it goes along. Someone with 3GB of ram should not be having this type of problem. When we had this problem on our machines, we bumped up the ram and also greatly increased the Virtual Memory and still had the problem.

FROM: William Metcalf DATE: 9/26/2008 12:24:12 PM Eastern Daylight Time

I strongly agree with Mr. Koenig. I am running Windows XP. Also this machine is less than a year old; it has a core 2 duo 2.66 GHZ processer and 3 GB of ram. There is absolutely no way that the memory on this machine is the issue (my initial virtual memory was set to ~2040 and maximum was ~4092, and I Tried it with your settings ~4090 for both, and with ~6000 for both). The performance of the best retail desk top you can buy right now is not too far ahead of this one. It is clearly an issue with how the program is handling memory or something to do with how the program is interacting with the operating system. Considering that lots of other programs run in windows with out this type of problem (programs that are much more computationally intensive I might add) it's hard not to come to the conclusion that the problem is with Virtis. I request that the status of this incident be changed from resolved.

FROM: Herman Lee DATE: 9/26/2008 1:56:55 PM Eastern Daylight Time

I changed the Subject to better describe the issue.

FROM: Herman Lee DATE: 9/26/2008 2:10:31 PM Eastern Daylight Time

Also in Incident 8890.

FROM: Herman Lee DATE: 10/29/2008 3:33:55 PM Eastern Daylight Time

We're not able to reproduce the "Not enough storage..." problem with the bridge attached in Incident 8890. The NSG analysis completed without any error message.

We suspect the problem may be related to virtual memory fragmentation. Could you follow the steps below to find out the virtual memory fragmentation information in your machine? Thanks.

4/19/2016 3:06:19 PM

HRS AASHTO

1187

Complete Issue Information

1. Check to see whether you can reproduce the problem.
2. Run Windows Disk Defragmenter (Start Menu > All Programs > Accessories > System Tools > Disk Defragmenter).
3. Select the boot drive (usually C:) and select Analyze button to start the analysis.
4. After the analysis is completed, select the View Report button.
5. Scroll down the Volumn information in the Analysis Report until you see Pagefile fragmentation (See attached Defrag.png file).
6. Tell us the reported pagefile size and the number of fragments.

FROM: Herman Lee DATE: 10/31/2008 8:45:36 AM Eastern Daylight Time  
Reply e-mail to William Metcalf:

=====  
Could you first try to see whether you are able to reproduce the "Not enough storage..." problem?

If you are able to reproduce the problem, perform the following steps to see whether the problem is still there.

1. Use Windows Disk Defragmenter to defragment the C drive.
2. Download Microsoft PageDefrag (<http://technet.microsoft.com/en-us/sysinternals/bb897426.aspx>) to defragment the virtual memory.
3. Try to reproduce the problem again.

Thanks,  
Herman

>>> <WilliamMetcalf@dotd.la.gov> 10/30/08 10:03 AM >>>  
Question, do you want me to work in Virtis Till I get the error and then check the page file fragmentation or just check the page file fragmentation right now? As of right now this is the info:

Volume WINXP (C:)  
Volume size = 50.01 GB  
Cluster size = 4 KB  
Used space = 22.09 GB  
Free space = 27.93 GB  
Percent free space = 55 %

Volume fragmentation  
Total fragmentation = 26 %  
File fragmentation = 53 %  
Free space fragmentation = 0 %%

File fragmentation  
Total files = 74,565  
Average file size = 423 KB  
Total fragmented files = 7,008  
Total excess fragments = 58,962  
Average fragments per file = 1.79

4/19/2016 3:06:19 PM

HRS AASHTO

1188

Complete Issue Information

Pagefile fragmentation  
Pagefile size = 5.86 GB  
Total fragments = 2.

Folder fragmentation  
Total folders = 9,250  
Fragmented folders = 183  
Excess folder fragments = 776

Master File Table (MFT) fragmentation  
Total MFT size = 84 MB  
MFT record count = 84,449  
Percent MFT in use = 97 %  
Total MFT fragments = 2

William J. Metcalf Jr.  
Louisiana Department of Transportation and Development  
Bridge Design - Bridge Rating Unit  
1201 Capitol Access Rd.  
Baton Rouge, La. 70804

=====

FROM: William Metcalf DATE: 11/12/2008 2:41:46 PM Eastern Standard Time  
I used Virtis until the error was repeated then I checked the pagefile fragmentation and it was the same as before:

Size: 5.86 mb  
Fragments: 2

I downloaded the software from the Microsoft site and ran it (requiring reboot) the message it gave was 'page file is as contiguous as possible'. I checked the pagefile defragmentation and it was still:

Size: 5.86 mb  
Fragments: 2

Then I started using Virtis again and got the same error I have been getting. I then checked the pagefile defragmentation and it was still:

Size: 5.86 mb  
Fragments: 2

So I don't think this is the issue.

FROM: Herman Lee DATE: 7/14/2010 11:03:57 AM Eastern Daylight Time  
Duplicate of Incident 9970.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 8878<br>Subject: can not find bridges in bridge explorer window |
|---------------------------------------------------------------------------|

4/19/2016 3:06:20 PM

HRS AASHTO

1189



## Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Ordoobadi, Mehrdad                 |
| Submitted By: Metcalf, William 9/17/2008 7:02:20 PM |
| Modified By: hlee 4/6/2010 2:09:36 PM               |
| Priority: High                                      |
| Category: Bug                                       |

## History

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Lee, Herman        | New      | High     | Bug              |
| Ihnat, Joseph      | Assigned |          |                  |
| Duray, Jim         |          |          | Bug - Database 1 |
| Ordoobadi, Mehrdad |          |          |                  |
| Thogaru, Srujana   |          |          | Bug              |
|                    | Resolved |          |                  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                              | Description |
|------|--------------------------------------------------|-------------|
|      | RE_ Steel shape section properties - Bentley.pdf |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: William Metcalf DATE: 9/17/2008 3:05:12 PM Eastern Daylight Time

We are having trouble with a few bridges that do not show up in the bridge explorer window even after you hit all, but if you search for them using the bridge id field it finds them. I believe this started happening before we upgraded to 6.0 and continues. Any ideas on what might cause this?

4/19/2016 3:06:20 PM

HRS AASHTO

1190

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 11/3/2008 2:16:29 PM Eastern Standard Time  
Do they appear in the "All Bridges" folder?

FROM: Herman Lee DATE: 10/30/2009 1:29:07 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:05:31 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: William Metcalf DATE: 12/11/2009 5:04:41 PM Eastern Standard Time  
No they do not, however the issue seems to be intermittent. For a while I thought I might be going crazy, but recently another engineer in our office has had the same issue. If you hit the binoculars icon and search by bridge ID it finds it even though it was not displayed in the bridge explore. But, as I said the issue is intermittent so it only pops up some times.

FROM: Mehrdad Ordoobadi DATE: 12/14/2009 1:40:49 PM Eastern Standard Time  
If we could get a copy of your database we could investigate this further. Could you please ask your database administrator to send us a copy of the database?

FROM: Mehrdad Ordoobadi DATE: 12/14/2009 2:00:01 PM Eastern Standard Time  
e-mail sent to William Metcalf:

From: Bridgeware,  
Sent: Monday, December 14, 2009 2:09 PM  
To: WilliamMetcalf@dotd.la.gov  
Subject: Virtis/Opis issue VI 8878 - Cannot find bridges in bridge explorer window

William,

If we could get a copy of your database we could investigate this further. Could you please ask your database administrator to send us a copy of the database? He can place the compressed database export file on Baker's ftp website at <ftp://ftp.mbakercorp.com/Incoming/LADOT/>. ...

Thanks,  
Mehrdad Ordoobadi  
AASHTOWare Virtis/Opis Support

FROM: Mehrdad Ordoobadi DATE: 12/16/2009 9:58:57 AM Eastern Standard Time  
Changed the status of this issue to "Information Needed".  
We are waiting for LA DOT to provide a copy of their database.

FROM: Herman Lee DATE: 1/5/2010 9:50:36 AM Eastern Standard Time  
Information Needed E-mail sent on 1/5/09.

4/19/2016 3:06:20 PM

HRS AASHTO

1191

Complete Issue Information

FROM: Herman Lee DATE: 2/27/2010 7:05:50 AM Eastern Standard Time  
Information Needed E-mail sent on 2/27/09.

FROM: Herman Lee DATE: 4/6/2010 9:23:33 AM Eastern Daylight Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                              |
|----------------------------------------------|
| Issue ID: 8880                               |
| Subject: Problems with Virtis Agency Library |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Koenig, David           | 9/19/2008 1:09:13 PM |
| Modified By: akemna                   | 6/23/2010 1:31:25 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Koenig DATE: 9/19/2008 9:19:54 AM Eastern Daylight Time  
We have discovered that when you enter steel shapes in your agency library, Virtis is not calculating RT, Sxx, RXX, or Syy. On the input screen, there is no way to enter these values, so Virtis should be calculating these behind the scenes. If you enter a new shape from scratch, it leaves these fields blank. In another scenario, we copied one from the standard library and made changes for the shape. When you copy from the standard library, it brings these values over from the copied shape. However, it does not update them as you update other values for the modified shape.

## Complete Issue Information

1. If you are not going to be able to enter these values from the input window, then Virtis should be calculating them behind the scenes for all agency entered shapes.
2. If you copy a standard shape and modify it for your agency library, then Virtis should be recalculating these values and updating them behind the scenes.
3. Also, we were suprised to find out that all of the library data is stored in Metric. This is something that users should be made aware of so that when they export a shape and are looking at the values they know that the need to convert back to English for comparison.

This bug is a very serious problem that needs to be addressed quickly. Also, states need to be made aware of this problem ASAP.

FROM: Jim Duray DATE: 10/26/2009 8:08:55 AM Eastern Daylight Time

From Herman:

"Sxx, Syy, Rt and Rxx are in the database and domain but not exposed in the GUI. When copying a rolled shape or other library item, we should only copy properties that are exposed in the GUI. Properties that are not exposed should set to NULL in the copy since user cannot change these properties."

From Brian Goodrich:

"The BRASS-LRFD engine calculates all the properties internally. The BRASS-LFD engine calculates all the properties internally except for A, I, and Z."

From Hasmukh (StdEngine):

"Std Engine is calculating some of these properties from the dimensions and other properties input by the user (passed on by GUI for Virtis)."

FROM: Jim Duray DATE: 10/26/2009 8:14:19 AM Eastern Daylight Time

Revise the copy function to not copy the values that cannot be entered using the UI.

Disable the Domain function for retrieving the values that cannot be entered using the UI (unless Bentley is using them).

Check with Bentley to make sure they are not using values that cannot be entered using the UI (I doubt they are using them).

FROM: Jim Duray DATE: 11/23/2009 1:44:12 PM Eastern Standard Time

Bentley's addition of LARS to the available engines (not yet released) is currently using Ryy, Syy, Rxx, Sxx that are not available through the UI.

We discussed this issue at the Nov Task Force meeting. Concensus by the Task Force was to remove the data items from the database for which there is no access through the UI. None of the engines (BRASS, Madero, StdEngine and the new AASHTO LRFD/LRFR) currently available in Virtis and Opis use any of the properties that will vbe removed. The 6.2 release will include a script that deletes the orphaned data from the database. The Domain API functions will be removed for those data items.

FROM: Jim Duray DATE: 12/17/2009 1:54:36 PM Eastern Standard Time

I notified Ron Love (see attached email pdf). Bentley will modify their code to calculate the values we are removing from the db.

4/19/2016 3:06:20 PM

HRS AASHTO

1193

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 1/13/2010 2:07:06 PM Eastern Standard Time  
Unused columns in library and bridge steel shapes removed.  
The Db, De, Dm, Domain classes updated. Necessary changes to the GUI completed.  
Library import was broken that is now corrected.  
Report tool causes an error when a steel channel is in the BWS. Srujana, please fix the report tool error.

FROM: Herman Lee DATE: 4/8/2010 8:08:05 AM Eastern Daylight Time  
Removed Steel Channel Nominal Depth attribute from all abr files. Resolved in 6.2 Release.

FROM: Mehrdad Ordoobadi DATE: 4/8/2010 9:40:41 AM Eastern Daylight Time  
The old rolled shapes.XML file was updated on January 13, 2010.

FROM: Herman Lee DATE: 5/9/2010 10:24:52 AM Eastern Daylight Time  
Verified in 6.2 Beta 1.

FROM: Aaron Kemna DATE: 6/11/2010 2:11:26 PM Eastern Daylight Time  
We can't really test this at MoDOT, but we are happy with the solution to the problem. Accepted for 6.2 Beta.

Issue ID: 8881  
Subject: pontis update will not work with LRFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Jensen, Paul 9/19/2008 4:21:14 PM  
Modified By: hlee 10/3/2008 6:00:32 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Accepted |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VirtualMemory.png   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Jensen DATE: 9/19/2008 12:36:29 PM Eastern Daylight Time  
 we are working with LRFR to update our ratings in pontis. when we were working in the test builds, this worked once then I never tested again (why should I since we were working on fixes). in the production release, the LRFR will not work when updating pontis data. the screen is not the same as the test release, The new one had rating factors and tons. the error message we are getting is:

Error generating LRFD load commands!

No. of vehicles = 23 (Maximum = 20)

The number of vehicles exceeds the maximum allowed by BRASS!

This includes pedestrian loads also.

Error in the BRASS LRFD Analysis Module!

Error generating LOAD-LIVE-DEFINITION, LOAD-LIVE-COMBO, and/or LOAD-LIVE-DEFLECTION command!

the program should not have processed over 20 vehicles. we have in our list only 5.

hs20-44

hs20 (si)

type 3

type 3s3

type 3-3

all trucks are from the default library. all trucks have LRFR checked in the ratings list. we have created a rating template with the same trucks and use only inventory and operating, the system returned LRFR ratings...

what give when upn is running????

FROM: Herman Lee DATE: 9/24/2008 3:02:51 PM Eastern Daylight Time

I tested Update Pontis Ratings in a Virtis 6.0 and Pontis 4.4.3 integrated database. Following is the Update Pontis Ratings error message when LRFR is selected as the Default rating method in the Member Alternative Description window.

=====  
Error generating LRFD load commands!

03:18:00 PM - Line 200 in source file .\BrassLrfdLoadControl.cpp.

No LRFR or Design vehicles are selected!

Complete Issue Information

03:18:00 PM - Line 1284 in source file .\EngineExport.cpp.

Error generating LOAD-LIVE-DEFINITION, LOAD-LIVE-COMBO, and/or LOAD-LIVE-DEFLECTION command!

03:18:00 PM - Line 1444 in source file .\BrassLrfdLoadControl.cpp.

=====

FROM: Brian Goodrich DATE: 9/25/2008 5:59:22 AM Mountain Daylight Time  
Herman asked me to comment on how a Virtis vehicle is broken up into live loads for BRASS. A Virtis vehicle can consist of: 1) multiple axles, 2) tandem, and 3) lane. Each of these different live loads are generated as a separate live load for BRASS and then combined per the spec after the analysis. Only loads that are entered are generated. Additionally, for LRFD and LRFR, a fatigue truck and truck train is generated for design vehicles, as well as a tandem train if desired by the user. For legal vehicles, there is also type of truck train called a legal pair. I don't see how these five Virtis vehicles resulted in 23 live loads to BRASS. It might help to attach the BRASS data file.

FROM: Herman Lee DATE: 10/3/2008 1:44:43 PM Eastern Daylight Time  
Modified Update Pontis Ratings to also consider Pontis rating vehicles as LRFR Inventory and Operating vehicles.  
Resolved in 6.0.1 and 6.1.

|                        |
|------------------------|
| Issue ID: 8884         |
| Subject: Storage Space |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Wampler, Danny          | 9/23/2008 6:30:29 PM |
| Modified By: hlee                     | 9/23/2008 6:59:07 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

---

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Danny Wampler DATE: 9/23/2008 2:36:33 PM Eastern Daylight Time  
Submitted By: Danny Wampler 09/23/2008 When running several ratings, 35 or more, we get an error message that says "Error loading BRASS DLL! (Error code = 8) not enough storage is available to process this command." Sometimes we can run 60 or more at a time, but other times, we cannot run 2 without getting kicked out. We added memory to our computers for a total of 3 gb, but that didn't help.

FROM: Herman Lee DATE: 9/23/2008 2:44:02 PM Eastern Daylight Time  
The memory allocated in a run is related to the number of member alternatives and also related to the complexity of each member alternative. For example, a member alternative with more cross section changes will require more memory than a member alternative will less cross section changes.

Some users also have the same experience. If you are running Windows XP, try to increase the size of the virtual memory in your computer. Attached is the virtual memory settings in my computer.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 8887                                                   |
| Subject: VIRTIS Steel Beam Timber Deck Top Flange Local Buckling |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 9/24/2008 1:24:01 PM |
| Modified By: bgoodrich                | 11/4/2008 4:44:32 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Duplicate |          |          |
| Duray, Jim      | Assigned  |          |          |
|                 | Resolved  |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                              | Description |
|------|--------------------------------------------------|-------------|
|      | DFAnalysis - Member G1<br>Line.txt<br>001630.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 9/24/2008 9:24:37 AM Eastern Daylight Time

Submitted by David Wolfe, Moffatt & Nichol (DWolfe@moffattnichol.com) via Bridgewater e-mail:

=====  
Bridgewater – Please find attached a dummy file test of a bridge (steel beam with timber deck) with top flange thickness deterioration.

Beam rating is by LFD. Deck rating is not run.

The file has 4 superstructures. Beam #2 in each case has top flange deterioration that causes the flange to be noncompact. Each superstructure is a copy of the previous with minor modifications:

- (1) Top flange lateral support full length of beams
- (2) Addition of a midspan diaphragm to (1)
- (3) Removal of the full length top flange lateral support from (2)
- (4) Removal of the midspan diaphragm from (3)

The curious feature is that the rating of beam #2 for the full length top flange lateral support ((1) & (2)) invokes top flange local buckling while (3) with only a midspan diaphragm does not. This causes (3) to have the highest rating factor.

How can (3) rate higher than (1)?

4/19/2016 3:06:21 PM

HRS AASHTO

1198

Complete Issue Information

Thank you –  
David Wolfe  
Moffatt & Nichol  
Richmond, VA  
(804) 320-1996

=====

FROM: Brian Goodrich DATE: 9/24/2008 9:28:53 AM Mountain Daylight Time  
If Eq. 10-101 is not satisfied, as in case (3), the moment capacity should be the lesser of Eq. 10-99 and 10-103a. It appears that BRASS is only considering Eq. 10-103a in this case. I will submit this issue to WYDOT for assignment to a BRASS problem log.

FROM: Brian Goodrich DATE: 11/4/2008 9:38:51 AM Mountain Standard Time  
This issue was assigned to BRASS Problem Log 842.

FROM: Brian Goodrich DATE: 11/4/2008 9:42:38 AM Mountain Standard Time  
This issue was addressed in the BRASS engine.

|                                           |
|-------------------------------------------|
| Issue ID: 8890                            |
| Subject: -1.#IND influence line ordinates |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Metcalf, William        | 9/26/2008 4:25:22 PM |
| Modified By: jduray                   | 4/30/2010 6:38:25 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:06:21 PM

HRS AASHTO

1199

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 9/26/2008 12:38:08 PM Eastern Daylight Time

This structure has an 11 span continuous plate girder span, and I am trying to run NSG on it. I understand that 11 spans is a lot for NSG to chew on; However the FEA both 2D and 3D part of the analysis run fine, it takes a little while (20 to 30 minutes), but it runs fine. But when it passes the info back to Virtis to do the final part of the analysis I get the 'Not enough storage....yadayadayada' error. The issue here is not my computer for 2 reasons:

1. It is a core 2 duo with 2.66 GHZ and 3 GB of ram and my virtual memory initial and maximum are both set to 4092. There is no reason this computer should not be able to run this.
2. The computer runs the FEA part fine without ever crashing; this should be computationally intensive part. If it runs the FEA there is no reason is should not run the Virtis part.

File is attached.

FROM: Herman Lee DATE: 9/26/2008 1:59:38 PM Eastern Daylight Time

The status of Incident 8877 has been changed back to Assigned.  
Since the issue described here is the same as Incident 8877, I changed the Status to Duplicate.

FROM: Herman Lee DATE: 10/29/2008 3:34:22 PM Eastern Daylight Time

I'm not able to reproduce the "Not enough storage..." problem. The NSG analysis completed without any error message but all influence line ordinates are reported as -1.#IND. Attached the G1 member influence line file.

Changed the Status back to Assigned. May be related to Incident 8480.

FROM: Jim Duray DATE: 4/26/2010 8:11:53 AM Eastern Daylight Time

I believe the generated FE model for 2D analysis is incorrect due to the hinges. The member releases appear to be incorrect.

FROM: Jim Duray DATE: 4/26/2010 4:22:17 PM Eastern Daylight Time

Beginning around line 4610 in AbxVirtisDistFactModelGen::GenerateBeamElements it looks like the code is adding a rotation release for the end of the member to the left of a hinge and the start of the member to the right of hinge.

Fixed for Alpha 4.

FROM: Jim Duray DATE: 4/30/2010 1:44:01 PM Eastern Daylight Time

Verified - 6.2 alpha 4.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 8891                                      |
| Subject: Continuous for Live Load Prestressed Beams |

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis             |
| Primary Contact: Lee, Herman                      |
| Submitted By: Curtis, Beckie 9/26/2008 7:15:31 PM |
| Modified By: hlee 10/16/2008 12:19:37 PM          |
| Priority: High                                    |
| Category: Education                               |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 9/26/2008 3:28:31 PM Eastern Daylight Time

MDOT policy treats continuous for live load prestressed beams as simple for positive dead and live load moments.

Is there a simple way to analyze positive dead and live load moments as simple beams, while checking shear and negative moments as continuous beams?

Current procedure is to do a simple and continuous model for each structure and run both. We can check "ignore shear" in a simple span, is there a way to ignore positive moment for continuous span?

FROM: Brian Goodrich DATE: 9/29/2008 8:47:09 AM Mountain Daylight Time

I cannot think of any way to ignore just positive moments.

FROM: Herman Lee DATE: 9/30/2008 1:29:02 PM Eastern Daylight Time

Beckie, would you like to change this to an enhancement request?

Complete Issue Information

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 8893                                                                    |
| Subject: Legal pair checkbox on Analysis Settings - Advanced dialog is not stored |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Kennelly, Krisha        | 9/30/2008 6:18:14 PM |
| Modified By: jihnat                   | 9/10/2009 5:51:20 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 9/30/2008 2:18:51 PM Eastern Daylight Time  
I'm not sure how this checkbox is supposed to work but I think it should be similar to the Single Lane Loaded checkbox on this window.

Open the Analysis Settings window, open the LRFR Legal Load Rating template. Click the Advanced button and check the Legal Pair for the Lane Type Legal Load. Hit OK to close Advanced dialog and Ok to close Analysis Settings window. Re-open the Analysis Settings window, Advanced dialog and the

Complete Issue Information

Legal Pair is not checked anymore.

FROM: Joseph Ihnat DATE: 10/2/2008 2:46:23 PM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 3:00:19 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

FROM: Krisha Kennelly DATE: 9/10/2009 1:18:33 PM Eastern Daylight Time  
accepted in acceptance build

|                                           |
|-------------------------------------------|
| Issue ID: 8895                            |
| Subject: Truss Doesn't Run in Version 6.0 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Koenig, David           | 9/30/2008 8:30:40 PM |
| Modified By: hlee                     | 10/1/2008 6:36:20 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:22 PM

HRS AASHTO

1203

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Deterioration.pdf   |             |
|      | deterioration.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Koenig DATE: 9/30/2008 4:37:55 PM Eastern Daylight Time

We have a Truss bridge that ran okay in Version 5.6. When trying to run it in Version 6.0, it gives errors. It basically is now requiring detailed section properties on a nondetailed section that is a tension member. Is this something that changed for Version 6.0? The XML file of the bridge from Version 5.6 is attached. Also, Word documents with the output from a verification of the bridge in each version is attached along with a document of the input file for the truss.

FROM: Herman Lee DATE: 10/1/2008 2:09:01 PM Eastern Daylight Time

Yes, additional properties are required for nondetailed section in Version 6.0. Please refer to Incident 8329 for more information. In summary, Virtis is not able to determine whether a member is in tension or compression during truss validation and a nondetailed section can be assigned to multiple members, the additional properties are required.

|                                     |
|-------------------------------------|
| Issue ID: 8899                      |
| Subject: Detailed Report Generation |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Curtis, Beckie          | 10/6/2008 2:27:10 PM |
| Modified By: hlee                     | 5/13/2010 3:22:15 PM |

### Complete Issue Information

|                          |
|--------------------------|
| Priority: Urgent         |
| Category: Bug - Domain 1 |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          | N_A      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | Virtis55_Backup_20080304101<br>835.zip  |             |
|      | Virtis55s_Backup_2008030410<br>2231.zip |             |
|      | Virtis55sXMLs.exe                       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 10/6/2008 10:35:37 AM Eastern Daylight Time

Two items in attached bridge.

1. I set width loss to 100% and thickness loss to 100% for bottom cover plate of fascia beam. The rating is the same as the other fascia with no deterioration. When the cover plate is deleted instead of entered as deterioration, then the rating changes.

2. When detailed report is generated, the name of the truck is incorrect. The report shows three HS-20 vehicles and then only two MI legal vehicles instead of the two HS-20 vehicles and three MI legal vehicles that I actually ran.

FROM: Herman Lee DATE: 10/16/2008 1:19:48 PM Eastern Daylight Time

1. The defect is not engine dependent. I suspect the defect is in cutting the deteriorated cross sections in the domain.

2. I'm able to reproduce using 5 library vehicles.

Krishna, please assign to Mehrdad after you are done with the first item.

4/19/2016 3:06:22 PM

HRS AASHTO

1205



Complete Issue Information

FROM: Jim Duray DATE: 1/14/2009 1:13:45 PM Eastern Standard Time  
I changed the category to Bug - Domain 1 because it is affecting the rating and the problem is in the domain.

FROM: Krisha Kennelly DATE: 5/19/2009 12:22:29 PM Eastern Daylight Time  
1. Fixed for 6.1 Beta 1. Cover plate with 100% thick & width loss results in section properties in region of cover plate to be very close to rolled shape without cover plate. The properties are slightly off because a section with loss is converted to a plate in the Virtis LFD input instead of a W shape so the fillets are missing.

FROM: Herman Lee DATE: 8/17/2009 2:15:29 PM Eastern Daylight Time  
Changed Subject from "Bottom Flange Deterioration and Detailed Report Generation" to "Detailed Report Generation" since the deterioration issue (#1) has been fixed for 6.1.

FROM: Mehrdad Ordoobadi DATE: 9/24/2009 11:51:27 AM Eastern Daylight Time  
May, please investigate this issue. I am not familiar with the report.

FROM: Xinmei Li DATE: 10/20/2009 10:09:07 AM Eastern Daylight Time  
There are 3 tables for HS20 detailed rating results because 2 tables are for lane load and one table for axle load. I added the vehicle type table to each table so that user can tell from the report.  
Mehrdad, please investigate why we have two sets of lane load rating results.

FROM: Mehrdad Ordoobadi DATE: 2/11/2010 10:14:27 AM Eastern Standard Time  
Fixed the problem with having two sets of rating results for the lane loading.

FROM: Mehrdad Ordoobadi DATE: 2/11/2010 10:20:43 AM Eastern Standard Time  
Pinned in 6.1 SP1.

FROM: Jim Duray DATE: 5/6/2010 6:15:01 PM Eastern Daylight Time  
Verified #2 resolved for 6.2 a4. I assume #1 was resolved for 6.1 based on "FROM: Krisha Kennelly DATE: 5/19/2009 12:22:29 PM Eastern Daylight Time" above.

FROM: Beckie Curtis DATE: 5/12/2010 3:40:14 PM Eastern Daylight Time  
Tested Beta 1

|                                         |
|-----------------------------------------|
| Issue ID: 8900<br>Subject: 5.6 Database |
|-----------------------------------------|

|                                                                                                         |                      |
|---------------------------------------------------------------------------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Curtis, Beckie | 10/8/2008 8:18:29 PM |
|---------------------------------------------------------------------------------------------------------|----------------------|

4/19/2016 3:06:23 PM

HRS AASHTO

1206

### Complete Issue Information

|                     |                       |
|---------------------|-----------------------|
| Modified By: jihnat | 10/14/2008 4:35:59 PM |
| Priority: High      |                       |
| Category: N_A       |                       |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 10/8/2008 4:22:16 PM Eastern Daylight Time  
The attached databases were created on a computer with the database from the install cd. When the computer was replaced, the sybase was installed and we are now unable to open these databases. Could you extract the xml files for import into the new database?

FROM: Joseph Ihnat DATE: 10/14/2008 12:33:24 PM Eastern Daylight Time  
I've attached a self-extracting EXE file that contains the bridges from the Virtis55s database. Run the exe to extract the contents.  
The Virtis55 database contained no bridges, other than our sample bridges.

Complete Issue Information

Issue ID: 8901  
Subject: Can member end connection types be non-detailed?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 10/9/2008 6:37:52 PM  
Modified By: hlee 10/14/2008 2:00:55 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 10/9/2008 2:39:29 PM Eastern Daylight Time  
Under the MemberCrossSection command data entry for the member end connection type (riveted/bolted/welded) is described for cross section types except NonDetailed. Is there a way to enter it for NonDetailed cross section types?

FROM: Herman Lee DATE: 10/14/2008 8:07:45 AM Eastern Daylight Time  
No. NonDetailed Section doesn't have the Connection subcommand.

## Complete Issue Information

Issue ID: 8903

Subject: Analysis Settings - Advanced tab

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ihnat, Joseph

Submitted By: Kennelly, Krisha

10/14/2008 6:04:15 PM

Modified By: jihnat

9/10/2009 5:51:45 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:23 PM

HRS AASHTO

1209

## Complete Issue Information

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | deck_truss_errors.xml   |             |
|      | fbeam_drawing_error.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 10/14/2008 2:04:47 PM Eastern Daylight Time

Open Analysis Settings window. Pick the LRFR Legal Load Rating Template. use the Temporary Vehicles button and create a new vehicle. Add this vehicle to the Legal Load Rating category in the Vehicle Tree. Open the Advanced window, close the Advanced window. hit Ok on Analysis Settings window. Get error message "Advanced Vehicle Properties: Frequency and/or Loading Condition are not set".

Go back to Advanced window, can't change Frequency or Loading Condition (which is correct since I added this as a legal load not a permit load).

But now I can't close the Analysis Settings window because I keep getting the error message.

Should not have to set Frequency or Loading Condition for this vehicle since it is not a permit vehicle.

FROM: Joseph Ihnat DATE: 10/17/2008 3:21:34 PM Eastern Daylight Time

Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 3:04:21 PM Eastern Daylight Time

Verified fixed for 6.1 Beta1.

FROM: Krisha Kennelly DATE: 9/10/2009 1:16:39 PM Eastern Daylight Time

tested and accepted in acceptance build

Issue ID: 8907

Subject: V/O crashes when switching from English to Metric on Framing window

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ihnat, Joseph

Submitted By: Jensen, Paul

10/24/2008 5:31:26 PM

Modified By: jihnat

4/30/2010 3:58:02 PM

Priority: High

Category: Bug

4/19/2016 3:06:23 PM

HRS AASHTO

1210

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
| Li, Xinmei      | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Not Reproducible   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | MI18.xml                   |             |
|      | cont.xml                   |             |
|      | virtis detailed output.txt |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 10/24/2008 1:35:44 PM Eastern Daylight Time  
when adding information on the framing plan screen and switch from english to metric, the program throws an exception and exits (gpf error). Not to gracefull. I can not give you an export because the program exits violently. this only happens (so far) on the floor systems and on all three types.

FROM: Paul Jensen DATE: 10/24/2008 2:54:26 PM Eastern Daylight Time  
more stuff---

when editing floorbeam locations, the screen resets skew to 0. this is for the floorbeam only the stringers are shown as described in the framing screen.

screen shot shows an issue with the deck apparent width (the driving lanes) and the actual size. the large skew of this bridge is causing computation issues. as shown the floorbeam are not long enough to cover the stringer descriptions.....

I have include the xml file of the bridge please use the structure def of "adjusted stringer and floorbeam rating"

not all of the information has been entered into the system. The issues is the skew, and floorbeam

4/19/2016 3:06:23 PM

HRS AASHTO

1211

Complete Issue Information

computations.

FROM: Joseph Ihnat DATE: 10/28/2008 12:50:01 PM Eastern Daylight Time  
Crash fixed for 6.1.0 and 6.0.1  
Krisha, please investigate Paul's second issue.

FROM: Krisha Kennelly DATE: 10/29/2008 2:45:35 PM Eastern Daylight Time  
#1. when editing floorbeam locations, the screen resets skew to 0

This is due to a bug in the domain. I'm testing a fix. A workaround is if you change the span length on the Structure Def window (thereby changing the location of a floorbeam mbr for this structure type) then go to the Framing Plan window and re-enter the skew angles, hit OK. This will force the skew angle to be reset for you after you've moved the floorbeams. The fix I made will update the skew angle when you close the Structure Def window.

#2. screen shot shows an issue with the deck apparent width (the driving lanes) and the actual size.

There is a bug in the framing plan schematic when it places the floorbeam mbr for this structure type. The framing plan schematic is drawing the floorbeam mbr at its correct length but just not placing it correctly as measured from the left edge of deck.

Paul - please note that the framing plan schematic will draw the fb member at the total length entered on the Floorbeam Definition window. For your skewed floorbeams the length entered on the Floorbeam Definition window should be the skewed length of the floorbeam. The length entered in the attached xml file is not the skewed length of the floorbeam.

FROM: Krisha Kennelly DATE: 11/17/2008 10:11:23 AM Eastern Standard Time  
#1 is fixed (code is in abognrl)

Assigned to Joe for #2 and the following:

#3. Open the Floorbeam Mbr Locations window, open the Structure Def window and change one of the span lengths, hit Apply. The Floorbeam Mbr Locations window should get a message to update with the new fb location.

FROM: Joseph Ihnat DATE: 2/24/2010 7:55:20 AM Eastern Standard Time  
#2 is fixed for version 6.2

FROM: Joseph Ihnat DATE: 2/24/2010 12:39:33 PM Eastern Standard Time  
#3 is fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:58:08 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 8908<br>Subject: POI in Brass Engine and Std Engine and shear difference between engines |
|----------------------------------------------------------------------------------------------------|

|                                                                      |
|----------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Li, Xinmei |
|----------------------------------------------------------------------|

4/19/2016 3:06:24 PM

HRS AASHTO

1212

### Complete Issue Information

|                              |                       |
|------------------------------|-----------------------|
| Submitted By: Curtis, Beckie | 10/24/2008 7:03:04 PM |
| Modified By: hlee            | 2/27/2010 12:15:52 AM |
| Priority: High               |                       |
| Category: Bug                |                       |

### History

| Primary Contact | Status             | Priority | Category       |
|-----------------|--------------------|----------|----------------|
| Lee, Herman     | New                | High     | Bug            |
|                 | Assigned           |          |                |
|                 | Information Needed |          |                |
| Goodrich, Brian | Assigned           |          |                |
|                 | Information Needed |          |                |
|                 | Assigned           |          |                |
|                 | Development        |          | Bug - Export 1 |
|                 | Duplicate          |          |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | stage 3.pdf         |             |
|      | stage 1.pdf         |             |
|      | beam only run.pdf   |             |
|      | stage 2.pdf         |             |
|      | 9300.xml            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 10/24/2008 4:52:05 PM Eastern Daylight Time

I am checking beam P of the continuous model of attached bridge.

1. I am trying to compare the Brass and Std engine results for shear. The Brass engine is much lower than Std engine. The programs are reporting the POI's differently. Is there an easy way to get a point to be generated at the same location in the two different engines?

4/19/2016 3:06:24 PM

HRS AASHTO

1213



Complete Issue Information

2. I think I was able to find a similar point, 200.99 in Brass and 7.42 of Span 2 in Virtis. At this location Vi is 0.3 kips according to Brass and -20.7 kips according to Virtis. I can't seem to locate why there is a difference between the two, but it is causing a large difference in the rating.

FROM: Herman Lee DATE: 10/28/2008 7:46:33 AM Eastern Daylight Time

1. For PS continuous span structure, there's no easy way to get a point to be generated at the same location in the two different engines. Related to Incident 8684.

2. Please export and attach the vehicle you used so we can reproduce the above mentioned Vi for both engines.

FROM: Beckie Curtis DATE: 11/18/2008 10:19:51 AM Eastern Standard Time

Truck is now attached.

FROM: Xinmei Li DATE: 2/18/2010 2:05:19 PM Eastern Standard Time

2. I tried the attached bridge with VirtisOpis 6.1.0 release, rated beam P of continuous superstructure definition with the attached vehicle, I was not able to reproduce the shear difference stated above. Here is the detail results I get

Virtis std engine results:

Location: Span2 @ 7.42' DL1 Shear = 44.81kips DL2 Shear = 1.03kiips LL Shear Positive = 70.35kips LL Shear Neg = -10.15kips

BRASS engine results

Location: Span2 @ 7.58' DL1 Shear = 43.04kips DL2 Shear = 0.98kiips LL Shear Positive = 68.32kips LL Shear Neg = -10.24kips

The difference between two engines is less than 3%.

|                                           |
|-------------------------------------------|
| Issue ID: 8914                            |
| Subject: build up beam section properties |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Gao, Yihong             | 10/28/2008 5:24:26 PM |
| Modified By: bgoodrich                | 11/5/2008 6:05:50 PM  |
| Priority: High                        |                       |
| Category: Bug - Export 1              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:24 PM

HRS AASHTO

1214

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | test2.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Yihong Gao DATE: 10/28/2008 1:33:19 PM Eastern Daylight Time  
From output, at stage 1 (non-composite) the area and I do not match up with beam only section. The top cover plate thickness and width don't match with inputs. at stage 2, the top cover plates are missing. The file is attached for your information. Thanks

FROM: Herman Lee DATE: 10/29/2008 9:53:05 AM Eastern Daylight Time  
Please attach the bridge xml file for investigation.

FROM: Herman Lee DATE: 11/3/2008 3:18:28 PM Eastern Standard Time  
Attached bridge xml and output files.

FROM: Brian Goodrich DATE: 11/4/2008 8:40:11 AM Mountain Standard Time  
I imported the XML file in version 5.6 and received the following error message when trying to run member G1:

Error converting Virtis/Opis steel cross sections or schedules to 'general' cross sections!

I tried importing the XML file into version 6.0, but it failed to import. Any ideas?

I suspect the top cover plate is being merged with the horizontal leg of the top angles in positive moment regions. The positive moment regions are controlled by the Contraflexure Locations input for the engine properites for the member alternative.

FROM: Herman Lee DATE: 11/4/2008 4:54:39 PM Eastern Standard Time  
Please tell us the tolerances set in the Tolerance tab of the System Defaults window for your database.

FROM: Herman Lee DATE: 11/5/2008 8:57:34 AM Eastern Standard Time  
Following are the tolerances set in the user's database.

The tolerance are:

ft - 0.01  
in - 0.05  
m - 0.003048  
mm 1.27  
mi 0.01  
km 0.01609

4/19/2016 3:06:24 PM

HRS AASHTO

1215

Complete Issue Information

FROM: Brian Goodrich DATE: 11/5/2008 9:09:13 AM Mountain Standard Time  
Only a slab OR a cover plate are exported, so BRASS merges the cover plate with the top angles.  
This is a duplicate of 8454, which was already addressed in the BRASS export for version 6.0.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 8916                                                                      |
| Subject: Thru Girder Bridge Error for stringer added dead load to composite section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Lee, Herman             | 11/3/2008 5:27:29 PM |
| Modified By: hlee                     | 5/9/2010 2:28:47 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/3/2008 12:27:52 PM Eastern Standard Time  
Received Bridgware e-mail (David Wolfe, Moffatt & Nichol <DWolfe@moffattnichol.com>):

=====  
Bridgware - Attached is a Thru Girder Bridge that demonstrates an error that I received.

Superstructure test-a runs successfully.

Complete Issue Information

Superstructure test-b is an exact copy of test-a, except the stringer definition includes a dl to the composite section, which causes errors for the floorbeam analysis and saving of the file after an analysis.

Respectfully - David

=====

Related to Incident 8826.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 11:16:03 AM Eastern Daylight Time  
This still happens in Virtis/Opis 6.1 with the following errors:

Error generating LFD/ASD load commands!  
11:19:14 AM - Line 362 in source file .\BrassStdLoadControl.cpp.

Error generating load group commands!  
11:19:14 AM - Line 501 in source file .\BrassLoadControl.cpp.

Error in the loads utility!  
11:19:14 AM - Line 861 in source file .\LoadsUtility.cpp.

Error getting stringer dead load reaction!  
11:19:14 AM - Line 1288 in source file .\EngineExport.cpp.

Error preparing stringer dead load reactions!  
11:19:14 AM - Line 3771 in source file .\LoadsUtility.cpp.

FROM: Mehrdad Ordoobadi DATE: 11/30/2009 1:19:13 PM Eastern Standard Time  
Fixed for 6.2.

FROM: Herman Lee DATE: 5/9/2010 10:27:58 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

Issue ID: 8917  
Subject: Empty Truss Rating Results Report

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Lee, Herman 11/3/2008 9:19:08 PM  
Modified By: xli 5/28/2009 7:09:39 PM  
Priority: High  
Category: Bug

Complete Issue Information

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 30-101-062.xml      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/3/2008 4:19:43 PM Eastern Standard Time  
 Submitted on behalf of Anna Lager, Haks Engineers (alager@haks.net).

Received e-mail:

=====  
 I complete a Bridge BIN 2262260, load a vehicles, run a program, it was  
 no commence, when I'm open -looking thru eye glasses & open "Rating  
 Results Report" table show empty.  
 Were is a problem, see attachment.  
 =====

Attached bridge xml file and LL Analysis Summary and Detail files.  
 May be related to Incident 8890 and 8480.

FROM: Herman Lee DATE: 2/18/2009 9:09:56 AM Eastern Standard Time  
 Number of members,  $m = 29$   
 Number of constraints,  $r = 3$   
 Number of panel points,  $n = 18$   
 Since  $m + r < 2n$ , the truss is statically unstable.

Added a validation check for stability in 6.1 Release.

FROM: Xinmei Li DATE: 5/28/2009 3:07:24 PM Eastern Daylight Time  
 Verified fixed for 6.1 Beta1. Truss data validation is added.

4/19/2016 3:06:25 PM

HRS AASHTO

1218

Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 8919                 |
| Subject: Getting Truss to Rate |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Doerr, Gary             | 11/7/2008 4:39:02 PM |
| Modified By: hlee                     | 5/19/2009 4:57:40 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Lathia, Hasmukh | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | Comparison Template.xls         |             |
|      | Ramp WN load rating_110708.pdf  |             |
|      | Ramp WN girders_110708.pdf      |             |
|      | Interior_Girder_(G2).dat        |             |
|      | 2926_Revised.xml                |             |
|      | Interior_Girder_(G2).OUT        |             |
|      | 2926.xml                        |             |
|      | Ramp WN girder calcs_110708.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Gary Doerr DATE: 11/7/2008 11:52:27 AM Eastern Standard Time  
I can get the floorbeam-stringers to rate but I get no value for the trusses. I've tried to eliminate nodes that contribute no value but the rating of the truss does not occur and no errors are given. I've attached the file in the documents tab.

FROM: Herman Lee DATE: 11/9/2008 11:58:00 AM Eastern Standard Time  
Support conditions are missing in the truss model. Analysis completed ok after the Support command is defined.

Truss validation needs to check for support conditions.

FROM: Herman Lee DATE: 5/19/2009 10:55:27 AM Eastern Daylight Time  
Added truss support conditions validation.

Resolved for 6.1 Release.

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| Issue ID: 8920                                                                                           |
| Subject: Virtis Std Engine is using the gross section properties for the calculation of prestress losses |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lathia, Hasmukh      |                       |
| Submitted By: Li, Xinmei              | 11/12/2008 3:43:32 PM |
| Modified By: hlee                     | 11/24/2008 6:37:51 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Xinmei Li DATE: 11/12/2008 10:45:43 AM Eastern Standard Time  
Submitted on behalf of David Lawson. The following is support history. All files are attached.

>>> Hasmukh Lathia 11/12/2008 10:09 AM >>>  
May:

I have looked at the output you sent and some earlier runs I had on this bridge. I have looked into the VSE code. It appears that VSE is using the gross section properties for the calculation of prestress losses. For all other calculations (stresses, ratings etc.) it is using the transformed section properties. This seems to be a bug in VSE. I have verified the above using a hidden input code in VSE where the user can specify which section properties to use.

Currently VSE calculates and reports both the gross and transformed section properties, but uses the transformed section properties except for the above apparent bug. This can be used to report as an incident to fix this bug in future. Let me know if you have any further questions.

Thanks,  
Hasmukh

>>> Xinmei Li 11/12/2008 8:52 AM >>>  
Input and output files are attached, also attached the comparison spreadsheet I did, and the virtis bridge file.

>>> Hasmukh Lathia 11/11/2008 5:29 PM >>>  
May:

Can you email me the input and output files for the VSE run in question?

Thanks,  
Hasmukh

>>> Xinmei Li 11/11/2008 3:19 PM >>>  
hasmuk,

Can you answer Dave's question? Does Virtis Std Engine use Transformed beam properties to calculate prestress loss?

Thanks.

May

>>> David Lawson 11/11/2008 10:38 AM >>>

When you say Virtis uses Transformed beam properties, you mean that the PS steel has been transformed, right?

The Virtis output BEAM PROPERTIES listed are the gross properties & the composite properties and do not reflect that the prestressing steel has been transformed.

So, does Virtis use transformed section properties (meaning that the PS steel has been transformed into equivalent concrete)?

4/19/2016 3:06:25 PM

HRS AASHTO

1221



## Complete Issue Information

>>> Xinmei Li 11/11/2008 7:28 AM >>>

Yes, the file from AZ DOT was using AASHTO method.

In Virtis, when you choose the AASHTO method, you can't choose whether or not prestressing steel has been transformed. But you can choose Brass Engine or Virtis Std Engine to do the rating. Brass Engine does not use Transformed beam properties, Virtis Std Engine uses Transformed beam properties.

The following is quoted from Virtis Std Engine output. The major difference between Virtis Std Engine and AZ DOT files is elastic shortening. I compared the detail breakdown of prestress loss in the attached spread sheet.

### Computing Prestress Losses:

#### BEAM PROPERTIES

CABLES = 66. SAREA = 0.153 ECC = 29.6837  
ESBEAM = 4888. ESPS = 28500.  
ULT.STRENGTH P/S = 270.000 INITIAL LOSS = 0.690 STRAND TYPE = L  
YBOT = 36.3806 YCOMP = 50.8885 CECC = 44.1915  
AIBEAM = 733320.29 AICOMP = 1356002.16 AREA = 1085.00 Pi = 2044.84

#### MAX MOMENTS

Mgir = 2172.26 Mint dia = 0.00  
Mslab = 1681.75 Mext dia = 127.10  
MDL2 = 413.23

#### STRESSES AT C.G. P/S STRANDS

fcir = 2.9391 fcds = 1.0402

#### P/S LOSSES BY AASHTO ARTICLE 9.16.2 IN SPAN: 1

SHRINKAGE = 6500.000 ELASTIC SHORTENING = 18588.692  
CREEP OF CONC. = 27988.072 RELAXATION OF STR. = 1416.727  
TOTAL LOSS = 54.493 PERCENT OF P/S FORCE = 26.910

>>> David Lawson 11/10/2008 1:56 PM >>>

When you choose the AASHTO method, does it give you options based on whether or not prestressing steel has been transformed?

With the AASHTO method, does Virtis provide detailed break-down of the losses?

I am assuming the file from AZ DOT was using AASHTO method, correct?

>>> Xinmei Li 11/10/2008 11:41 AM >>>

If you go to Prestress Properties window, General P/S Data tab, there is a drop down list of loss method. We were using the first one AASHTO method. If you know the loss, you can choose the second one, Lump-sum method and enter the prestress loss in the next tab, Lump-Sum Data tab. We also have PCI method.

>>> David Lawson 11/10/2008 1:21 PM >>>

Thanks for info.

What are the three ways to have Virtis determine losses?

It sounds like one way is to enter the losses directly using the info shown on plans.

What are the other 2 ways?

## Complete Issue Information

>>> Xinmei Li 11/10/2008 11:10 AM >>>

Dave,

According to the hand calcs you sent me, I made some changes in Virtis input.

1, Stress limit range: Span length is 124', beam projections on both sides are 9", stress limit range should be 125.5' instead of 126'

2, Concrete strength, in the load rating file you sent me, first line, f'c = 6500psi, however the Virtis was using 5700psi concrete, so I changed the material to 6500psi, also changed stress limits and factors accordingly.

After all above changes, I did analysis again and compared the Interior girder bottom concrete tensile stress in the attached spreadsheet. Vitis Std engine gives rating factors slightly larger than 1. Brass Engine gives very low rating factors because it calculates DL1 stress by using gross beam properties instead of transformed beam properties.

I agree with you that the main difference is the prestress loss.

There are three ways to define loss in Virtis, if you know the loss you can choose "Lump Sum" as loss method in Prestress Properties/General P/S Data and enter the values in the Lump-Sum Data tab.

Let me know if you have any questions.

May

>>> David Lawson 11/7/2008 5:25 PM >>>

May, overall girder calcs attached. Interior governed over Exterior. Design per Conspan using transformed section properties and losses.

I am thinking main difference is that long term losses are less (and final PS force remaining is higher) when transforming prestressing steel (since Conspan determines no Elastic shortening losses).

How does Virtis handle elastic shortening losses when you transform prestressing steel?

>>> David Lawson 11/7/2008 2:24 PM >>>

May,

Rating attached.

The stresses I entered are directly from Conspan results.

Do not pay too much attention to the operating rating....AZ DOT has us do shear design using 1979 interim AASHTO specs (which is why the shear portion will look goofy).

Looking at spreadsheet you just sent, DL stresses at midspan bottom compares good with both Virtis and Brass.

L+I stress midspan bottom, I am showing 753 psi (from Conspan) compared to 622 psi from Virtis and compared to 746 psi from Brass.

Big difference is PS stress midspan bottom, I am using Conspan result of 3528 psi compared to 3198 from Virtis and compared to 3120 from Brass.

This difference in prestress (or the long term losses) is probably causing big difference in ratings.

Design used transformed prestressing steel which meant the long-terms losses predicted by Conspan to be less (since no Elastic shortening loss).

Is Brass a/o Virtis able to transform PS steel and figure losses based off transformed section properties?

Dave.

4/19/2016 3:06:25 PM

HRS AASHTO

1223

## Complete Issue Information

>>> Xinmei Li 11/7/2008 12:09 PM >>>

Dave,

If you can send me a scan of your hand calcs it will be very helpful for me to compare the loads, section properties and rating.

Thanks.

May

>>> David Lawson 11/7/2008 2:01 PM >>>

Attached is pdf showing girder that AZ DOT should have used for rating for Ramp W-N.

The Design is per 17th Ed AASHTO using HS-25 vehicle.

Rating I performed (hand calcs) is per Manual for Condition Evaluation of Bridges, thru 2003 interims, using HS-20 vehicle.

ADOT's main adjustment of 17th Ed specs is to limit final tension to 3 SQRT instead of 6 SQRT.

I did girder design using Conspan, and for inventory rating, came up with 1.44 controlled by final tension being limited to 3 SQRT.

The file I recieved from Amin Islam is also attached, this is the one he is saying is giving him rating less then 1.0.

This is a bit of a curious issue because Az DOT with their thinking that bridge has rating less then 1.0 is now of the opinion that they would like me to add a girder line in order to increase the rating.

I do not think adding girder line is needed, so I need your help finding out why Virtis is telling Az DOT rating is less then 1.0 so I can show him that adding a girder line is not necessary.

Please let me know what else I can do to assist you with this issue and I appreciate the help.

Do not hesitate to call me with questions....direct 602-798-7543 or mbl 602-999-6629.

Thanks, Dave.

>>> Herman Lee 11/7/2008 7:48 AM >>>

May,

Amin Islam (AZ DOT) requested a rating comparison between Virtis Std Engine and BRASS Engine last week. The structure is 2926 (Ramp SE), which is similar to the structure 2926 (Ramp W-N) they sent to Dave. For Ramp SE, the inventory rating factor reported by the BRASS engine is half of the rating reported by the Std Engine. The main difference is the concrete allowable tension. This may be the reason why the rating is less than 1.0 in the Ramp W-N structure. Please extract this value in the BRASS output file so Dave can compare with the design.

Thanks,

Herman

>>> Jim Duray 11/7/08 7:51 AM >>>

May

Can you import the attached file into V 6.0, review the data looking for obvious mistakes, do a rating and summarize the results for Dave. Charge your time to the number provided below.

4/19/2016 3:06:25 PM

HRS AASHTO

1224

Complete Issue Information

Dave - What vehicles are we to rate for? Without the plans we won't know if the data file is correct or not. If the rating is less than 1.0 and you don't think it should be I advise you send us the info that AZ DOT worked from to enter the bridge into Virtis so we can verify their data file.

thanks

>>> David Lawson 11/6/2008 6:52 PM >>>

Jim,

If you need charge # for doing this and helping me with this issue, please use 110977 task 1.3  
Thanks again, Dave.

>>> Ed Martin 11/6/2008 11:38 AM >>>

Jim,

Can you help Dave?

-Ed

>>> David Lawson 11/6/2008 1:26 PM >>>

Ed,

Hope you can help me out with something.

Ariz DOT is doing a bridge rating using Virtis on a new bridge we are designing for them.

DOT is telling me that rating they are getting is coming out to be less then 1.0.

I am having hard time believing that rating is less then 1.0.

The design is per 17th edition using HS-25 truck.

We do not have Virtis in Phx office.

Can you try to use attached xml file I got from Ariz DOT to put their input and output into format I can understand and review?

Any help you can provide would be great.

Thanks and hope things are going well.

Dave.

FROM: Hasmukh Lathia DATE: 11/17/2008 2:40:45 PM Eastern Standard Time

The jacking force ratio entered as 0.7 and the relative humidity input of 40% seems to cause major differences in PS losses reported by BRASS and VSE. Relative humidity of 70% is hard coded in VSE. Gross sections properties used by VSE in calculating PS losses also cause some differences, but not as much. VSE is corrected for using the transformed section properties for the calculation of PS losses. In future, an option to choose sections properties and an input parameter for relative humidity in VSE may be provided if the TF approves and provides funds for these enhancements.

Issue ID: 8921

Subject: Reported Bridge rating results is not the critical Member rating results

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Bouscher, Justin

11/12/2008 4:08:48 PM

4/19/2016 3:06:26 PM

HRS AASHTO

1225

### Complete Issue Information

|                   |                     |
|-------------------|---------------------|
| Modified By: hlee | 5/9/2010 2:30:06 PM |
| Priority: High    |                     |
| Category: Bug     |                     |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
| Ihnat, Joseph   | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | T1-Truss Example 1.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/12/2008 11:09:28 AM Eastern Standard Time  
Submitted on behalf of Justin Bouscher, Michael Baker Jr., Inc.:

Attached the bridge xml file, vehicle xml file and screen capture of the rating results.

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 11:20:53 AM Eastern Daylight Time  
Reproducible with the results in memory, but once saved the results will be correct.

FROM: Mehrdad Ordoobadi DATE: 11/30/2009 10:56:35 AM Eastern Standard Time  
The problem was an accuracy issue. The minimum rating factors were found after they were rounded and the associated capacities may not be the minimum capacity but with the same RF.

This fixed for 6.1 SP1 and 6.2.

FROM: Herman Lee DATE: 5/9/2010 10:29:42 AM Eastern Daylight Time  
Verified in 6.2 Beta 1.

4/19/2016 3:06:26 PM

HRS AASHTO

1226

Complete Issue Information

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 8922                                                         |
| Subject: Distribution Factors in T1 - Truss Floorbeam Stringer Example |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ihnat, Joseph        |                        |
| Submitted By: Bouscher, Justin        | 11/12/2008 4:25:57 PM  |
| Modified By: jihnat                   | 10/14/2009 12:12:59 PM |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/12/2008 11:26:20 AM Eastern Standard Time  
Submitted on behalf of Justin Bouscher, Michael Baker Jr., Inc.:

The T1 truss tutorial in the support web site should use lane distribution factors in the truss command.

T1 - Truss Floorbeam Stringer Example (Adobe PDF format, 824 KB) (updated 9/12/08)

FROM: Xinmei Li DATE: 10/13/2009 10:52:54 AM Eastern Daylight Time  
Updated T1 xml and pdf file, saved at G drive, also attached bridge to this incident.  
Joe, please update the tutorial on the support site.

4/19/2016 3:06:26 PM

HRS AASHTO

1227

Complete Issue Information

FROM: Joseph Ihnat DATE: 10/14/2009 8:11:23 AM Eastern Daylight Time  
Web site is updated.

|                                                    |
|----------------------------------------------------|
| Issue ID: 8924                                     |
| Subject: Print Rating Results from Bridge Explorer |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Armbrecht, Tim          | 11/13/2008 6:58:22 PM |
| Modified By: hlee                     | 11/14/2008 1:22:23 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Duplicate |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 11/13/2008 2:04:21 PM Eastern Standard Time  
After running a NSG analysis on multiple bridges from bridge explorer, I call up the ratings results and get the bridge ratings results window. Is there a way print the results that are in this window? If not, why not?

FROM: Herman Lee DATE: 11/13/2008 2:19:04 PM Eastern Standard Time  
The Print feature is not available for the results in the Bridge Rating Results window.

Duplicate of Incident 3395.

FROM: Tim Armbrecht DATE: 11/13/2008 4:56:39 PM Eastern Standard Time  
Herman,

It is impractical to a practicing permit analysis enginer to not be able to do this. Especially if we expect Virtis to be the national leader in non-stnadard gague analysis. Is there a reason that this feature is not available? How much effort would it take to add this feature?

Note that a copy-and-paste-to-Excel solution is not practical either since we can't copy the field headers with the data.

FROM: Herman Lee DATE: 11/14/2008 7:26:29 AM Eastern Standard Time  
I agree a Print or Report feature is needed for Bridge Explorer Rating Results. I don't know why it's not available. Incident 3395 was submitted back in 2001. I guess this feature was overlooked since the beginning. I would like this feature to be implemented in the Report Tool. Option should be available to report rating results for a specific level of detail (bridge, structure or member) with drill down capability. For example, when user selects the bridge level with drill down, structure and member results should also be reported.

|                              |
|------------------------------|
| Issue ID: 8925               |
| Subject: HS 20 truck in LRFR |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Jensen, Paul            | 11/14/2008 3:50:46 PM |
| Modified By: hlee                     | 10/15/2011 9:59:29 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |



## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Assigned  | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | BWS Report.xml            |             |
|      | Report with comments.pdf  |             |
|      | 044901.xml                |             |
|      | Interior_Girder.OUT       |             |
|      | BWS Report.xml            |             |
|      | G_1_exterior_Tee_beam.OUT |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 11/14/2008 10:58:34 AM Eastern Standard Time

The HS 20-44 truck should be removed from the vehicle options in LRFR analysis. It is not being calculated correctly. When LRFR uses the HS 20-44 truck, it puts the lane load on, then adds the truck AND the concentrated load both on top of each other, resulting in a very low rating. Either the HS 20-44 option should be removed, or the concentrated load removed from the HS 20-44 truck in LRFR analysis (which would make it almost identical to the HL-93).

I'm attaching a file where the live loads are being mis-calculated for HS-20 truck in an LRFR rating.

FROM: Krishna Kennelly DATE: 11/17/2008 9:00:04 AM Eastern Standard Time

We don't restrict the selection of vehicles in the Analysis Settings based on name since users can name their vehicles as they want. Assigned to Jim to not use concentrated load in LRFR influence line loading.

FROM: Jim Duray DATE: 1/13/2009 2:25:04 PM Eastern Standard Time

We do not use concentrated load with the lane load for LRFD/LRFR. I think this is a BRASS issue.

FROM: Brian Goodrich DATE: 1/14/2009 2:58:32 PM Mountain Standard Time

The BRASS export examines the presence of axles, lane load, and concentrated loads and generates the corresponding commands. The BRASS LRFD/LRFR engine considers the lane load and

4/19/2016 3:06:28 PM

HRS AASHTO

1230

Complete Issue Information

concentrated (live) loads if they are part of the vehicle definition in Virtis/Opis. The export cannot use vehicle names to flag certain live load combination behavior for the reason Krishna makes. While the concentrated loads are not called for in LRFD/LRFR, what happens if the user wants to combine these with a lane load? Can another vehicle be added to the library, i.e., one that only has the axles and lane load defined? Or do we need to add a flag to indicate if the concentrated loads are to be used for ASD/LFD/LRFD or ASR/LFR/LRFR?

FROM: Krishna Kennelly DATE: 5/19/2009 12:16:52 PM Eastern Daylight Time

FROM: Jim Duray DATE: 10/22/2009 8:51:25 AM Eastern Daylight Time

I think we need to come up with a consistent (across engines) way to address this. I believe a vehicle defined by AASHTO is what it is, HS-20 is made up of axles, lane and concentrated load. I don't think we should have an HS-20 vehicle definition for LFD (with concentrated lane load) and another one for LRFD (without concentrated lane load). I believe it should be the responsibility of the spec implementation to determine how that definition is to be applied. For LFD/LFR the axles should be handled as a vehicle and the concentrated plus uniform lane load should be another (I think that is what StdEngine and BRASS LFD do). For LRFD/LRFR the spec describes adding the uniform lane load (without the concentrated load) to the axle load. That is what we do in the AASHTO LRFD/LRFR engine. I think BRASS LRFD/LRFR should be corrected or the BRASS LRFD/LRFR export should be modified to not pass the concentrated lane load to the BRASS engine regardless of the name of the vehicle.

FROM: Brian Goodrich DATE: 11/2/2009 1:37:36 PM Mountain Standard Time

I can revise the export so the concentrated loads are not exported for LRFD/LRFR.

FROM: Brian Goodrich DATE: 1/22/2010 9:37:53 AM Mountain Standard Time

The BRASS LRFD/LRFR export has been changed to NOT export the concentrated loads for lane. I added a boolean that controls if these loads are exported, which is currently set to false. If there is ever an option added to control if these are exported, we can easily turn these loads back on.

FROM: Herman Lee DATE: 5/7/2010 10:06:44 AM Eastern Daylight Time

Verified in 6.2 Beta 1.

FROM: Jim Duray DATE: 7/20/2010 9:05:03 AM Eastern Daylight Time

How the AASHTO LRFR engine handles the HS20 vehicle or any vehicle with axle and lane loads depends on if the Notional checkbox is checked. If it is then the lane (without concentrated loads) is added to the axle (like the HL-93 vehicle). A truck pair is not evaluated. If it is not checked, then the truck and lane are evaluated separately and the lane includes the concentrated loads.

Issue ID: 8926

Subject: Rating Summary interms of Critical rating factor (R/C Tee Beam)

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

4/19/2016 3:06:28 PM

HRS AASHTO

1231

Complete Issue Information

|                           |                       |
|---------------------------|-----------------------|
| Submitted By: Lee, Herman | 11/18/2008 4:58:04 PM |
| Modified By: hlee         | 10/13/2009 5:14:22 PM |
| Priority: High            |                       |
| Category: Enhancement     |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Closed             |          | Unknown  |
|                 | Not Reproducible   |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | error.JPG           |             |
|      | Connect.png         |             |
|      | c:\error.jpg        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/18/2008 11:58:38 AM Eastern Standard Time  
 Submitted by Balaji, United International Corp. (mbalajie@gmail.com) via Bridgewater e-mail:

=====

Dear Mr.Lee,

I'm herewith attaching the exported xml file for the Reinforced Concrete Tee beam bridge.

Thanks,

Balaji.

Complete Issue Information

On Tue, Nov 18, 2008 at 9:24 AM, Bridgeware <Bridgeware@mbakercorp.com>wrote:

> Hi Balaji,  
>  
> Thanks for the detail description of the issue. There's one more file we  
> needed before we can reproduce the issue. Please export the bridge (File  
> menu | Export) and send it to us for investigation.  
>  
> Herman  
>  
> >>> Balaji <mbalaje@gmail.com> 11/17/08 3:31 PM >>>  
> Dear Mr. Lee,  
>  
> Thanks for the prompt reply. I checked with the Member Alternative window  
> and though the "ignore shear" option was not selected still I'm getting  
> rating report in terms of the flexure instead of critical shear. It is the  
> case for all the 4 spans and for both exterior and interior girder.  
>  
> I'm herewith attaching the .xsl file and the .xml file for your kind  
> consideration. Rating results for Span 4 is provided for HL-93 vehicle.  
> Span  
> 4 - Length = 40.5 feet.  
>  
> I'm also attaching the .pdf file for only the rating report for the  
> exterior  
> and interior girder and the output file for the same.  
>  
> The shear controls for both the girders.  
>  
> For the Exterior girder it is at the point \*102 (.2 x span length)\*  
> with the \*design truck as the controlling one with the rating factor of  
> 0.56  
> \*  
> \*\*  
> For the Interior girder it is at the point \*103 (.3 x span length)\*  
> with the \*design truck as the controlling one with the rating factor of  
> 0.67  
> \*  
> \*\*  
> But the rating report doesn't give the controlling shear.  
>  
> Thanks for your help and please let me know if you need any attachments  
> further (or) if anything is not clear.  
>  
> Sincerely,  
>  
> Balaji.  
>  
> \*\*  
> \*  
>

4/19/2016 3:06:28 PM

HRS AASHTO

1233

Complete Issue Information

> \*  
> On Mon, Nov 17, 2008 at 10:20 AM, Bridgeware <Bridgeware@mbakercorp.com>  
> >wrote:  
>  
> > Hi Balaji,  
> >  
> > The rating report should report the critical rating factor unless ignore  
> > shear is selected in the Member Alternative window. If this is not the  
> > cause of your issue, please export the bridge and send it to us for  
> > investigation. We also need to know which member in the bridge is having  
> > this issue.  
> >  
> > Thanks,  
> > Herman Lee  
> >  
> > >> Balaji <mbalajie@gmail.com> 11/16/08 1:59 PM >>>  
> > Dear Sir / Madame,  
> >  
> > This is Balaji, and I work for United International Corp. (UIC) at  
> > Connecticut.  
> >  
> > We have VIRTIS (version 6.0) bridge load rating software.  
> >  
> > The shear rating factor controls for R/C Tee beam in our analysis, but  
> > the  
> > rating report shows the flexural rating factor as Critical.  
> >  
> >  
> >  
> > The output file gives the Rating factor for Shear to be less than the  
> > Flexure.  
> >  
> >  
> >  
> > How to get the rating report in terms of the Critical rating factor  
> > (either  
> > flexure or shear)?  
> >  
> >  
> >  
> > This is not the case for Steel I section, since it gives the controlling  
> > factor in the rating report.  
> >  
> >  
> >  
> > Thanks,  
> >  
> >  
> > Balaji.  
> >  
> >

4/19/2016 3:06:28 PM

HRS AASHTO

1234

Complete Issue Information

>  
>

=====

FROM: Brian Goodrich DATE: 11/19/2008 5:04:09 PM Mountain Standard Time  
The LRFR spec indicates that concrete shear is only required to be checked for the permit rating procedure (LRFR 6.5.9). Therefore, BRASS defaults to ignoring shear for the design and legal rating procedure. Although not available to the Virtis user right now, BRASS does allow the user to consider shear if desired.

The only way to address this issue is to enhance the engine properties to allow the user to control which spec checks are considered for a particular rating procedure and limit state.

FROM: Brian Goodrich DATE: 11/20/2008 10:47:39 AM Mountain Standard Time  
E-mail from Herman Lee:

Brian,

This probably will be an agency spec exception. I think we should mark the incident as Enhancement and Suspended since we are doing what the spec specified.

Herman

FROM: Herman Lee DATE: 10/13/2009 1:13:01 PM Eastern Daylight Time  
Resolved in 6.1 Release.

|                                                 |
|-------------------------------------------------|
| Issue ID: 8927                                  |
| Subject: problem accessing Virtis Opis web site |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Klossner, Dale          | 11/20/2008 3:29:11 PM |
| Modified By: hlee                     | 11/24/2008 4:30:30 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:29 PM

HRS AASHTO

1235

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 8776.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Dale Klossner DATE: 11/20/2008 10:39:04 AM Eastern Standard Time  
 I'm having a problem accessing the downloads section on the Virtis Opis Technical Support web site. When I select the Downloads section I don't see the logon screen, instead I receive a not authorized message (see attached screen capture). I'm using IE7 browser.

FROM: Herman Lee DATE: 11/20/2008 11:45:00 AM Eastern Standard Time  
 I'm not able to open the attached error.jpg file. Please use Add File instead of Link File to attach a file.

When you click on the Downloads link, a Connect dialog box should pop up for the User name and Password (see attached). Is the dialog box hidden behind the Internet Explorer or you don't see the box at all?

FROM: Herman Lee DATE: 11/20/2008 2:28:27 PM Eastern Standard Time  
 E-mail from Dale Klossner:

=====  
 I've attached the file.  
 The logon dialog box is not displayed, nor behind the screen.  
  
 The Firefox 3.0 browser seems to work correctly, but not IE7.  
 =====

Response e-mail:

=====  
 Hi Dale,  
  
 Some agencies also reported the same problem you are having with IE7. Those agencies are able to see the Connect dialog box after their IT department adjusted the security settings. Please consult with your IT department to see whether they can loosen up the settings for this web site.

Thanks,  
 Herman Lee

=====  
 FROM: Herman Lee DATE: 11/24/2008 9:00:18 AM Eastern Standard Time  
 E-mail from Dale Klossner:

4/19/2016 3:06:29 PM

HRS AASHTO

1236

Complete Issue Information

=====  
IE7 works fine from my home. So there seems to be a problem when the computer connects through our cooperate Proxy server. I'd appreciate any information you could provide on what other agencies have done to fix the problem. I don't think our firewall/proxy administrator will loosen up the setting without a clear identification of the problem and solution.

Thanks,  
=====

Response e-mail:

=====  
Dale,

We don't know what other agencies have done to fix the problem. There are different ways to block the connect box, from Windows Local Security Policy to Agency Security Software.

The settings below may also be the causes:  
1. Logon User Authentication (see attached)  
2. Pop-up Blocker

Herman  
=====

FROM: Herman Lee DATE: 11/24/2008 11:07:18 AM Eastern Standard Time  
E-mail from Dale Klossner:

=====  
Herman,  
The problem is not isolated to IE7, IE6 has the same problem. The IE client settings don't seem to be the problem. I've tried the ones you mentioned and others. The issues seems to be with either our Mn/DOT's proxy server or the web server hosting your web page.

No need to pursue any further on my behalf. I can get by using Firefox, or get the files when I'm outside our network.

Thanks,  
=====

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8928<br>Subject: Truss Built-Up Angles Deterioration |
|----------------------------------------------------------------|

|                                                                                                                               |                                              |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Li, Xinmei<br>Submitted By: Bouscher, Justin<br>Modified By: jduray | 11/24/2008 9:31:00 PM<br>5/6/2010 1:00:19 PM |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Duplicate          |          |          |
|                 | Resolved           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | 0600036a.xml                       |             |
|      | 0600036.xml                        |             |
|      | TrussError-<br>NoFlbmDL0600036.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/24/2008 4:32:03 PM Eastern Standard Time  
Submitted on behalf of Justin Bouscher, Michael Baker Jr., Inc.:

Virtis crashes when trying to run IR062007 TRUSS SPAN 4 "Left Truss" only.  
The error is due to the deterioration on lines 180-182 in the Truss description.

FROM: Xinmei Li DATE: 6/22/2009 3:21:25 PM Eastern Daylight Time  
Resolved for 6.1 Beta2.

4/19/2016 3:06:30 PM

HRS AASHTO

1238

Complete Issue Information

FROM: Jim Duray DATE: 5/6/2010 8:44:33 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                              |
|------------------------------|
| Issue ID: 8931               |
| Subject: Truss error message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 12/1/2008 5:25:11 PM |
| Modified By: hlee                     | 8/14/2009 8:20:43 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 12/1/2008 12:26:30 PM Eastern Standard Time  
When attempting to analyze the truss (export attached) an error is generated as follows...

“ Computing nodal loads due to floorbeams...  
???Error - Unable to compute dead load of floorbeam!  
???Error - Unable to compute floorbeam loads ...  
???Error - Unable to compute floorsystem loads...

Analysis failed!”

We have investigated this and have not been able to discover the reason for the error. The analysis of stringers and floorbeams produces reasonable results.

## Complete Issue Information

FROM: Herman Lee DATE: 12/1/2008 3:08:41 PM Eastern Standard Time

Duplicate of Incident 8480. Please see the first issue in the description on 8/28/2008 in 8480.

A workaround is to add a dummy range at the start and end of the floorbeam haunch profile and deck profile.

I also noticed that the N Truss is entered as a simple span structure but the superstructure definition is a 3-span structure.

FROM: Tim Armbrecht DATE: 12/2/2008 2:00:57 PM Eastern Standard Time

So when can we expect a fix, as mentioned in 8480? We'll try the workaround, but ultimately we're going to want a patch. This is a truss that needs to be rated now, and I have a few others like it waiting in line.

FROM: Herman Lee DATE: 12/3/2008 12:11:32 PM Eastern Standard Time

I'll discuss with the assigned person in 8480.

FROM: Krisha Kennelly DATE: 12/9/2008 10:20:10 AM Eastern Standard Time

This problem has been fixed for version 6.1.

FROM: Herman Lee DATE: 2/17/2009 9:56:46 AM Eastern Standard Time

A replacement DLL (abostld.dll) for 6.0.0 has been sent to Tim.

FROM: Tim Armbrecht DATE: 2/27/2009 9:23:05 AM Eastern Standard Time

The former error when doing the truss analysis for SN 060-0036 (VI #8931) no longer occurs and the analysis is reported as running successfully.

However...

- The dead loads and ratings are reported in the truss Rating Results Report as "-1.#J" and "1.#R" respectively. (I think this may have also happened in the analysis of the Murray Baker Bridge, SN 090-0001.)

- The following warning is generated, "Warning - Using specified unbraced length (Z-Z) 34.000000 ft for member " U1L1 " with physical length of 19.166700 ft...". Actually the physical length is 34.0 ft and the unbraced length override was specified as 34.0 ft (Z-Z) and 19.1667 ft (Y-Y).

- Using the Unit 1 stringers as an example, when I modify the counterweight distributed dead load for the 30WF124 stringer, the computed stringer reactions either don't change, or if they do, can't be successfully accepted. (I think this might have been reported a couple of years ago.)

XML attached

FROM: Herman Lee DATE: 3/1/2009 1:58:47 PM Eastern Standard Time

Before we sent out the replacement DLL, we verified the error in 8931 was fixed and also verified reasonable rating results were reported in the truss model attached in 8931. Please see below for our investigation of the additional problems.

- I compared the truss model attached in the incident with the model in the new XML file. Looks like the addition of the L8 pinned support indirectly triggered those nonsense dead load actions and rating

4/19/2016 3:06:30 PM

HRS AASHTO

1240

Complete Issue Information

results (-1.#J). I noticed that with the removal of the L12L13 and U13U14, the center section in the middle span between L13 and L13' will behave like a swing. U13L13 and U13'L13' will constraint the center section vertically but there is no constraint in the horizontal direction for the center section. This results in an ill-behaved stiffness matrix. A remedy is to put a horizontal constraint in L16 in the Support command (L16 UserDefined True False False).

- I confirmed that the unbraced length warning messages are caused by a defect in 6.0. This defect will not affect the capacity computation in 6.0 and the defect has been fixed for the 6.1 Release.

- For the stringer reaction issue, I increased the counterweight from 1.635 to 2 k/ft in the 30WF124 stringer. The reported nodal loads due to stringer unit 1 during the analysis and the resulted actions did reflect the increase in counterweight. We need more detailed description of the problem or the steps to reproduce the problem.

FROM: Tim Armbrecht DATE: 3/5/2009 12:46:56 PM Eastern Standard Time  
Looks like the horizontal bracing remedy worked.

Also, we are not able to duplicate the stringer reaction issue at this time. If we can in the future, I'll send as a separate incident. Thanks for your help.

FROM: Xinmei Li DATE: 5/28/2009 3:58:40 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1. The reported errors are gone now.

FROM: Tim Armbrecht DATE: 7/24/2009 2:52:09 PM Eastern Daylight Time  
It appears that the truss rates properly in Virtis 6.1 Beta 2 but there are no rating factors generated for the stringers or floorbeams. When run under 6.0 there are rating factors generated for the stringers & floorbeams.

FROM: Herman Lee DATE: 7/26/2009 11:32:01 AM Eastern Daylight Time  
I tried both XML files attached in this incident. I got rating factors for "Unit2 S3" stringer and "Flbm-L2-x" floorbeam. Please attach the XML file to reproduce the problem.

FROM: Tim Armbrecht DATE: 7/31/2009 12:15:43 PM Eastern Daylight Time  
I have attached the file. Not sure if we're looking in the same location, but note that we were looking for the rating factors in the grid (clicking on the grid icon) and not in the output file. As I mentioned before, we see them in 6.0, but not in 6.1.

FROM: Herman Lee DATE: 8/7/2009 10:11:12 AM Eastern Daylight Time  
The Points of Interest control option in the 6.1 Beta 2 XML file was not set correctly. This was caused by a bug in migrating 6.0 XML file into 6.1 Beta 2 database. This bug had been fixed for 6.1 Beta 3. Please try to import the 6.0 XML file into 6.1 Beta 3 database instead of using the 6.1 Beta 2 XML file since the control options for this bridge are not set correctly in the Beta 2 database.

FROM: Tim Armbrecht DATE: 8/14/2009 4:17:33 PM Eastern Daylight Time  
Appears to be working correctly. Accepted.

Issue ID: 8934

Subject: HorizontalFlange deterioration for rolled beam

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Lee, Herman             | 12/4/2008 3:09:22 PM |
| Modified By: jduray                   | 5/6/2010 1:36:43 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
| Goodrich, Brian | Assigned |          | Education |
|                 | Resolved |          |           |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 12/4/2008 10:09:51 AM Eastern Standard Time  
Submitted on behalf of Russell Howells, Michael Baker Jr., Inc.:

For deterioration of a rolled beam it provides the option of specifying "HorizontalFlange" or "VerticalFlange" for the member description. When would these be used? Are they applicable for rolled beams?

FROM: Girish Bhanushali DATE: 10/6/2009 11:09:44 AM Eastern Daylight Time  
HorizontalFlange/VerticalFlange should be taken out from the command lang. documentation under deterioration RolledBeam and Channels subcommands.

FROM: Xinmei Li DATE: 10/15/2009 10:46:37 AM Eastern Daylight Time

4/19/2016 3:06:31 PM

HRS AASHTO

1242

Complete Issue Information

VirtisTrussCommandLanguage document is updated. "HorizontalFlange/VerticalFlange" is removed for RolledBeam and Channels subcommands.

FROM: Jim Duray DATE: 5/6/2010 9:28:36 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 8936                                        |
| Subject: Distribution Moments from Superimposed Loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Prince, Bob             | 12/8/2008 8:17:48 PM |
| Modified By: hlee                     | 12/9/2008 3:26:33 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bob Prince DATE: 12/8/2008 3:25:38 PM Eastern Standard Time  
A VDOT modification to the AASHTO code indicates the distribution of moments from superimposed loads shall be made using the gross section properties of the slab and girder along the entire length of the girder. In other words the gross section properties should be considered when calculating stiffness and the composite section properties should be used to calculate stresses. Can this be accomplished using Virtis? If so, how? Thanks.

4/19/2016 3:06:31 PM

HRS AASHTO

1243

Complete Issue Information

FROM: Brian Goodrich DATE: 12/9/2008 7:56:15 AM Mountain Standard Time  
With regard to the BRASS ASD/LFD engine, the answer is no. This BRASS engine only allows input of the slab or rebar at any given cross section range. The export process obtains the points of contraflexure and uses those to determine if the slab or rebar is exported for a particular range. Note that a new BRASS engine is under development and will not have this limitation.

FROM: Herman Lee DATE: 12/9/2008 10:07:23 AM Eastern Standard Time  
The answer is also no for the Virtis Std ASD/LFD Engine.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 8940                                      |
| Subject: Sections developed by BRASS export program |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: vinayagamoorthy, vinacs | 12/15/2008 8:00:57 PM  |
| Modified By: hlee                     | 10/15/2011 10:21:45 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | New      | High     | Bug            |
|                 | Assigned |          | Bug - Export 1 |
|                 |          |          | Bug - BRASS    |

4/19/2016 3:06:32 PM

HRS AASHTO

1244

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 01001.xml           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 12/15/2008 3:01:49 PM Eastern Standard Time  
email from Vinacs at CalTrans, 12/11/2008:

Attached is a file that we were working on.

It appears that the BRASS export program incorrectly exports the section when bent up are involved

We have a two span continuous bridge and have bent up bars. The bent up bar details in span 1 and span 2 are similar.

We tried to rate the bridge at every 10th point (excluding over the bent). In addition, we want to rate at the face of support.

The rebars considered at edge of support (for the negative moment) by the BRASS export is the one is in question.

Our review (after considering the bar development calc provided by the BRASS) indicates that the blue, brown & pink bars were developed at Left face of the support. However, BRASS considered only the blue and pink for the analysis.

I think the program should have generated section at the face of the support (or where the brown bent up falls in as top reinforcement)

(See attached file: 38C0274.xml)

Vinacs M Vinayagamoorthy  
916-227-8657

Please review the structure definition "MVV Span 1-2 (MDL 1) (10/08)" only. I changed a few things in this model to illustrate the problem (as a result rating results would be really low and makes no sense)

#####

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]

4/19/2016 3:06:32 PM

HRS AASHTO

1245



Complete Issue Information

Sent: Monday, December 15, 2008 1:05 PM

Hi Brian,

Vinacs from Caltrans is having the attached error.

To make it easy to focus on the problem I made the following changes to MVV Span 102 (MDL 1) (10/08), G1 on my pc (not his attached file):

1. on the Girder Profile: Reinforcement tab delete all rebars except for G1-T3-S1-3/4" sq, Fy = 33, 15ft
2. Delete all points of interest except for 10.4583

Then run HS20 rating.

My first thought was that to the very left of 10.4853 there is no rebar because the sloped portion is just ending and that would be correct. So I revised the POI to 10.5 to force it to be in the straight portion of the bar. when I do that the cross section to the left & right of 10.5' does contain rebar in the input file but the detailed calcs for that point don't have any rebar in the section.

I've entered this as incident 8940.

Thanks,  
Krisha

#####

From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]  
Sent: Tuesday, December 16, 2008 1:50 PM

I made the changes you suggested to simplify the problem. The same results are produced with a POI at 10.4853' or 10.5' or 10.56875'. The second and third POI are just to the right of the cross section change at 10.4853'. However, they are within 0.12' of the existing node, so these points do not get added to the model. BRASS locks onto the nearest node point, i.e., 10.4853'.

For any point of interest, BRASS gets the properties from the adjacent element with the smallest moment of inertia. If they are the same, it uses the side with the smallest rebar area. For the POI in question, there is no rebar on one side, so that is the cross section that BRASS picks.

Am I correct that the domain functions that generate the cross sections from the rebar schedules assume no contribution from the rebar in bent region of the bar, i.e., the rebar is assumed to have zero area in these regions? Could we assume the rebar extends half way into the bent region from each side? Comments?

#####

From: Krisha Kennelly [mailto:KKENNELLY@mbakercorp.com]  
Sent: Wednesday, December 17, 2008 12:13 PM

Hi Brian,

Complete Issue Information

I think it is too unconservative to assume the bar extends so far into the bent region. We would like to come up with a way the domain can return the data and the export makes the assumptions it needs (eg, since BRASS can't check just the side of the POI the user specified maybe if it knows the bar is bending there it can use the area on both sides of the bent point and then create an extra range in between the bend points of the bar.)

Are you available for a conference call this afternoon to discuss this with Jim and me?

Thanks,  
Krisha

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 8942                                                       |
| Subject: Unable to enter TopFlangePlate deterioration for ChannelBox |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Lee, Herman             | 12/16/2008 2:41:06 AM |
| Modified By: jduray                   | 4/29/2010 6:15:12 PM  |
| Priority: High                        |                       |
| Category: Bug - GUI 1                 |                       |

History

| Primary Contact    | Status        | Priority | Category    |
|--------------------|---------------|----------|-------------|
| Lee, Herman        | New           | High     | Bug         |
|                    | Assigned      |          |             |
| Bhanushali, Girish |               |          |             |
| Li, Xinmei         |               |          |             |
| Bhanushali, Girish | Resolved      |          |             |
|                    | Assigned      |          | Bug - GUI 1 |
|                    | Development   |          |             |
|                    | Investigation |          |             |
| Li, Xinmei         | Assigned      |          |             |
| Wang, Shuqing      |               |          |             |
| Bhanushali, Girish | Resolved      |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Rc #303530.xml      |             |
|      | LiveLoadMoments.png |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 12/15/2008 10:05:32 PM Eastern Standard Time  
Submitted on behalf of Russell Howells, Michael Baker Jr., Inc.

Received e-mail:

=====

I am working on a truss in Virtis. I have attempted to define the deterioration that is present on the end post member. The member type is ChannelBox and I have identified the deterioration as shown in the manual. However, it appears that specific line of code is not correct due to the error message received from the verification. Please review and let me know what we need to do. Thank you for your help,

IR092007-d-o Span 2  
Truss RT

Line 78

=====

Reply e-mail:

=====

Looks like it doesn't like to have only TopFlangePlate deterioration for LOU1. A workaround is to enter a fake Channels deterioration after the TopFlangePlate.

Example:

```

Channels
Left BottomFlange 0 0 L0 0.00 0.00

```

The duplicate U3L4 and Deterioration lines also need to be removed.

I'll enter an incident in Virtis Support Center for this on Thursday. Please check the computed LOU1 section properties to make sure the workaround is OK. Thanks.

=====

FROM: Xinmei Li DATE: 5/28/2009 4:31:34 PM Eastern Daylight Time

FROM: Girish Bhanushali DATE: 10/6/2009 10:51:12 AM Eastern Daylight Time  
Issues have been fixed.

Complete Issue Information

Following should be Noted or documentation should be updated to help user understand this:

Input had following issue apart from the actual code related bug.  
In the input MOI for U3L4 was entered twice. (though with different component ).

```
//////// Incorrect //////////
U3L4
Deterioration
TopFlangePlate
1   9   0   L4   0.00  3.00
U3L4
Deterioration
Channels
...
////////
```

Intended way to define deterioration for a MOI is to group all the components deterioration under the corresponding MOI.

Example:  
//////// Correct //////////
U3L4
Deterioration
TopFlangePlate
1 9 0 L4 0.00 3.00
Channels
...
////////

FROM: Herman Lee DATE: 10/12/2009 3:02:24 PM Eastern Daylight Time  
Girish, if the channel deterioration is ignored in above incorrect MOI input, the truss command validation should check for the duplication or the command parser should be updated to accept the duplication.

FROM: Herman Lee DATE: 3/12/2010 9:09:06 AM Eastern Standard Time  
Girish updated the command parser to check for the duplication.  
Resolved for 6.2 Release.

FROM: Jim Duray DATE: 4/29/2010 2:08:35 PM Eastern Daylight Time  
Verified - 6.2 alpha 4.  
I verified the parser detects the duplicate line. I changed the command as suggested above and the truss rating runs to completion.

Issue ID: 8944  
Subject: Virtis Issue

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman

4/19/2016 3:06:33 PM

HRS AASHTO

1249

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Metcalf, William | 12/16/2008 6:14:41 PM |
| Modified By: hlee              | 1/23/2010 10:42:44 PM |
| Priority: High                 |                       |
| Category: Support              |                       |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Bug            |
|                 | Assigned |          |                |
| Duray, Jim      |          | Urgent   | Bug - Export 1 |
|                 | Resolved |          |                |
|                 | Closed   |          |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | TrussAnalysisFails-0160934.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 12/16/2008 1:16:13 PM Eastern Standard Time  
For the attached bridge superstructure member "Span 1N a" as far as I can tell the two exterior girders, girder 1 and girder 7 should be identical with the exception of a minor difference in length (on the order of 1"). The two girders rate very differently. I check the loads graph and the dead loads are almost identical but for some reason the live load moment at mid span on girder 1 is 30% higher than girder 7. The span has splayed (flared) girders and is therefore rated using the Virtis Std. engine. Any Ideas on why is happening?

William J. Metcalf Jr.  
Louisiana Department of Transportation and Development

4/19/2016 3:06:33 PM

HRS AASHTO

1250

Complete Issue Information

Ph (225)-379-1741

FROM: Herman Lee DATE: 12/23/2008 4:48:33 PM Eastern Standard Time  
I'm not able to locate the higher live load moment at mid-span in Girder 1 (see attached screen capture). The difference in live load moment is very small.

I compared Girder 1 and Girder 7. Girder 7 is composite with deck but not Girder 1 and there are some differences in the size of shear reinforcements also.

FROM: Herman Lee DATE: 10/30/2009 2:11:24 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:05:45 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: William Metcalf DATE: 12/11/2009 5:09:59 PM Eastern Standard Time  
most likely the composite issue is what is causing this problem but I will have to check up on this when I get the opportunity.

FROM: Herman Lee DATE: 12/14/2009 9:32:53 AM Eastern Standard Time  
Changed Status to Resolved for now. Please let us know whether the composite issue is the cause of the problem.

|                          |
|--------------------------|
| Issue ID: 8945           |
| Subject: Truss won't run |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Armbrecht, Tim          | 12/18/2008 3:19:44 PM |
| Modified By: jduray                   | 8/14/2009 7:14:11 PM  |
| Priority: Urgent                      |                       |
| Category: Bug - Export 1              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:06:34 PM

HRS AASHTO

1251

## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 12/18/2008 10:20:50 AM Eastern Standard Time  
016-0934 (Torrence Av. @ Grand Calumet R.) – The truss analysis simply ends with...

Initiating finite element analysis...

FEA - Building model...

FEA - Creating nodes...

FEA - Creating elements...

FEA - Creating constraints...

FEA - Adding load cases...

Verifying finite element model...

Performing linear solution...

Successful finite element analysis.

Analysis failed!

XML is attached.

FROM: Herman Lee DATE: 12/23/2008 3:00:49 PM Eastern Standard Time

Developer Notes:

CFeNodalReactionSetEx MoveItem returns false inside

CLmBeamReactionInfluenceLine::GenerateLine.

FROM: Jim Duray DATE: 7/7/2009 10:01:23 AM Eastern Daylight Time

Node at M7 was being duplicated when the symmetry routine generated the complete model.

Resolved for release 6.2. Can be included in 6.1 beta 3 if Tag/TF desires.

FROM: Jim Duray DATE: 7/8/2009 10:43:37 AM Eastern Daylight Time

TF agreed to include this resolution in 6.1 as long as it does not hold up the release.

FROM: Tim Armbrecht DATE: 8/14/2009 2:29:48 PM Eastern Daylight Time

Appears to be working correctly. Accepted.

Issue ID: 8946

Subject: Error with stringer reactions to floorbeams and tolerance issue

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ordoobadi, Mehrdad

Submitted By: Goodrich, Brian

12/18/2008 9:15:11 PM

Modified By: hlee

5/9/2010 2:32:29 PM

4/19/2016 3:06:34 PM

HRS AASHTO

1252

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | Assigned         | High     | Bug      |
|                 | Not Reproducible |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 01901.xml           |             |
|      | 01901_Modified.xml  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 12/18/2008 2:17:25 PM Mountain Standard Time  
E-mail submitted on behalf of Elizabeth Befikadu:

>From: Befikadu, Elizabeth (MHD)  
>Sent: Wednesday, December 17, 2008 5:24 PM  
>To: 'Herman Lee'; 'Krisha Kennelly'  
>Cc: 'Befikadu, Elizabeth (MHD)'  
>Subject: S03004  
>  
>Hi All,  
>  
>I was running the south truss of bridge (S03004). I couldn't run the  
>three floor beams. It looks like the tolerance issue.  
>Is there any way to change the tolerances to higher level  
>(.000001) so it works for any bridge. I have similar problems for other  
>bridges too.  
>  
>I have attached the XML file and the word file with snapshot of the  
>error messages.  
>  
>Is there any way to see the summary of the controlling element out of  
>the truss floor beam stringer system?

4/19/2016 3:06:35 PM

HRS AASHTO

1253



Complete Issue Information

>  
>Thank you for your help  
>  
>Elizabeth Befikadu  
>MHD Bridge section  
>Room NO. 6500  
>Tel. 617-973-7599  
>Fax 617-973-7575

FROM: Brian Goodrich DATE: 12/18/2008 2:19:55 PM Mountain Standard Time  
As we discussed on the phone, the workaround for the stringer reactions to the floorbeams is to override the computed values. These values can be obtained from the "Computed Stringer Reactions" window for each stringer unit layout.

I confirmed where the tolerance problem was coming from. You were right that it was due to the entries for the section loss on the floorbeam member alternatives. Open "Floorbeam 2 Alt" and go to both the "Web Loss" and "Bottom Flange Loss" tabs. Change the Start Distance and Length to 33.16666 and 0.66667, respectively. The previous values of 33.17 and 0.67 add up to 33.84' (406.08"). Note this is the value from the error message. Change these loss distances for all the floorbeams that would not rate.

These two changes should allow you to fully rate the "TRUSS (ST)" structure definition.

FROM: Brian Goodrich DATE: 12/18/2008 2:21:01 PM Mountain Standard Time  
The issue of automatically transferring the stringer reactions to the floorbeams remains to be addressed.

FROM: Herman Lee DATE: 12/19/2008 6:38:31 AM Eastern Standard Time  
I'm not able to reproduce both error messages in the attached S03004Verror.doc file. All floor beam ratings in "TRUSS (ST)" are completed successfully (see attached FloorbeamRatings.png).

After I imported the attached bridge, I'm not able to save the bridge to the database. Below are the error messages:

```
=====
Unable to save Bridge data!
06:41:33 AM - Line 884 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmStringerDIReactDetail (SaveOrder object 602).
06:41:26 AM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.
06:41:26 AM - Line 1001 in source file .\DmStringerDIReactDetail.cpp.
State:23000,Native:-193,Origin:[Sybase][ODBC Driver][Adaptive Server Anywhere]
Primary key for table 'abw_stringer_dl_react_detail' is not unique
=====
```

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 10/8/2009 12:52:33 PM Eastern Daylight Time  
Related to 7916, 8826 "Error preparing stringer dead load reactions for floorbeam"

FROM: Mehrdad Ordoobadi DATE: 11/30/2009 1:29:32 PM Eastern Standard Time  
The dead load reaction data removed from the bridge XML file so that it can be saved. The new file "S03004121708-NoSaveError.xml" is attached.

FROM: Mehrdad Ordoobadi DATE: 11/30/2009 1:44:53 PM Eastern Standard Time  
The bridge analyzes successfully without any problems in 6.2.0 and 6.1 SP1.

FROM: Herman Lee DATE: 5/9/2010 10:32:26 AM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                            |
|--------------------------------------------|
| Issue ID: 8948                             |
| Subject: Unable to rate all stringer units |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 12/22/2008 8:14:36 PM |
| Modified By: hlee                     | 3/15/2010 2:44:43 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/22/2008 3:16:06 PM Eastern Standard Time

4/19/2016 3:06:35 PM

HRS AASHTO

1255

Complete Issue Information

Submitted on behalf of Russell Howells, Michael Baker Jr., Inc.

Received and Reply E-mail:

=====

Looks like the distances to stringer group definition workpoint in the Floor System Geometry window don't match up exactly with the floorbeam locations in the Floorbeam Member Locations window.

After I used the Floorbeam Location Wizard to recompute the locations and copied the locations to the Floor System Geometry window, I'm able to rate all stringer units. Attached is the modified bridge. Since using the wizard deleted all floorbeam member alternatives, please reenter the floorbeam member alternatives.

Herman

>>> Russell Howells 12/19/08 11:15 AM >>>  
Herman,

Try running the entire bridge. The program is still shutting down on me.

Russ

>>> Herman Lee 12/18/2008 11:57 AM >>>  
Virtis didn't close out when I rated the "Left Truss". It complains the following at the end of the rating. Since you don't have a deck defined, the message is ok.

"Cannot compute deck dead load if concrete material is undefined!"

Please try to rate it again to see whether the close out can be reproduced.

Herman

>>> Russell Howells 12/16/08 4:13 PM >>>  
Herman and Krisha,

The attached file has been very problematic. When attempting to analyze the truss, the program closes out. Please see if you can determine the source for the error. Thank you for your help,

Russ

=====

FROM: Herman Lee DATE: 3/14/2010 5:55:47 PM Eastern Daylight Time  
Related to Incident 7916 and 8826 "Error preparing stringer dead load reactions for floorbeam".  
I'm not able to reproduce the problem in 6.2 Alpha. I'm able to rate the entire bridge.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 8949<br>Subject: alt timber loading for deck- where did it go???? |
|-----------------------------------------------------------------------------|

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Jensen, Paul            | 12/23/2008 8:22:01 PM |
| Modified By: hlee                     | 2/4/2010 6:51:15 PM   |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

### History

| Primary Contact       | Status                 | Priority | Category    |
|-----------------------|------------------------|----------|-------------|
| Lee, Herman           | New                    | High     | Bug         |
| Generated, task force | Suspended<br>Duplicate |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 12/23/2008 3:30:36 PM Eastern Standard Time  
we were adding timber bridge decks to our system and found an issue, where is the loading specified by articals 3.7.6a and 3.7.7a? When the timber addition was made to the Virtis, on the timber deck page (see attached screen shot).

for the short term, which table updates this for export so that I can resolve the problem.....

FROM: Herman Lee DATE: 12/24/2008 9:54:37 AM Eastern Standard Time  
For girder line superstructure definition, two more fields (Overhang and Girder spacing) are available for Deck Rating Parameters (see attached GirderLineDeckWindow.png file). These two fields are at that location since the beginning (version 5.0). If this is not the information you are looking for, please provide more detail on the problem.

FROM: Herman Lee DATE: 10/30/2009 2:20:01 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

4/19/2016 3:06:36 PM

HRS AASHTO

1257

Complete Issue Information

FROM: Herman Lee DATE: 12/1/2009 10:05:55 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:44:31 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

FROM: Herman Lee DATE: 2/4/2010 1:55:42 PM Eastern Standard Time  
E-mail from Brian Goodrich:

I don't think the Virtis GUI has ever supported this load reduction. Madero does, but the export is hard-coded right now for this to be ignored. This option applies to both H and HS type trucks. This option appears to do either the full or reduced loads but not the critical of the two.

Issue ID: 8950  
Subject: pontis update not picking the controlling rating for timber deck bridge

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Generated, task force  
Submitted By: Jensen, Paul 12/23/2008 8:30:44 PM  
Modified By: hlee 12/24/2008 1:49:57 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:06:37 PM

HRS AASHTO

1258

Complete Issue Information

FROM: Paul Jensen DATE: 12/23/2008 3:33:05 PM Eastern Standard Time  
after the last vi issue we notice another... the controlling rating is not picked for timber decked bridges.  
some bridges the decks will control (since that is the reason why we are rating them). it is only picking  
the grider rating.

FROM: Herman Lee DATE: 12/24/2008 8:00:49 AM Eastern Standard Time  
Duplicate of Incident 4468.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 8953<br>Subject: Computed NSG Dist. Factor is 0 when there is no deck overhangs. |
|--------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Duray, Jim<br>Submitted By: Lee, Herman 1/20/2009 9:24:19 PM<br>Modified By: jduray 4/26/2010 11:57:54 PM<br>Priority: High<br>Category: Bug |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:38 PM

HRS AASHTO

1259

### Complete Issue Information

|             |               |      |     |
|-------------|---------------|------|-----|
| Duray, Jim  | Assigned      | High | Bug |
|             | Resolved      |      |     |
| Lee, Herman | New           | High | Bug |
|             | Assigned      |      |     |
| Li, Xinmei  | Investigation |      |     |
|             | Resolved      |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 38138101000R010.xml |             |
|      | 2009-01-23_0727.mp4 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 1/20/2009 4:25:20 PM Eastern Standard Time  
Attached bridge and NSG vehicle XML files.

FROM: Jim Duray DATE: 4/26/2010 7:37:09 PM Eastern Daylight Time  
The bridge is only 8' 8" wide. The analysis properly determines the vehicle is not on the bridge.

|                          |
|--------------------------|
| Issue ID: 8955           |
| Subject: Report Tool Bug |

4/19/2016 3:06:39 PM

HRS AASHTO

1260

Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Curtis, Beckie          | 1/23/2009 12:30:19 PM |
| Modified By: jduray                   | 5/6/2010 1:43:41 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Lee, Herman        | New       | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned  |          |             |
| Goodrich, Brian    | Duplicate |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 1/23/2009 7:35:20 AM Eastern Standard Time

In the attached structure, increasing the Fy of steel to 38 or above causes the report to not generate for one superstructure definition, but the analysis runs fine. Other Superstructure definitions tied to the same steel type will generate a report without error. I have attached a video demonstrating the issue, the problem is Span 1 Thru 3

FROM: Herman Lee DATE: 10/28/2009 11:01:18 AM Eastern Daylight Time

Invalid argument while generating the LFD Analysis Output.

May, please see whether you are able to reproduce the error. I need to update QuickTime to the latest before I can see the video.

FROM: Xinmei Li DATE: 2/19/2010 9:57:52 AM Eastern Standard Time

I'm able to reproduce the error with VirtisOpis 6.1 release. When Fy is above 37.1 I can get the error.

4/19/2016 3:06:39 PM

HRS AASHTO

1261



Complete Issue Information

FROM: Xinmei Li DATE: 3/2/2010 9:40:17 AM Eastern Standard Time  
When Fy is above 37.1, the critical rating location is at the end of the span 3. The rating location tolerance is 0.01, the span length tolerance is 0.001. When comparing the rating location and span length, tolerance 0.001 is used (see VI 8265), this caused the report tool error.  
Resolved for 6.2

FROM: Jim Duray DATE: 5/6/2010 9:37:27 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                                             |
|---------------------------------------------|
| Issue ID: 8956                              |
| Subject: LRFR Steel Bridge Rating Questions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Onysko, Jim             | 1/23/2009 2:03:33 PM |
| Modified By: hlee                     | 1/26/2009 9:07:59 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Onysko DATE: 1/23/2009 9:30:37 AM Eastern Standard Time  
I am doing an LRFR rating on a multi-span continuous steel structure and I had a few questions.

1.) When I print the rating summary for several beams, the controlling limit state for the HL-93 at the operating level is Strength II. Why is the design level rating for the HL-93 being carried out for the Strength II limit state when LRFR manual states that Strength II only applies to permit vehicles? Is this

## Complete Issue Information

because the operating live load factor is 1.35, which is the same as the Strength II live load factor for design in LRFD?

2.) The rating summary shows only the controlling rating factor, controlling limit state, and controlling span location. How do I obtain the controlling rating factor for a specific limit state? For example, flexure controls for most of my beams. However, for reporting purposes, I need to show the controlling flexural rating and controlling shear rating for each beam. Is there any way to do this without searching through the many pages of BRASS output? If not, then it seems there should be a way to do so. After the analysis is run, rating data is obtained for each limit state at each point. If the program has all the analysis results in the database after running the analysis, couldn't there be a way to just easily access the info for a specific limit state or point of interest?

FROM: Brian Goodrich DATE: 1/26/2009 1:48:36 PM Mountain Standard Time

1. The Strength II limit state is used as the Design Load Operating rating because the live load factor is also 1.35.

2. The rating summary currently shows only the controlling rating factor for each live load combination. Searching through the output file is necessary to determine critical rating factors for non-controlling limit states.

The user is requesting an output filter, i.e., functionality to get to rating factors other than the critical. This is similar to 4699 and 6716.

|                                              |
|----------------------------------------------|
| Issue ID: 8958                               |
| Subject: Allow thicker PS webs near bearings |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 1/28/2009 2:51:34 AM |
| Modified By: ghuang                   | 8/10/2012 8:16:18 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

## History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lee, Herman      | New       | High     | Bug         |
|                  | Suspended |          | Enhancement |
| Kennelly, Krisha | Resolved  |          |             |

4/19/2016 3:06:40 PM

HRS AASHTO

1263

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 37 0527R.PDF        |             |
|      | 37 0527R.xml        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krishna Kennelly DATE: 1/27/2009 9:51:56 PM Eastern Standard Time  
Submitted on behalf of Vinacs via email 1/23/09:

We are starting to use the Virtis-BRASS to rate PS-I girder bridges that are made continuous for live load. In many cases, we are experiencing the difficulty in completing the rating because, the shear at the edge of support control the overall rating.

The stem of PS-I girders are much thicker (typically 19") compare to the stem in the mid region (Typically they are 7"). BRASS uses the bw as 7" in establishing the shear capacity. If we use bw of 19" at the end, the shear capacity would be much higher. How could we enter the thicker web at the end of PS girders?

How do other states rate the bridge especially closer to support location?

email response sent via Herman Lee on 1/24/09:

Virtis doesn't support varying cross sections along a PS girder span. We don't think there's any workaround.

The Virtis Std Engine considers AASHTO Std 9.20.1.4 for PS girder but this may not be enough to reveal the true controlling location.

FROM: Herman Lee DATE: 6/30/2012 9:45:51 AM Eastern Daylight Time  
Implemented for 6.4 release.

FROM: George Huang DATE: 8/10/2012 4:16:18 PM Eastern Daylight Time  
verified by Vinacs in V6.4 beta build 3.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 8965<br>Subject: Virtis Std Engine needs to check valid input format. |
|---------------------------------------------------------------------------------|

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

4/19/2016 3:06:40 PM

HRS AASHTO

1264

Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Lee, Herman    | 2/4/2009 10:35:20 PM |
| Modified By: kkennelly       | 5/8/2010 2:50:19 AM  |
| Priority: High               |                      |
| Category: Bug - Export 2     |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Goodrich, Brian | Assigned | High     | Bug       |
| Lee, Herman     | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/4/2009 5:35:27 PM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====

Hi Vinacs,

I'm able to reproduce the crash. The Virtis Std Engine output file has some information/hint on why the analysis failed and crashed the program. Unlike the BRASS Engine, Virtis Std Engine uses the data in the Stress Limit window. The Final allowable tension entered is 10 ksi but the allowable input format for this field in the Virtis Std Engine is X.XXXX. That's the reason why the program crash. Virtis needs to prevent the crash and reports the problem back to the user.

Herman Lee

>>> Murugesu Vinayagamoorthy <murugesu\_vinayagamoorthy@dot.ca.gov> 2/4/09 4:01 PM >>>

When I used the "user defined" LFD Factors and use the Virtis-LFD program to analyze the prestressed girder bridges made continuous, the Virtis program crashes.

Complete Issue Information

On the other hand, if I had used the BRASS-LFD, the Virtis will NOT crash.

Review the Span 1-2 (1993) MDL 2 of 2; G1

(See attached file: 37 0527R.PDF)(See attached file: 37 0527R.xml)

Vinacs M Vinayagamoorthy

=====

FROM: Herman Lee DATE: 11/11/2009 2:12:32 PM Eastern Standard Time  
Implemented check for the length of each command.  
Resolved for 6.2 Release.

FROM: Krisha Kennelly DATE: 5/7/2010 10:45:18 PM Eastern Daylight Time  
verified in 6.2 beta 1. Ran G1 in the second structure definition. Export for Virtis LFD program gives  
error message that the input exceeds the allowable length of data.

Issue ID: 8966  
Subject: BRASS Engine is not using the entered floorbeam moment/shear distribution factor.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 2/4/2009 10:45:37 PM  
Modified By: hlee 2/5/2009 2:28:58 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:06:41 PM

HRS AASHTO

1266

Complete Issue Information

FROM: Herman Lee DATE: 2/4/2009 5:45:56 PM Eastern Standard Time  
Submitted on behalf of Elizabeth Befikadu, AI Engineers, Inc.

FROM: Herman Lee DATE: 2/5/2009 9:17:33 AM Eastern Standard Time  
Virtual stringer analysis is required for floorbeam spacing greater than 6 feet. (AASHTO STD Table 3.23.3.1)

Issue ID: 8971  
Subject: Live load actions from Madero are too high

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Goodrich, Brian 2/6/2009 5:56:56 PM  
Modified By: bgoodrich 2/6/2009 6:06:01 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:41 PM

HRS AASHTO

1267

### Complete Issue Information

|             |          |      |           |
|-------------|----------|------|-----------|
| Lee, Herman | New      | High | Education |
|             | Assigned |      |           |
| Li, Xinmei  | Assigned | High | Bug       |
|             | Resolved |      | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | img-209173455.pdf   |             |
|      | n-06-020.xml        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 2/6/2009 10:57:03 AM Mountain Standard Time  
Submitted on behalf of Elizabeth Befikadu, AI Engineers, Inc.

Live load actions from Madero are too high. For a 12' stringer, the moment is 96 ft-kips.

FROM: Brian Goodrich DATE: 2/6/2009 11:00:03 AM Mountain Standard Time  
The live load actions shown in the Analysis Results window are based on the axle weights and not adjusted for live load distribution (wheel fractions). This differs from the BRASS engines. This fact is documented in the (Madero) Engine Related Help topic for the Analysis Results window.

Issue ID: 8972

Subject: Shear at supports LL distribution factor.

Complete Issue Information

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis          |
| Primary Contact: Li, Xinmei                    |
| Submitted By: Lee, Herman 2/10/2009 3:45:39 PM |
| Modified By: xli 10/13/2009 2:50:25 PM         |
| Priority: High                                 |
| Category: Education                            |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Rejected |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | L13026.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 2/10/2009 10:46:09 AM Eastern Standard Time  
Submitted on behalf of Andrew Benkert, CME Associates, Inc.

Received Bridgewater e-mail:

=====  
Herman, I have attached my hand calcs for the first interior girders on the east and west bound spans. It appears that shear at supports for these girders are the only ones that are in question. I have discovered my error on the others. Please let me know if you can help

Thanks,  
Andy

=====



Complete Issue Information

FROM: Xinmei Li DATE: 10/13/2009 9:20:49 AM Eastern Daylight Time

In your hand calculations,

Middle 2 girders are 1.2 and 1.67, match Virtis calculation;

1st interior, the left wheel of second truck cannot be placed 4' from right wheel of first truck, it should be 6' from first truck so that both trucks are in within a 12' lane. Virtis places two trucks at 2.667' and 8.667' (first truck), 14.667' and 20.667' (second truck), measured from the centerline of G13 (exterior girder).

|                                               |
|-----------------------------------------------|
| Issue ID: 8973                                |
| Subject: Why is top flange flexure governing? |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 2/10/2009 5:53:09 PM |
| Modified By: bgoodrich                | 3/10/2009 6:00:17 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 2/10/2009 10:53:15 AM Mountain Standard Time

Submitted on behalf of Elizabeth Befikadu (AI Engineers):

I have attached the xml file for the bridge that we have discussed.

Bridge # L-13-026

4/19/2016 3:06:42 PM

HRS AASHTO

1270

Complete Issue Information

Issue : For span 1 and span 5 at midspan topflange flexure governs. This is a simply supported beam I don't know how Top flange flexure governs at midspan.

Please let me know what you think.

FROM: Brian Goodrich DATE: 2/10/2009 11:07:06 AM Mountain Standard Time  
This issue applies to BRASS ASD. The structure in question is a non-composite simple span, so the flange stresses due to a positive moment are the same magnitude, with the top being in compression and the bottom being in tension.

It appears that she would like the tensile stress to control the rating for positive flexure when the magnitudes are the same. I suspect that BRASS is simply searching for the minimum rating by starting at the top of the section and ending at the bottom. We could check for a simple span and reverse the search process to start at the bottom of the section.

I forwarded this issue to WYDOT for consideration.

FROM: Brian Goodrich DATE: 3/10/2009 11:49:28 AM Mountain Daylight Time  
E-mail from Mike Watters (WYDOT):

Brian,

If we did as you suggest, some user may come later and want a different order. I presume the output file shows the ratings for tensile stress, and that it is only the summary sheet she wants changed. Also, I noted that this was an ASD rating, which we are not making any changes to. I recommend leaving the program as is.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

|                                                      |
|------------------------------------------------------|
| Issue ID: 8976                                       |
| Subject: Missing deck load in the exported floorbeam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 2/12/2009 3:22:30 PM |
| Modified By: hlee                     | 5/9/2010 3:32:10 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Bug      |

4/19/2016 3:06:43 PM

HRS AASHTO

1271

### Complete Issue Information

|                    |          |      |     |
|--------------------|----------|------|-----|
| Lee, Herman        |          |      |     |
| Ihnat, Joseph      | Assigned | High | Bug |
| Ordoobadi, Mehrdad | Resolved |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | errormessage.docx   |             |
|      | AnalyzeProgress.png |             |
|      | A19003error.xml     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 2/12/2009 10:23:22 AM Eastern Standard Time  
Submitted on behalf of Elizabeth Befikadu, AI Engineers, Inc.

See the Floorbeam in the attached Floorbeam-Stringer Floorline Superstructure Definition.

FROM: Brian Goodrich DATE: 2/17/2009 8:32:43 AM Mountain Standard Time  
The BRASS export is set up to export the deck load to a floorbeam only when the stringers frame into the floorbeam. The floorbeam stringer floor system superstructure definition has a checkbox for specifying if the stringers frame into the floorbeam, but the floorbeam string floorline superstructure definition does not. The export is using this flag to determine if the deck load is applied directly to the floorbeam.

FROM: Brian Goodrich DATE: 2/18/2009 10:16:33 AM Mountain Standard Time  
E-mail from Herman Lee 2/17/2009 1:17 PM

#### Option 1:

Since GFS Floor Line has the "Stringers frame into floorbeam" checkbox, the checkbox should also be available in FS Floor Line.

#### Option 2:

Since members are not related to each other in line superstructure, if a deck is entered for the floorbeam member alternative of a floor line or truss line superstructure definition, we should apply the deck load to the floorbeam.

4/19/2016 3:06:43 PM

HRS AASHTO

1272

## Complete Issue Information

Krishna, what's your opinion on this?

Herman

FROM: Brian Goodrich DATE: 2/18/2009 10:19:15 AM Mountain Standard Time  
E-mail from Krishna Kennelly Tuesday, February 17, 2009 11:33 AM

I suggest Option 2.

In system superstructures we use the 'stringers frame into fb' checkbox to decide if we should show the floorbeam deck profile window in the tree. For that case it is ok to use the checkbox to know if the floorbeam has a deck DL because that checkbox allows/restricts the deck profile window from showing up.

For lines, we should use the deck DL if it is entered for the floorbeam in its Deck Profile window without regard to that checkbox.

I think it is a mistake to have the checkbox on the GFS Floor Line window. That checkbox doesn't affect the tree like it does for a system and I don't think it should.

FROM: Brian Goodrich DATE: 2/18/2009 10:19:54 AM Mountain Standard Time  
The export was using the IDoFsFloorLineStructDef ::  
GetStringerFrameInFloorbeamInd function to get the flag for if stringers framed into the floorbeam. Since this item is not being populated by the GUI, should this function be removed from the domain?

I'll work on implementing Option 2 for the floorbeam stringer floor line.

FROM: Brian Goodrich DATE: 2/18/2009 10:20:07 AM Mountain Standard Time  
E-mail from Herman Lee 2/17/2009 12:22 PM

Brian,

Please assign the incident back to me after you are done. We still need to decide what to do with the checkbox, which is available in the GUI, in GFS Floor Line. Does the export consider the "Stringers frame into floorbeam" checkbox in GFS Floor Line?

Thanks,  
Herman

FROM: Brian Goodrich DATE: 2/18/2009 10:21:11 AM Mountain Standard Time  
Yes, the export does consider the "Stringers frame into floorbeam" checkbox in a GFS Floor Line. The TFS Floor Line has this checkbox too and the export uses it accordingly. Let me know what you decide to do for the GFS and TFS floor lines.

I changed the export for the FS Floor Line only at this point. See the

4/19/2016 3:06:43 PM

HRS AASHTO

1273

Complete Issue Information

CEngineExport::IsDeckApplicableToFloorbeam() function.

FROM: Brian Goodrich DATE: 3/12/2009 8:44:27 AM Mountain Daylight Time  
Let me know if I need to revise the export for the GFS and TFS floor lines.

FROM: Herman Lee DATE: 3/17/2010 10:29:45 AM Eastern Daylight Time  
The BRASS export considers the "Stringers frame into floorbeam" checkbox in GFS Floor Line and TFS Floor Line. Removing the checkbox from the user interface, domain and export will change existing ratings for the case that the checkbox is not checked and there is a deck entered for the floorbeam. This checkbox provides an additional control for applying deck load to floorbeam. I think we should leave the checkbox in GFS Floor Line and TFS Floor Line.

FROM: Herman Lee DATE: 5/9/2010 10:36:58 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 8977                                                             |
| Subject: Unable to analyze the copied Truss Line Superstructure Definition |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Lee, Herman             | 2/12/2009 9:47:58 PM |
| Modified By: hlee                     | 5/9/2010 3:33:20 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:06:43 PM

HRS AASHTO

1274



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | New              | High     | Bug      |
|                 | Assigned         |          |          |
|                 | Not Reproducible |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ratings.png         |             |
|      | 50150112000S030.xml |             |
|      | Virtis Output.jpg   |             |
|      | Brass Output.jpg    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 2/19/2009 3:04:58 PM Eastern Standard Time  
I have a bridge that works for normal load rating/analysis but the NSG analysis fails for some reason that I have not been able to track down.  
I've attached the xml of the structure.  
I'll attempt to also zip and include the output and attach that.

FROM: Herman Lee DATE: 2/20/2009 9:18:24 AM Eastern Standard Time  
I'm able to reproduce the problem. I tested the following 2 configurations.

1. Use original configuration and modify support skews to 0.0.  
NSG analysis runs to completion.
2. Use original configuration and unlink G3, G4 and G5. Copy G1 member alternative to G5 and G2 member alternative to G3 and G4.  
NSG analysis runs to completion.

I suspect there is a tolerance problem in locating analysis points along linked member for skewed bridge.

4/19/2016 3:06:44 PM

HRS AASHTO

1276

Complete Issue Information

FROM: Krisha Kennelly DATE: 5/19/2009 2:12:29 PM Eastern Daylight Time  
Problem is occurring in CABxVirtisDistFactEngine::Compute2DActions().

line 4308 is trying to find pLinkPoiInfo->m\_dDistance at 128.9999999473 inside the pmapPoiInfo. But pmapPoiInfo has a poi at 129.0000000526. KEY\_FACTOR is 100000L so 12899999 is never matched to 12900000.

FROM: Jim Duray DATE: 4/26/2010 7:05:36 PM Eastern Daylight Time  
There is another search loop for when the key is not found. However, the tolerance for the comparison was the default system tolerance (0.000001 ft). I changed the comparison to use a tolerance of 0.01 ft.

Fixed for Alpha 4.

FROM: Jim Duray DATE: 4/29/2010 2:44:48 PM Eastern Daylight Time  
Verified - 6.2 Alpha 4.

FROM: Todd Thompson DATE: 5/11/2010 11:44:30 AM Eastern Daylight Time  
6.2 Beta 1  
Appears to be fixed - tested the attached structure and worked ok.

FROM: Todd Thompson DATE: 7/15/2010 3:30:08 PM Eastern Daylight Time  
Forgot to mark this Accepted

|                            |
|----------------------------|
| Issue ID: 8982             |
| Subject: Composite Section |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 2/27/2009 6:03:36 PM |
| Modified By: rcurtis                  | 3/3/2009 8:32:19 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:44 PM

HRS AASHTO

1277



## Complete Issue Information

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | HL Virtis Main_Girder.OUT  |             |
|      | Virtis Main_Girder.OUT.txt |             |
|      | section properties.xml     |             |
|      | Ratings.png                |             |
|      | cmd.png                    |             |
|      | Brass Main_Girder.OUT.txt  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 2/27/2009 1:17:52 PM Eastern Standard Time

In attached structure, span 1 is non-composite and span 2 is composite. Rating results between Brass and STD engine are greatly different. Closer investigation finds that STD engine is not treating span 2 as composite. Attached is the xml file, and screenshots of Brass and Virtis output.

FROM: Herman Lee DATE: 3/1/2009 3:45:22 PM Eastern Standard Time

I checked the Virtis Std Engine output. Span 2 is composite from 9 ft to the end.

I compared the rating results between the Virtis Std engine and the BRASS engine (see attached Ratings.png). The results are comparable.

Issue ID: 8983

Subject: Section Properties Discrepancy

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Curtis, Beckie

3/3/2009 6:00:25 PM

4/19/2016 3:06:44 PM

HRS AASHTO

1278

### Complete Issue Information

|                   |                       |
|-------------------|-----------------------|
| Modified By: hlee | 10/27/2009 6:57:52 PM |
| Priority: High    |                       |
| Category: Bug     |                       |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Goodrich, Brian  | Assigned | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 18742.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 3/3/2009 1:01:53 PM Eastern Standard Time

Virtis and Brass engines produce different results for section properties, and consequently different rating results. The flange changes and the Virtis engine does not seem to be including this.

FROM: Herman Lee DATE: 3/3/2009 2:10:35 PM Eastern Standard Time

I checked the Virtis Std Engine output. Changes in top and bottom flanges thicknesses are included.

I compared the rating results between the Virtis Std engine and the BRASS engine (see attached Ratings.png). The results are comparable.

Please note that the BRASS LFD export requires you to specify the points of contraflexure in a continuous steel beam in order for the export to determine what section properties (composite or non-composite) should be used. The points of contraflexure are defined on the Engine tab of the Member Alternative Description window. Since there are hinges in Span 2, the contraflexure locations should be set to coincide with the hinge locations.

FROM: Beckie Curtis DATE: 3/3/2009 3:22:42 PM Eastern Standard Time

The structure is noncomposite and so the points of contraflexure weren't edited.

Attached is an image of my output, showing very different Virtis ratings.

4/19/2016 3:06:44 PM

HRS AASHTO

1279

Complete Issue Information

FROM: Beckie Curtis DATE: 3/3/2009 3:54:27 PM Eastern Standard Time  
Also attached are the Brass and Virtis output. No changes were made in the file between runs other than selecting the different engine.

FROM: Herman Lee DATE: 3/5/2009 2:43:29 PM Eastern Standard Time  
Based on the output files, I entered the "Michigan 2 Unit Truck 18-DL" vehicle and rated the girder with both engines. The rating results are comparable.

The BRASS output file from my run is similar with the one you attached. But the Virtis Std output file (see attached "HL Virtis Main\_Girder.OUT") from my run is very different from the one you attached.

Could you try to rate the girder with both engines in a different machine in your Agency to see whether you get the same results?

FROM: Herman Lee DATE: 10/27/2009 2:33:16 PM Eastern Daylight Time  
I discussed this incident with Beckie during the International Bridge Conference back in June. The database contains this bridge was overwritten by a new installation. This incident is marked as Not Reproducible until more information is available.

|                                            |
|--------------------------------------------|
| Issue ID: 8984                             |
| Subject: BRASS LRFR CONC-REBAR input error |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Kennelly, Krisha     |                     |
| Submitted By: Lee, Herman             | 3/3/2009 6:55:28 PM |
| Modified By: kkennelly                | 5/8/2010 2:25:16 AM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:06:44 PM

HRS AASHTO

1280

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/3/2009 1:56:05 PM Eastern Standard Time  
Submitted on behalf of Sarah Saeed, Saeed Associates. (sarah\_saeed82@yahoo.com)

Received Bridgeware e-mail:

=====  
Hello. I had a question about using VIRTIS. I am running a steel girder bridge in VIRTIS. I ran it using LFD and it worked. However, when I switch to LRFR method, it does not run. Besides traffic information which I have entered, is there additional input needed to run using LRFR that is not needed in LFD method? I have attached my file in xml and bbd format. Can you please look at my file and tell me what is missing and what the problem is? Thank you very much.  
=====

BRASS LRFR error messages:

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\VirtisOpis56\18742\IR122006\G1  
\Exterior\_46\_\_RC\_Tee\_Beam\BRASS\_LRFR\Exterior\_46\_\_RC\_Tee\_Beam.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program Files\AASHTOWARE\VirtisOpis56\18742\IR122006\G1  
\Exterior\_46\_\_RC\_Tee\_Beam\BRASS\_LRFR\Exterior\_46\_\_RC\_Tee\_Beam.DAT

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

Complete Issue Information

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File  
\*\* ERROR: Parameter 5 on the CONC-REBAR command must be greater than zero.

-----  
Error No.: 1004  
Type : Input Error  
Location : Data File  
  
\*\* ERROR: One or more input errors occurred. Please see the output file for detailed error description(s).

----- End of Contents of BRASS Error File -----

FROM: Herman Lee DATE: 3/5/2009 1:57:48 PM Eastern Standard Time  
Looks like part of the type 3 inverted rebar is sticking out of the bottom of the cross section. I think we should issue validation error, either in the GUI or while cutting cross sections.

FROM: Brian Goodrich DATE: 3/5/2009 1:59:03 PM Mountain Standard Time  
The negative distances go away if the inverted rebar distances are increased by the height of the Type 3 bar. I think the user should simply correct the rebar distances.

This information has been forwarded to the user.

FROM: Krisha Kennelly DATE: 2/2/2010 9:05:09 AM Eastern Standard Time  
Message is now issued while cutting cross section if the bar is above or below the beam. Fixed for 6.2

FROM: Krisha Kennelly DATE: 5/7/2010 10:21:20 PM Eastern Daylight Time

4/19/2016 3:06:44 PM

HRS AASHTO

1282

Complete Issue Information

verified fix in 6.2 beta1. error message now states where bar is located outside of the beam depth.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 8985                                                   |
| Subject: Ignore steel serviceability check for inventory rating. |

|                                               |
|-----------------------------------------------|
| Folder: /Virtis/Support Center/Virtis         |
| Primary Contact: Goodrich, Brian              |
| Submitted By: Lee, Herman 3/5/2009 6:11:48 PM |
| Modified By: bgoodrich 3/23/2009 6:44:34 PM   |
| Priority: High                                |
| Category: Enhance BRASS                       |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Goodrich, Brian | Suspended | High     | Enhance BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 874278-virtis.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/5/2009 1:22:37 PM Eastern Standard Time  
Submitted on behalf of Patricia Botas, Botas Engineering (general@botasengineering.com):

Part of the e-mail from Brian Goodrich:

=====  
I talked with Patricia Botas. We discussed the following issues:

1. She wants to ignore the steel serviceability checks from AASHTO STD 10.57.1 and 10.57.2. This rating for operating can be ignored using a checkbox in the point of interest engine properties, but I don't see any way through Virtis to ignore this for the inventory rating. For a stand-alone BRASS user, the LOAD-LEVEL-2 command could be coded with a low gamma factor, which would effectively reduce the flange stresses so the serviceability

4/19/2016 3:06:45 PM

HRS AASHTO

1283

Complete Issue Information

ratings are not critical.

=====

FROM: Brian Goodrich DATE: 3/5/2009 1:31:55 PM Mountain Standard Time  
E-mail from Patricia Botas:

Please, forward this servicibility issue...as I mentioned, it is not very efficient for us to analyze all these bridges using LFD and having to hand pick the controlling load rating factors....many times there are many girders being analyzed and the spans are continuous.....this makes the task long and labor intensive.

FROM: Brian Goodrich DATE: 3/5/2009 2:47:09 PM Mountain Standard Time  
E-mail from Patricia Botas:  
Hi Brian:

We tried to follow your suggestion but it is not working for Operating either.

See results below.

Patricia Botas, P.E.

FROM: Brian Goodrich DATE: 3/5/2009 2:47:45 PM Mountain Standard Time  
The option for ignoring operating serviceability will only work if you do not generate points of interest. The BRASS LFD "Engine Related Help" for the Point of Interest window reads:

"BRASS LFD will not use the override data entered in the Point of Interest windows if the POI Control on the Member Alternative Description: Engine (BRASS LFD) window is selected as a "generate" option (Options 1, 3, or 5). Selecting a generate option on that window means that the points of interest will be generated from the schedule data that you have entered in other windows. You must select the "No point of interest data will be generated" option on that window in order for BRASS LFD to use the data entered on the Point of Interest windows. If you select "No point of interest data will be generated" as the POI Control, you must enter all of the information on the Point of Interest windows. The export will not generate any data from other windows for items left blank on the Point of Interest windows."

If points of interest are not generated from the various schedules, they have to be manually input in Virtis. This means you have to figure out the following for each point you enter: the stiffener size and spacing, lateral bracing, unbraced lengths, etc. This may be more work than you want to do, especially because the inventory serviceability rating cannot be shut off.

FROM: Brian Goodrich DATE: 3/23/2009 12:38:22 PM Mountain Daylight Time  
E-mail from 3/5/2009:

Mike,

I am forwarding Virtis Incident 8985 to you for consideration. We could add a parameter for turning off the serviceability ratings for inventory too. We may want to consider doing this for the entire structure at once rather than at each POI like is currently done for the operating rating. We may also want to

4/19/2016 3:06:45 PM

HRS AASHTO

1284

Complete Issue Information

consider handling the bearing stiffener rating at the same time, which has been requested in the past. I estimate 12 hours to address this. This will also require changes to the BRASS engine properties in Virtis and the BRASS export, which are not included in the estimate.

Brian Goodrich  
BridgeTech, Inc.

FROM: Brian Goodrich DATE: 3/23/2009 12:42:46 PM Mountain Daylight Time  
E-mail from Mike Watters (3/16/2009):

Brian,

As I read this, it appears BRASS users have a means to do this (not very elegant, but they do have a way). I suppose Virtis could be changed by adding a means to turn off the serviceability. This check box would then enter a low gamma factor in the LOAD-LEVEL-2 command.

I have not heard of any BRASS users requesting a checkbox. I interpret this as a Virtis issue.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

|                                                    |
|----------------------------------------------------|
| Issue ID: 8986                                     |
| Subject: Alternate Military Loading ASD/LFD rating |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Ordoobadi, Mehrdad   |                     |
| Submitted By: Lee, Herman             | 3/5/2009 6:43:11 PM |
| Modified By: hlee                     | 5/9/2010 3:36:18 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krisha   | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI9668.SQL          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/5/2009 1:43:23 PM Eastern Standard Time  
 Submitted on behalf of Patricia Botas, Botas Engineering (general@botasengineering.com):

Part of the e-mail from Brian Goodrich:

=====

I talked with Patricia Botas. We discussed the following issues:

3. She also requested that the Alternate Military Loading be made available for ASD/LFD ratings. This loading is discussed in AASHTO 3.7.4. The workaround is to copy the Standard library vehicle and make the change, but this would not be necessary if the ASD/LFD rating box was checked in the existing standard vehicle.

=====

I think we should check the ASD/LFD rating box for the Alternate Military Loading Standard Vehicle. We should only do this in 6.1 installed database, not in migrated database.

FROM: Jim Duray DATE: 4/21/2009 4:13:34 PM Eastern Daylight Time  
 I agree.

FROM: Krisha Kennelly DATE: 5/19/2009 12:21:17 PM Eastern Daylight Time  
 It's ok if this doesn't make it into Beta 1.

FROM: Mehrdad Ordoobadi DATE: 12/1/2009 10:59:40 AM Eastern Standard Time  
 Fixed for 6.2. Database in SourceSafe corrected.

FROM: Herman Lee DATE: 5/9/2010 11:34:05 AM Eastern Daylight Time  
 Verified in 6.2 Beta 1.

|                                       |
|---------------------------------------|
| Issue ID: 8988                        |
| Subject: Hinge for Concrete Structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Huang, George           | 3/11/2009 6:28:51 PM |

4/19/2016 3:06:45 PM

HRS AASHTO

1286

### Complete Issue Information

|                         |                      |
|-------------------------|----------------------|
| Modified By: mordoobadi | 4/11/2011 3:31:28 PM |
| Priority: High          |                      |
| Category: Enhancement   |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Duray, Jim      | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 3/11/2009 2:35:54 PM Eastern Daylight Time

We have many concrete bridges with hinges at span locations. Currently VIRTIS can not analysis this type bridges. W would like to have this function developed in the new version.

FROM: Krisha Kennelly DATE: 2/2/2010 2:07:45 PM Eastern Standard Time

This enhancement has been approved for inclusion in Version 6.2. (was approved at the Nov 2009 TF meeting)

Domain has been updated to allow Reinforced and Prestressed concrete beams to have hinges.

Joe - please implement hinges in the UI for these beam types.

Herman - please implement hinges in the engine exports for these beam types

Srujana - please implement hinges in the report tool for these beam types

Mehrdad - please implement hinges in the database migration scripts for these beam types (if necessary)

FROM: Joseph Ihnat DATE: 2/3/2010 9:15:41 AM Eastern Standard Time

UI is done.

4/19/2016 3:06:45 PM

HRS AASHTO

1287

Complete Issue Information

FROM: Herman Lee DATE: 3/1/2010 10:08:29 AM Eastern Standard Time  
Export is done.

FROM: Srujana Thogaru DATE: 4/30/2010 2:54:23 PM Eastern Daylight Time  
Updated the database for hinges. SQL Script sent to Mehrdad.

FROM: Mehrdad Ordoobadi DATE: 5/1/2010 7:08:48 PM Eastern Daylight Time  
Added SQL Script file from email.

FROM: George Huang DATE: 6/7/2010 5:16:11 PM Eastern Daylight Time  
The hinge input has been added. However there was error in the analysis and a seperate VI 9963 was submitted.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 8989                                                    |
| Subject: Schedule Based Reinforcement Input for Concrete I Girder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Huang, George           | 3/11/2009 6:36:30 PM |
| Modified By: hlee                     | 3/11/2009 7:17:41 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 3/11/2009 2:52:43 PM Eastern Daylight Time  
Currently there is only cross section based reinforcement input for concrete I girder. It is very time consuming to input all reinforcement information. In California, there are many RC box girder bridge. If there is schedule based input, we can use I-girder to rate the box girder bridge with some modifications. This will greatly improve our productivity.

4/19/2016 3:06:46 PM

HRS AASHTO

1288

## Complete Issue Information

Issue ID: 8990

Subject: Post Tension Concrete Girder

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

Submitted By: Huang, George

3/11/2009 6:53:31 PM

Modified By: hlee

5/16/2014 7:37:04 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Duray, Jim      | Suspended |          | Enhancement |

4/19/2016 3:06:46 PM

HRS AASHTO

1289

Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 3/11/2009 3:00:41 PM Eastern Daylight Time  
 There are many post tension concrete box girder bridges in US. Currently VIRTIS doesn't have the function for post tension design or box girder design. If VIRTIS has the post tension function for I girder, at least we can rate the box girder bridge with some modifications.

FROM: Herman Lee DATE: 8/27/2010 7:34:23 AM Eastern Daylight Time  
 Related to Incident 3589 and 5379.

FROM: Herman Lee DATE: 5/16/2014 3:35:34 PM Eastern Daylight Time  
 Post-tensioned multi-cell box implemented for the 6.6 release.

|                                     |
|-------------------------------------|
| Issue ID: 8991                      |
| Subject: Concrete Box Girder Bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Huang, George           | 3/11/2009 7:02:13 PM |

### Complete Issue Information

|                       |                      |
|-----------------------|----------------------|
| Modified By: hlee     | 5/16/2014 7:38:01 PM |
| Priority: High        |                      |
| Category: Enhancement |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lathia, Hasmukh | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Virtis Fortran Error.JPG     |             |
|      | 00112 - 82182112000S348.xml  |             |
|      | Interior_Girder_11S.dat      |             |
|      | 8992_Interior_Girder_11S.out |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 3/11/2009 3:10:12 PM Eastern Daylight Time

There are so many concrete box girder bridges in the western States. Currently Virtis can't handle the data for box girder, and there is a huge demands from California, Colorado and other States to have this type bridge to be included.

FROM: Herman Lee DATE: 8/27/2010 7:31:40 AM Eastern Daylight Time

Related to Incident 3291 and 3585.

FROM: Herman Lee DATE: 5/16/2014 3:37:16 PM Eastern Daylight Time

Reinforced concrete multi-cell box implemented for the 6.6 release.

4/19/2016 3:06:46 PM

HRS AASHTO

1291

Complete Issue Information

Issue ID: 8992  
Subject: Virtis Std Engine run-time error: GDLC greater than 330

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lathia, Hasmukh  
Submitted By: Dombrowski, Chris                      3/13/2009 11:47:12 AM  
Modified By: hlee                                              3/23/2009 8:53:33 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/13/2009 7:48:56 AM Eastern Daylight Time  
Submitted on behalf of Chris Dombrowski, Williams & Works.

Received Bridgeware e-mail:

=====

I have revised the file so that G2 has less than 150 Steel Member Properties lines. However, now when I try to run it I get a Fortran dump error message and Virtis crashes/closes. Please see the attached screenshot. Can you please tell me what this new error message means?

Thank you,

4/19/2016 3:06:46 PM

HRS AASHTO

1292

Complete Issue Information

-----Original Message-----

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
Sent: Tuesday, March 10, 2009 2:49 PM  
To: Dombrowski, Chris  
Subject: Re: Virtis Error Message - number of steel member propertieslines exceeds the maximum (150) allowed

Hi Chris,

G2 has more than 150 Steel Member Properties lines. The format of the Steel Member Properties exported to the Virtis Std Engine is described on page 5-12 in the Virtis Std User Manual. Each unique cross section in G2 is entered on one line.

Herman Lee

>>> "Dombrowski, Chris" <Dombrowski@williams-works.com> 03/10/09 12:03 PM >>>

I am receiving the following error message when I try to run a girder using the Virtis Analysis Engine:

"Error - The number of steel member properties lines exceeds the maximum (150) allowed! Error - Unable to generate Steel Member Properties!"

I have run other bridges with more than 150 lines of code under the "Steel Member Properties" heading in the text file without any errors. Can you please tell me what this error message is referring to?

I have attached the text file and the .xml file for the bridge. The bridge is incomplete, but I was trying to run it to see if it would run before I finished entering all of the input.

Thank you,

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer

4/19/2016 3:06:46 PM

HRS AASHTO

1293



Complete Issue Information

E-mail: dombrowski@williams-works.com

Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

=====

FROM: Hasmukh Lathia DATE: 3/23/2009 10:52:40 AM Eastern Daylight Time  
When user inputs more than 150 section property ranges, the program checks and issues an input error message. When less than 150 section property ranges are entered, other array subscripts are exceeding which generates a Fortran dump error. This girder has too many section property ranges. This problem did not occur before PennDOT made BAR7 revision 159 where rating are calculated at both sides of an analysis point where section properties change. The problem has been resolved by increasing the array sizes, but the ratings are still negative. A run from the revised code is attached. Please check the other input to ensure proper rating calculations.

Issue ID: 8993  
Subject: Report not generating in NSG

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Teal, Dean 3/13/2009 2:24:47 PM  
Modified By: dteal 3/18/2009 6:16:16 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | No NSG Report.xml         |             |
|      | AdvancedRatingResults.png |             |

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 3/13/2009 10:32:29 AM Eastern Daylight Time  
Maybe I'm doing something fundamentally wrong?

- I ran a NSG
- Selected the Report Tool from the tool bar, selected report type – LFD Analysis Output, then Generate
- The report came up blank in an explorer window
- I went back to each individual member alternative and selected the view analysis report from the tool bar to see the rating results summary – the report was there for each member individually
- So I went back and ran a SDS gage rating for a member and used the report tool, the report was generated

So is there a reason I can't generate a report with the report tool for NSG?  
Or am I soing something wrong?

Structure I used is attached

FROM: Herman Lee DATE: 3/13/2009 11:11:05 AM Eastern Daylight Time  
LFD Analysis Output is only available for the member alternative.  
Please see attached png file for the Advanced Rating Results Report, which is available for the Superstructure.

|                                          |
|------------------------------------------|
| Issue ID: 8994                           |
| Subject: Question on longer span bridges |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 3/13/2009 5:17:16 PM |
| Modified By: hlee                     | 6/7/2013 8:32:06 PM  |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:06:47 PM

HRS AASHTO

1295

Complete Issue Information

|                 |                    |      |         |
|-----------------|--------------------|------|---------|
| Goodrich, Brian | Assigned           |      |         |
| Lee, Herman     |                    |      |         |
| Lee, Herman     | New                | High | Bug     |
|                 | Assigned           |      |         |
|                 | Information Needed |      |         |
|                 | Assigned           |      |         |
|                 | Suspended          |      |         |
|                 | Assigned           |      |         |
|                 | Suspended          |      |         |
|                 | System Test        |      |         |
|                 | Assigned           |      |         |
|                 |                    |      | Unknown |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 010-0024.xml        |             |
|      | SystemError.png     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 3/13/2009 1:20:49 PM Eastern Daylight Time  
 AASHTO Manual for Condition Evaluation of Bridges Section 7.4.2 states that for spans over 200 ft in length the selected legal load should be spaced with 30 ft clear distance between vehicles to simulate a train of vehicles in one lane and a single vehicle load should be applied in the adjacent lane(s).

And the New AASHTO The Manual for Bridge Evaluation in section 6B.9.2 - states essentially the same.

I can't seem to find how or if Virtis handles these rules within the product. So I guess I'm looking for an answer if the live load model follows this AASHTO rule or not.  
 Thanks

FROM: Todd Thompson DATE: 3/13/2009 1:30:47 PM Eastern Daylight Time  
 And while I'm asking - I'll ask about LRFR rating also - AASHTO The manual for Bridge Evaluation Section 6A.4.4.2 - has a similar greater than 200 ft span length requirement by using the AASHTO

4/19/2016 3:06:47 PM

HRS AASHTO

1296

Complete Issue Information

Type 3-3 multiplied by 0.75 and combined with a lane load of 0.2 klf.

FROM: Brian Goodrich DATE: 3/13/2009 2:02:30 PM Mountain Daylight Time  
The BRASS-LFD engine does not consider the legal train loading of MCEB 7.4.2. This load model has never been coded in that engine. You could create an agency vehicle that models the axles from both trucks, but you would have to do something about the vehicle in the adjacent lane.

The BRASS-LRFD/LRFR engine does support the legal train live load model from the new MBE. The "Lane-Type Legal Load" vehicle must be specified and the "Legal Pair" box must be checked on the Advanced tab.

FROM: Brian Goodrich DATE: 1/28/2010 1:31:57 PM Mountain Standard Time  
I commented on the functionality in BRASS. What about the Virtis engines?

FROM: Jim Duray DATE: 1/28/2010 5:42:56 PM Eastern Standard Time  
The Virtis UI does not permit the user to enter an adjacent vehicle so 7.4.2 is not considered. Virtis does evaluate 6A.4.4.2.

FROM: Herman Lee DATE: 7/14/2010 10:39:57 AM Eastern Daylight Time  
Changed Status to Maintenance.

FROM: Herman Lee DATE: 6/10/2011 6:45:19 PM Eastern Daylight Time  
See also Incident 9965.

FROM: Herman Lee DATE: 6/7/2013 4:20:14 PM Eastern Daylight Time  
This functionality is included in the Adjacent Vehicle Rating enhancement in the 6.6 release. Related to Incident 10776.

Issue ID: 8995  
Subject: NSG - detailed rating results are zero

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrrecht, Tim 3/13/2009 8:55:34 PM  
Modified By: hlee 12/12/2010 6:30:55 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Rating Results.png     |             |
|      | Ratings Comparison.png |             |
|      | 0540512new.xml         |             |
|      | 0540512.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 3/13/2009 4:57:12 PM Eastern Daylight Time  
 After rating this structure for a non-standard gage truck, I get a rating but when I select "Detailed" under lane/impact type I get a rating of 0 for all for cases.

FROM: Herman Lee DATE: 3/14/2010 5:18:45 PM Eastern Daylight Time  
 I got below error message when I tried the structure in 6.0 and 6.1. Incident 9640 reported the same error message.

```
=====
Unable to generate model.
05:35:28 PM - Line 1817 in source file .\AbxVirtisDistFactEngine.cpp.
```

```
Unable to generate girder system finite element model.
05:35:28 PM - Line 575 in source file .\AbxVirtisDistFactModelGen.cpp.
```

```
All members do not have the same number of nodes! Model cannot be generated!
05:35:28 PM - Line 1621 in source file .\AbxVirtisDistFactModelGen.cpp.
```

```
=====
```

FROM: Herman Lee DATE: 5/27/2010 10:33:09 AM Eastern Daylight Time  
 After I changed the tolerances to the Illinois settings (0.01' and 0.125") specified in Incident 9951, I'm able to complete the NSG analysis using 6.2 Beta 2. Ratings are reported for all the lane/impact combinations in the Detailed selection.

Tim, please see whether you are able to reproduce the 0 rating in the Detailed selection. Thanks.

FROM: Herman Lee DATE: 6/23/2010 4:08:57 PM Eastern Daylight Time  
 E-mail from Phillip Litchfield (IDOT). The "Not enough storage" error screen capture in the e-mail is attached in this incident.

4/19/2016 3:06:47 PM

HRS AASHTO

1298

Complete Issue Information

=====

Herman,

The tolerance settings corrected that error. But now I'm getting a "Not enough storage" error. I've tried restarting the PC and increasing the increment in the vehicle path from 2' up to 16', both didn't help. I'm running the analysis using the virtis std. engine and on a newer PC with 4Gb of ram.

Thanks,

=====

Looks like the NSG analysis completed ok but the Virtis Std Engine (Virtis LFD) has problem loading up when trying to use the NSG distribution factors to perform the rating.

FROM: Herman Lee DATE: 12/12/2010 1:11:24 PM Eastern Standard Time  
 The analysis has exceeded the 2 GB limit for each process on 32-bit Windows OS.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 8996                                          |
| Subject: LF rating factor significantly lower than LRFR |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Armbrecht, Tim          | 3/19/2009 6:24:35 PM   |
| Modified By: hlee                     | 10/15/2011 10:35:42 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Goodrich, Brian | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
| Duray, Jim      | Assigned           |          |          |
| Lee, Herman     | Information Needed |          |          |
|                 | Assigned           |          | Support  |
|                 | Information Needed |          |          |
| Goodrich, Brian | Assigned           |          |          |

Complete Issue Information

|             |
|-------------|
| Third Party |
|-------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | S-24-003 (OUJ) Springfield.xml |             |
|      | FB8'_-_Section_Losses.OUT      |             |
|      | FB8'_Alt.OUT                   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Ambrecht DATE: 3/19/2009 2:32:16 PM Eastern Daylight Time  
 Could you please help me track down the capacity equations being used by BRASS, BRASS-LRFD and VSE? For the attached structure, we get a LRFR rating factor of 1.125 (with 4" FWS). However, for LFR, we get 0.808 and 0.768 for BRASS and VSE respectively. I have to admit that I'm surprised with the difference, especially since I was under the impression that the capacity calculations are pretty similar between LRFD and the Std. Specs. I can see the capacity numbers, but I can't tell how they were determined. Since the structure is OK under the new code, but not the old, this is causing some consternation in our Design section. Is this bug, or if it's legitimate, what is the reason? Thanks, Tim

FROM: Herman Lee DATE: 3/21/2009 2:17:14 PM Eastern Daylight Time  
 I'm able to reproduce similar LRFR rating factor using the "2 - 1st E Int-x" member and HS 20 vehicle but not able to reproduce similar LFR rating factors listed above. Please give us more details on reproducing above factors with the attached bridge.

FROM: Brian Goodrich DATE: 3/23/2009 12:45:40 PM Mountain Daylight Time  
 The steel capacities should be fairly close between the specs, unless the engines are not treating the sections the same regarding compactness.

Also include the vehicles you are rating for each method.

FROM: Tim Ambrecht DATE: 4/2/2009 3:11:22 PM Eastern Daylight Time  
 OK, we investigated further on our end. It now looks like the only difference in ratings is between the line-girder & girder system is the BRASS LFD rating. It appears that the system comes out significantly higher than the line girder. However, the VSE LFD rating is about the same for both. I attached a new xml that includes both alternatives (line and system).

Brian, at this point, we are just using the standard HS 20 vehicles.

FROM: Brian Goodrich DATE: 7/2/2009 3:35:24 PM Mountain Daylight Time

4/19/2016 3:06:48 PM

HRS AASHTO

1300

## Complete Issue Information

I believe the difference in the BRASS LFD ratings is due to a difference in the member alternative engine properties. The "Compactness at the pier" is set to non-compact for one and compact for the other. I get very close ratings between the system and line once I make these consistent.

FROM: Tim Armbrecht DATE: 7/7/2009 10:59:10 AM Eastern Daylight Time

This resolves our issue with BRASS. However, the VSE numbers are still very low. Is it because VSE does not consider compactness?

FROM: Brian Goodrich DATE: 7/9/2009 9:31:40 AM Mountain Daylight Time

The BRASS issue is resolved. Assigned to Baker to comment on the VSE.

FROM: Jim Duray DATE: 1/13/2010 10:57:27 AM Eastern Standard Time

Herman - I think this should be assigned to Hasmukh to determine why VSE RF are low. If you agree please do so.

FROM: Herman Lee DATE: 1/13/2010 4:03:29 PM Eastern Standard Time

When any section does not qualify as compact in Virtis Std Engine, the summary will reflect the lowest non-compact rating factor. Virtis Std Engine does list both compact and non-compact rating factors in the output file when a section is qualifies as compact (see attached png file). The listed compact rating factors are very close to those reported by the BRASS Engine.

FROM: Tim Armbrecht DATE: 1/26/2010 1:07:50 PM Eastern Standard Time

But doesn't it qualify as compact? Isn't that why VSE shows those (compact) numbers and why LRFR has higher load ratings? If it's compact, shouldn't Virtis list those numbers in the summary instead of the non-compact numbers?

FROM: Herman Lee DATE: 1/26/2010 3:31:42 PM Eastern Standard Time

Tim, only some sections are qualify as compact. In the BAR7 program that Virtis Std Engine based on, when any section does not qualify as compact along the span, the critical will reflect the lowest non-compact rating factor of all sections. This is a conservative approach in the BAR7 Program. Do you want to change this to an enhancement request for the Virtis Std Engine?

The attached Ratings Comparison file listed ratings from different engines in different settings. The operating rating is 1.227 shear for LRFR, 1.354 flexural for BRASS LFD (Compactness at pier not selected in engine properties) and 1.993 serviceability for BRASS LFD (Compactness at pier selected). The limit states are different between LRFR and LFR. Please let us know if you would like us to investigate further.

FROM: Tim Armbrecht DATE: 3/19/2010 4:21:34 PM Eastern Daylight Time

Herman, were we ignoring shear before? Why did those shear ratings for LRFR all of a sudden pop up and cause the difference in limit states?

FROM: Herman Lee DATE: 3/21/2010 12:18:44 PM Eastern Daylight Time

No, the option to ignore shear is not available for steel girder.

Brian, do you have any comments on the difference in limit states between LRFR and LFR?

Issue ID: 8997

Subject: Floorbeam with section losses rates higher than one without

4/19/2016 3:06:48 PM

HRS AASHTO

1301



Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Goodrich, Brian 3/19/2009 8:16:30 PM |
| Modified By: bgoodrich 4/27/2009 8:31:13 PM        |
| Priority: High                                     |
| Category: Bug - BRASS                              |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | LA6 Simple Span Stringer Model.xml |             |
|      | LADOTD Permit Vehicles.pdf         |             |
|      | LADOTD Permit Vehicles.xml         |             |
|      | LA6 Continuous Stringer Model.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 3/19/2009 2:16:54 PM Mountain Daylight Time  
 E-mail thread between Julia Carroll and Krisha Kennelly:

-----Original Message-----

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
 Sent: Wednesday, March 18, 2009 1:54 PM  
 To: Julia Carroll; Goodrich@BridgeTech-Laramie.com  
 Subject: RE: Issue: Floorbeam with section losses rates higherthanonewithout

Hi Julia,

4/19/2016 3:06:48 PM

HRS AASHTO

1302

## Complete Issue Information

I am forwarding your problem to BridgeTech, they maintain the BRASS programs for Wyoming DOT.

I see in the FB8'\_alt.out file a Multiple Presence Truck exists on page 1 of the output but this truck does not show up in the FB8'\_Section\_Losses.out even though the LL input appears the same between these 2 files. That is why the alt with section losses has the higher rating factor.

Regards,  
Krisha Kennelly, PE  
Michael Baker, Jr. Inc

>>> "Carroll, Julia" <Julia.Carroll@aecom.com> 3/18/2009 3:41 PM >>>

Those are not the results I get. I was running HS-20 (no lane). I get the same governing location, but an inventory LFD rating of 1.499 for the member without losses. Attached are the BRASS output files for each member.

-----Original Message-----

From: Bridgewater [mailto:Bridgewater@mbakercorp.com]

Sent: Wednesday, March 18, 2009 3:36 PM

To: Carroll, Julia

Subject: RE: Issue: Floorbeam with section losses rates higher thanonewithout

Hi Julia,

I ran both of these fb mbr alts for an HS20 truck using the BRASS LFD engine and I get the following results:

FB8' Section Losses controlling Inv Rating = 1.391 (for lane) at 18.9' which is 9.15' into Span 2

FB8' controlling Inv Rating = 1.388 (for lane) at 18.9' which is 9.15' into Span 2

I don't see any large difference in the rating factors and I don't see any difference in the live load between these runs.

There is a slight difference in the section properties between these 2 runs due to BRASS using the rolled shape section properties for the FB8' alternative and BRASS computing the section properties for the FB8' Section with losses. The BRASS input for the FB8' Section with losses alternative consists of plate descriptions for the beam because a portion of the beam has losses.

The BRASS calculated plate section properties at 18.9' (which has no deterioration) end up very slightly larger than the rolled shape section properties so the alt with section loss has a slightly higher rating factor.

4/19/2016 3:06:48 PM

HRS AASHTO

1303

Complete Issue Information

Please run these 2 alts again for the HS20 truck and see if you still get different live load values between the 2 alts. If you do please send me the generated BRASS input files and output files so I can determine what is different between them.

Regards,  
Krisha Kennelly, PE  
Michael Baker, Jr. Inc

>>> "Carroll, Julia" <Julia.Carroll@aecom.com> 3/18/2009 2:19 PM >>>  
The floorbeams are under FB8'-SectionLoss in Truss-Span1\_2. The XML file is attached. I was having this issue using HS20. I did not test it with any other trucks.

Thanks.

-----Original Message-----

From: Bridgeware [mailto:Bridgeware@mbakercorp.com]  
Sent: Wednesday, March 18, 2009 1:52 PM  
To: Carroll, Julia  
Subject: Re: Issue: Floorbeam with section losses rates higher than onewithout

Hi Julia,

Can you export your bridge to an XML file and email it to us so we can investigate your problem. Please identify the two Floorbeam Member Alternatives you are analyzing and the vehicle used in the analysis.

Regards,  
Krisha Kennelly, PE  
Michael Baker, Jr. Inc.

>>> "Carroll, Julia" <Julia.Carroll@aecom.com> 3/18/2009 9:43 AM >>>  
Hello,

I have two identical Floorbeam Member Alternatives in a truss-floorbeam-stringer model. One has losses on the top and bottom flanges, the other has gross dimensions. When I remove the losses, the floorbeams rate exactly the same, but when I re-enter the losses and run either ASD or LFD, the floorbeam with losses rates higher than the original. Looking through the BRASS output files, I have noticed that the dead loads are identical (except the self-load in the section exhibiting losses, which is correct as is), but the live load being applied to these floorbeams is significantly different (lower live load on the beam with losses). As best I can tell, the virtual stringer analyses are completely identical. Can you provide any insight? Is this a bug? What can I do?

Thank you,

4/19/2016 3:06:48 PM

HRS AASHTO

1304

Complete Issue Information

Julia Carroll

Structural Engineer, Boston

AECOM Transportation

D 617.371.4478

AECOM

66 Long Wharf, 2nd Floor

Boston, MA 02143

T 617.723.1700 F 617.723.6856

FROM: Brian Goodrich DATE: 3/19/2009 2:19:23 PM Mountain Daylight Time  
I have confirmed that the source of the floorbeam issue is in the BRASS engine. Therefore, I requested a work order from the Wyoming DOT. Once I receive authorization from them, I will address the issue.

FROM: Brian Goodrich DATE: 3/19/2009 2:20:01 PM Mountain Daylight Time  
I ran this in 6.0 release and got the same output as Julia. I just had to create a copy of the HS-20 vehicle and remove the lane load.

The multiple presence truck does not show up in the details summary for the floorbeam with losses. Both the data files generated by the export have the multiple presence truck. Because the losses are considered, the cross section and span commands are different between the two data files. There has to be some kind of problem processing the combination of commands in the file with losses.

FROM: Brian Goodrich DATE: 4/6/2009 12:34:24 PM Mountain Daylight Time  
WYDOT assigned this issue to BRASS Problem Log 882.

FROM: Brian Goodrich DATE: 4/27/2009 2:29:40 PM Mountain Daylight Time  
This issue was corrected in BRASS-GIRDER(LRFD) 2.0.2. Fixed for Virtis 6.2.

Issue ID: 8998

Subject: unable to verify the live load results calculated by Virtis

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

4/19/2016 3:06:48 PM

HRS AASHTO

1305

### Complete Issue Information

|                               |                      |
|-------------------------------|----------------------|
| Submitted By: Goodrich, Brian | 3/20/2009 4:22:35 PM |
| Modified By: bgoodrich        | 7/9/2009 3:38:54 PM  |
| Priority: High                |                      |
| Category: Unknown             |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Big TVA Truck 09.xml |             |
|      | 40SR0760014.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 3/20/2009 10:24:06 AM Mountain Daylight Time  
Submitted by Rachel Mertz:

>>> "Rachel Mertz" <RLMertz@modjeski.com> 3/17/09 2:32 PM >>>  
I am unable to verify the live load results calculated by Virtis.

I am performing a girder line analysis for a two-span continuous girder. Both spans are 25' for a total bridge length of 50'. The controlling live load distribution factor is 0.562. I verified the results for the lane load. My hand calculations compared to Virtis' results are as follows. I am only providing the results for the tandem truck - this truck controlled per Virtis (the HL93 controlled per my hand calculations). Also, I did not calculate results for the rear axle variable spacing. My HL93 results used axle spacings of 14' - however, this difference does not explain the major difference in our results. A note within the output states that the Virtis live load results include impact and the distribution factor; therefore, my results also include these multipliers. (Impact = 1.33.)

4/19/2016 3:06:48 PM

HRS AASHTO

1306

Complete Issue Information

|                          |             |       |
|--------------------------|-------------|-------|
| My Hand Calculations     | Virtis      |       |
| Tandem, Max +Mom<br>ft-k | 128.9 ft-k  | 126.8 |
| Max -Mom<br>-174.7 ft-k  | -109.1 ft-k |       |

I was also able to verify my uniformly distributed dead load results. So, it appears the discrepancy is with the moving loads.

Please provide some insight.

Rachel L. Mertz, P.E., S.E.

Modjeski and Masters, Inc.

#4 Sunset Hills Professional Center

Edwardsville, IL 62025

618-659-9102

618-659-9029 (fax)

FROM: Brian Goodrich DATE: 3/20/2009 10:26:07 AM Mountain Daylight Time  
Hi Rachel,

I've been assigned to investigate your live load issue with Virtis/BRASS.

I input the structure you described into Virtis, but I'm unable to duplicate the moments. The moments that I am getting from BRASS are as follows:

Design Tandem (Max +M) = 160.2 ft-k  
Design Tandem (Max -M) = -87.3 ft-k

Design Truck (Max +M) = 127.5 ft-k  
Design Truck (Max -M) = -116.9 ft-k

The above moments have not been combined with the lane load, but have been factored by 1.33 for impact and a distribution factor of 0.562.

4/19/2016 3:06:48 PM

HRS AASHTO

1307

Complete Issue Information

Because I'm not able to match your results with my bridge, I will need to get a copy of yours. Please export your Virtis bridge to an XML file and send it to me. Also, let me know what version of Virtis you are using. If you are using one of the Analysis Settings templates that came with Virtis, indicate which one.

Regards,

Brian Goodrich  
BridgeTech, Inc.

FROM: Brian Goodrich DATE: 3/20/2009 10:26:20 AM Mountain Daylight Time  
E-mail from Rachel Mertz:

Brian,

I attached my exported model. I am using Virtis, Version 6.0.0. From the Analysis Settings tab, I was using the LRFR Rating Method, with a HL-93(US) vehicle for the design load ratings for both inventory and operating.

Please feel free to call me if you need any additional information or would like to discuss the problem. Thanks.

Rachel L. Mertz, P.E., S.E.  
Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center  
Edwardsville, IL 62025

618-659-9102  
618-659-9029 (fax)

FROM: Brian Goodrich DATE: 3/20/2009 10:26:57 AM Mountain Daylight Time  
Rachel,

I received your bridge and was able to duplicate the moments you reported. I compared this to the model I entered and tracked down one difference. I used one pinned support and two rollers. Your model is has the middle support completely fixed. Was this your intent?

Brian Goodrich  
BridgeTech, Inc.

FROM: Brian Goodrich DATE: 3/23/2009 12:22:07 PM Mountain Daylight Time  
E-mail from Rachel Mertz:

Thanks Brian for the help with the live load. That was the problem with the model. Apparently, I had been staring at it for far too long and missed the obvious.

I am now trying to pinpoint a difference between my hand calculations and the model for the resistance.

4/19/2016 3:06:48 PM

HRS AASHTO

1308

## Complete Issue Information

Using the model that you currently have (with pin and roller supports), the virtis output shows that the section is not compact and meets the requirements for noncompact web sections. However, I am calculating that the section is compact. Do you have any insight?

Rachel L. Mertz, P.E., S.E.  
Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center  
Edwardsville, IL 62025

FROM: Brian Goodrich DATE: 3/23/2009 12:23:10 PM Mountain Daylight Time  
There is an engine properties setting that must be changed to allow BRASS to consider the section as compact. Open the BRASS-LRFR engine properties for your member alternative (Interior Stringer). On the Miscellaneous tab, check the "Use Appendix A6..." box. When this box is checked, BRASS determines if the section is compact or not based on the specification. Otherwise, BRASS bypasses Appendix A6 and just moves on to AASHTO 6.10.8. Please let me know if this addresses your issue.

FROM: Brian Goodrich DATE: 4/1/2009 9:49:31 AM Mountain Daylight Time  
E-mail from Rachel Mertz:

>>> "Rachel Mertz" <RLMertz@modjeski.com> 3/26/09 1:47 PM >>>  
If I am rating a structure for more than one permit vehicle, does virtis calculate an individual load factor for each permit loading based on the vehicle's axle weight on the bridge? In the output summary, only one load factor is listed.

Also, for a continuous structure, the number of axles on the structure producing the maximum positive and negative moments would be different. Is a different load factor calculated for different points of interest based on the varying number of axles on the structure required to produce the maximum moment at each point of interest?

Rachel L. Mertz, P.E., S.E.  
Modjeski and Masters, Inc.

FROM: Brian Goodrich DATE: 4/1/2009 9:59:45 AM Mountain Daylight Time  
The BRASS engine used by Virtis 6.0 has a limitation of one permit live load factor for the entire bridge. The live load factor for the first permit vehicle encountered by the BRASS export will be used. I have been working this week to enhance BRASS so a live load factor for each permit vehicle is allowed. Virtis does calculate this live load factor for each vehicle. Look for this change in Virtis 6.1.

The weight is determined by placing the vehicle on the bridge to result in the maximum weight of axles on the bridge. This calculation is performed in the export process to determine the live load factor.

4/19/2016 3:06:48 PM

HRS AASHTO

1309



Complete Issue Information

FROM: Brian Goodrich DATE: 4/1/2009 9:59:56 AM Mountain Daylight Time  
E-mails from Rachel Mertz:  
Sent: Monday, March 30, 2009 10:37 AM

I had assumed this might be the case and reanalyzed the structure by running one permit vehicle per analysis. However, my results showed that a new load factor was not calculated for each vehicle. I wonder whether virtis is only using the ADTT to calculate the load factor. Anyway, it does not appear that the axle loads on the bridge are factored into the equation.

Rachel L. Mertz, P.E., S.E.  
Modjeski and Masters, Inc.

I attached my simple 25' span model, the vehicles, and also a pdf of the vehicles with my load factor calculation summary for LASDV 1 and LASDV 2. For either run, virtis is using a load factor of 1.36. I am calculating a load factor of 1.4002 for LASDV 1 and 1.4524 for LASDV 2.

Rachel L. Mertz, P.E., S.E.  
Modjeski and Masters, Inc.

FROM: Brian Goodrich DATE: 4/1/2009 10:01:20 AM Mountain Daylight Time  
I reviewed your simple-span bridge, vehicles, and live load factors. Based on your live load factor calculations, the permit vehicle must be using an "Unlimited Crossings" frequency from the table. The default frequency for a permit vehicle in the Vehicle Properties window (use Advanced button on Analysis Settings window) is "Single Trip." I changed this setting and the calculated live load factors matched yours.

Also, the weight of the LASDV2 vehicle on the bridge is 67 kips using the middle 4 axles.

Issue ID: 9000  
Subject: Unable to generate model for NSG analysis.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Lee, Herman 3/26/2009 6:18:16 PM  
Modified By: hlee 5/27/2010 5:39:56 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:49 PM

HRS AASHTO

1310

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | G3 Interior_Girder_10S.dat  |             |
|      | 9027_G3                     |             |
|      | Interior_Girder_10S_A.out   |             |
|      | 9027_G3                     |             |
|      | Interior_Girder_10S_A.dat   |             |
|      | G2 Interior_Girder_11S.dat  |             |
|      | 00112 - 82182112000S348.xml |             |
|      | G3 run-time error.png       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/26/2009 2:20:45 PM Eastern Daylight Time  
 Submitted on behalf of Rob Benshoof, TN DOT.

Tolerance for ft = 0.01  
 Tolerance for in = 0.1

Error message:

```
=====
Unable to generate model.
02:15:23 PM - Line 1810 in source file .\AbxVirtisDistFactEngine.cpp.
```

```
Unknown error while generating finite element model!
02:15:23 PM - Line 739 in source file .\AbxVirtisDistFactModelGen.cpp.
=====
```

I'm able to complete the NSG analysis if the tolerances are back to the defaults.

FROM: Krisha Kennelly DATE: 3/27/2009 10:20:59 AM Eastern Daylight Time  
 The span length for span 4 is entered as 74.88' on the Structure Definition window. Span 1 is 74.875' so I suspect the intent was for Span 4 to also be 74.875'.

The length of the deck is entered as 301.25' which is total bridge length using 74.875' for Span 4.

If I change the length of Span 4 to 74.875' the NSG will run with the above tolerances. This change will let you analyze your bridge, I will continue investigating to fix the problem.

4/19/2016 3:06:49 PM

HRS AASHTO

1311

Complete Issue Information

FROM: Herman Lee DATE: 5/27/2010 1:13:04 PM Eastern Daylight Time  
We fixed a NSG model generation bug in 6.2. I tested the bridge with the NSG vehicle attached in this incident. I'm able to complete the NSG analysis.

|                               |
|-------------------------------|
| Issue ID: 9027                |
| Subject: G3 array size error. |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Dombrowski, Chris       | 4/5/2009 3:05:33 PM |
| Modified By: hlee                     | 4/6/2009 9:16:28 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lathia, Has Mukh | Assigned | High     | Bug      |
| Lee, Herman      | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/5/2009 11:07:43 AM Eastern Daylight Time  
Submitted on behalf of Chris Dombrowski, Williams & Works.

This incident is for the G3 array size error. Incident 9028 is for the member alternative copy issue.

Received Bridgewater e-mail:

=====  
Please see the attached .xml file. I previously sent a version of this file which had an array size error

Complete Issue Information

(See Virtis Incident 8992). As a workaround to this error, I have separated the file into 3 separate superstructures to reduce the array size and get the girders to run.

For the superstructure definition "WB Spans 9-15 (Continuous Pin and Hanger)", I was able to enter girder G2 and get it to run. However, when I copied the information to girder G3 and adjusted the properties for the different span lengths, I received an array size error when I tried to run G3. The only differences between G2 and G3 are the span lengths and plate girder flange thicknesses for Spans 1 and 5. Spans 2, 3, 4, 6, and 7 are exactly the same. Can you tell me why I am getting an array size error on one girder and not the other?

Also, when I copied the data from G2 to G3 Virtis recalculates all of the start distances. For example, the transverse stiffener spacings for Spans 2, 3, 4, 6, and 7 are exactly the same for Girders G2 and G3. However, when I copy the member alternative Virtis changes all of the start distances for the transverse stiffeners in these spans. Therefore, I had to retype all of the stiffener spacings for G3. Virtis also changes the distances for the hinge locations and deck reinforcement. Can you tell me how to copy the member alternative without having Virtis change the start distances for these spans?

Thank you,

CHRISTOPHER DOMBROWSKI, PE  
Project Engineer

E-mail: dombrowski@williams-works.com

Williams & Works  
549 Ottawa Avenue, N.W.  
Grand Rapids, MI 49503

=====

FROM: Has Mukh Lathia DATE: 4/6/2009 2:00:40 PM Eastern Daylight Time  
There appear to be duplicate Steel Member Properties ranges at the ends of spans 1, 2, 3 and 4. After removing these duplicate input lines, G3 runs fine. Please check Virtis input for this girder. The revised input file and corresponding Virtis Std Engine output files are attached.

FROM: Herman Lee DATE: 4/6/2009 4:38:17 PM Eastern Daylight Time  
Virtis computed span lengths for G3 are shown in the G3 Member window. To eliminate those duplicate lines, please enter more precise ranges so the top and bottom flange ranges end at each support. For example, the computed length for span 1 is 115.928866 ft but the entered first top flange length is 115.927 ft. This results in 2 cross sections.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 9037<br>Subject: Connection and Lacing in Truss Input Command |
|-------------------------------------------------------------------------|

4/19/2016 3:06:49 PM

HRS AASHTO

1313

Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Li, Xinmei                         |
| Submitted By: Bouscher, Justin 4/14/2009 5:51:33 PM |
| Modified By: xli 5/18/2009 8:09:38 PM               |
| Priority: High                                      |
| Category: Bug                                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Assigned  | High     | Bug         |
|                 | Resolved  |          |             |
|                 | Assigned  |          |             |
| Lee, Herman     |           | Critical |             |
|                 | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | L1 vs L7 2-2-10.png     |             |
|      | BIN 04F 2-2-10.xml      |             |
|      | BIN 04F South Truss.pdf |             |
|      | 04F.xml                 |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/14/2009 1:55:09 PM Eastern Daylight Time  
See attached.

FROM: Xinmei Li DATE: 5/18/2009 3:29:26 PM Eastern Daylight Time

4/19/2016 3:06:49 PM

HRS AASHTO

1314

Complete Issue Information

fixed for next build

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 9038                                                 |
| Subject: Unsymmetrical concurrent forces for symmetrical truss |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 4/16/2009 7:44:34 PM |
| Modified By: hlee                     | 7/2/2012 5:48:52 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/16/2009 3:46:17 PM Eastern Daylight Time  
Submitted on behalf of Joshua Colella, Michael Baker Engineering, Inc.

Received via e-mail (jcolella@mbakercorp.com):

=====

In regards to this structure. We are also noticing that we are obtaining different coincident force

4/19/2016 3:06:50 PM

HRS AASHTO

1315

Complete Issue Information

reactions for symmetric nodes. The truss is symmetrical about L4U4 and, for example, are obtaining different values for the vertical member at L1 and L7 (which, due to symmetry, are the same node).

L1U1 @ L1 with 39.54 kips and concurrent forces of 32.42 kips at the lower chords  
L&UL @ L7 with 39.54 kips and concurrent forces of 44.42 kips at the lower chords

I would expect these concurrent forces to be the same. Given the symmetry of the structure, is there any reason that these differences are occurring?

=====

FROM: Jim Duray DATE: 5/15/2009 3:47:30 PM Eastern Daylight Time  
I ran this truss on an alpha build of 6.1 and could not reproduce the unsymmetrical results described above. I believe the work done of the influence line loading for other incidents included fixing this problem as well.

FROM: Herman Lee DATE: 2/2/2010 7:57:46 AM Eastern Standard Time  
E-mail from Joshua Colella:

=====

Another update; it appears that we are still encountering the analysis engine's inaccuracy described in AASHTOware technical support incident 9038 (un-equal coincident forces at symmetrical truss nodes).

We have the model up and running using the workaround. I also re-analyzed another truss model for a bridge we submitted to our client prior to the release of Virtis 6.1 and again, encountered the above inaccuracy issue.

=====

Attached the 6.1 bridge file (BIN 04F 2-2-10.xml) and a screen capture (L1 vs L7 2-2-10.png) to illustrate the issue.

FROM: Jim Duray DATE: 4/27/2010 8:07:09 AM Eastern Daylight Time  
I believe the unsymmetric results are for the hanger members only (L1U1, L3U3, L5U5, L7U7). there are two truck positions that cause the maximum effect (for each hanger). The Influence lines for the concurrent actions are being loaded with the vehicle moving Left to Right, but Right to Left may cause larger forces in the concurrent members.

Modify the infl loader to store both and apply to the concurrent members and select the max/min.

FROM: Jim Duray DATE: 4/28/2010 2:09:17 PM Eastern Daylight Time  
Herman - I added to the infl line loader class the tracking of multiple vehicle positions that result in the same max/min action. Please make the changes to the concurrent forces for truss.

FROM: Herman Lee DATE: 7/2/2012 11:00:56 AM Eastern Daylight Time  
The reported concurrent forces are based on the first truck position that causes the critical force in the primary member. I added a note in the report for the 6.4 Release.  
The concurrent forces report needs to be enhanced when more than one truck positions cause the critical force in the primary member.

Issue ID: 9039

4/19/2016 3:06:50 PM

HRS AASHTO

1316

Complete Issue Information

Subject: How to Model Floor beam resting on Pier and Fascia Main Girder

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Pandey, Sita Ram 4/20/2009 7:37:40 PM  
Modified By: hlee 4/20/2009 8:16:39 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                 | Description |
|------|-----------------------------------------------------|-------------|
|      | 360Ban.xml                                          |             |
|      | Rating Method Differences from Bridge Workspace.doc |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Whittemore DATE: 4/20/2009 3:50:20 PM Eastern Daylight Time  
I have a Steel Multigirders Bridge in which one end of floor beam rest on Pier and the other end of floor beam rest on Fascia Main girder. I can not find the way to model this bridge in virtis 5.6. I have attached the framing plan for your reference

Sita Ram Pandey  
Structural Engineer  
AI Engineers Inc

FROM: Herman Lee DATE: 4/20/2009 4:12:54 PM Eastern Daylight Time  
Virtis doesn't support the floor beam framing configuration you described.

4/19/2016 3:06:50 PM

HRS AASHTO

1317



Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 9040                         |
| Subject: Differences in Rating Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Horton, Doug            | 4/21/2009 1:08:28 PM |
| Modified By: hlee                     | 1/5/2010 2:42:38 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Doug Horton DATE: 4/21/2009 9:20:03 AM Eastern Daylight Time  
We have some structures that provide different ratings when using LFD vs. Member Alternative. The file is attached, as is a document providing screenshots of the differences. We have reviewed the file in depth and do not see anything obvious that is causing the difference.

4/19/2016 3:06:50 PM

HRS AASHTO

1318

Complete Issue Information

Please review and advise as to why the two options do not provide the same results.

Doug Horton

FROM: Herman Lee DATE: 4/21/2009 3:24:02 PM Eastern Daylight Time  
Looks like one rating is for single lane and the other is for multi-lane. Please make sure "Single Lane Loaded" is not checked inside one of your Analysis Settings Template. Let us know whether this solve your problem.

FROM: Herman Lee DATE: 10/30/2009 2:35:52 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:06:16 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:45:57 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

Issue ID: 9052  
Subject: Check In/Check Out Problems on Floorsystems

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Koenig, David 4/23/2009 8:54:28 PM  
Modified By: mordoobadi 11/8/2011 5:54:55 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Li, Xinmei         |          |          |          |

4/19/2016 3:06:51 PM

HRS AASHTO

1319

### Complete Issue Information

|                    |          |      |     |  |
|--------------------|----------|------|-----|--|
|                    | Resolved |      |     |  |
| Ordoobadi, Mehrdad | Resubmit |      |     |  |
| Lee, Herman        | Resolved | High | Bug |  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 4/23/2009 4:59:18 PM Eastern Daylight Time

We are having problems with Virtis not wanting to run a floorsystem unless the bridge is checked out. It does this from the Bridge Explorer and within the actual bridge. It generates the error messages shown below when you try to rate it. We have also noticed that when you have the bridge checked out, it shows the floorbeam definitions, stringer definitions, stringer member alternatives, and floorbeam member alternatives as being locked. These two issues may or may not be related. The BMD file is attached.

Unable to analyze Floorbeam Member Alternative: Rolled Shape

Unable to analyze Stringer Member: Unit4 Stringer7

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer6

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer5

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer4

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer3

Unable to perform Stringer Dead Load Analysis when

4/19/2016 3:06:51 PM

HRS AASHTO

1320

Complete Issue Information

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer2

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer1

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Floorbeam Member Alternative: Rolled Shape

Unable to analyze Stringer Member: Unit4 Stringer7

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer6

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer5

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer4

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer3

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer2

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit4 Stringer1

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer7

Unable to perform Stringer Dead Load Analysis when

Complete Issue Information

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer6

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer5

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer4

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer3

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer2

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer1

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Floorbeam Member Alternative: Rolled Shape

Unable to analyze Stringer Member: Unit3 Stringer7

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer6

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer5

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit3 Stringer4

Unable to perform Stringer Dead Load Analysis when

Complete Issue Information

- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit3 Stringer3
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit3 Stringer2
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit3 Stringer1
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer7
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer6
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer5
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer4
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer3
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer2
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged
- OR
- Bridge is not checked-out
- Unable to analyze Stringer Member: Unit2 Stringer1
- Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged

Complete Issue Information

OR

- Bridge is not checked-out  
Unable to analyze Floorbeam Member Alternative: Rolled Shape  
Unable to analyze Stringer Member: Unit2 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

Complete Issue Information

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Floorbeam Member Alternative: Rolled Shape  
Unable to analyze Stringer Member: Unit1 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged



Complete Issue Information

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit4 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

Complete Issue Information

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer5  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer4  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer3  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer2  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit3 Stringer1  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer7  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer6  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer5  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer4  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer3  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out

Complete Issue Information

Unable to analyze Stringer Member: Unit2 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out

FROM: Mehrdad Ordoobadi DATE: 9/28/2009 12:03:02 PM Eastern Daylight Time  
This is fixed in 6.2.

May, please add to the help:

If check-in/check-out is enabled, in order for the floor-system analysis to complete successfully from

4/19/2016 3:06:52 PM

HRS AASHTO

1328

Complete Issue Information

the bridge explorer or bridge workspace when a bridge is not checked out, stringer dead load reactions should first be saved to the database. In order to save the stringer dead load reactions, check-out the bridge, perform rating. Then accept the stringer dead load reactions and save the bridge.

FROM: Xinmei Li DATE: 10/20/2009 1:48:04 PM Eastern Daylight Time  
Added the above text to the help for floor system superstructure def.

FROM: Herman Lee DATE: 5/5/2010 1:56:10 PM Eastern Daylight Time  
I followed the instructions to save the stringer dead load reactions but I'm still not able to rate BID 13 from Bridge Explorer without checking out first.

FROM: Jim Duray DATE: 5/6/2010 9:46:31 AM Eastern Daylight Time  
It worked for me.  
Verified - 6.2 alpha 4.

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 9058                                                                                         |
| Subject: Incorrect capacity in truss rating calculation when both max and min LL forces are in tension |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 4/27/2009 10:51:39 AM |
| Modified By: xli                      | 5/28/2009 7:45:59 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:06:52 PM

HRS AASHTO

1329

Complete Issue Information

FROM: Herman Lee DATE: 4/27/2009 6:52:21 AM Eastern Daylight Time

When both max and min live load forces in a truss member are in tension, rating calculation should use the tension capacity instead of the compression capacity.

FROM: Xinmei Li DATE: 5/28/2009 3:45:49 PM Eastern Daylight Time

Verified fixed for 6.1 Beta1.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 9061                                                          |
| Subject: Skewed Trusses - Stringer Loads Not Included in Truss Analysis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Campisi, Paul           | 4/29/2009 1:46:19 PM  |
| Modified By: dmcdonagh                | 11/16/2010 8:59:02 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:52 PM

HRS AASHTO

1330

### Complete Issue Information

|                                                            |          |      |                |
|------------------------------------------------------------|----------|------|----------------|
| Lee, Herman                                                | New      | High | Bug            |
|                                                            | Assigned |      |                |
| Lee, Herman                                                | New      | High | Bug            |
|                                                            | Assigned |      |                |
| Kennelly, Krisha<br>Bhanushali, Girish<br>Kennelly, Krisha |          |      | Bug - Export 1 |
|                                                            | Resolved |      |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 33505 - 6001320.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 4/29/2009 9:52:35 AM Eastern Daylight Time

I have several Truss-Floorbeam-Stringer models with large skews where stringer dead loads are not passed to the truss finite element engine analysis. This includes the stringer's self-weight and any associated concrete haunch and member loads.

This problem occurs when the end floorbeam skew is large, making the fascia stringer on one side too short for Virtis to analyze and compute dead load reactions. When this error occurs, the entire structure's stringer dead loads(including haunches and member loads) are not accounted for.

Although the log file contains an error message attesting to this, the truss analysis is not terminated. Therefore, in these cases Virtis generated truss member forces are incorrect.

If not all of the truss loads are accounted for in the analysis, Virtis should terminate with no results reported. Otherwise, this can be very misleading if the error is not caught in the log file.

The log file error message is listed below:

```

???Error - Couldn't compute average dead load due to stringer unit 11!
???Error - Unable to compute stringer unit loads ...
    
```

4/19/2016 3:06:52 PM

HRS AASHTO

1331

## Complete Issue Information

An example bridge model where this problem exists is attached. See "Superstructure Definition – Span 1."

FROM: Herman Lee DATE: 5/20/2009 7:37:46 AM Eastern Daylight Time  
Summary of issues for the attached bridge:

1. For the "Heavy (Left) Truss", the leftmost stringer in Unit 11 is too short (0.76 ft) for Virtis to compute the load due to Stringer Unit 11. This is most likely due to the tolerances set in the user's system. Virtis requires stricter tolerances since numerically Floorbeam 11 and Floorbeam 12 are not exactly at the same location on the left truss. I'm able to rate the left truss without any error messages with the default tolerances, which is very strict, set in the system.
2. When truss loads are not accounted for during the analysis, Virtis should terminate the analysis.
3. Although I'm able to complete the analysis in 1 without any error messages, Stringer Unit 11 load is not being applied to the left truss.
4. The computed Stringer Unit 1 and Stringer Unit 11 loads seem low. The average stringer length in Unit 11 is half of Unit 10. The computed load of Unit 10 on left truss is 72.646 kip but the computed load of Unit 11 on left truss is only 4.823 kip.

FROM: Herman Lee DATE: 5/20/2009 10:09:42 AM Eastern Daylight Time  
#2 is fixed for 6.1 Release. Virtis will terminate the truss analysis when loads are not accounted for during the analysis.  
#3 is fixed for 6.1 Release.

Krishna, please confirm the calculations in the ComputeTrussStrUnitAveDeadLoad function.

FROM: Paul Campisi DATE: 5/20/2009 3:51:12 PM Eastern Daylight Time  
Is there a way to get the short stringer to analyze so we can get results?

If not, we should have the choice to override the termination. You can work around the missing stringer loads by putting the missing loads in as Panel Point loads. This way we can still get results.

FROM: Herman Lee DATE: 3/16/2010 8:22:18 AM Eastern Daylight Time  
#4, I confirmed the computed Stringer Unit 1 load, Stringer Unit 11 load and Stringer Unit 10 load. The difference between Unit 10 and Unit 11 is the additional 1 kip/ft "Test Stringer Member Load" in Unit 10 stringers.

I cannot think of a way to rate the short stringer (0.76 ft) without a strict tolerances set in the system. The override option for not computing apply loads on the truss is an enhancement to the truss system analysis. An alternative is to model the truss as truss line superstructure definition. Please let us know if you want to change this to an enhancement request.

Resolved for 6.2 Release.

FROM: Herman Lee DATE: 5/5/2010 2:21:29 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

4/19/2016 3:06:53 PM

HRS AASHTO

1332

## Complete Issue Information

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 9062                                               |
| Subject: Cantilevered Sidewalks Not passed To Truss Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Campisi, Paul           | 4/29/2009 2:48:57 PM |
| Modified By: kkennelly                | 6/10/2010 7:20:01 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 31675 - trainpwc.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Paul Campisi DATE: 4/29/2009 10:56:24 AM Eastern Daylight Time

For Truss-Floorbeam-Stringer models with cantilevered sidewalks, if you input the sidewalk in the "Structure Typical Section" workspace in its cantilever position (not on the structural deck), the sidewalk loads are not passed to the truss finite element analysis engine. Therefore, in these cases Virtis generated truss member forces are incorrect.

If all of the truss loads coded in Virtis are not accounted for in the analysis, Virtis should terminate with no results reported. Otherwise, this can be very misleading if the error is not caught in the log file.

An example bridge model where this problem exists is attached. See "Superstructure Definition – Span

4/19/2016 3:06:53 PM

HRS AASHTO

1333



Complete Issue Information

2 with sidewalk.”

FROM: Herman Lee DATE: 5/20/2009 10:16:18 AM Eastern Daylight Time  
Summary of issues:

1. The reported sidewalk load on truss in the analysis log file is incorrect. Note that each sidewalk load is distributed to each truss based on the Dead Load Distribution method selected in the Superstructure Loads window DL Distribution tab.
2. When truss loads are not accounted for during the analysis, Virtis should terminate the analysis.
3. For the "Light (Right) Truss" in "Span 2 with sidewalk" superstructure definition, the rightmost sidewalk load is not being applied to the right truss.

FROM: Herman Lee DATE: 5/20/2009 11:23:52 AM Eastern Daylight Time  
#1 is fixed for 6.1 Release.  
#2 is a duplicate of the #2 issue in Incident 9061. Fixed for 6.1 Release.

Krishna, please see whether the ComputeSidewalkLoadOnTruss function can handle the rightmost sidewalk. The rightmost sidewalk is cantilevered on the outside of the through truss but Virtis doesn't support cantilever floorbeam for through truss. Note that you have to pin down one truss support before the "Light (Right) Truss" can run in 6.1 Development.

FROM: Krishna Kennelly DATE: 6/10/2010 2:54:22 PM Eastern Daylight Time  
#3 The right sidewalk is not attached to the deck so Virtis cannot compute the load due to it.  
Message is now issued saying sidewalk not attached and analysis stops.  
Similar code changes made for girder system structures that have appurtenances or sidewalks not located on the deck. Virtis Std and Opis LRFD/Virtis LRFR will issue message and stop analysis.

Fixed for 6.2

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 9066                                                         |
| Subject: Truss Member Rating Factors With Deal Load Exceeding Capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Campisi, Paul           | 4/29/2009 5:30:02 PM |
| Modified By: hlee                     | 5/5/2010 6:34:43 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:53 PM

HRS AASHTO

1334

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 4/29/2009 2:55:58 PM Eastern Daylight Time

When rating a truss with a severely deteriorated member where the capacity is exceeded by the LFD factored dead load ( $1.3 \times (\text{Dead Load})$ ), the computed Rating Factor is not reported correctly. It appears that Virtis is using absolute values in the Rating Factor equation and is not reporting negative Rating Factors. Therefore, the controlling member is not showing up as controlling. Although this case is rare, a message should be generated indicating the member has a negative Rating Factor.

I used the Training Truss as an example (see attached file: trainpwc.xml).

For the North Truss, Member L2L3 has a negative Rating Factor, but member L4U5 is shown in the summary as controlling in the summary.

Paul Campisi  
NYSDOT  
Office of Structures  
Load Rating Unit

FROM: Herman Lee DATE: 7/1/2009 1:56:56 PM Eastern Daylight Time  
Negative rating factor will be reported as 0.0.  
Resolved for 6.1 Release.

FROM: Herman Lee DATE: 5/5/2010 2:33:12 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

Issue ID: 9068

Subject: Report path is not setup for multi vehicle paths NSG Analysis.

4/19/2016 3:06:53 PM

HRS AASHTO

1335

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 5/4/2009 11:00:40 AM |
| Modified By: hlee                     | 5/4/2009 11:09:06 AM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 5/4/2009 7:02:18 AM Eastern Daylight Time  
The Report path is not setup in the analysis event for the second vehicle path.

Resolved fo 6.1 Release.

## Complete Issue Information

|                          |
|--------------------------|
| Issue ID: 9069           |
| Subject: Voided RC slabs |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Horton, Doug            | 5/4/2009 4:14:37 PM |
| Modified By: hlee                     | 5/4/2009 6:34:52 PM |
| Priority: High                        |                     |
| Category: Education                   |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 5/4/2009 12:18:08 PM Eastern Daylight Time

There was an entry for this quite long ago (2852) that has been suspended. Virtis does not appear to have the capability to handle a voided RC slab. Is there a recommended workaround? Our particular structure is being widened with voided prestressed box beams and we would like to know how to input the voided RC slab.

FROM: Herman Lee DATE: 5/4/2009 2:04:57 PM Eastern Daylight Time

4/19/2016 3:06:53 PM

HRS AASHTO

1337

Complete Issue Information

Voided PS box beam is supported. We don't have a recommended workaround for voided RC slab.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 9149                                              |
| Subject: error when rating a truss from the bridge explorer |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jensen, Paul            | 5/14/2009 6:34:18 PM |
| Modified By: hlee                     | 5/14/2009 7:03:13 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:06:54 PM

HRS AASHTO

1338

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 5/14/2009 2:40:10 PM Eastern Daylight Time  
when rating a truss from the bridge explorer i get the following messages if i do not check out the bridge. I think there is something incorrect when the truss rating logic if i do not check out the bridge. other bridges simple girder bridges do not have this issue. below is the error message:

Unable to analyze Floorbeam Member Alternative: 6  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer7  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

4/19/2016 3:06:54 PM

HRS AASHTO

1339

Complete Issue Information

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer5  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer3  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Floorbeam Member Alternative: 5  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

4/19/2016 3:06:54 PM

HRS AASHTO

1340

## Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer7  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer5  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

4/19/2016 3:06:54 PM

HRS AASHTO

1341



Complete Issue Information

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer3  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Floorbeam Member Alternative: 4  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

## Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer7  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer5  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer3  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

4/19/2016 3:06:54 PM

HRS AASHTO

1343

Complete Issue Information

OR

- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Floorbeam Member Alternative: 3  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer7  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

## Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer5  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer3  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Floorbeam Member Alternative: 2  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

4/19/2016 3:06:55 PM

HRS AASHTO

1345

## Complete Issue Information

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer7

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer5

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

4/19/2016 3:06:55 PM

HRS AASHTO

1346

## Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer3  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Floorbeam Member Alternative: 1  
12:32:26 PM - Line 13287 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer9  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer8  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer7  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

4/19/2016 3:06:55 PM

HRS AASHTO

1347

## Complete Issue Information

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer6

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer5

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer4

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer3

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

Unable to analyze Stringer Member: Unit1 Stringer2

12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

4/19/2016 3:06:55 PM

HRS AASHTO

1348

Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer1  
12:32:26 PM - Line 13256 in source file .\UiAnalysisProgressDlg.cpp.

Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged  
OR  
- Bridge is not checked-out  
12:32:26 PM - Line 13217 in source file .\UiAnalysisProgressDlg.cpp.

FROM: Paul Jensen DATE: 5/14/2009 2:48:01 PM Eastern Daylight Time  
more stuff- if i do a pontis rating i get these error (i checked out the bridge before rating)

Error generating LFD/ASD load commands!  
12:43:31 PM - Line 362 in source file .\BrassStdLoadControl.cpp.

Error generating load group commands!  
12:43:31 PM - Line 484 in source file .\BrassLoadControl.cpp.

Error in the loads utility!  
12:43:31 PM - Line 845 in source file .\LoadsUtility.cpp.

Error getting stringer dead load reaction!  
12:43:31 PM - Line 1284 in source file .\EngineExport.cpp.

Error preparing stringer dead load reactions!  
12:43:31 PM - Line 3755 in source file .\LoadsUtility.cpp.

FROM: Herman Lee DATE: 5/14/2009 2:53:53 PM Eastern Daylight Time  
Duplicate of Incident 8570.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 9158                                                   |
| Subject: timber stingers on floorbeams (truss and floor systems) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jensen, Paul            | 5/15/2009 5:01:39 PM |
| Modified By: hlee                     | 5/15/2009 7:55:51 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |



Complete Issue Information

|           |             |
|-----------|-------------|
| Suspended | Enhancement |
|-----------|-------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Jensen DATE: 5/15/2009 1:05:35 PM Eastern Daylight Time

we have a high number of bridges that have timber stringers and timber decks on floorbeams (trusses and girder systems). since we can rate timber decks on steel girders and timber girders, why can't we rate these combinations on trusses? these options are not available to us in the floorsystem models.

FROM: Herman Lee DATE: 5/15/2009 3:48:36 PM Eastern Daylight Time

Looks like all the components are there, but still have to connect them in the user interface and analysis export in floor and truss systems.

|                                                   |
|---------------------------------------------------|
| Issue ID: 9175                                    |
| Subject: concurrent force report- multiple trucks |

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jensen, Paul            | 5/20/2009 6:58:39 PM |
| Modified By: hlee                     | 5/20/2009 8:21:50 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Jensen DATE: 5/20/2009 3:04:53 PM Eastern Daylight Time  
when reviewing the the concurrent forces report for a multiple truck run, the report [i think] thinks that there are several trucks on the bridge not the one truck at the single time. we are not sure what force we are getting because we see several trucks in the same report. we should have the maximum and concurrent forces for each truck individually not the summary of all of the trucks and only the truck with the maximum for that connection location.

FROM: Herman Lee DATE: 5/20/2009 3:32:22 PM Eastern Daylight Time  
In the Concurrent Forces Report, the critical live load force of each primary member is the max of all the trucks. The concurrent forces are then determined based on this critical truck position. The critical live load force can be related back to the live load force reported in the Rating Summary Report.

Complete Issue Information

Issue ID: 9176  
Subject: enhancement- computing maximum shear on the x and y planes

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Jensen, Paul 5/20/2009 7:05:52 PM  
Modified By: hlee 5/20/2009 7:32:15 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Jensen DATE: 5/20/2009 3:09:58 PM Eastern Daylight Time  
this is a request for enhanceing the concurent and max force report for returning the shear in the x plane and in the y plane for coputational use.

it would be better, if we could all agree on using the fhwa guidelines for computing a rating for the gussets and have it "inline" with the product.

Complete Issue Information

Issue ID: 9185  
Subject: Stringer-FloorBeam-Girder System - Virtis crashes on analysis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Thompson, Todd                      5/22/2009 2:30:14 PM  
Modified By: tthompson                              5/11/2010 5:01:05 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
| Ihnat, Joseph      | Resolved |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | henderson.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 5/22/2009 10:32:17 AM Eastern Daylight Time  
I have a load rater/designer working on analyzing one of our Stringer-Floorbeam-Girder systems and when we do an analysis - Virtis Crashes out on us.

I've attached the structure.

FROM: Todd Thompson DATE: 5/22/2009 11:07:18 AM Eastern Daylight Time  
Added the error message .txt file - not sure if it helps or not

FROM: Herman Lee DATE: 5/22/2009 12:51:24 PM Eastern Daylight Time  
Developer Notes:  
1. To run with the system default tolerances, S3(20-5) Stringer Definition span length needs to be 20.416666 ft (same as the rolled shape length in the Stringer Profile).  
2. Crash is inside the Analysis Progress dialog when it failed in locating the second floorbeam in Stringer Unit 9.

FROM: Mehrdad Ordoobadi DATE: 9/4/2009 10:25:07 AM Eastern Daylight Time  
The crash is fixed. This is related to issue 9312.

The stringers in Unit 10 are only supported on one side. This caused the crash.  
This problem is related to accuracy of stringer spans and floorbeam locations.

FROM: Mehrdad Ordoobadi DATE: 9/11/2009 1:36:03 PM Eastern Daylight Time  
Joe, please investigate the issue with stringer supports.

FROM: Joseph Ihnat DATE: 1/19/2010 7:57:38 AM Eastern Standard Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:23:21 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

FROM: Todd Thompson DATE: 5/11/2010 12:08:43 PM Eastern Daylight Time  
6.2 Beta 1 -

4/19/2016 3:06:57 PM

HRS AASHTO

1354

Complete Issue Information

Appears to be fixed, although I had several tolerance issues.  
I need

FROM: Todd Thompson DATE: 5/11/2010 1:01:05 PM Eastern Daylight Time  
6.2 Beta 1

I revsed the inches tolerance from 0.00001 inches to 0.001 inches and now it works fine.  
When one is dealing with stringer lengths and fractions - the default tolerance for 0.00001 inches is just bad.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 9188                                                                                  |
| Subject: Zero load rating when stirrups are extended in the deck in a prestressed I beam bridge |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Waheed, Amjad           | 5/26/2009 8:17:59 PM  |
| Modified By: hlee                     | 1/23/2010 10:41:38 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
| Goodrich, Brian | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 |                    |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 5/26/2009 4:38:04 PM Eastern Daylight Time

4/19/2016 3:06:57 PM

HRS AASHTO

1355

Complete Issue Information

A prestressed I beam bridge with concrete slab was analyzed. It gave good results. But when the stirrups were extended in the deck, it gave zero rating and was failing in shear. BRASS LFD engine was used in the analysis. XML file is attached.

FROM: Herman Lee DATE: 6/1/2009 1:02:11 PM Eastern Daylight Time  
We don't see the XML file attached in this incident. Please attach the bridge XML file again. Thanks.

FROM: Amjad Waheed DATE: 6/2/2009 9:25:49 AM Eastern Daylight Time  
I have tried to attach the XML file. Please let me know if you get it or not.

thanks,

FROM: Herman Lee DATE: 6/2/2009 2:58:02 PM Eastern Daylight Time  
We got your attached XML file.

FROM: Brian Goodrich DATE: 6/3/2009 8:58:38 AM Mountain Daylight Time  
When the stirrups extend into the deck, the structure is analyzed in two stages, which affects the dead load distribution. For this structure, the stage 2 dead load is uniformly distributed. The dead load was huge for all the members for the composite case. For the non-composite case, only G6 had a huge load because tributary area was used to distribute the dead loads.

The "SIDEWALK AND BARRIER" appurtenance is the source of the problem. The unit weight for this appurtenance is entered as 150 kcf instead of 0.15 kcf. Ratings are now better for the composite case than the non-composite case.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 9203                                         |
| Subject: BRASS LRFR - Error with transverse stiffeners |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 5/28/2009 4:44:51 PM |
| Modified By: bgoodrich                | 5/28/2009 5:17:52 PM |
| Priority: High                        |                      |
| Category: Bug - Export 1              |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Bug - Export 1 |
| Goodrich, Brian | Resolved |          |                |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 5/28/2009 10:45:25 AM Mountain Daylight Time  
Submitted for David Wolfe (DWolfe@moffatnichol.com)

Bridgeware – The attached bridge file gives an error when running BRASS LRFR on G5 due to transverse stiffener input. The first batch of stiffeners stops about an equal space shy of the next, but BRASS LRFR seems to add the additional space, which then slightly overlaps the range. Changing the spacing from 45.25" to either 45.24" or 45.26" seems to eliminate the error. BRASS LFD does not give an error. What is happening?

FROM: Brian Goodrich DATE: 5/28/2009 11:07:19 AM Mountain Daylight Time  
This issue deals with an internal spacing tolerance when exporting the transverse stiffener schedules. The export used the first spacing in a range to compare to subsequent spacings. For this girder, one spacing was 45.25" and the next was 45.238". These spacings were deemed essentially the same due to the comparison tolerance, which gives a slightly longer range than was input by the user. The next range overlaps this range slightly, which is causing the problem. The solution was to use the average spacing for a range, which for this one becomes 45.244". In addition to the transverse stiffener schedules, similar changes were made to the bracing and stirrup schedules. No changes were necessary for the shear connector schedules.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 9239                                                       |
| Subject: Rating of zero for 1979 AASHTO Spec for continuous PS beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 6/2/2009 5:12:56 PM  |
| Modified By: tarmbrecht               | 6/21/2010 6:49:32 PM |

4/19/2016 3:06:57 PM

HRS AASHTO

1357



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sd_11104026.xml     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 6/2/2009 1:16:13 PM Eastern Daylight Time  
Reported by my consultant:

When the AASHTO 1979 Interim code is checked for the Shear Computation Method I've had one problem. I've had this occur on a couple of PPC I-beam bridge, the ratings are "0" when the AASHTO 1979 Interim code is checked. When "Ignore" or "Use current AASHTO" is checked, the correct ratings are calculated. This only occurs in continuous PS beams.

FROM: Brian Goodrich DATE: 6/3/2009 11:03:00 AM Mountain Daylight Time  
The "jd" term is being calculated as zero, so the Vc and Vs components of the shear capacity are zero. The only contribution showing up now is the prestress force Vp. I'll forward this issue to WYDOT for review.

FROM: Brian Goodrich DATE: 7/9/2009 9:34:50 AM Mountain Daylight Time  
WYDOT assigned this issue to BRASS Problem Log 899.

FROM: Brian Goodrich DATE: 10/16/2009 3:23:31 PM Mountain Daylight Time  
An error in the BRASS engine was corrected. The strand centroid distance is now being calculated correctly. Fixed for BRASS-GIRDER(STD) 6.0.3.

FROM: Tim Armbrecht DATE: 6/21/2010 2:49:32 PM Eastern Daylight Time  
Looks like it's working correctly. Accepted.

4/19/2016 3:06:57 PM

HRS AASHTO

1358

## Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 9251                                            |
| Subject: Getting Rating done at points not asked for - RC |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Thompson, Todd          | 6/2/2009 8:11:19 PM |
| Modified By: tthompson                | 9/9/2009 6:17:37 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 6/2/2009 4:17:04 PM Eastern Daylight Time  
In testing Virtis LF engine in 6.1 Beta 1 - I also noticed that this occurs in 6.0.

But I have a RC Slab bridge that I have entered Cross Section Based and in 6.1 I have asked only for at user defined points of interest but I'm getting my rating to control at locations other than the user defined points of interest.

FROM: Todd Thompson DATE: 6/2/2009 4:18:43 PM Eastern Daylight Time  
I attached an example bridge.  
It analyzes ok with BRASS LF.  
But not with Virtis LF.

FROM: Herman Lee DATE: 6/8/2009 4:43:23 PM Eastern Daylight Time  
Virtis Std Engine doesn't have the capability to turn off generation of tenth points and section change

4/19/2016 3:06:58 PM

HRS AASHTO

1359

Complete Issue Information

points. I added analysis messages to warn user that turning off these two options is not supported.

Category changed to Enhancement for supporting these two options in the Virtis Std Engine.

FROM: Todd Thompson DATE: 9/9/2009 2:17:37 PM Eastern Daylight Time  
Fine to leave as an enhancement.

|                                                |
|------------------------------------------------|
| Issue ID: 9285                                 |
| Subject: LRFR Critical Analysis Not Displaying |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Lee, Herman             | 6/4/2009 7:46:15 PM |
| Modified By: hlee                     | 6/7/2013 8:45:14 PM |
| Priority: High                        |                     |
| Category: Maintenance                 |                     |

History

| Primary Contact | Status    | Priority | Category                   |
|-----------------|-----------|----------|----------------------------|
| Lee, Herman     | Suspended | High     | Enhancement<br>Maintenance |
|                 | Duplicate |          |                            |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | LRFR Critical Analysis Not |             |

4/19/2016 3:06:58 PM

HRS AASHTO

1360

Complete Issue Information

Displaying.pdf

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/4/2009 3:48:28 PM Eastern Daylight Time  
 Submitted on behalf of Patricia Botas and Jovana Fernandez, Botas Engineering  
 (general@botasengineering.com).

"When running analysis using LRFR for Load Rating, we are not getting the Critical Moment or Shear  
 Along the elements."  
 See attached for details.

FROM: Herman Lee DATE: 5/30/2010 10:29:47 AM Eastern Daylight Time  
 Changed to Maintenance (TF and TAG May 2010)

FROM: Herman Lee DATE: 6/7/2013 4:36:45 PM Eastern Daylight Time  
 Duplicate of the Detailed LRFR analysis report enhancement implemented for 6.4.

Issue ID: 9288  
 Subject: LFD Rating Results Generates a Blank Report

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Teal, Dean 6/4/2009 9:04:33 PM  
 Modified By: dteal 7/10/2009 4:09:37 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:06:58 PM

HRS AASHTO

1361

### Complete Issue Information

|             |          |      |     |
|-------------|----------|------|-----|
| Duray, Jim  | New      | High | Bug |
| Lee, Herman | New      | High | Bug |
| Li, Xinmei  | Assigned |      |     |
|             | Resolved |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 31675 - trainpwc.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 6/4/2009 5:11:13 PM Eastern Daylight Time  
Using PCITrainingBridge4

Notice the LFD BRASS ratings are available in the Analysis Results

But when I go to Report Tool, LFD Analysis Output, and select only Detailed Rating Results

I get a blank report  
See attached Document

FROM: Dean Teal DATE: 6/4/2009 5:12:35 PM Eastern Daylight Time  
Or am I doing something wrong?

FROM: Herman Lee DATE: 6/9/2009 9:52:56 AM Eastern Daylight Time  
Only Virtis Std Engine reports the "Cross Section Properties" and "Detailed Rating Results" back to Virtis. This capability is not implemented for BRASS LFD Engine. I added a message in the report to indicate this.

Changed Folder to Support Center since it's an existing issue in 6.0. Resolved for 6.1 Release.

FROM: Dean Teal DATE: 7/10/2009 12:09:37 PM Eastern Daylight Time  
Accepted in 6.1 beta 2

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 9292                                                                         |
| Subject: Virtis Calculating Incorrect Angle Box and Built-up Member Section Properties |

4/19/2016 3:06:58 PM

HRS AASHTO

1362

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Campisi, Paul           | 6/5/2009 8:26:44 PM  |
| Modified By: xli                      | 6/16/2009 9:24:05 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 6/5/2009 4:31:25 PM Eastern Daylight Time  
 For Builtup and Angle Box Section Members, the truss module is not calculating section properties with the section orientation (Horizontal and Vertical) as defined in the Truss Input Command Language Manual. When the angles are coded as being "Vertical", the section properties are calculated with the angles orientated "Horizontal", which is incorrect.

See the examples below, which are taken from the attached file "TRUSS CHECK":

Angle Box Member

From "North Truss"

AngleBox = Section2  
 LeftWebPlate  
 20.0 0.5  
 RightWebPlate

## Complete Issue Information

20.0 0.5

TopAngles "L 7x4x0.5" Vertical Inward

BottomAngles "L 7x4x0.5" Vertical Inward

BackToBack 20 20

Lacing Top

For the Anglebox section defined above, I have coded the "L 7x4x05" as vertical, which has the following definition in the manual: "Vertical means y-axis of this section is parallel to the y-axis of the overall member cross section." The angle is defined in the Virtis shape library with the long leg parallel to the y-axis. With this in mind, the long leg should be vertical for section2. But Virtis calculated the section properties with the long leg horizontal. See calculations below:

Virtis calculated the following section properties as shown in the MemSectionProperties.xml file for Section2:

Izz = 2425.31 in<sup>4</sup> ==> These values are not correct

Iyy = 3415.05 in<sup>4</sup> ==>

Note: The calculations show in the MemSectionProperties.xml file show the Bottom Left and Right Angle "Y" dimension from the 1-1 axis as 0.92 inches, which is incorrect.

The section properties with the long leg vertical as calculated with STAAD Pro 2007 Section Wizard are as follows:

Izz = 1979.12 in<sup>4</sup>

Iyy = 3857.52 in<sup>4</sup>

As shown above, there appears to be an orientation error with the angle legs as calculated by Virtis.

## Builtup Member

For Built up members, the same error appears to be occurring. As an example, the following section is built in the truss module:

From "North Truss"

Builtup = Section3

WebPlate 20 0.5

TopAngles "L 7x4x0.5" Vertical

BottomAngles "L 7x4x0.5" Vertical

BackToBack 20

Connection Riveted 0

Virtis calculated the following section properties as shown in the MemSectionProperties.xml file:

Izz = 2091.97 in<sup>4</sup>

Iyy = 256.72 in<sup>4</sup>

For comparison, the same section was built under the Member Definitions – Floorbeam Definitions Workspace as "Built-up Check LLV" and "Built-up Check LLH":

BRASS calculated section properties from Brass output with the long leg vertical (see Floorbeam1):

4/19/2016 3:06:58 PM

HRS AASHTO

1364

Complete Issue Information

lxx = 1670 in^4

BRASS calculated section properties from Brass output with the long leg horizontal (see Floorbeam2):  
lxx = 2096 in^4 ==> Closely matches MemSectionProperties.xml

As shown above, there appears to be an orientation error with the angle legs as calculated by Virtis.

Paul Campisi, P.E.  
NYSDOT, Office of Structures  
Bridge Load Rating Unit  
email: pcampisi@dot.state.ny.us  
phone: (518) 485-7822  
fax: (518) 485-8549

FROM: Xinmei Li DATE: 6/16/2009 10:07:06 AM Eastern Daylight Time  
Resolved for Beta2.

The newly calculated values are:

Angle box  
lzz = 1980.05 in^4  
lyy = 3860.31 in^4  
Builtup  
lzz = 1646.72 in^4  
lyy = 54.93 in^4

|                                              |
|----------------------------------------------|
| Issue ID: 9294                               |
| Subject: Lane-Type Legal Load Ton multiplier |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Horton, Doug            | 6/8/2009 3:42:55 PM    |
| Modified By: hlee                     | 10/15/2011 10:22:21 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:06:58 PM

HRS AASHTO

1365



## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 6/8/2009 12:19:17 PM Eastern Daylight Time

VDOT is currently using LRFR to rate all structures. In looking at the MBE(2008), section C6A.4.4.2.1a, last sentence of first paragraph, states "When the lane type, load model governs the load rating, the equivalent truck weight for use in calculating a safe load capacity for the bridge shall be taken as 80 kips."

It appears that Virtis (5.6 and 6.0) all appear to be using only the truck weight (30 tons) to compute the tonnage (60 tons for lane type legal load-negative). The truck weight works fine for all other loads, but, based on our understanding of the text, is incorrect for the lane legal loads.

Please let us know if we have missed something or it was a TF decision to stay with the truck weight only.

FROM: Brian Goodrich DATE: 6/9/2009 7:15:31 AM Mountain Daylight Time

I agree with Doug's comments regarding the 80 kips. Here is some background... In the BRASS stand-alone engine, users specify the lane-type loading by first entering the legal truck and lane separately, i.e., a Type3-3 truck without the 75% applied and a legal lane of 0.2 klf. Then, the user specifies the combination factors for the truck and lane, i.e., 0.75 and 1.0, respectively. BRASS sums the axle weights to obtain the total vehicle weight, which is the 80 kips in this case. This general implementation was developed when LRFR under development. When LRFR was implemented in Virtis, the lane-type load input was done differently where the axle weights were input at 75% of the actual. This is now the issue we are facing with this log. I will develop a plan to address this issue.

FROM: Brian Goodrich DATE: 1/22/2010 10:09:58 AM Mountain Standard Time

I have only come up with one option for getting the vehicle weight to come out to 80 kips, and it involves two assumptions:

1. The vehicle definition contains axle loads with a lane load.
2. The vehicle definition is assigned to the legal category.

I don't think we can make assumptions on the sum of the axle weights or the magnitude of the lane load because that would limit agencies from inputting their own lane-type legal load. Maybe they want to use their state's Type 3-3 truck instead of the AASHTO truck. Maybe they want to use something other than the 0.2 k/ft legal lane load.

If the two assumptions above are met, the axle weights would be divided by 0.75 and exported as usual. The difference is the BRASS live load combination command would need to be adjusted to export an axle combination factor of 0.75.

Issue ID: 9296

Subject: BRASS Export - Properties

Folder: /Virtis/Support Center/Virtis

4/19/2016 3:06:59 PM

HRS AASHTO

1366

### Complete Issue Information

|                                  |                     |
|----------------------------------|---------------------|
| Primary Contact: Goodrich, Brian |                     |
| Submitted By: Horton, Doug       | 6/8/2009 9:37:56 PM |
| Modified By: bgoodrich           | 7/9/2009 3:26:59 PM |
| Priority: High                   |                     |
| Category: Bug                    |                     |

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VIRTIS 6.docx       |             |
|      | Truss.xml           |             |
|      | W-37-13 0005.pdf    |             |
|      | W-37-13 0045.pdf    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 6/8/2009 5:56:19 PM Eastern Daylight Time

In reviewing some of the ratings and factors performed by BAKER under the VDOT Pilot effort, we have experienced results that are approximately 1/2 those obtained from comparison programs (Merlin DASH and PCBars). In searching for the cause of the large discrepancy (1.33 in Virtis vs. 2.55 +/- in DASH and PCBars) it was discovered that the span properties being sent to BRASS were not 100% in agreement with what was entered into Virtis.

File G2.dat is the BRASS export file. Please note the first SPAN-D line for span 2. The location of 27.0001 is causing the section to be selected as XSECT-2, when the actual section to the left is XSECT-3. We have tried several iterations of input into the Girder Profile, but always seem to have the same issue. The input appears correct and no unexpected values are showing up in the dimensions. Please review the input file to see if there is a hidden reason for the difference in the export. Span 1 has the same dimensions near the pier and exports fine.

We have also attached a file showing the beam properties (G2Prop.txt). Please note that span 2

4/19/2016 3:06:59 PM

HRS AASHTO

1367

### Complete Issue Information

includes incorrect flange width and thickness at point 2.20. This is directly associated with the export issue in all likelihood.

Once the span value issue is resolved we will investigate the rating factor difference in more detail.

FROM: Brian Goodrich DATE: 6/9/2009 11:12:35 AM Mountain Daylight Time

There is a slight difference in the flange ranges versus the deck ranges in Virtis for span 2. The flange change points are at 10 ft, 27 ft, and 95.807291 ft, but the deck change points are at 10.000057 ft, 27.000057 ft, and 95.807292 ft. This small difference is causing a different cross section to be determined at the right end of the range than at the left. BRASS then interpolates the dimensions for points within this range. If I change the deck ranges to match those for the flanges, the correct section dimensions are used in BRASS.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 9306                                                   |
| Subject: Defining Floor beam in a skewed Truss floor beam system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Nakrani, Navnit         | 6/15/2009 8:54:45 PM  |
| Modified By: hlee                     | 6/17/2009 12:40:28 PM |
| Priority: High                        |                       |
| Category: Education                   |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 6/15/2009 5:13:00 PM Eastern Daylight Time

Hi!

I am Naveen Bitla, working with United International Corporation, CT.

I am doing load rating for a skewed Truss span with four main Truss member. I am facing a problem in defining the first two and the last two Floor beams which do not intersect Truss1 or Truss 4. I also want

4/19/2016 3:06:59 PM

HRS AASHTO

1368

Complete Issue Information

to know how to define the three floor beams that are in between the main truss spans which we can see in the Cross section plan. I am attaching my query in detail and the drawings with this mail.

Your response would be greatly appreciated.  
Thank you.

FROM: Herman Lee DATE: 6/17/2009 8:25:02 AM Eastern Daylight Time  
The configurations of the first two and last two floor beams are not supported by Virtis. The floor beams between the main truss spans are assumed as continuous span in Virtis.

Issue ID: 9307  
Subject: Virtis Truss Module is Crashing When Angle Leg Deterioration is Coded For Built-Up Members

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Campisi, Paul 6/17/2009 5:25:40 PM  
Modified By: xli 6/22/2009 7:22:09 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
| Li, Xinmei      | Assigned  |          |          |
| Lee, Herman     | Duplicate |          |          |

4/19/2016 3:06:59 PM

HRS AASHTO

1369

### Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | Query -2.pdf                                  |             |
|      | FS5-Skewed End Panel Floor System Example.pdf |             |
|      | Truss Stringer Beam Lengths.pdf               |             |
|      | Truss Cross Section Plan.pdf                  |             |
|      | Input file.xml                                |             |
|      | Truss Framing Plan.pdf                        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 6/17/2009 1:29:37 PM Eastern Daylight Time

For the attached file "33787 - Copy\_of\_2265170.xml", the Virtis application is crashing to desktop when Superstructure Definition "Span 1 - Left Truss" is analyzed. The problem appears to be connected to angle leg deterioration coded for built-up member sections. When angle deterioration is coded to the angle legs, the program crashes. When the angle deterioration command is removed, the truss analyzes and produces results. It is noted that the "Left Truss" validates with and without the deterioration commands present.

The Superstructure Definition "Span 1 - Right Truss" has no deterioration coded and the truss analyzes and produces results.

Also of interest, in the same file the Superstructure Definition "Three Span Continuous With Deterioration - Right Truss" has angle leg deterioration coded for an anglebox section and does not crash.

Paul Campisi, P.E.  
NYSDOT, Office of Structures  
Bridge Load Rating Unit  
email: pcampisi@dot.state.ny.us  
phone: (518) 485-7822  
fax: (518) 485-8549

FROM: Xinmei Li DATE: 6/17/2009 1:52:35 PM Eastern Daylight Time

4/19/2016 3:06:59 PM

HRS AASHTO

1370

Complete Issue Information

It's duplicate of 8928.

FROM: Paul Campisi DATE: 6/18/2009 10:51:13 AM Eastern Daylight Time  
Has this been fixed for release 6.1?

FROM: Herman Lee DATE: 6/22/2009 1:32:06 PM Eastern Daylight Time  
8928 hasn't been fixed yet.

FROM: Xinmei Li DATE: 6/22/2009 1:50:20 PM Eastern Daylight Time  
Resolved for 6.1 Beta2.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 9309                                                      |
| Subject: Defining Floor beam in a skewed Truss floor beam system -2 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Nakrani, Navnit         | 6/17/2009 8:52:31 PM |
| Modified By: hlee                     | 6/18/2009 1:50:44 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Navnit Nakrani DATE: 6/17/2009 5:20:33 PM Eastern Daylight Time  
Sub: Continuation of Issue ID: 9306

Complete Issue Information

Hi!

I am Naveen Bitla working with United International Corporation, CT. Thank you so much for your response earlier this morning regarding issue ID-9306. It was of great help. I was working with what you said earlier this morning. I have described my queries in detail in Query-2 file that I am attaching with this e-mail.

I want to know if my approach of considering two trusses at a time is correct.

Could you help me defining the floor beams at the ends which are skewed?

I want to know how we define the Stringer Units both at the beginning and end of the span?, because the length varies along the skew.

I would really appreciate if you could send me a skewed Truss example which is similar to this span which can help me.

I am attaching the following drawings with this mail,

- 1. Truss Span Cross section
- 2. Truss Framing Plan.
- 3. Truss Stringer Beam Lengths.

And also my Virtis file and the query letter.

Thank you so much. I greatly appreciate your help,  
Naveen Babu Bitla  
United International Corporation, CT

FROM: Herman Lee DATE: 6/18/2009 9:21:42 AM Eastern Daylight Time  
Attached is a skewed floor system example. For the floor beam does not intersect truss message, the warning message is very sensitive to the skew input. You could either change the skew to 41.186 Degrees or add another digit after 41.1861 Degrees.

Issue ID: 9310  
Subject: Radically different ratings with Version 6.0 compared to Version 5.5

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Frick, James 6/19/2009 6:44:24 PM  
Modified By: hlee 1/5/2010 2:44:27 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |

4/19/2016 3:07:00 PM

HRS AASHTO

1372

### Complete Issue Information

|             |                    |      |             |
|-------------|--------------------|------|-------------|
|             | Assigned           |      |             |
|             | Information Needed |      |             |
| Lee, Herman | New                | High | Bug         |
|             | Suspended          |      | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: James Frick DATE: 6/19/2009 2:56:22 PM Eastern Daylight Time  
Structure with splayed girders that previously rated out ok in version 5.5.0.3001 in 2007 now has inadequate capacity in version 6.0.0.3001 with no change in input (Version 5.5 H2O Operating Rating - 64.06, Version 6.0 H2O Operating Rating - 23.01). Engine settings were rechecked and we found no issues. Girder in question is Span 2, G6. \*.xml file is attached

FROM: Herman Lee DATE: 6/19/2009 3:04:17 PM Eastern Daylight Time  
We don't see the XML file attached in this incident. Please attach the bridge XML file again. Thanks.

FROM: Herman Lee DATE: 6/22/2009 1:51:10 PM Eastern Daylight Time  
I'm able to rate G6 in Span 2 after I changed the default ft tolerance from 0.001 to 0.01. The Version 6.0 H2O Operating Rating I got is 73.41 ton.  
Please provide detail information on the steps to reproduce the 23.01 H2O Operating Rating.

FROM: Herman Lee DATE: 10/30/2009 2:39:41 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:07:04 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:47:51 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                |
|----------------|
| Issue ID: 9313 |
|----------------|

4/19/2016 3:07:00 PM

HRS AASHTO

1373



Complete Issue Information

Subject: steel channel section for exterior griders

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Jensen, Paul 6/23/2009 4:12:09 PM  
 Modified By: hlee 6/23/2009 4:48:21 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description                                           |
|------|-----------------------------|-------------------------------------------------------|
|      | AR-M277_20090630_114136.pdf | Illustrates area and effective thickness calculations |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Jensen DATE: 6/23/2009 12:14:57 PM Eastern Daylight Time  
 we can define a channel section in the beam defs but when we want to use them for the exterior girder, they are not supported. we need to have the ability to use a steel shape for a beam and run the analysis.

this may be a dup, but this need resolution.

## Complete Issue Information

Issue ID: 9321

Subject: Virtis 6.0 - compression flange for built-up section

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Goodrich, Brian

6/30/2009 10:11:02 PM

Modified By: hlee

4/12/2013 3:51:20 PM

Priority: High

Category: Bug - BRASS

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 6/30/2009 4:13:02 PM Mountain Daylight Time  
Entered for Yuen Shuenn Siow:

Hi,

4/19/2016 3:07:00 PM

HRS AASHTO

1375

Complete Issue Information

I am using Virtis to rate a built-up girder with cover plate (see attachment for the cross section). I found that Virtis doesn't consider the thickness of the cover plates for the compression flange area in the Lateral torsion buckling resistance calculation. As a result, the resistance was reduced significantly. I also found that Virtis is inconsistent regarding the compression flange calculation. In the Web Load-Shedding Factor calculation, cover plates were included when compression flange area was calculated. See attached screen shot of the spec check for the comparison.

What is the reason cover plates were excluded from lateral torsion buckling resistance?

Thanks in advance for your help.

Yuen Shuenn Siow, P.E., S.E.

Modjeski and Masters, Inc.

1800 Chouteau Avenue

St. Louis, MO 63103

Ph: 314-588-8115, Ext 14

Fax: 314-588-8117

FROM: Brian Goodrich DATE: 6/30/2009 4:18:47 PM Mountain Daylight Time

I am responding to your comments and questions regarding the compression flange for a built-up section. It is our intent to be consistent with the compression flange dimensions throughout the BRASS analysis.

I have forwarded this issue to WYDOT (the owners of BRASS) and will be discussing it with them. Please send me a description or calculations of how you would perform these checks when cover plates are present. I am particularly interested in the width you use in the checks (16", 24", or something else). I would like to share your comments with WYDOT and address this issue for the next release.

FROM: Brian Goodrich DATE: 7/9/2009 9:28:42 AM Mountain Daylight Time  
WYDOT assigned this issue to BRASS Problem Log 902.

FROM: Brian Goodrich DATE: 5/18/2011 8:19:21 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 47.

FROM: Brian Goodrich DATE: 4/12/2013 10:37:02 AM Eastern Daylight Time  
This issue was addressed in the BRASS-GIRDER(LRFD) 2.1.3 released in June 2012.

FROM: Herman Lee DATE: 4/12/2013 11:48:05 AM Eastern Daylight Time  
Updated Status to Resolved per BridgeTech request.

---

4/19/2016 3:07:01 PM

HRS AASHTO

1376

Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 9322                       |
| Subject: Stringer section properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 7/1/2009 12:26:24 PM |
| Modified By: bgoodrich                | 7/2/2009 10:13:38 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Lee, Herman     | Assigned  |          |             |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/1/2009 8:26:47 AM Eastern Daylight Time  
Submitted on behalf of William Kristoff (Michael Baker Engineering).

Section properties at mid-span (no loss) for Span 1 S1 and S14 should be similar. Dimensions are the same but area and moment of inertia are different. Although the area and moment of inertia are different, the LFD ratings are close between S1 and S14. The ASD ratings are very different between S1 and S14.

FROM: Brian Goodrich DATE: 7/2/2009 4:07:33 PM Mountain Daylight Time

### Complete Issue Information

S1 has no losses, so it is exported as a wide flange shape where the area and moment of inertia are transferred directly into BRASS using the section library. S14 has losses, so it is exported as a plate girder where the fillets between the flanges and web are ignored. For a plate girder, BRASS calculates the area and moment of inertia, which are smaller due to the omission of the fillets. Changing this behavior would require modification of the BRASS engines.

|                                 |
|---------------------------------|
| Issue ID: 9327                  |
| Subject: LRFR - NSG Unavailable |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 7/1/2009 7:46:07 PM  |
| Modified By: hlee                     | 4/30/2013 2:49:55 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/1/2009 3:48:00 PM Eastern Daylight Time  
Beta 2

4/19/2016 3:07:01 PM

HRS AASHTO

1378

Complete Issue Information

I thought we had discussed this in Pittsburgh last month during the BETA Testing session. But I can't locate this in VI anywhere, so it must have gotten lost or not entered.

I wanted to run a NSG analysis and then use those DF within LRFR Rating method. But if I choose LRFR as an option - then Advanced Radio Button is greyed out and not available. I thought we had discussed that this should be available.

FROM: Jim Duray DATE: 7/2/2009 11:05:14 AM Eastern Daylight Time  
Herman - Let's discuss this.

FROM: Dean Teal DATE: 7/28/2009 2:01:52 PM Eastern Daylight Time  
Were are we on this?

FROM: Todd Thompson DATE: 7/29/2009 9:58:10 AM Eastern Daylight Time  
AASHTO MBE 6A.3.3 - Refined Analysis -- refers one to AASHTO LRFD 4.6.3 which refers you to 4.4 - which allows FE Method of analysis.

Isn't it possible to make the advanced Radio Button available for NSG analysis followed by LRFR rating using these new DF's.

FROM: Herman Lee DATE: 7/29/2009 1:46:22 PM Eastern Daylight Time  
We are in the process of implementating LRFR for Advanced analysis.

For Member Alternative Rating Method, we need to update the Vehicle Summary tree for allowing LRFR rating categories (permit, legal ...).  
For LRFR Rating Method, we need to enable the the Advanced radio button.

Then, use the advanced DFs and modify the Advanced Rating Results Summary Report for allowing LRFR rating categories.

FROM: Jim Duray DATE: 8/12/2009 4:38:11 PM Eastern Daylight Time  
Based on discussion with TF on July 29th this will be held for a future release. Changed to Suspended and Enhancement (not included in any previous work plan). When it is implemented it should also be implemented for BRASS LRFR.

FROM: Todd Thompson DATE: 8/17/2009 10:55:42 AM Eastern Daylight Time  
All future work NEEDS to include NSG (just like documentation, testing, API 3rd party documentation updating...)

FROM: Herman Lee DATE: 4/30/2013 10:49:17 AM Eastern Daylight Time  
Implemented LRFR for NSG analysis in the 6.5 release.

Issue ID: 9352

Subject: Floorbeam analysis takes too long - BRASS LFD

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

4/19/2016 3:07:01 PM

HRS AASHTO

1379

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Submitted By: vinayagamoorthy, vinacs | 7/9/2009 7:36:01 PM  |
| Modified By: bgoodrich                | 11/2/2009 8:57:16 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 7/9/2009 3:36:26 PM Eastern Daylight Time  
Submitted on behalf of Vinacs, Caltrans:

email from vinacs, 7/7/2009

I have a bridge where steel girders are supported on Bent Cap.

I thought I did a good job. However, program runs into problem. Once it is exported to do the BRASS analysis, it keeps on going and with says 500 step Times out.

Check the "Twospan Bent Cap" structure definition

(See attached file: 50 0183.xml)

Also, I misplaced the official e-mail address that I am supposed to send this type of inquires, please let me the e-mail as well.

Thanks

4/19/2016 3:07:01 PM

HRS AASHTO

1380

Complete Issue Information

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-8657

response sent by KKennelly, 7/8/2009

You are getting that message because you have a very wide travelway over the floorbeam and BRASS is trying to move the lanes transversely across the travelway at 1' increments by default.

You can change the increment on the Floorbeam Definition: Engine tab. You can change the "Lane advancement increment" value to a bigger number to get BRASS to run quicker. But you'll have to use engineering judgment to determine the increment to balance the speed of the analysis with the accuracy of the loading.

The technical support email is [bridgeware@mbakercorp.com](mailto:bridgeware@mbakercorp.com)

Let me know if you need any additional information.  
Krisha

email sent by Vinacs 7/9/2009

When I tried the analysis with 4ft lane advancement and analysis is completed within a minute.

However, when I tried the analysis with 2ft, the analysis was not completed even after I let the computer run for 10 minutes. That means, the analysis went on an internal loop. In my opinion, program should terminate with an error messages. Also, if there is limitation as to how many lane advancement could be performed, that needs to be relaxed in the futuer version.

Vinacs M Vinayagamoorthy

FROM: Brian Goodrich DATE: 7/10/2009 8:37:45 AM Mountain Daylight Time  
This issue is a duplicate of Incidents 4728, 6690, and 7839. WYDOT has already added this to the BRASS enhancement list. I have forwarded this incident to WYDOT.

FROM: Brian Goodrich DATE: 8/28/2009 9:14:37 AM Mountain Daylight Time  
Status set to Suspended until work is authorized by WYDOT.

FROM: Brian Goodrich DATE: 11/2/2009 1:57:03 PM Mountain Standard Time  
E-mail from WYDOT:

=====

Since this issue is rated #15 on the enhancement list and a work around is available (see your comments below), I am not going to address this in the near future. Here were your comments:

You can change the increment on the Floorbeam Definition: Engine tab. You can change the "Lane advancement increment" value to a bigger number to get BRASS to run quicker. But you'll have to use

4/19/2016 3:07:01 PM

HRS AASHTO

1381



Complete Issue Information

engineering judgment to determine the increment to balance the speed of the analysis with the accuracy of the loading.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

=====

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 9353                                                   |
| Subject: Virtis License Transfer from Version 6.0 to Version 5.6 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Nakrani, Navnit         | 7/9/2009 9:08:39 PM   |
| Modified By: hlee                     | 1/23/2010 10:40:18 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Navnit Nakrani DATE: 7/9/2009 5:14:55 PM Eastern Daylight Time  
This is Balaji, working with United International Corporation,CT.

I tried transferring Virtis License from Version 6.0 to Version 5.6 as given in the help line, but couldn't make it happen.

I'm not sure what I'm doing wrong.

Steps Followed:

4/19/2016 3:07:01 PM

HRS AASHTO

1382

Complete Issue Information

We already have Version 6.0 running fine in one of the systems(old computer), and installed Version 5.6 in the new computer and transferred License (5.6) from the new computer to a common folder (on the Server).

Then transferred License , version 6.0 from the old computer to the folder (on the server) where Version 5.6 was already transferred. That shut down the Virtis Version 6.0 in the old computer.

Then in the new computer when I opened Version 5.6 and tried transferring the license by selecting the folder, it wasn't working fine.

I checked with the system time for the new computer not to earlier than the old computer and also both the systems are logged in under the administrator privileges.

It would be great if you could help me resolving this problem.

Thanks for the help.

Sincerely,

Balaji.

FROM: Joseph Ihnat DATE: 7/13/2009 9:15:02 AM Eastern Daylight Time  
Balaji was finally able to do the license transfer using a flash drive.

|                                            |
|--------------------------------------------|
| Issue ID: 9357                             |
| Subject: Shear Capacity of Concrete T-Beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Huang, George           | 7/12/2009 4:47:45 AM |
| Modified By: ghuang                   | 5/13/2010 6:29:39 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status             | Priority | Category  |
|-----------------|--------------------|----------|-----------|
| Lee, Herman     | New                | High     | Bug       |
| Goodrich, Brian | Assigned           |          | Education |
|                 | Information Needed |          |           |
|                 | Resolved           |          |           |

4/19/2016 3:07:02 PM

HRS AASHTO

1383

### Complete Issue Information

|               |          |      |         |
|---------------|----------|------|---------|
| Lee, Herman   | New      | High | Bug     |
| Ihnat, Joseph | Assigned |      |         |
|               | Resolved |      | Support |
|               | Closed   |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 7/12/2009 12:54:08 AM Eastern Daylight Time

How does the Virtis calculates the shear capacity for T-beam? When I specified 11 points of interest and changed the shear re-bar spacing between point 1 and point 2, there was no change for the shear rating at point 1, which is at the face of bent cap. The analysis engine was LFD Brass.

FROM: Brian Goodrich DATE: 7/14/2009 9:37:31 AM Mountain Daylight Time

BRASS uses the larger stirrup spacing adjacent to a point of interest. This may be why changing the stirrup spacing on one side doesn't change the capacity. Please attach the bridge file, so I can review the input and results specific to this bridge.

FROM: George Huang DATE: 7/15/2009 12:49:23 AM Eastern Daylight Time

Hi Brian, how do I attach the bridge file to you?

FROM: Brian Goodrich DATE: 7/20/2009 9:17:56 AM Mountain Daylight Time

E-mail from George Huang:

Hi Brian,

You are right. BRASS does use the larger stirrup spacing adjacent to a point of interest. By further checking my input file, I did found some mistake I made. So the issue for the shear capacity is solved. However I do have a separate question for the same bridge file. During the saving of the shear reinforcement for G2, there was an error message

4/19/2016 3:07:02 PM

HRS AASHTO

1384

Complete Issue Information

End Distance is 153.5000000 ft.  
Beam length is 154.0000000 ft.  
Do you want to change the spacing?

If I choose "Yes", It will ignore the last rebar input and it doesn't seem right. Attached is the bridge input file. Thanks.

(See attached file: 19C0061.xml)

George Huang, Ph.D., P.E.  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Phone: (916) 227-8769  
Fax: (916) 227-8357

FROM: Brian Goodrich DATE: 7/21/2009 9:03:05 AM Mountain Daylight Time  
The message you are getting regarding the end distance is really just a warning. Virtis issues this message when a ranges ends within one foot from the end of the girder. The range starting at 46.5 ft from Support 3 with 2 spaces at 3" fills in the rest of the beam with shear reinforcement.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 9358                                                    |
| Subject: Installation of Stand Alone Vrsion with SQ Sever Express |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Huang, George           | 7/12/2009 5:35:16 AM |
| Modified By: ghuang                   | 6/8/2010 2:57:44 PM  |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 7/12/2009 1:52:11 AM Eastern Daylight Time

For the stand alone version, after IT staff installed the Virtis with SQL Server Express, the database wouldn't work under user's account. Right now in our office, IT staff had to grant the user with administrative rights first, then to install the program with user's account, and to remove user's administrative right after program been installed. Is there any easier way to install the program?

FROM: Joseph Ihnat DATE: 7/13/2009 9:16:52 AM Eastern Daylight Time

Depending on your local policies, SQL Server may require permissions of the folder where the mdf and ldf files are located.

Granting Full Control to Everyone on this folder may keep you from needing to change the user's privilege level.

The next version of Virtis will set the permission on this folder during the install.

|                                                 |
|-------------------------------------------------|
| Issue ID: 9359                                  |
| Subject: Point Load Capacity for Pin and Hanger |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Curtis, Beckie          | 7/13/2009 11:36:43 AM |
| Modified By: hlee                     | 7/7/2013 4:53:18 PM   |
| Priority: High                        |                       |

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 7/13/2009 7:40:20 AM Eastern Daylight Time  
Enhancement request to have User Input for Pin and Hanger Assembly (Point Load) that would be compared against software calculated dead and live loads and included in determination of final rating. Currently the assemblies must be checked independently and would not be included in automated analysis of permits etc.

FROM: Jim Duray DATE: 5/12/2010 11:37:28 AM Eastern Daylight Time  
The rating of the pin would be done along with the rating of the beam and the minimum would be reported.

FROM: Herman Lee DATE: 6/9/2011 4:26:09 PM Eastern Daylight Time  
This is the Capacity Override Enhancement in the 6.4 Work Plan.

FROM: Herman Lee DATE: 7/7/2013 12:51:23 PM Eastern Daylight Time  
Overriding capacity at points of interest is supported in the 6.5 release.

Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 9360                                          |
| Subject: Unsymmetrical floorbeam negative moment demand |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: vinayagamoorthy, vinacs | 7/13/2009 12:24:20 PM |
| Modified By: bgoodrich                | 1/8/2010 8:38:11 PM   |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krishna Kennelly DATE: 7/13/2009 8:24:43 AM Eastern Daylight Time  
Followup to 9352 from Vinacs: (file is attached to 9352)

In the same bridge model, I have another problem. I ran the bridge with 3ft increment for HS20. Bent cap is symmetrical, however, the negative moment demand is not symmetric. See whether that could be resolved.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-8657

FROM: Brian Goodrich DATE: 7/14/2009 9:48:00 AM Mountain Daylight Time

4/19/2016 3:07:02 PM

HRS AASHTO

1388

Complete Issue Information

I have forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 7/21/2009 9:09:20 AM Mountain Daylight Time  
 The workaround is to use a 2 ft increment until the engine can be addressed.

FROM: Brian Goodrich DATE: 8/12/2009 3:51:01 PM Mountain Daylight Time  
 WYDOT assigned this issue to BRASS Problem Log 904.

FROM: Brian Goodrich DATE: 1/8/2010 1:41:31 PM Mountain Standard Time  
 The BRASS floorbeam module has been corrected. Symmetrical actions are now calculated for a symmetrical structure. Fixed in BRASS-GIRDER(STD) 6.0.3 and BRASS-GIRDER(LRFD) 2.0.3. Fixed for version 6.2.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 9363                                                                     |
| Subject: Different shear results for Brass and STD engines, stiffened plate girder |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Curtis, Beckie          | 7/13/2009 11:42:51 AM |
| Modified By: hlee                     | 5/7/2010 3:03:57 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
|                 | Assigned |          |             |
| Goodrich, Brian |          |          | Bug - BRASS |
|                 | Resolved |          | Support     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:03 PM

HRS AASHTO

1389



## Complete Issue Information

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | virtis shear calc location 2.pdf              |             |
|      | FRM1-Reinforced Concrete<br>Frame Example.pdf |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 7/13/2009 9:11:02 AM Eastern Daylight Time

First issue:

In the attached structure, see WB Spans 5-9 G3 (Interior Girder 10S). Virtis and Brass are calculating different shear capacities. It appears that STD engine is calculating the shear at 96.8% of Span 1 (a change in web thickness) as  $C*V_p$ .

Brass is giving NA for the rating calculations at this location.

I am not sure why Brass is giving NA, but I didn't disagree with the Virtis results since I could see Eq 10-119 applying due to the point of interest being in the first bay from the pin and hanger location.

Second issue:

Checking now WB Spans 9-15, Exterior Girder 7S, at 30-ft in Span 4, the combined Moment/Shear is controlling. Looking at STD engine detailed output,  $C*V_p$  is once again being used.

Looking at Brass for the same location,  $V_u$  is calculated according to Eq 10-114 and is significantly higher.

My questions:

1. Does Brass always ignore shear at web transitions?
2. What situation would not allow the STD engine to use Eq 10-114? It does not appear to be using it for this structure.

FROM: Hasmukh Lathia DATE: 7/14/2009 5:09:19 PM Eastern Daylight Time

Answer to Question 2:

Std Engine uses Eq 10-113 if the girder has a unstiffened web or has a stiffened web and the  $d_0/D$  ratio is greater than 3, or if it is an end panel or if the girder is hybrid. It uses Eq 10-114 if the girder has a stiffened web and the  $d_0/D$  ratio is less than or equal to 3. Looks like the girder in question is hybrid.

FROM: Brian Goodrich DATE: 7/27/2009 10:26:11 AM Mountain Daylight Time

I was able to duplicate the BRASS results (or rather lack thereof). I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 8/12/2009 3:53:40 PM Mountain Daylight Time

WYDOT assigned this issue to BRASS Problem Log 905.

FROM: Brian Goodrich DATE: 10/16/2009 3:18:41 PM Mountain Daylight Time

The points of dead load contraflexure were not entered correctly in Virtis. Because of this, BRASS was

4/19/2016 3:07:03 PM

HRS AASHTO

1390

Complete Issue Information

calculating a negative moment capacity, while the applied factored moments were positive. When this condition is detected, no moment or shear ratings are performed. I changed the contraflexure locations on the member alternative engine properties from 95% and 5% to 97% and 3% to better match the actual dead load action diagram. These changes resulted in acceptable ratings.

|                         |
|-------------------------|
| Issue ID: 9371          |
| Subject: RC Rigid Frame |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Cruz, Michael           | 7/16/2009 1:10:09 PM |
| Modified By: hlee                     | 7/16/2009 1:26:54 PM |
| Priority: High                        |                      |
| Category: Education                   |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Michael Cruz DATE: 7/16/2009 9:12:08 AM Eastern Daylight Time  
Does Virtis have the capability to rate reinforced concrete rigid frames? In particular, a single span frame where the legs of the frame act as abutments retaining the earth load?

FROM: Herman Lee DATE: 7/16/2009 9:17:15 AM Eastern Daylight Time  
Attached is a reinforced concrete frame example.

Complete Issue Information

Issue ID: 9380  
Subject: Long Name in Wizard Creates Error

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Teal, Dean 7/20/2009 8:07:33 PM  
Modified By: jhnat 5/13/2010 11:44:13 AM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | G-11-008.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 7/20/2009 4:08:09 PM Eastern Daylight Time  
When using the superstructure definition wizard to create your PS structure  
You are allowed to name the LRFD PS Stress Limits with a name of any length (no limit)  
It is allowed  
Now when you try to save the structure you will get a system error.  
What is does when the name length is too long, it will delete your name and leave the field blank.  
With the filed name Null, the save fails

When you name the PS limits outside the wizard, you cannot enter a string that is too long.  
I think this is how the wizard should behave also.

FROM: Krisha Kennelly DATE: 7/21/2009 8:43:57 AM Eastern Daylight Time  
existing bug (not new to 6.1)

FROM: Joseph Ihnat DATE: 9/22/2009 8:08:57 AM Eastern Daylight Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 10:02:45 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

FROM: Dean Teal DATE: 5/12/2010 4:14:44 PM Eastern Daylight Time  
Accepted in 6.2 beta 1

|                                           |
|-------------------------------------------|
| Issue ID: 9390                            |
| Subject: Wheel line reaction on floorbeam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 7/22/2009 1:17:03 PM  |
| Modified By: hlee                     | 1/23/2010 10:39:06 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

Complete Issue Information

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Closed    |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/22/2009 9:17:31 AM Eastern Daylight Time  
Submitted on behalf of Andy Benkert (abenkert@cmeengineering.com).

=====  
Great Barrington is a symmetric bridge and therefore the end floorbeams should have the same live load. However, with this bridge I continue to get slightly different live load results between floorbeams 1 and 9. I have checked the layout of the stringers and floorbeams but I can't seem to find an error. Can you offer any advice?  
=====

For Type 3 truck, wheel line reactions are the same on floorbeam 1, 2, 8 and 9.  
For HS 20 truck, wheel line reactions on floorbeam 2 and 9 is a bit higher than floorbeam 1 and 8.  
Is this related to the truck advancement in the virtual stringer analysis?

FROM: Brian Goodrich DATE: 8/12/2009 4:03:45 PM Mountain Daylight Time  
There is a slight asymmetry in the HS20 truck actions calculated by BRASS-LFD due to the nature of the moving the truck along the influence line. This causes the end reactions to be slightly different, which is the reason for the difference in loads applied to the floorbeams. This could occur for other trucks as well.

### Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 9404                                                      |
| Subject: Member Eccentricity Needs to be Included in Truss Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 7/28/2009 2:34:41 PM |
| Modified By: hlee                     | 4/20/2011 2:58:18 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          |             |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | bad_comp_from_14_config.xml |             |
|      | Deck_HS_20-44.DAT           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 7/28/2009 8:35:17 AM Mountain Daylight Time

(Short Version)

The eccentricity of the member has to be included in the capacity calculation. By ignoring the eccentricity, the rating factors for the bridge can be five times larger than the actual ratings as we found during our rating analysis of a 204 feet long, 21.5 feet wide, 10 panel pin connected, Through Pratt Truss bridge

4/19/2016 3:07:04 PM

HRS AASHTO

1395

Complete Issue Information

(Detailed version)

In the current Virtis truss analysis, it assumes that the axial forces in all truss members are acting at the location of the neutral axis of the member cross section. There is no eccentricity between the force and neutral axis of the cross-section. Therefore there is no place to input the eccentricity property for the truss member in Virtis. This assumption may be right for some bridges.

But for some through truss bridges, it is common that the cross-sections for the post and top cord members are not symmetric to the horizontal axis. These members are usually built up with two vertical channels and one top plate. So the neutral axis for cross-section is located above the center line of the channel. However the pine connections, which transfer the forces through different members, are located at the center of the channel. In this case the eccentricity of the member has to be included in the capacity calculation. By ignoring the eccentricity, the rating factors for the bridge can be five times larger than the actual ratings as we found during our rating analysis of a 204 feet long, 21.5 feet wide, 10 panel pin connected, Through Pratt Truss bridge.

Thank you very much.

George Huang, Ph.D., P.E.  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Phone: (916) 227-8769  
Fax: (916) 227-8357

FROM: Herman Lee DATE: 5/30/2010 10:41:05 AM Eastern Daylight Time  
This is a scheduled enhancement for the 6.2 Release.

Issue ID: 9405  
Subject: computing or exporting incorrect deck info - timber

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Jensen, Paul 7/28/2009 8:36:07 PM  
Modified By: bgoodrich 7/12/2010 3:11:29 PM  
Priority: High  
Category: Enhancement

History

4/19/2016 3:07:04 PM

HRS AASHTO

1396

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0534_0001.pdf       |             |
|      | 0535_0001.pdf       |             |
|      | 00171 - 07772.xml   |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Paul Jensen DATE: 7/28/2009 4:42:36 PM Eastern Daylight Time

attached is a bridge that we had removed one of the girders in the super def (14 girder). now the deck size is not correct in the export- we think it is taking the maximum spacing and computing the deck size, rather than using the information provided in the deck def.

me thinks we have an issue-

FROM: Brian Goodrich DATE: 7/30/2009 2:11:27 PM Mountain Daylight Time

The Madero engine does not support unequal girder spacings. This was known at the time of implementation, so the export was coded to issue the following warning to the LOG file:

WARNING (Medium):

An unequal girder spacing was detected! Madero only supports equally spaced girders. Therefore, the maximum girder spacing is exported. This may increase deck and wearing surface dead load comps. The deck width will be adjusted accordingly.

FROM: Paul Jensen DATE: 8/25/2009 11:11:29 AM Eastern Daylight Time

this issue need better resolution than a warning. this is a common issue with timber

me still thinks there is an issue--- elevate to TF action...

FROM: Brian Goodrich DATE: 7/12/2010 8:21:26 AM Mountain Daylight Time

The Madero export and engine were updated to support different spacings between the stringers. Fixed for version 6.2.

4/19/2016 3:07:04 PM

HRS AASHTO

1397



Complete Issue Information

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 9410                                                |
| Subject: Rating summary doesn't agree with engine output file |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 7/29/2009 4:54:33 PM |
| Modified By: bgoodrich                | 7/30/2009 8:10:30 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Doc2.doc            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/29/2009 12:55:43 PM Eastern Daylight Time  
 Submitted on behalf of John Rosatone (jrosatone@aiengineers.com), AI Engineers.

Received e-mail:

=====

The Reinforced concrete T-Beam bridge with the diagonal shear crack that I mentioned to you previously is the problem. I got the bridge to run and it gives reasonable results. The problem is that shear controls for all trucks as you might expect, but the controlling values are not being summarized so when we make a screen shot of all the controlling vehicles, it shows flexure controlling, not shear. I have attach the results for Girder G2 and also the Brass Intermediate output file results of the rating. Do you have any clue of why this is happening. Again any help is truly appreciated.

=====

Complete Issue Information

FROM: Brian Goodrich DATE: 7/29/2009 12:06:03 PM Mountain Daylight Time  
BRASS calculates shear ratings and reports these in the detailed output as you found. Because checking shear is optional for design and legal loads per the LRFR spec, BRASS (by default) ignores the shear ratings when searching for the critical ratings. This explains the results you are getting. BRASS contains options for considering shear (and other spec checks), but these have not been exposed to the Virtis user through the GUI in the version you're using. In the upcoming 6.1 release, new options have been added to consider or ignore shear.

The only workaround would be to take the BRASS data file generated by the BRASS export process, add some MAP-SPEC-CHECK commands to consider the shear check, and run the data file with the stand-alone version of BRASS from WYDOT. These results would not be imported back into Virtis though. They would be at the end of the BRASS output file.

FROM: Brian Goodrich DATE: 7/30/2009 2:09:24 PM Mountain Daylight Time  
E-mail from John Rosatone:

Brian, Herman

Thank you both for your help. You have educated me on the subject and that is very much appreciated.

Sincerely

John

Issue ID: 9416  
Subject: Support harped and straight debonded strand configuration for PS U shape

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 8/6/2009 2:24:17 PM  
Modified By: hlee 8/6/2009 2:40:03 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:07:05 PM

HRS AASHTO

1399

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/6/2009 10:24:40 AM Eastern Daylight Time  
Requested by Clint Krajnik (clint.krajnik@TSHengineering.com), Tsiouvaras Simmons Holderness during 2009 User Group Meeting.

Received bridgeware e-mail on 7/28/2009:

=====  
The attached Word file shows a screen capture of Virtis in which the Strand Configuration Type is set to 1)Straight/Debonded. The input box is grayed out, and does not allow the user to switch to 2)Harped or 3)Harped and straight debonded. We have girders that have both harped and straight debonded strands, but have been unable to input them that way.  
=====

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 9418<br>Subject: Update T1 Example to use lane based live load distribution factors |
|-----------------------------------------------------------------------------------------------|

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Nataluk, Ryan           | 8/7/2009 2:02:13 PM  |
| Modified By: hlee                     | 9/28/2009 1:46:29 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 07870_OB.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/7/2009 10:03:23 AM Eastern Daylight Time  
Requested by Ryan Nataluk in Incident 8111.

Update T1 and post it in Virtis/Opis Support Center.

FROM: Herman Lee DATE: 9/28/2009 9:42:09 AM Eastern Daylight Time  
Duplicate of Incident 8922.

Complete Issue Information

Issue ID: 9420  
Subject: Error running Virtis LFD engine for ps beam

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Kennelly, Krisha 8/10/2009 3:14:15 PM  
Modified By: kkennelly 5/8/2010 2:43:06 AM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/10/2009 11:14:39 AM Eastern Daylight Time  
Submitted on behalf of Octavio Burrolla, New Mexico DOT (at the 2009 User Group Meeting)

G1 member alt does not run for Virtis LFD engine.

FROM: Herman Lee DATE: 8/10/2009 1:26:19 PM Eastern Daylight Time  
The problem is in the export of the first two #7 vertical shear reinforcements.

4/19/2016 3:07:05 PM

HRS AASHTO

1402

Complete Issue Information

FROM: Herman Lee DATE: 11/17/2009 4:32:11 PM Eastern Standard Time  
Added code to adjust shear reinforcements within the beam projections.  
Resolved for 6.2 Release.

FROM: Krisha Kennelly DATE: 5/7/2010 10:40:25 PM Eastern Daylight Time  
fix verified in 6.2 beta 1. G1 ran with the Virtis LFD engine

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 9421                                                      |
| Subject: Increase max number of axles in a vehicle in Madero engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Kennelly, Krisha        | 8/11/2009 5:00:05 PM |
| Modified By: hlee                     | 8/11/2009 5:38:58 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:05 PM

HRS AASHTO

1403

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/11/2009 1:00:45 PM Eastern Daylight Time  
Submitted on behalf of John Estes, CDot at the 2009 User Group meeting:

BRASS engine for timber structures has a max of 20 axles. We need a a min of 25 axles.

(Note from John stated 'BRASS engine' but I suspect he meant Madero)

Issue ID: 9422

Subject: forces in PanelPointMaxForces & PanelPointConcurrentForces files

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Metcalf, William

8/11/2009 8:50:47 PM

Modified By: hlee

5/30/2010 7:00:42 PM

4/19/2016 3:07:06 PM

HRS AASHTO

1404

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Maintenance |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
| Goodrich, Brian | Assigned  |          |             |
| Lee, Herman     |           |          |             |
| Li, Xinmei      |           |          |             |
| Lathia, Hasmukh |           |          |             |
|                 | Resolved  |          |             |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | virtis_error.doc                       |             |
|      | 29_ft_wide_RC_Slab_(1988_Widening).dat |             |
|      | 10-SpanGH.xml                          |             |
|      | 29 0040_sb.xml                         |             |
|      | 10-Span.xml                            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 8/11/2009 4:57:04 PM Eastern Daylight Time

I have noticed that the forces in the PanelPointMaxForces file include impact and distribution factor. The forces in the PanelPointConcurrentForces file do not include impact or distribution factors. There may be a good reason that the forces are reported this way. However, if there is not then this should be fixed. I don't know that it matters which way it is done but unless there is a good reason to do otherwise

4/19/2016 3:07:06 PM

HRS AASHTO

1405



Complete Issue Information

it should be the same in the two files. If it is not it is inviting trouble for the people using the information.

FROM: Herman Lee DATE: 5/30/2010 2:58:00 PM Eastern Daylight Time  
Changed to Maintenance (TF and TAG May 2010)

|                                            |
|--------------------------------------------|
| Issue ID: 9424                             |
| Subject: Maximum Spans for Concrete Bridge |

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis            |
| Primary Contact: Lathia, Hasmukh                 |
| Submitted By: Huang, George 8/12/2009 7:46:45 PM |
| Modified By: ghuang 4/20/2011 2:46:53 PM         |
| Priority: High                                   |
| Category: Enhancement                            |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 8/12/2009 3:50:19 PM Eastern Daylight Time  
We are using concrete T-beam to model a 10-span slab bridge and found that Virtis can only input maximum 9 spans. Is this right? Please see the attached file. Thanks.

FROM: Herman Lee DATE: 8/13/2009 8:39:46 AM Eastern Daylight Time  
I copied the superstructure definition, added another span and modified G1 for 10 spans in the attached 10-Span.xml file. I got the following limitation when I tried to rate G1. Is there any workaround for this limitation?

=====  
Error generating LFD/ASD load commands!  
Error generating load group commands!  
Load Case: DW

4/19/2016 3:07:06 PM

HRS AASHTO

1406

Complete Issue Information

The number of deck uniform loads exceeds the maximum allowed by BRASS!

No. of uniform loads = 10 (Maximum = 9)

=====

FROM: George Huang DATE: 8/17/2009 10:55:28 PM Eastern Daylight Time

I have the feeling that error is due to the span number. For this particular bridge, 9-span model is fine for our rating purpose.

I also tried to use Virtis Engine with modified support conditions (because I got error message that Virtis Engine can only deal with pin or roller supports) for G1, this time there was error message and the program (Virtis) was shut down. When I re-open the Virtis, I even could not save file because the error in G2.

FROM: George Huang DATE: 8/17/2009 11:20:36 PM Eastern Daylight Time

The error message (Virtis\_error.doc) and my revised file (10-spanGH.xml) for G1 in "Copy of Span 1-10 (MDL 1) (06/09)" are attached.

FROM: Herman Lee DATE: 8/18/2009 9:08:40 AM Eastern Daylight Time

Brian, please assign this incident back to me after you are done.

FROM: George Huang DATE: 8/20/2009 6:14:21 PM Eastern Daylight Time

The 10 span model will run with Brass Engine if assign overlay with DC load case, but won't run with DC1 or DW load cases. With Virtis Engine it won't run even with DC load case.

FROM: Herman Lee DATE: 8/21/2009 8:39:57 AM Eastern Daylight Time

For Virtis Std Engine, one internal array exceeds its limit. We will add a check for this condition in 6.2 or 6.1 patch if there's one.

FROM: Herman Lee DATE: 3/5/2010 5:13:36 PM Eastern Standard Time

May, please attach the Virtis Std Engine input file.

FROM: Herman Lee DATE: 3/7/2010 9:25:29 AM Eastern Standard Time

Attached Virtis Std Engine input file.

FROM: Hasmukh Lathia DATE: 3/8/2010 2:52:05 PM Eastern Standard Time

The problem with exceeding one internal array size is not due to the number of spans, but a combination of number of analysis points and reinforcement ranges defined for the bridge. A fix will be made in 6.2 or 6.1 patch to catch this limit, inform the user and exit the program gracefully.

FROM: Herman Lee DATE: 3/30/2010 12:53:04 PM Eastern Daylight Time

Resolved by Hasmukh Lathia on 3/30.

FROM: Herman Lee DATE: 5/9/2010 11:43:04 AM Eastern Daylight Time

Tested the 10-SpanGH.XML file in this incident.

Verified in 6.2 Beta 1.

FROM: Herman Lee DATE: 5/11/2010 2:11:49 PM Eastern Daylight Time

4/19/2016 3:07:06 PM

HRS AASHTO

1407

Complete Issue Information

George Huang would like to change this incident to Virtis Std Engine enhancement request for increasing the size of the internal array.

FROM: George Huang DATE: 5/12/2010 4:29:15 PM Eastern Daylight Time  
Herman, we were told the Brass LFD were able to handle bridge with more than 10 spans. If this is true, then the problem may due to the UI export file. Could you verify this?

FROM: Herman Lee DATE: 5/13/2010 10:36:45 AM Eastern Daylight Time  
For BRASS LFD, the limitation is not the number of spans. The limitation is the number of uniform loads. Brain, has this been already requested by BRASS users?

=====  
Error generating LFD/ASD load commands!  
Error generating load group commands!  
Load Case: DW  
The number of deck uniform loads exceeds the maximum allowed by BRASS!  
No. of uniform loads = 10 (Maximum = 9)  
=====

E-mail sent to Brian Goodrich on 5/13 for clarification.

FROM: Brian Goodrich DATE: 5/13/2010 9:31:55 AM Mountain Daylight Time  
The deck load module has a limit of 9 uniform loads as indicated by the error message. I will forward this to WYDOT.

One work-around would be to reduce the number of deck uniform loads by one and input this as a member load.

Issue ID: 9425  
Subject: VIRTIS 5.6 continuous span bridge - low rating using LRFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Goodrich, Brian 8/12/2009 9:45:36 PM  
Modified By: hlee 10/30/2009 6:49:56 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |

4/19/2016 3:07:06 PM

HRS AASHTO

1408

Complete Issue Information

|                 |                    |      |           |
|-----------------|--------------------|------|-----------|
| Goodrich, Brian | Resolved           |      | Education |
|                 | New                | High | Bug       |
|                 | Assigned           |      |           |
|                 | Information Needed |      |           |
|                 | Assigned           |      | Unknown   |
|                 | Resolved           |      | Support   |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier               | Description                                       |
|------|-----------------------------------|---------------------------------------------------|
|      | Incident9426-BRASS-Calcs.pdf      | BRASS concrete tension rating factor calculations |
|      | Hand Calcs - HS20 Load Rating.pdf |                                                   |
|      | Ramp_C.XML                        |                                                   |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 8/12/2009 3:45:40 PM Mountain Daylight Time  
 Submitted on behalf of Sarah Saeed, Saeed Associates. (sarah\_saeed82@yahoo.com)

Received Bridgeware e-mail:

=====  
 Hello. I am trying to rate a 3 span continuous steel girder bridge in VIRTIS 5.6 in LRFR. I am getting a very low rating when I rate it in LRFR, but not when I use LFD. I get a normal rating in LFD. I have checked the input and can not find the problem.. Can you please take a look at the bridge, I am attaching it in xml format, and tell me where the problem is? Thank you very much.  
 =====

FROM: Brian Goodrich DATE: 8/12/2009 3:47:50 PM Mountain Daylight Time  
 For your 00992.xml file, it appears that a Service II check (Web Bend-Buckling) is controlling the rating for LRFR. I don't see anything wrong in the input. I reviewed the detailed output from BRASS, but don't see any problems here either. The output from the BRASS 210 point of interest is included below:

Complete Issue Information

AASHTO REFERENCE: 6.10.1.9 Web Bend-Buckling Resistance

6.10.1.9.2 Webs With Longitudinal Stiffeners

EQUATION NO. : 6.10.1.9.1-1

Input Parameters:

D = 105.000 in Fyw = 50.000 ksi Fyc = 50.000 ksi

tw = 0.500 in E = 29000.000 ksi Rh = 1.000

Longitudinal Stiffeners Provided: YES

More Input Parameters:

D = 105.000 in Dc = 58.002 in ds = 84.000 in

Calculations: [AASHTO LRFD 6.10.1.9.2]

Calculated Value: ds / Dc = 1.448

AASHTO Limit : 0.400

Calculations: [AASHTO LRFD 6.10.1.9.2-1]

$k_1 = 5.17 * (D / ds)^2 = 8.078$

$k_2 = 9.0 / (Dc / D)^2 = 29.494$

$k = \text{MAX}(k_1, k_2) = 29.494$

Are both edges of web are in compression?

NO => k = 29.494

Calculations: [AASHTO LRFD 6.10.1.9.1-1]

$F_{crw} = 0.9 E * k / (D / tw)^2 = 17.456 \text{ ksi}$

Complete Issue Information

$$F_{crw} \text{ Minimum}(1) = R_h * F_{yc} = 50.000 \text{ ksi}$$

$$F_{crw} \text{ Minimum}(2) = F_{yw} / 0.7 = 71.429 \text{ ksi}$$

$$F_{crw} = \text{MIN}(F_{crw}, \text{Minimum}(1), \text{Minimum}(2)) = 17.456 \text{ ksi}$$

AASHTO REFERENCE: 6.10.4.2.2 Flexure

EQUATION NO. : 6.10.4.2.2-4

Input Parameters:

$$\phi = 1.000 \quad f_c = 26.680 \text{ ksi}$$

Flexure Resistance Summary:

$$F_r = \phi F_{crw} = 17.456 \text{ ksi}$$

Result Code: FAIL

=> Note: Result Code lists PASS if the flange stress ( $f_c$ ) is less than the limiting stress ( $F_r$ ).

PERFORMING RATING FACTOR COMPUTATIONS: Stress (Web Bend-Buckling Stress (Bottom Flange))

Point of Interest : 210.00

|                     |              |                 |         |
|---------------------|--------------|-----------------|---------|
| Construction Stage: | 3            | Resistance =    | -17.456 |
| LL Combination No.: | 1            | Dead Load =     | -15.210 |
| Limit State         | : SERVICE II | Live Load =     | -11.470 |
| Units               | : ksi        | Rating Factor = | 0.196   |

Complete Issue Information

There are known differences in between LFR and LRFR, such as the load model, live load distribution factors, and impact. I suspect these might be contributing some to the lower rating with LRFR.

FROM: Herman Lee DATE: 10/30/2009 2:44:30 PM Eastern Daylight Time  
Changed Status to Resolved since Brian Goodrich didn't find anything incorrect in the input.

|                                                      |
|------------------------------------------------------|
| Issue ID: 9426                                       |
| Subject: Low rating for prestressed concrete tension |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 8/13/2009 3:05:07 PM |
| Modified By: hlee                     | 3/23/2010 7:56:20 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 8/13/2009 9:05:18 AM Mountain Daylight Time  
Submitted on behalf of Mark Unterkofler:

=====  
=====

Virtis indicates a Rating Factor that is governed by Tension in the Bottom Flange for Positive Moment. The RF = 0.49 for the design truck. This is a PS beam (simple span). The moments and section properties in Virtis match up well with our original design software. I have a feeling that Virtis is using the Factored Live Load Moment to compute the stress rather than Service Live Load Moment. Our RF

4/19/2016 3:07:06 PM

HRS AASHTO

1412





Complete Issue Information

Stress = -1207.9 psi

Feel free to call me if you need to.

Mark G. Unterkofler, P.E.

FROM: Brian Goodrich DATE: 1/28/2010 9:07:46 AM Mountain Standard Time  
I attached a file (Incident9426-BRASS-Calcs.pdf) documenting how BRASS calculates the concrete tension rating factor of 0.49. I verified that the dead loads input into Virtis are getting into the BRASS engine. There appears to be a difference in the dead loads between the Conspan model and the Virtis model.

Issue ID: 9430  
Subject: Shear rating incorrect due to bearing stiffeners not being considered as transverse stiffeners

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 8/13/2009 8:40:34 PM  
Modified By: hlee 10/15/2011 10:00:10 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status             | Priority | Category       |
|-----------------|--------------------|----------|----------------|
| Lee, Herman     | New                | High     | Bug            |
| Goodrich, Brian | Assigned           |          |                |
|                 | Information Needed |          |                |
|                 | Assigned           |          |                |
|                 | Information Needed |          | Bug - Export 1 |
|                 |                    |          | Bug            |
|                 | Not Reproducible   |          |                |
|                 | Closed             |          |                |
|                 |                    |          | Bug - BRASS    |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Prospect.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 8/13/2009 2:40:38 PM Mountain Daylight Time  
 Submitted on behalf of Cory Chamberlain via Tim Armbrect:

=====

===

Krishna,

When you get a chance, can you please confirm what my consultant is reporting below – that BRASS does not recognize bearing stiffeners as transverse stiffeners in computing shear capacity in LRFD/LRFR?

Thanks,  
 Tim

Tim,

I have been working with Dewey and Tim on tracing some of the VIRTIS issues. One issue is VIRTIS/BRASS is not recognizing the bearing stiffeners as transverse stiffeners to increase the shear capacity. The work around is to add transverse stiffeners at the bearing stiffener locations, but this is time consuming to do. The program should recognize the bearing stiffeners as transverse stiffeners and calculate the shear capacity based on the spacing between the bearing stiffener and the next connection plate. This is for sure a problem in LRFD/LFD, but not sure it is a problem in the LFD module.

Cory

=====

===

FROM: Brian Goodrich DATE: 8/13/2009 2:44:09 PM Mountain Daylight Time  
 I'm looking into the transverse stiffener issue. The export process adds a schedule for the range between the end of a span and the first transverse stiffener present. I tested this with the 6.1 beta version and the ranges are added correctly. I don't see that this area of the export has been changed

4/19/2016 3:07:07 PM

HRS AASHTO

1415

## Complete Issue Information

significantly for about three years.

One possible solution is to make sure that the engine properties are set to generate POIs at user-defined or tenth points. Otherwise, none of the schedule input will be used.

If this is already set, then I'll need the bridge XML file as well as the version of Virtis the consultant is running, so I can investigate further.

FROM: Brian Goodrich DATE: 8/13/2009 2:45:06 PM Mountain Daylight Time  
E-mail from Tim:

Brian,

Just discussed with my consultant. What you describe below is not the issue. The issue is does BRASS consider bearing stiffeners to act as transverse stiffeners for the purposes of calculating shear capacity? It doesn't appear so, and the workaround is to add a transverse stiffener at the bearing location. However, we would prefer that the program looks at the bearing stiffener and thinks "transverse stiffener" in the shear capacity calculations. In this case, I'm wondering if BRASS is calculating  $d_0$  (as in "d sub zero") to be the distance from the first transverse stiffener to the left of a pier support to the first transverse stiffener to the right of the support, and ignoring the bearing stiffener at the pier support. When I posed this possibility to the consultant, he replied:

I believe your statement to be correct, however when I traced the output in BRASS it states "no transverse stiffeners" for that section so I am not sure what is going on for sure, but when I use the workaround the shear capacity hits exactly what MDX is producing. When I just use the transverse stiffeners at the cross frames and bearing stiffeners at the pier the shear capacity significantly drops to what an unstiffened web should be. This appears to be a hiccup in the programming logic but I don't know for sure, other than the shear results are wrong without the workaround.

In this case, we believe the bearing stiffener behaves as a transverse stiffener, and  $d_0$  should be revised accordingly.

Can you confirm that this is what happens in BRASS? Thanks,

Tim

FROM: Brian Goodrich DATE: 8/13/2009 2:46:25 PM Mountain Daylight Time

We did fix an issue where there was a slight gap in the transverse stiffener schedule near the end of a span. The stiffener spacing for a POI at the adjacent support was therefore determined as non-existent. This can be seen if you look at the STIF-TRAN-SCHEDULE commands in the BRASS data file. If the start distance plus the range doesn't add up to exactly the BRASS span length, the gap exists.

If this doesn't explain the issue, please send in the bridge XML file.

4/19/2016 3:07:07 PM

HRS AASHTO

1416

Complete Issue Information

FROM: Brian Goodrich DATE: 8/20/2009 1:28:41 PM Mountain Daylight Time  
E-mails from Cory and Tim:

=====  
=====  
Brian,

I have attached the xml file and Cory's comment. Please review and let me know what you think.  
Thanks,

Tim

=====  
=====

=====  
=====  
Tim,

I am not sure this discussion below is relevant to our problem. I believe it is a issue with bearing stiffeners not being recognized or acting as transverse stiffeners for shear capacity. Since adding a transverse stiffener at the same location as the bearing stiffener "fixes" the problem, I would speculate the problem highlighted below is not our problem.

The XML file is attached. Unit 1 has the workaround to get the correct shear capacity, which is to define a transverse stiffener at the same location as a bearing stiffener. Unit 2-4 have not been modified as such.

Thanks,  
Cory

=====  
=====

Attached the XML file.

FROM: Brian Goodrich DATE: 1/28/2010 12:24:42 PM Mountain Standard Time  
I'm not able to duplicate this issue with the 6.2 alpha version. Please indicate the exact structure definition, member, and member alternative that is exhibiting the unexpected behavior. Also, attach the BRASS data file that is produced by the export.

FROM: Tim Armbrecht DATE: 2/22/2010 2:35:54 PM Eastern Standard Time  
Brian, we can't duplicate it any more either. It appears to have been fixed for the 6.1 release, because we have been running 6.1 since October and our last post to this incident was in August. It appears to be OK now. Please go ahead and close this incident. If it pops up again, we'll re-submit. Thanks.

FROM: Brian Goodrich DATE: 3/1/2010 10:18:48 AM Mountain Standard Time  
Closed.

|                                         |
|-----------------------------------------|
| Issue ID: 9431<br>Subject: Can Not Save |
|-----------------------------------------|

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Metcalf, William        | 8/13/2009 10:08:01 PM |
| Modified By: mordoobadi               | 9/3/2009 8:47:10 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 00381 - Watauga_River.xml |             |
|      | Copy Super Def error.JPG  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 8/13/2009 6:10:03 PM Eastern Daylight Time

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmStringerDIReactDetail (SaveOrder object 602).

Error updating database record set.

FROM: Mehrdad Ordoobadi DATE: 9/3/2009 4:42:28 PM Eastern Daylight Time

Related to 9433.

This was a problem since 2002. It is now fixed. In 6.1 Acceptance build.

Complete Issue Information

Issue ID: 9433  
Subject: Unable to Save after making a copy of a Superstructure Definition

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Barnhill, Gale 8/14/2009 4:28:30 PM  
Modified By: mordoobadi 8/21/2009 10:08:38 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gale Barnhill DATE: 8/14/2009 12:41:33 PM Eastern Daylight Time  
For the attached bridge, I try to copy the Super Def "Three span continuout". I can do the Copy and Paste and the "Copy of...." Super Def shows up in the tree.

When I click SAVE, I get the attached error.

I get the same error if I try to Copy the Bridge in the Bridge Explorer.

4/19/2016 3:07:07 PM

HRS AASHTO

1419

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 8/21/2009 2:04:40 PM Eastern Daylight Time

This is reproducible in version 6.1 with the following error message:

-----  
Unable to save Bridge data!  
02:15:23 PM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmStringerDIReactDetail (SaveOrder object 625).  
02:15:18 PM - Line 448 in source file e:\virtis\dev\data management\abmbche\dmbridgecache.cpp.

Error updating database record set.  
02:15:18 PM - Line 1001 in source file e:\virtis\dev\data management\abmfloor\dmstringerdlreactdetail.cpp.  
State:23000,Native:-194,Origin:[Sybase][ODBC Driver]  
Integrity constraint violation: no primary key value for foreign key 'R\_3459' in table 'abw\_stringer\_dl\_react\_detail'

-----  
This is for a Sybase database.

FROM: Mehrdad Ordoobadi DATE: 8/21/2009 5:04:05 PM Eastern Daylight Time  
This was a problem since 2002. It is now fixed. In 6.1 Acceptance build.

|                                                   |
|---------------------------------------------------|
| Issue ID: 9434                                    |
| Subject: IM factors for LRFR ratings less the 33% |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 8/14/2009 6:25:49 PM |
| Modified By: bgoodrich                | 8/17/2009 2:36:09 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug            |
|                 | Resolved |          | Bug - Export 2 |

Contacts

4/19/2016 3:07:07 PM

HRS AASHTO

1420

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/14/2009 2:27:52 PM Eastern Daylight Time  
 Submitted on behalf of Jim Randall, County of Santa Clara (Jim.Randall@rda.sccgov.org).

Received e-mail:

=====  
 We are using Virtis 6.0 to establish our permit vehicles (California Permit Truck P-15) rating using a IM = 25%. We have changed the Bridge, Superstructure Definitions, and the Member Alternative windows for the LRFD Dynamic Load Allowance, All other limit states box to 25%. When we run the program with out changing the Vehicle Properties impact box the results are for IM = 33%. When we change the Vehicle Properties, Impact box to 0.7576 = 25/33 then the moment results from Virtis agree with our hand calculations. It appears that the program does not take into account the preliminary Impact/Dynamic Allowance windows discussed above? I am attaching my xml file and a memo for your comment and guidance. I called today but you were not available to discuss this issue.  
 =====

I'm able to reproduce the issue described above. Looks like Rating Procedure in the LOAD-LIVE-DYNAMIC command is always set to D (Design Loads).

FROM: Brian Goodrich DATE: 8/14/2009 2:54:09 PM Mountain Daylight Time  
 The export only generates the LOAD-LIVE-DYNAMIC command for "design" loads, but this was done long before LRFR was implemented. The workaround that Jim is using works, but this isn't a long-term solution. The 25/33 factor input on the Vehicle Properties window removes the default 33% used within BRASS. Therefore, this workaround only works for the BRASS engine.

On the various Impact/DLA windows, should the LRFD Dynamic Load Allowance be used for design, legal, and permit categories? If so, I just have to revise the export to generate commands for the legal and permit categories. This means that when vehicles are assigned to the design, legal, and permit categories, they all get the same impact unless overridden on the Vehicle Properties window. The alternative is to enhance Virtis to allow the user to input the impact differently for each category. Comments?

FROM: Brian Goodrich DATE: 8/17/2009 8:34:44 AM Mountain Daylight Time  
 E-mail from Herman:

=====  
 With what we have now, I think the Dynamic Load Allowance should be used by all the vehicles in the design, legal and permit categories.

4/19/2016 3:07:07 PM

HRS AASHTO

1421



Complete Issue Information

=====

I revised the export to generate the commands for the legal and permit categories.

|                                             |
|---------------------------------------------|
| Issue ID: 9454                              |
| Subject: LRFR Legal Loads with Truck + Lane |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 8/21/2009 4:32:58 PM |
| Modified By: hlee                     | 5/7/2010 3:07:29 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 8/21/2009 10:34:08 AM Mountain Daylight Time  
 Received Bridgeware e-mail (David Wolfe, Moffatt & Nichol <DWolfe@moffattnichol.com>):

=====

Bridgeware - It appears that running "Lane-Type Legal Load" as an LRFR Legal Load runs only the truck portion defined on the truck tab and neglects the lane load portion defined on the lane tab. When any truck is defined, the lane load information is ignored for LRFR Legal Load.

Therefore, the Lane-Type Loading for Negative Moments and Interior Reactions shown in MBE Figure

Complete Issue Information

D6A-5 cannot be analyzed using VIRTIS vehicle definitions.

I am running VIRTIS 5.6.

Take a lane type legal load as an user defined agency vehicle:

- (a) Analyze legal load with truck + 0.200 klf lane
- (b) Run same as (a) but change lane to 200 klf. I get the (a) results
- (c) Delete all portions of the truck and keep 200 klf, then I get a very low RF as one would expect.

Respectfully - DW

FROM: Brian Goodrich DATE: 8/21/2009 10:53:25 AM Mountain Daylight Time

I was able to reproduce the results you reported regarding the "Lane-Type Legal Load". This version is not exporting the legal truck with the right code for it to be combined with the legal lane. The only workaround I have found is to check the "Legal Pair" checkbox for this vehicle on the Vehicle Properties window.

This problem no longer occurs in the upcoming 6.1 release version schedule for release in October.

Please let me know if the workaround addresses your issue for the short-term.

FROM: Herman Lee DATE: 5/7/2010 11:05:55 AM Eastern Daylight Time  
Resolved in 6.1 Release

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 9458                                                              |
| Subject: Live Loads - AASHTO Manual for Condition Evaluation Spec 6.4.4.2.1 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 8/21/2009 8:36:15 PM |
| Modified By: hlee                     | 6/7/2013 7:16:45 PM  |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Resolved |          |          |

4/19/2016 3:07:08 PM

HRS AASHTO

1423

Complete Issue Information

|             |                  |      |             |
|-------------|------------------|------|-------------|
| Lee, Herman | Suspended        |      | Enhancement |
|             | New              | High | Bug         |
| Li, Xinmei  | Assigned         |      |             |
|             | Not Reproducible |      |             |
| Lee, Herman | Assigned         |      |             |
|             | Resolved         |      |             |
|             | Closed           |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name                                                               | Resource Identifier | Description |
|--------------------------------------------------------------------|---------------------|-------------|
| lateral support.xml                                                |                     |             |
| ZeroDeflection_VirtisStdEngine.png                                 |                     |             |
| 9463A_Interior_Beam_without_top_flange_bracing_3_5ft_span_2.out    |                     |             |
| 9463(1)_Interior_Beam_without_top_flange_bracing_3_5ft_span_2.OUT  |                     |             |
| log.txt                                                            |                     |             |
| deflection.png                                                     |                     |             |
| 9463(1)A_Interior_Beam_without_top_flange_bracing_3_5ft_span_2.out |                     |             |
| 3.5 ft span 2.png                                                  |                     |             |
| 9463(2)_Interior_Beam_without_top_flange_bracing_3_5ft_span_2.OUT  |                     |             |
| 9463(2)_Interior_Beam_without_top_flange_bracing_3_5ft_span_2.     |                     |             |

Complete Issue Information

|                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DAT<br>Interior_Beam_without_top_flan<br>ge_bracing_3_5ft_span_2.OUT<br>9463(1)<br>_Interior_Beam_without_top fla<br>nge_bracing_3_5ft_span_2.<br>DAT<br>Interior_Beam_without_top_flan<br>ge_bracing_3_5ft_span_2.DAT |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 8/21/2009 4:43:15 PM Eastern Daylight Time  
Is this Spec Article (6.4.4.2.1) for Live Loads in Virtis LRFR?

States For All Span lengths

- critical loads shall come from
- AASHTO Legal Loads (3, 3-3 and 3S2)
- For Neg Moments and Reactions at Interior Supports - a lane load of 0.2 klf combined with TWO AASHTO Type 3-3 Trucks multiplied by 0.75 - headed in same direction - separated by 30 ft

In addition - for span lengths greater than 200 ft

- AASHTO Type 3-3 multiplied by 0.75 and combined with lane load of 0.2 klf

And also -

Dynamic Effects only on legal trucks and NOT the lane loads  
and if ADTT < 500 - lane load excluded and 0.75 factor revised to 1.0 - if warranted by Engineer.

FROM: Jim Duray DATE: 8/24/2009 11:18:26 AM Eastern Daylight Time  
Yes.

You can add vehicles to the "Legal Load Rating" category in the analysis settings.

If a vehicle does not have a lane load it is processed as described in bullet 1 under 6.4.4.2.1.  
If a vehicle has a lane load it is processed as described in bullets 2 and 3 under 6.4.4.2.1.

There is a vehicle in the library named "AASHTO Lane-type legal Load Model". It is a Type 3-3 truck (multiplied by 0.75) with a lane load of 0.2 k/ft.

The last sentence regarding ADTT and engineering judgement is not implemented. 0.75 is always used and so is the lane load.

FROM: Todd Thompson DATE: 9/9/2009 4:52:49 PM Eastern Daylight Time  
Please mark this as an enhancement to allow the user to follow the AASHTO code if they so choose to use that option.

Complete Issue Information

FROM: Jim Duray DATE: 9/9/2009 4:52:53 PM Eastern Daylight Time  
Changed to Enhancement and Suspended and moved to Support Center.

FROM: Herman Lee DATE: 5/30/2010 10:17:26 AM Eastern Daylight Time  
Changed to Maintenance (TF and TAG May 2010)

FROM: Herman Lee DATE: 6/7/2013 11:01:55 AM Eastern Daylight Time  
This enhancement is to support the following statement in 6A.4.4.2.1a.

"If the ADTT is less than 500, the lane load may be excluded and the 0.75 factor changed to 1.0 if, in the Engineer's judgement, it is warranted."

A workaround is to create a separate vehicle with the lane load excluded and the 0.75 factor changed to 1.0. I tested this workaround. The modified Figure D6A-4 model worked as expected but not the modified Figure D6A-5 model. I entered Incident 12644 for fixing the application of the modified Figure D6A-5 model.

|                                                    |
|----------------------------------------------------|
| Issue ID: 9463                                     |
| Subject: Gapping out Lateral support of top flange |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 8/28/2009 2:02:52 PM |
| Modified By: hlee                     | 5/13/2010 3:21:36 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:07:08 PM

HRS AASHTO

1426

## Complete Issue Information

FROM: Beckie Curtis DATE: 8/28/2009 10:23:33 AM Eastern Daylight Time

In analyzing the effects of the beam top flange not being attached to the deck, I tried to gap out the lateral support from 5-ft left of pier to 3.5-ft right of pier. However, at the 3.5-ft point of span 2 in the output shows an unbraced compression flange of 1053-in (the span length) rather than the 8.5-ft I attempted to input. Used Virtis engine. Can't compare to Brass since it always considers the top flange braced if a deck is added. see screenshot.

Second issue: checking deflection, and the Virtis engine is showing deflection (not uplift) at the pier for dead load. Brass engine shows 0in deflection at pier.

FROM: Xinmei Li DATE: 3/5/2010 5:14:01 PM Eastern Standard Time

1) Lateral support issue: For Virtis std engine, the top flange for the entire girder is assumed to be continuously supported. So the information you entered (3.5') was not imported to std engine, which was not considered in rating analysis.

2) Deflection issue: I'm not able to reproduce Virtis std engine deflection for dead load with my development version. See attached screen shot, "ZeroDeflection\_VirtisStdEngine".

FROM: Xinmei Li DATE: 3/7/2010 9:03:44 AM Eastern Standard Time

Virtis std engine input and output files are attached.

FROM: Xinmei Li DATE: 3/7/2010 11:01:51 AM Eastern Standard Time

2) Deflection issue: I tried this again with 6.0 release version, I was able to reproduce the non zero deflection, it seems this issue was fixed.

FROM: Xinmei Li DATE: 3/10/2010 9:40:31 AM Eastern Standard Time

1) Lateral support issue: Virtis export did not export the lateral bracing information to the engine, see the warning message in the attached log file.

Lateral Brace Points and Stiffener Spacings

Warning - Lateral support ranges in span 1 are not within a foot of the span length!

Warning - The lateral support ranges in span 1 will not be exported!

Warning - Lateral support ranges in span 2 are not within a foot of the span length!

Warning - The lateral support ranges in span 2 will not be exported!

FROM: Hasmukh Lathia DATE: 3/10/2010 5:23:56 PM Eastern Standard Time

1) Lateral Support Issue: I have modified the Virtis Std Engine input file for adding top flange brace points at 5' left of support 2 and 3.5' right of support 2. Virtis Std Engine recognizes these brace points and considers appropriate unbraced lengths for an analysis at 3.5' in span 2. The output file beginning with 9463A\_.... (no bracing at top flange) and with 9463(1)A\_... are attached for review. This appears to be a user input issue with Virtis export.

FROM: Hasmukh Lathia DATE: 3/11/2010 4:28:06 PM Eastern Standard Time

If the girder has a gap in the top flange bracing, the export should pass on input to Virtis Std Engine coded as follows:

BG in Span 1 with code C for 1 spacing of 82.75' followed by code T for 1 spacing of 5.0' and

BG in span 2 with code T for 1 spacing of 3.5' followed by code C for 1 spacing of 84.25'.

Input lines for Virtis Std Engine should look like this:

4/19/2016 3:07:08 PM

HRS AASHTO

1427

Complete Issue Information

BG 1 C 1 82.75 T 1 5.00 0 0.00 0 0.00

BG 2 T 1 3.50 C 1 84.25 0 0.00 0 0.00

I ran the girder with these changes. The ratings are much better (no negative ratings). The two outputs, one with unbraced and another with continuously braced top flange in the regions identified, are attached .

Virtis Export for Std Engine will be fixed accordingly in 6.2 Release.

FROM: Herman Lee DATE: 3/14/2010 1:57:34 PM Eastern Daylight Time  
 Updated export for gaps in lateral support ranges.  
 Resolved for 6.2 Release.

FROM: Jim Duray DATE: 5/6/2010 6:42:21 PM Eastern Daylight Time  
 Verified for 6.2 alpha 4.

Issue ID: 9464  
 Subject: Virtis LFD Engine for Bridge Models Created for BRASS Engine

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Huang, George 8/28/2009 2:27:21 PM  
 Modified By: ghuang 4/20/2011 2:47:48 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Duplicate |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 8/28/2009 10:38:34 AM Eastern Daylight Time  
All Caltrans bridge models are created to run BRASS engine. Since Brass engine will be phase out in 2011, these models have to run with Virtis Engine. However Virtis engine can only handle pin and roller supports while our models have the rotational stiffness from substructures when they are applied, our bridge will not run with Virtis engine, unless changing the boundary conditions or Virtis adds the function to handle the rotational stiffness for the bounday condition. Is there any plan for this new addition in Virtis?

FROM: Herman Lee DATE: 8/28/2009 11:09:25 AM Eastern Daylight Time  
Duplicate of Incident 6683 and 7157.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 9466                                                                      |
| Subject: Live Load Distribution For Precast Concrete Beams Used in Multi-Beam Decks |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Huang, George           | 8/28/2009 3:56:20 PM |
| Modified By: hlee                     | 5/12/2010 8:50:43 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

4/19/2016 3:07:09 PM

HRS AASHTO

1429



### Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Lee, Herman      | New      | High     | Bug      |
| Ihnat, Joseph    | Assigned |          |          |
| Kennelly, Krisha | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Virtis Super Def Alt Error.JPG |             |
|      | Virtis Super Def Alt Error.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 8/28/2009 12:59:02 PM Eastern Daylight Time

For precast concrete beams used in multi-beam deck as defined in AASHTO STD Specification (2002), section 3.23.4, the live load distribution factor should be calculated with the equations listed in that section. These girders are also defined in AASHTO LRFD Specification Table 4.6.2.2.1-1 as Typical Cross-Section (h), (g), (i) and (j). The live load distribution factors for moment in interior beams are listed in Table 4.6.2.2.2b-1. However in Virtis, the live load distribution factors for moment are calculated based on S/5.5 for both LFR and LRFR.

Personally I feel the equations listed on both Specs are questionable, and I will use S/5.5 for our specific bridge (see the attached file). However, If Virtis has made decision to use the different equations other than those from the Specs, it may need to add a note, which may pop up after clicking the "computer from typical section" button, to explain it positions.

FROM: George Huang DATE: 5/12/2010 3:49:19 PM Eastern Daylight Time

The question has been clarified. The case is closed.

FROM: Herman Lee DATE: 5/12/2010 4:33:26 PM Eastern Daylight Time

If the Deck checkbox in the PS Tee Beam window is checked, Virtis will consider the girders to be adjacent to each other.

Complete Issue Information

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 9479                                                             |
| Subject: Virtis error when trying to reassign Super Def to Super Struc Alt |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Kennelly, Krisha     |                     |
| Submitted By: Barnhill, Gale          | 9/4/2009 2:50:13 PM |
| Modified By: sthogaru                 | 5/5/2010 7:56:38 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Lathia, Hasmukh | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |
|                 | Resubmit           |          |          |
|                 | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                  | Description |
|------|----------------------------------------------------------------------|-------------|
|      | 9483_plate_girder_with_higher_web_yield_and_stiffeners_Out put_A.OUT |             |
|      | plate_girder_with_higher_web_yield_and_stiffeners.dat                |             |
|      | 9483_Exterior_Girder_7S_Hybrid Issue.OUT                             |             |
|      | plate_girder_with_higher_web_yield_and_stiffeners.OUT                |             |
|      | beta test bridge.xml                                                 |             |

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 9/4/2009 11:03:41 AM Eastern Daylight Time

In this model, I made a copy of the Super Def "Simple span through truss WITH BOTH COUNTERS" and made some changes to the Truss Command sets.

I tried to assign the new Super Def "Simple span through truss REMOVE COUNTERS" to the Superstructure Alternative.

When I select that name in the pulldown list, I get the error shown in the attache screen shot.

I was able to work around this error by Unchecking the Superstructure Alternative from the Alternatives Tab of the Superstructures window, deleting the Superstructure Alternative and reentering it and then assign the new Super Def.

FROM: Krisha Kennelly DATE: 1/30/2010 10:35:48 PM Eastern Standard Time  
fixed for Version 6.2

FROM: Srujana Thogaru DATE: 5/5/2010 3:52:02 PM Eastern Daylight Time  
Verified for 6.2 Beta Build 1

|                        |
|------------------------|
| Issue ID: 9483         |
| Subject: Hybrid Girder |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lathia, Hasmukh      |                       |
| Submitted By: Curtis, Beckie          | 9/9/2009 11:26:53 AM  |
| Modified By: hlee                     | 5/14/2010 12:53:17 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:07:09 PM

HRS AASHTO

1432

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 9/9/2009 7:28:46 AM Eastern Daylight Time  
Similar to 9363, I'm reposting so this additional comment doesn't get missed.

AASHTO LFD Section 10.53 defines a hybrid girder as "girders that utilize a lower strength steel in the web than in one or both of the flanges". For the bridge posted in 9363 with A242 steel, the web yield strength is higher than in the flanges. Therefore, it is technically not a hybrid girder per the AASHTO definition. This directly influences the shear capacity calculated by Virtis Std Engine.

FROM: Has Mukh Lathia DATE: 9/12/2009 7:45:33 PM Eastern Daylight Time  
Virtis Std Engine treats the girder as hybrid if all the three elements (top flange, web and bottom flange) of the girder do not have the same yield strength. The section in question may not be technically hybrid as per wording in AASHTO LFD Section 10.53, but it is not homogenous either.

Was there a specific reason to use lower strength steel in the tension flange?

FROM: Beckie Curtis DATE: 9/15/2009 8:14:09 AM Eastern Daylight Time  
The girder has plate sections whose thickness increases to the point that the yield strength per the specification needs to be reduced.

FROM: Has Mukh Lathia DATE: 9/16/2009 3:35:24 PM Eastern Daylight Time  
Virtis Std Engine has been revised to treat the girder as hybrid only if the steel used in the web has a lower strength than in one or both of the flanges as per AASHTO LFD Section 10.53. This revision will be implemented in Virtis 6.2.

FROM: Herman Lee DATE: 5/9/2010 11:47:02 AM Eastern Daylight Time  
Verified in 6.2 Beta 1.

FROM: Beckie Curtis DATE: 5/12/2010 3:44:18 PM Eastern Daylight Time  
Shear issue is resolved, but Virtis STD is still applying the hybrid factor to the moment capacity of beams with  $f_y$  of the web greater than the flange. See attached xml, g2 of superstructure test 9483.

FROM: Herman Lee DATE: 5/13/2010 1:12:37 PM Eastern Daylight Time  
There are four member alternatives defined in Test 9483 G2. Only one has Virtis LFD selected in the LFD Analysis Module. Attached Virtis Std Engine input and output files.

FROM: Has Mukh Lathia DATE: 5/13/2010 6:58:32 PM Eastern Daylight Time  
BAR7 calculates hybrid strength modification factor R regardless of whether the girder is hybrid or not. A fix has been made to set R equal to 1 if the girder is not hybrid. Two output files with OUTPUT option A are attached. Revised source code (Rategf.for) has been sent to Herman.

FROM: Herman Lee DATE: 5/14/2010 8:50:10 AM Eastern Daylight Time  
Fixed by Has Mukh Lathia for 6.2 Beta 2.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 9489                                        |
| Subject: Scale Factor for HL-93 Vehicle in VIRTIS 5.6 |

4/19/2016 3:07:09 PM

HRS AASHTO

1433

Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Nakrani, Navnit         | 9/16/2009 12:44:46 PM |
| Modified By: hlee                     | 9/16/2009 2:00:03 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status             | Priority | Category     |
|-----------------|--------------------|----------|--------------|
| Lee, Herman     | New                | High     | Bug          |
|                 | Assigned           |          |              |
|                 | Information Needed |          |              |
| Goodrich, Brian | Assigned           |          | Bug - Madero |
|                 | Resolved           |          |              |
|                 | Resubmit           |          |              |
|                 |                    |          | Support      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                   | Description |
|------|-----------------------------------------------------------------------|-------------|
|      | 10C0123 BDS outputs.pdf                                               |             |
|      | pic15910.jpg                                                          |             |
|      | 10C0123 BDS outputs.pdf                                               |             |
|      | pic10367.jpg                                                          |             |
|      | 10C0123-Analysis-092309.pdf                                           |             |
|      | HS20Moment.png                                                        |             |
|      | 10C0123-Analysis-092309.pdf                                           |             |
|      | Mathcad - 10C0123 Calc for<br>4-span cont timber log<br>stringers.pdf |             |
|      | HS20Shear.png                                                         |             |
|      | 10C0123.xml                                                           |             |

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 9/16/2009 9:10:03 AM Eastern Daylight Time

Hi,

This is Balaji working with UIC, CT. We are using VIRTIS 5.6 for Virginia Load rating. Though we specify the scale factor for HL-93 Design Vehicle as 1.0, the output file shows the scale factor as 0.833. I checked the calculations too, but it considers only 0.833 instead of 1.0.

I'm herewith attaching the .xml file for your review.

Thanks,

Balaji.

FROM: Herman Lee DATE: 9/16/2009 9:58:52 AM Eastern Daylight Time

Duplicate of Incident 8380 and 8450. This defect had been resolved for the 6.0 Release.

|                                              |
|----------------------------------------------|
| Issue ID: 9496                               |
| Subject: Rating for Continuous Timber Bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Huang, George           | 9/17/2009 4:33:40 PM |
| Modified By: hlee                     | 4/2/2012 2:12:28 PM  |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

4/19/2016 3:07:10 PM

HRS AASHTO

1435

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 9/17/2009 12:47:40 PM Eastern Daylight Time

We have some problems to rate a four-span continuous timber bridge. Based the live load moment demand, it looks like the Virtis can only rate the simple span timber bridge. Please confirm. The bridge file is attached. I can send more information from e-mail if I have the e-mail address for the contact person. Thanks.

FROM: Herman Lee DATE: 9/17/2009 4:26:17 PM Eastern Daylight Time

More information from George:

=====

Hi, George,

The Virtis file of this bridge is in the network and here is the export file. (See attached file: 10C0123.xml)

The problem: This 4-span continuous log-stringer bridge span lengths are 18.6 ft, 15.5 ft, 15.0 ft, 20.4 ft. However, the Virtis Moment & Shear diagrams shows the span lengths are

- Span 1: 18.6'
- Span 2: 34.1' = 18.6' + 15.5'
- Span 3: 49.1' = 18.6' + 15.5' + 15'
- Span 4: 69.5' = 18.6' + 15.5' + 15' + 20.4'

Therefore, the live load moments shown in Virtis output are not reasonable. Please take a look the following typical printscreen.

(Embedded image moved to file: pic10367.jpg)

Richard C. Tsang, P.E.

=====

FROM: Herman Lee DATE: 9/18/2009 3:01:40 PM Eastern Daylight Time

I'm not able to reproduce the live load actions shown in the pic10367.jpg file. Attached png files are the moments and shears I got for HS20.

Please provide more detailed descriptions or step-by-step instructions for reproducing the issue. Thanks.

FROM: Herman Lee DATE: 10/1/2009 8:38:16 AM Eastern Daylight Time

Received e-mail (9/30/2009):

=====

Hi Herman,

Complete Issue Information

We tried with both Version 6.0 and 6.1 and couldn't produce the same plot you got. The difference between is only the wrong span length in the plot (there are gaps in our plots), however the values for moment and shear are the same. The ratings from Virtis and our hand calculation are listed here.

(Embedded image moved to file: pic15910.jpg)

Attached are files for our hand calculation. Please let me know if you need more information. Thanks.

George Huang, Ph.D., P.E.  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I

=====

FROM: Brian Goodrich DATE: 1/28/2010 1:26:41 PM Mountain Standard Time  
I was able to duplicate the issue with both dead and live load actions. Some of the summaries in the Analysis Results window, i.e., the dead and live load action tables, show up correctly with the span number and distance along the span. However, the ASD Critical Loads and ASD Critical Stresses show up with the span number and the distance from the left end of the structure. I think there are two issues going on here:

1. Madero is incorrectly writing out the distance from the left end of the bridge for the ASD Critical Loads/Stresses table.
2. Virtis is doing something to the results to adjust this distance, but it is doing it for all Madero results rather than just for the ASD Critical Loads/Stresses.

I plan to correct the Madero engine to write these distances to the results object so they correctly reference the left end of the span. Then, no adjustment will be necessary within Virtis when plotting these results.

Herman - Please verify my assumption regarding Virtis doing something to the Madero results when plotting the actions.

FROM: Mehrdad Ordoobadi DATE: 1/29/2010 8:33:45 AM Eastern Standard Time  
Brian, Virtis is calculating each location based on the span number and location from the left end of the span and it is doing it the same way for Dead/Live Load Actions too. As you noted all that needs to be done from the Madero engine is to provide span numbers and locations from the left end of the span when populating the ASD Critical Stresses and ASD Critical Loads.

FROM: Brian Goodrich DATE: 3/23/2010 10:15:18 AM Mountain Daylight Time  
I revised the Madero engine to write the distances so they reference the left end of the span. I am forwarding a new DLL.

FROM: Herman Lee DATE: 5/7/2010 11:08:16 AM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

4/19/2016 3:07:10 PM

HRS AASHTO

1437



Complete Issue Information

FROM: Herman Lee DATE: 5/11/2010 1:21:19 PM Eastern Daylight Time  
 George Huang would like us to investigate the rating difference. He is going to attach calculations to this incident.

FROM: George Huang DATE: 5/11/2010 1:43:46 PM Eastern Daylight Time  
 Brian, I ran the file and find the ratings for Virtis are different from our Hand calculation. Attached are our hand calculation for your reference (10C0123BDS outputs.pdf, 10c0123-analysis-092309.pdf, and Mathca-10c0123 Cal for 4-span cont timber log stringers.pdf).

FROM: Herman Lee DATE: 4/2/2012 10:04:45 AM Eastern Daylight Time  
 The defect in the ASD Critical Loads and ASD Critical Stresses tables was resolved in version 6.2. Category changed to Support for the rating difference investigation.

|                               |
|-------------------------------|
| Issue ID: 9497                |
| Subject: Truss Analysis Fails |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Ordoobadi, Mehrdad      | 9/17/2009 6:08:00 PM |
| Modified By: jduray                   | 4/29/2010 7:09:51 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Bhanushali, Girish | Assigned |          |          |
| Li, Xinmei         |          |          |          |
| Wang, Shuqing      |          |          |          |
|                    | Resolved |          |          |
| Duray, Jim         |          |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Complete Issue Information

|                                       |
|---------------------------------------|
| 00040 - 0162445y (From 560 Beta4).xml |
| 00040 - 0162445y (From 550).xml       |
| 114.xml                               |
| 114.xml                               |
| VI-9505.png                           |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mehrdad Ordoobadi DATE: 9/17/2009 2:13:11 PM Eastern Daylight Time  
 While investigating issue 8176 noticed that the Truss analysis of the bridges attached to issue 8176 failed with the following message:

...  
 FEA - Creating constraints...  
 FEA - Adding load cases...  
 Verifying finite element model...  
 Performing linear solution...  
 Successful finite element analysis.  
 ???Error - Live load analysis failed...

Error - Analysis failed!

...

And there is a System Error message:

Unknown exception error occurred.  
 02:17:28 PM - Line 2297 in source file e:\virtis\dev\analytical tools\abxvirtistruss\abxtrusslfdengine.cpp.

FROM: Shuqing Wang DATE: 3/10/2010 9:14:38 PM Eastern Standard Time  
 Fixed in 6.2

FROM: Jim Duray DATE: 4/29/2010 2:50:23 PM Eastern Daylight Time  
 Verified - 6.2 alpha 4.

|                                   |
|-----------------------------------|
| Issue ID: 9505                    |
| Subject: Unable to Save Structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Horton, Doug            | 9/23/2009 3:33:07 PM |

### Complete Issue Information

|                         |                      |
|-------------------------|----------------------|
| Modified By: mordoobadi | 9/23/2009 5:28:59 PM |
| Priority: High          |                      |
| Category: Bug           |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Lee, Herman     | Assigned |          |             |
| Goodrich, Brian |          |          |             |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 |          |          | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | RatingOutputs.png   |             |
|      | Ratings.png         |             |
|      | results.doc         |             |
|      | sd_61_51151041.xml  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Doug Horton DATE: 9/23/2009 11:39:13 AM Eastern Daylight Time  
Experienced error messages shown below when trying to save. Tried export and import as well - still would not save. Similar message to previously reported issues - just different object code. Exported file attached.

### Message summary

Unable to save Bridge data!  
Saving New and Modified objects failed while processing CDmLrfdFactor (SaveOrder object 52).  
Error updating database record set.

4/19/2016 3:07:10 PM

HRS AASHTO

1440

Complete Issue Information

Message detail

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmLrfdFactor (SaveOrder object 52).

Error updating database record set.

State:23000,Native:2601,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

Cannot insert duplicate key row in object 'dbo.abw\_lrfd\_factor' with unique index 'XAK1abw\_lrfd\_factor'. The statement has been terminated.

Message debug

Unable to save Bridge data!

09:33:34 AM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmLrfdFactor (SaveOrder object 52).

09:33:34 AM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.

09:33:34 AM - Line 780 in source file .\DmLrfdFactor.cpp.

State:23000,Native:2601,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

Cannot insert duplicate key row in object 'dbo.abw\_lrfd\_factor' with unique index 'XAK1abw\_lrfd\_factor'. The statement has been terminated.

FROM: Mehrdad Ordoobadi DATE: 9/23/2009 1:11:49 PM Eastern Daylight Time

The error indicates that duplicate names were used for an LRFD factor. Please review the names of all LRFD factors in the Bridge Workspace and change them to have unique names. Then try to save.

See attached file for a list of duplicate LRFD factors.

|                                                   |
|---------------------------------------------------|
| Issue ID: 9509                                    |
| Subject: Results from Bridge Explorer not correct |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Thompson, Todd          | 9/25/2009 5:35:33 PM   |
| Modified By: hlee                     | 10/15/2011 10:21:15 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 9/25/2009 1:39:03 PM Eastern Daylight Time  
Acceptance Release with 2nd set of patches.

I ran a BRASS LRFR rating from the desktop and looked at the results.  
Note that HL-93 appears to be INV = 62.13 and OP = 80.77 but when you open up all the members – one of the members is only 43.65 and 56.74. So something is broke with the results again.

So for some reason it is not pulling the controlling rating factors at the highest level.

Didn't we have issues with results with Beta 1... seems like we've fallen back to some of those problems.

I think we made a mistake in doing these patches with the Acceptance Release or they were not adequately tested prior to being shipped out.

FROM: Jim Duray DATE: 9/28/2009 8:21:53 AM Eastern Daylight Time  
We did what we felt was a reasonable amount of testing of the few incidents we fixed for each of the updates.

FROM: Herman Lee DATE: 9/28/2009 12:41:46 PM Eastern Daylight Time  
The critical rating reported by Bridge Explorer is based on the rating factor, not the load rating capacity (see attached Ratings.png). The lowest rating factor for the bridge is 1.726. Please note that the controlling live load types are different in the two superstructure definitions. The issues with results in Beta 1 were for the Virtis LRFR Engine.

Further investigation indicates inconsistency in the reported live load type and load rating capacity (see attached RatingOutputs.png).

FROM: Todd Thompson DATE: 9/28/2009 3:33:49 PM Eastern Daylight Time  
Good catch.... I am too used to looking at LF analysis results and looking at "tons" and not necessarily the Rating Factor value. And this was has Axle Load controlling on one span and Tandem controlling on another span, so the tons are not comparable. And now I see the issue you reported.

4/19/2016 3:07:11 PM

HRS AASHTO

1442

Complete Issue Information

FROM: Herman Lee DATE: 9/30/2009 4:53:28 PM Eastern Daylight Time  
The Live Load Type in the Rating Results Summary window doesn't reflect the Live Load Combination listed in the BRASS output file (see attached RatingOutputs.png). This is an existing bug in 5.6 and 6.0, not new to version 6.1. Virtis vehicles are separated into individual components (truck, tandem, lane...) in the BRASS input data file and the engine combines these components into live load combinations. To resolve this, both the export and engine need to be modified. This is risky since we are close to final acceptance build and the required modifications will affect the rating results reporting process. We are going to add help descriptions to the BRASS LRFD/LRFR Engine Related Help for 6.1 and fix this in the 6.2 Release.

FROM: Brian Goodrich DATE: 1/28/2010 3:30:49 PM Mountain Standard Time  
This appears to be related to Incident 9594.

WYDOT assigned this issue to BRASS Problem Log 934. This issue was addressed in BRASS-GIRDER(LRFD) 2.0.3. Fixed for Virtis 6.2.

FROM: Herman Lee DATE: 5/7/2010 11:12:48 AM Eastern Daylight Time  
The Live Load Type in the Rating Results Summary still shows Axle Load (TYP\_VEHICLELD\_VLDAXLE) instead of Truck + Lane (TYP\_VEHICLELD\_VLDDGNTRKDGNLN).

FROM: George Colgrove DATE: 9/27/2010 10:42:22 AM Eastern Daylight Time  
Verified fixed in VO62B7. The lowest values as published in the desktop rating (as obtained by Todd) was properly pulled from the girder ratings.

Issue ID: 9510  
Subject: Truss Command Language - update manual

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Armbrecht, Tim 9/29/2009 12:43:47 PM  
Modified By: jduray 5/6/2010 2:34:12 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | Assigned | High     | Help     |
| Li, Xinmei         |          |          |          |

4/19/2016 3:07:11 PM

HRS AASHTO

1443

### Complete Issue Information

|             |                    |      |             |
|-------------|--------------------|------|-------------|
|             |                    |      | Bug         |
| Lee, Herman | Resolved           |      |             |
|             | New                | High | Bug         |
|             | Information Needed |      | Enhancement |
|             | Suspended          |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 9/29/2009 8:44:23 AM Eastern Daylight Time  
Submitted on behalf of Tim Souther from Illinois DOT:

portion of email from Tim:

Could you ask for clarification regarding the Channels subcommand under the ChannelBox Section (6.9.3) in the Virtis Truss Input Command Language manual?

Under Channels for "<back-to-back>" it says, "Enter back of the web to back of the web dimension." If there are web plates attached to the channels, which dimension are we to enter, back-to-back of the channel webs or back-to-back of the web plates?

Baker email Response:

<back\_to\_back> under Channels subcommand corresponds to back to back of the channel webs.

Illinois request:

His answer would lead me to suggest that in the manual they change the description to, "<back\_to\_back> = Enter back of the channel web to back of the channel web dimension." This would eliminate any confusion.

FROM: Xinmei Li DATE: 10/15/2009 9:49:39 AM Eastern Daylight Time  
Updated the manual as suggested above.

FROM: Jim Duray DATE: 5/6/2010 10:32:30 AM Eastern Daylight Time

4/19/2016 3:07:11 PM

HRS AASHTO

1444

Complete Issue Information

Verified - 6.2 alpha 4.

|                                     |
|-------------------------------------|
| Issue ID: 9513                      |
| Subject: modulus of rupture choices |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Price, Adam             | 10/1/2009 6:56:42 PM  |
| Modified By: aprice                   | 10/6/2009 12:53:16 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Adam Price DATE: 10/1/2009 3:04:47 PM Eastern Daylight Time  
 AASHTO 5.4.2.6 specifies different equations for the modulus of rupture for different areas of design. There is no way to specify different values for the modulus of rupture in Opis. I suggest that the program be enhanced with this capability.

FROM: Herman Lee DATE: 10/2/2009 10:21:17 AM Eastern Daylight Time  
 The modulus of rupture is associated with the concrete composition and f'c which are defined with the Concrete Material. Are you requesting to allow user to enter a different modulus of rupture for a specific spec article? Thanks.

FROM: Todd Thompson DATE: 10/2/2009 4:17:26 PM Eastern Daylight Time  
 I'm guessing he is referring to this - depending on which code check you are dealing with - there are different modulus of rupture values:

5.4.2.6 Modulus of Rupture  
 Unless determined by physical tests, the modulus of

4/19/2016 3:07:11 PM

HRS AASHTO

1445



Complete Issue Information

rupture,  $f_r$  in ksi, for specified concrete strengths up to 15.0 ksi, may be taken as:

- For normal-weight concrete:
  - o When used to calculate the cracking moment of a member in Articles 5.7.3.4, 5.7.3.6.2, and 6.10.4.2.1.....0.24 f c
  - o When used to calculate the cracking moment of a member in Article 5.7.3.3.2 .....0.37 f c
  - o When used to calculate the cracking moment of a member in Article 5.8.3.4.3 .....0.20 f c
- For lightweight concrete:
  - o For sand-lightweight concrete .....0.20 f c
  - o For all-lightweight concrete .....0.17 f c

When physical tests are used to determine modulus of rupture, the tests shall be performed in accordance with AASHTO T 97 and shall be performed on concrete using the same proportions and materials as specified for the structure.

FROM: Herman Lee DATE: 10/5/2009 9:33:28 AM Eastern Daylight Time  
Received e-mail:

=====  
Herman,

Yes, the user needs to be allowed to enter different  $f_r$  for specific article. These different values could be automatically calculated by Opis when  $f'_c$  and the concrete composition are entered, and then manually changed if desired (just as the current single value of  $f_r$  is input).

Thanks,

Adam Price, M.S., P.E.  
Structural Specialist Supervisor 1  
Tennessee Department of Transportation

=====  
Currently, Opis computes  $f_r$  based on 5.4.2.6. This request is to enhance Opis to allow user to override the computed  $f_r$ .

FROM: Adam Price DATE: 10/6/2009 8:53:16 AM Eastern Daylight Time  
Not only does the user need to be able to override the computed  $f_r$ , but the program needs to provide input boxes for the  $f_r$  values required for the different code articles. Currently, two values for  $f_r$  are needed, one for the minimum reinforcement check and a different one for crack control. Whenever the program gains the capability to check article 5.8.3.4.3, then a third value will be needed.

Issue ID: 9514  
Subject: slab end depth

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Price, Adam             | 10/1/2009 7:05:10 PM |
| Modified By: jihnat                   | 4/30/2010 4:22:44 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Bug         |
|                 | Resolved |          | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | shearDiag.doc       |             |
|      | test.xml            |             |
|      | shearDiag (2).doc   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Adam Price DATE: 10/1/2009 3:14:16 PM Eastern Daylight Time

I have noticed a problem with the end slab depth for slab bridges. Under girder profile, when the slab depth is changed for a member with no depth variation, the end depth will not automatically change. It will change when clicked on. After closing the girder profile screen, if the screen is reopened, the old end slab depth reappears. I don't know if this is actually causing a problem in the analysis, but it is at least a worrisome cosmetic problem. Please try this error in the attached file.

FROM: Joseph Ihnat DATE: 10/14/2009 1:21:55 PM Eastern Daylight Time

Same problem existed in steel profile. Fixed both for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 12:22:38 PM Eastern Daylight Time

Verified - 6.2 alpha 4

4/19/2016 3:07:11 PM

HRS AASHTO

1447

Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 9516                         |
| Subject: VIRTIS Live Load Shear Forces |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 10/5/2009 2:11:12 PM |
| Modified By: hlee                     | 5/7/2010 5:16:52 PM  |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/5/2009 10:11:35 AM Eastern Daylight Time  
Submitted on behalf of David Wolfe (DWolfe@moffatnichol.com).

Bridgeware support e-mail:

=====

Bridgeware – See attached shear force diagram for HL-93 for a simple span plate girder bridge with

Complete Issue Information

CIP deck running VIRTIS 6.0. Other vehicles give same type of diagram. Rating is for vehicles running in both directions.

Notice that the top of the envelope appears to linearly interpolate for the data point at about 2% at the left. The bottom envelope has a kink at about 98%. These should have been similar. How come these differ at the two ends?

=====

FROM: Herman Lee DATE: 10/5/2009 10:21:12 AM Eastern Daylight Time  
E-mail sent to David requesting the bridge XML file for reproducing the attached shear diagram.

FROM: Herman Lee DATE: 10/6/2009 8:25:49 AM Eastern Daylight Time  
David reply e-mail:

=====

Bridgeware – Attached is a minimum data bridge to get the resulting shear force diagram for LL. Note that removing the diaphragms from Bay 1 produces results without a kink in the shear diagram. The Live Load Dist Factors summarized in the output file appear to be the same for both cases. However, it looks like at left it uses the 0.950 and at the right it uses 0.849 for shear. At the far end of Beam 2 the diaphragm slightly closer to the end of the beam seems to cause this selection of LL DF. This can be shown by adding a POI slightly before the first POI, which gives a jump in the shear diagram (see Beam 4). The previously first POI of Beam 4 now has the lower value observed at Beam 2's far end.

Beam Distribution Factor Schedule: Shear (Beam 2)

| Span No. | Distances, in |          | mg(1-lane) | mg(M-lanes) |
|----------|---------------|----------|------------|-------------|
|          | Start         | End      |            |             |
| 1        | 0.000         | 31.196   | 0.783      | 0.950       |
|          |               |          | (LRFD)     | ( M,LRFD)   |
| 1        | 31.196        | 1494.014 | 0.700      | 0.849       |
|          |               |          | (LRFD)     | ( M,LRFD)   |
| 1        | 1494.014      | 1524.000 | 0.783      | 0.950       |
|          |               |          | (LRFD)     | ( M,LRFD)   |

=====

FROM: Brian Goodrich DATE: 10/14/2009 2:02:24 PM Mountain Daylight Time  
The shear discontinuity is due to the distribution factor schedule for shear. The version of BRASS you are using provides too coarse of ranges for the shear distribution factor schedule. This issue has already been addressed in a new BRASS LRFD engine (Version 2.0.2 - August 2009). However this version has not been released with Virtis. The new schedule for Beam 4 looks like:

Beam Distribution Factor Schedule: Shear

| Span No. | Distances, in |     | mg(1-lane) | mg(M-lanes) |
|----------|---------------|-----|------------|-------------|
|          | Start         | End |            |             |
| -----    |               |     |            |             |

Complete Issue Information

|   |          |          |        |           |
|---|----------|----------|--------|-----------|
| 1 | 0.000    | 76.200   | 0.783  | 0.950     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 76.200   | 228.600  | 0.767  | 0.930     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 228.600  | 381.000  | 0.750  | 0.910     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 381.000  | 533.400  | 0.733  | 0.890     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 533.400  | 685.800  | 0.717  | 0.870     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 685.800  | 762.000  | 0.700  | 0.849     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 762.000  | 838.200  | 0.700  | 0.849     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 838.200  | 990.600  | 0.717  | 0.870     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 990.600  | 1143.000 | 0.733  | 0.890     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 1143.000 | 1295.400 | 0.750  | 0.910     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 1295.400 | 1447.800 | 0.767  | 0.930     |
|   |          |          | (LRFD) | ( M,LRFD) |
| 1 | 1447.800 | 1524.000 | 0.783  | 0.950     |
|   |          |          | (LRFD) | ( M,LRFD) |

There will still be discontinuities due to the nature of the distribution factor steps in the schedule. However, the discontinuities should not be so dramatic.

FROM: Brian Goodrich DATE: 11/16/2009 11:33:38 AM Mountain Standard Time  
Fixed for Virtis/Opis 6.2.

FROM: Herman Lee DATE: 5/7/2010 1:10:54 PM Eastern Daylight Time  
Confirmed reduced discontinuity effect at the end of LL shear diagram.  
Verified in 6.2 Beta 1.

Issue ID: 9517  
Subject: Reinforced Conc Section Based

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Curtis, Beckie 10/5/2009 6:30:42 PM  
Modified By: hlee 5/6/2010 10:04:05 PM  
Priority: High  
Category: Support

History

4/19/2016 3:07:12 PM

HRS AASHTO

1450

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
| Goodrich, Brian | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 10/5/2009 2:33:39 PM Eastern Daylight Time

We were modifying a previous model, simple span reinf conc tee beam done cross-section based. There is a small amount of steel in the deck, which the model had included. If the steel in the deck (top flange) is included the Brass rating is fine but the Virtis STD rating drops significantly. Removing the steel in the deck brings the rating more in line with Brass.

FROM: Xinmei Li DATE: 3/5/2010 10:05:48 PM Eastern Standard Time

I tried the attached bridge with my current development version, using Virtis std engine. I used Original Concrete T-beam cross section/G2/Interior beam. With reinforcement in deck (top flange) included, the rating factors are 0.571 and 0.953, after those reinforcement removed the rating factors drops to 0.413 and 0.69. Virtis std engine input and output files are attached.

FROM: Xinmei Li DATE: 3/7/2010 9:52:42 AM Eastern Standard Time

I tried the attached bridge with my current development version, using BRASS engine. I used Original Concrete T-beam cross section/G2/Interior beam. With reinforcement in deck (top flange) included, the rating factors are 1.482 and 2.469, after those reinforcement removed the rating factors drops to 1.459 and 2.431.

Comparing Virtis std engine and Brass engine, dead load and live load are very close. The significant rating factor difference was due to the shear strength at the end of the span.

Virtis std engine shear strength at the end of span is 57.6k, while Brass is 106.0k. For Virtis std engine Stirrup is not considered at the start and end of the beam.

Virtis std engine used stage 3 composite section for live load, while Brass used stage 1 non-composite for live load.

FROM: Xinmei Li DATE: 3/7/2010 11:21:59 AM Eastern Standard Time

4/19/2016 3:07:12 PM

HRS AASHTO

1451

Complete Issue Information

With 6.0 Release version, the Virtis std engine rating results are 0.571 and 0.953 with or without reinforcements in deck.

FROM: Xinmei Li DATE: 3/7/2010 8:28:45 PM Eastern Standard Time  
When I looked at the shear reinforcement input in GUI, there is no stirrups defined at the beginning and end of the beam. After adding stirrups at the beginning and end of the beam, the shear strength of Virtis std engine is 104.3k (vs BRASS 106.0k ) and rating factors are 1.27 and 2.12 (vs BRASS 1.482 and 2.46).  
The revised bridge (with strrups at both ends of the beam) is attached.

FROM: Hasumukh Lathia DATE: 3/7/2010 10:15:35 PM Eastern Standard Time  
May, The input file Interior\_beam\_w\_deckReinf.dat has no shear reinforcement at the ends of the span. The problem seems to be with absence of this shear reinforcement, not with the deck reinforcement. Deck reinforcement makes a little difference in flexural ratings. If the above is true, attach the input and output files with the shear reinforcement at the ends of the span.

FROM: Xinmei Li DATE: 3/22/2010 10:32:37 AM Eastern Daylight Time  
Brian,  
When user doesn't define shear reinforcements at the start and end of beam in GUI (attached bridge is an example), BRASS still assumes there are stirrups at both start and end when calculating shear capacity.  
Coule you please take a look? Thanks.

FROM: Brian Goodrich DATE: 4/17/2010 5:15:35 PM Mountain Daylight Time  
When points of interest are to be generated from stirrup schedule input, BRASS requires that the entire structure be filled with schedules. Any gaps in the input schedules are filled in with a stirrup spacing equal to the gap. This is what is happening at the beam ends.

Issue ID: 9520  
Subject: Bridge Explorer Rating when all Points of Interest control options are not checked.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Lee, Herman 10/6/2009 7:06:48 PM  
Modified By: hlee 5/7/2010 5:29:51 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | Version 61 - 20272 Spans C-F<br>2.zip |             |
|      | Version 60 - 20272 Spans C-F<br>2.zip |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 10/6/2009 3:07:18 PM Eastern Daylight Time  
Below are from Incident 9277.

FROM: Tim Armbrecht DATE: 8/12/2009 10:13:27 AM Eastern Daylight Time  
Just tried to run AASHTO LRFR in Beta 3. Used "rate" from the menu, legal load template. I no longer get error messages, however, there are no bridge rating results. The bridge rating results window pops up, but it is empty.

FROM: Jim Duray DATE: 8/13/2009 4:46:59 PM Eastern Daylight Time  
Dead and live load actions are computed. Based on the log file no spec-check domain a=objects are created so no spec checks are performed.

I tried an LRFR rating using the design template. It behaves the same way.  
I tried an LRFR rating with a type 3 vehicle assigned as a permit vehicle...same behavior.  
I tried LFRD....same behavior.  
I tried BRASS LFRD....it completes successfully.

FROM: Jim Duray DATE: 8/13/2009 5:40:22 PM Eastern Daylight Time  
Control options are not set to include any points of interest. Why are we not setting a default?

FROM: Mehrdad Ordoobadi DATE: 8/14/2009 9:45:26 AM Eastern Daylight Time  
It was decided that if none of the POI check-boxes are selected default to Tenth Points and Change Points.  
Fixed for next build (Acceptance)

FROM: Krisha Kennelly DATE: 9/1/2009 8:31:06 AM Eastern Daylight Time  
After talking with Jim we decided that if none of the POI check boxes are checked we will just issue a message in the log file and not generate the tenth points and change points.

FROM: Srujana Thogaru DATE: 9/2/2009 2:49:24 PM Eastern Daylight Time  
Tested and found to be fixed for Acceptance Build

4/19/2016 3:07:12 PM

HRS AASHTO

1453



## Complete Issue Information

FROM: Tim Armbrecht DATE: 9/9/2009 3:23:20 PM Eastern Daylight Time

This has not ben resolved. I attached a screen shot taken today running the same structure in the acceptance build.

FROM: Tim Armbrecht DATE: 9/9/2009 3:51:24 PM Eastern Daylight Time

I don't think the solution (putting a note in the log) is a good one for the users. This is too confusing for your average user. Either default to the tenth points, or pop up a dialog box and ask the user what he/she wants to do. This will look like an error every time.

FROM: Jim Duray DATE: 9/9/2009 4:55:47 PM Eastern Daylight Time

We do not have access to the UI from the spec-check module so we cannot popup a dialog during the analysis. We can popup a dialog from the control options window to warn the user when Ok or Accept is selected. The way it works in the acceptance build gives the user a way to do a superstructure analysis without the spec-checking. That is why we chose to add a message to the log file. BRASS aborts if there are no point of interest selected.

So I think the options are:

- 1) Leave the message, add a popup to the control options window and do not do a spec-check if no points of interest are selected.
- 2) Change it to default to 10th points as you suggest.

FROM: Jim Duray DATE: 9/15/2009 8:07:39 AM Eastern Daylight Time

Email to Tim:

"Tim

We can do that if you like. We have to add an flag to the analysis event that we can check during the analysis/spec-check to determine if it is a batch rating or not (not a big deal to do) and set the control options internal to the spec-checker to check the appropriate points.

However, after discussing this issue with Herman, Krisha and Mehrdad this morning, I think the control options should be considered as part of the data that defines the member (just like defining the width of a flange, etc.) and should not differ between BWS rating and bridge explorer rating. After all, the user should be defining the locations that were determined to be critical. If the user wants to experiment with overriding the schedule by defining temporary POI (or any other data) he/she should make a copy of the mbr alt (not mark as Existing and therefore not used in batch ratings) and use it for what-if analysis within the BWS. This leaves the mbr alt marked as Existing unaltered and presumably "correct" for others to analyze as necessary including from the bridge explorer for a permit analysis.

I suggest if none are enabled in the window we add the message to the window to inform the user that ALL (tenth, user and change) will be used for the analysis and spec-checking if the AASHTO LRFD/LRFR engine is used – as you requested below. Add a similar message in the AASHTO spec checker. And change the code in the spec-checker to enable all three options (internal to the spec-checker only for that run only) if none are selected regardless whether it is an analysis from the BE or BWS. No changes to BRASS or the BRASS export.

Jim"

FROM: Jim Duray DATE: 9/15/2009 1:14:11 PM Eastern Daylight Time

4/19/2016 3:07:12 PM

HRS AASHTO

1454

Complete Issue Information

from Tim referring to the third paragraph on 9/15:

"Jim,

I agree with your proposal in the third paragraph, because I think that if a user has them all turned off and wants to run an analysis, especially from BE, it's probably an oversight. If you can set it to ALL for that analysis only, not change the control options and get a message up there letting the user know what's going on, I think that would be ideal. Thanks,

Tim"

Mehrdad - assign to Joe when you are finished.

FROM: Mehrdad Ordoobadi DATE: 9/15/2009 4:33:36 PM Eastern Daylight Time  
Fixed for final release.

FROM: Joseph Ihnat DATE: 9/16/2009 7:36:06 AM Eastern Daylight Time  
Fixed for final release.

FROM: Herman Lee DATE: 9/17/2009 8:14:21 AM Eastern Daylight Time  
Verified with updated Beta 4 DLLs.

FROM: Tim Ambrecht DATE: 9/29/2009 1:01:26 PM Eastern Daylight Time  
Installed the new dlls.

A couple of questions regarding this incident:

If POI are not selected and BRASS LRFR is run, should we expect no results in the ratings results window?

Suppose the user selects "rate" from the "bridge" menu and sets up his rating analysis. Should the warning pop-up message show up when the user clicks OK?

FROM: Jim Duray DATE: 9/29/2009 1:03:45 PM Eastern Daylight Time  
No rating results if no POI are selected (for BRASS). No popup warning when rating from the BE.

FROM: Tim Ambrecht DATE: 10/5/2009 11:00:34 PM Eastern Daylight Time  
Appears to be working for AASHTO engine. Accepted on condition that it will ultimately also work similarly for the BRASS engine.

FROM: Herman Lee DATE: 10/6/2009 11:44:20 AM Eastern Daylight Time  
In 6.0 BRASS LRFR Engine Properties, the available POI Controls are:

- 
- 1 - User-defined points only (no schedule data)
  - 2 - Generate at user-defined points (using schedule data)
  - 3 - Generate at tenth points plus user-defined points (using schedule data)

In 6.1 Member Alternative Control Options, the available Points of Interest options are:

4/19/2016 3:07:12 PM

HRS AASHTO

1455

Complete Issue Information

- A - Generate at tenth points
- B - Generate at section change points
- C - Generate at user-defined points

The current 6.0 to 6.1 BRASS LRFR POI Controls migration are:

---

| Engine Properties | Control Options    |
|-------------------|--------------------|
| 1                 | -> None checked    |
| 2                 | -> C checked       |
| 3                 | -> A and C checked |

When none is checked in 6.1 Member Alternative Control Options, the 6.1 BRASS LRFR Export will translate it back to 1 (User-defined points only (no schedule data)) so the user will get the same results when compared to 6.0.

I think it's ok for each analysis engine to decide how to interpret those control options. In this case, since the mapping between the UI and the BRASS LRFR Engine is not one to one, if we force to check all when none is checked, the results may be different than 6.0.

FROM: Tim Armbrecht DATE: 10/6/2009 12:58:02 PM Eastern Daylight Time  
So if none is checked in 6.1 and user defined points are not defined, there are no rating results in BRASS?

As I pointed out to Jim before, this looks like an error when no results are showing. if a user does not have pois checked and (in the BRASS case) did not created user defined pois, that is probably an oversight on the users part. In this situation, it would be better to do ALL, as we are doing with the AASHTO engine.

FROM: Herman Lee DATE: 10/6/2009 2:49:56 PM Eastern Daylight Time  
In 6.0, when "User-defined points only (no schedule data)" is selected in engine properties and no user defined points, only dead load and live load analysis results are available. There are no rating results.

In 6.1, when none is checked in Control Options Points of Interest and no user defined points, only dead load and live load analysis results are available. There are no rating results.

I created Incident 9520 to modify the BRASS export to behave the same as the AASHTO Engine.

FROM: Brian Goodrich DATE: 11/17/2009 4:18:57 PM Mountain Standard Time  
I revised the export per Herman's instructions. The BRASS export now generates points of interest (tenth, user, and change) when none of the POI control boxes are selected AND there is no POI defined in the member alternative. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/7/2010 1:29:57 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                     |
|-------------------------------------|
| Issue ID: 9521                      |
| Subject: Missing stringer reactions |

Complete Issue Information

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis          |
| Primary Contact: Lee, Herman                   |
| Submitted By: Hart, Sean 10/7/2009 12:44:46 PM |
| Modified By: hlee 10/7/2009 3:07:32 PM         |
| Priority: High                                 |
| Category: Education                            |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/7/2009 8:47:06 AM Eastern Daylight Time  
Submitted on behalf of Sean Hart and Russ Howells (Michael Baker Jr., Inc.):

=====  
Herman,

Attached is the XML file of the floor system.

The floorbeams that are missing some of the stringer reactions are: #18, 19, 25 & 26

The floorbeams that are missing ALL of the stringer reactions are: #20-24

Thank you for your help,

Russ

=====

FROM: Herman Lee DATE: 10/7/2009 11:04:44 AM Eastern Daylight Time  
The Computed Reaction will not show up in the Floorbeam Stringer Reactions window unless the

4/19/2016 3:07:13 PM

HRS AASHTO

1457

### Complete Issue Information

reactions have been accepted in the Computed Stringer Reactions window. For each stringer on the floorbeam during a floorbeam rating, Virtis will first check whether there is a User Defined Reaction, then check whether there is an up-to-date Computed Reaction. If there are no User Defined Reaction and up-to-date Computed Reaction, Virtis will perform a dead load analysis for that stringer. The purpose to store the computed stringer reactions is to speed up the floorbeam rating.

To fill up those missing reactions, rate the stringer and accept the reactions in the Computed Stringer Reactions window. Or, don't need to do anything since the floorbeam rating will decide what to do.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 9522                                          |
| Subject: non linear yeild line method for slab bridges. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jensen, Paul            | 10/7/2009 4:06:54 PM |
| Modified By: hlee                     | 10/7/2009 5:04:40 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 10/7/2009 12:14:48 PM Eastern Daylight Time  
this process will better predicting the flexural capacity of slab bridges. this issue was suggested from the scan on bridge safety and reliability.

this is an enhancement.

Complete Issue Information

Issue ID: 9524  
Subject: Fcr in 10.48.2

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lathia, Hasmukh  
Submitted By: Curtis, Beckie 10/9/2009 2:43:16 PM  
Modified By: hlee 5/13/2010 3:20:08 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
| Li, Xinmei      |          |          |          |
| Lathia, Hasmukh |          |          |          |
| Goodrich, Brian |          |          |          |

4/19/2016 3:07:13 PM

HRS AASHTO

1459

Complete Issue Information

|                 |          |      |     |
|-----------------|----------|------|-----|
|                 | Resolved |      |     |
| Lathia, Hasmukh | Assigned |      |     |
| Duray, Jim      | New      | High | Bug |
| Goodrich, Brian | Assigned |      |     |
| Bug - BRASS     |          |      |     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00049 - 0160164.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 10/9/2009 10:51:06 AM Eastern Daylight Time  
 Attached structure is similar to Incident 8859, however there are slight differences and also I am wondering if the first incident was ever resolved?  
 In the attached structure, the SB superstructure proposed girder A1, the unbraced length isn't met at pier 5. When I add a diaphragm within 3-ft of pier 5 to meet the unbraced length, the rating factor reduces. It doesn't seem right that adding a brace point would lower the rating factor. It seems that equation 10-100 is not analyzed in Brass of partially braced members. Since the thinking behind Fcr is a shape factor buckling requirement on the localized level, wouldn't it apply regardless of the global member bracing?  
 In follow up to the previous incident, is Fcr limit on Fy being added to the Virtis engine?

FROM: Hasmukh Lathia DATE: 3/8/2010 3:10:57 PM Eastern Standard Time  
 The issues in this incident and 8859 (see comment in 8859) will be looked at when the task force approves implementation of the 17th edition of AASHTO in Virtis Std Engine.

FROM: Herman Lee DATE: 3/8/2010 4:03:03 PM Eastern Standard Time  
 Brian, please investigate the BRASS issue described above.

FROM: Brian Goodrich DATE: 3/23/2010 1:45:40 PM Mountain Daylight Time  
 I ran the member alts for the two superstructure definitions with the BRASS 6.0.3 beta engine:  
 SB\_Spans\_1-6\_(Continuous\_Pin\_&\_Hanger)\_PROPOSED\Girder\_A1\Interior\_Girder\_10W\_(Widened)\BRASS\_LFD\Interior\_Girder\_10W\_(Widened)  
 SB\_Spans\_1-6\_(Continuous\_Pin\_&\_Hanger)\_PROPOSED\_TEST\Girder\_A1\Interior\_Girder\_10W\_(Widened)\BRASS\_LFD\Interior\_Girder\_10W\_(Widened)

4/19/2016 3:07:13 PM

HRS AASHTO

1460

Complete Issue Information

The BRASS results for both show that Eq. 10-100 was checked. There is no longer a change in the rating as was seen in the BRASS 6.0.0 engine.

FROM: Herman Lee DATE: 3/23/2010 5:31:24 PM Eastern Daylight Time  
Virtis Std Engine issues described in this incident and 8859 are related to enhancement request 6961 (Revise Std Engine to conform to 17th Edition of AASHTO for ASD and LFD ratings).

FROM: Herman Lee DATE: 5/9/2010 11:59:56 AM Eastern Daylight Time  
Tested below member alternative in the XML file in this incident.  
SB\_Spans\_1-6\_(Continuous\_Pin\_&\_Hanger)\_PROPOSED\Girder\_A1\Interior\_Girder\_10W\_(Widened)\BRASS\_LFD\Interior\_Girder\_10W\_(Widened)

Verified in 6.2 Beta 1.

FROM: Beckie Curtis DATE: 5/12/2010 4:09:12 PM Eastern Daylight Time  
Verified in Beta 1

|                                         |
|-----------------------------------------|
| Issue ID: 9529                          |
| Subject: error in loading the BRASS DLL |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Armbrecht, Tim          | 10/14/2009 2:55:14 PM  |
| Modified By: hlee                     | 10/15/2011 11:27:57 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



## Complete Issue Information

### Description

FROM: Tim Armbrecht DATE: 10/14/2009 10:58:35 AM Eastern Daylight Time  
What would cause the following:

Error loading BRASS DLL!

(Error Code = 8) Not enough storage is available to process this command.

09:52:49 AM - Line 1540 in source file .\AbxBrassEngine.cpp.

File attached.

FROM: Tim Armbrecht DATE: 10/14/2009 11:33:53 AM Eastern Daylight Time

OK, I did some further investigation. I shut down Virtis and restarted it. It then ran OK for this file and another one. Originally, I rated about 24 bridges (using BRASS) from Bridge Explorer. By the last 5 or 6, I started getting this message, and just blew by the message. After that run, I tried to rate this structure from BE and got the same message. So after quitting Virtis and restarting, it worked again. Memory leak?

FROM: Todd Thompson DATE: 10/15/2009 2:45:40 PM Eastern Daylight Time

Still or again..... this seems to keep popping up year after year after.....

FROM: Brian Goodrich DATE: 11/18/2009 9:17:06 AM Mountain Standard Time

BRASS requires about 200MB of memory to execute. We have found that if there is not enough physical memory, some of the virtual memory is used. However, once BRASS dips into the virtual memory once, it will not execute successfully again. This is when the memory error is issued.

FROM: Todd Thompson DATE: 11/18/2009 1:35:24 PM Eastern Standard Time

Running Virtis 6.1 - I ran a series of Virtis LRFR ratings and then when I attempted to run a BRASS LRFR rating, I got the memory issue.

There must be some memory leak issue somewhere. As soon as I shut down and restarted VIRTIS, then I could run the BRASS LRFR.

I will have to watch my Physical Memory usage. Typically I can have multiple apps open, including Virtis and the available Physical Memory is in the 600 to 800+ K range. I'll have to notice if this dips below 200 K when I get this problem. Must be a pretty good memory leak if I can start in the 600 to 800 K range and yet end up dipping below 200 K to prevent VIRTIS from launching BRASS anymore.

FROM: Todd Thompson DATE: 11/18/2009 2:10:31 PM Eastern Standard Time

Since this happens on a daily basis when using Virtis, I watched my Task manager and the Available Physical Memory - BRASS failed to load and task manager stated there was 352,448 K available Physical Memory.

So I guess I'm not sure why it failed to load? or why after a series of a few runs, that the Physical Memory got gobbled up.

FROM: Brian Goodrich DATE: 1/26/2010 10:03:31 AM Mountain Standard Time

I just received the following message when trying to run the Virtis LFD engine:

Error loading Virtis Std ASD/LFD DLL!

(Error Code = 8) Not enough storage is available to process this command.

4/19/2016 3:07:13 PM

HRS AASHTO

1462

Complete Issue Information

It looks like the memory issue may not be limited to BRASS.

FROM: Todd Thompson DATE: 1/27/2010 9:25:01 AM Eastern Standard Time  
TST 1-27-2010

There seems to be a memory leak somewhere with the Virtis/Opis application not allowing the different engines to load and run.

FROM: Tim Armbrecht DATE: 2/18/2010 5:18:36 PM Eastern Standard Time

Just got an email from one of my engineers trying to run NSG for about 20 structures. We even installed more physical memory. He has 3GB in his machine right now:

Even after BIP installed an extra 1GB of RAM on my computer. I'm still receiving this error, when I run a NSG analysis for a group of structures.

Error loading BRASS DLL!

(Error Code = 8) Not enough storage is available to process this command.

03:58:03 PM - Line 1540 in source file .\AbxBrassEngine.cpp.

|                                      |
|--------------------------------------|
| Issue ID: 9530                       |
| Subject: BRASS ASD gives zero rating |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Goodrich, Brian         | 10/15/2009 7:40:52 PM  |
| Modified By: bgoodrich                | 11/17/2009 11:18:47 PM |
| Priority: High                        |                        |
| Category: Education                   |                        |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Assigned |          | Education |
| Goodrich, Brian | Resolved |          |           |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:14 PM

HRS AASHTO

1463

Complete Issue Information

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | 2009_09_28Greenman-Pedersen_F-02-059 (3TG).xml |             |
|      | S-03-002 (02B).xml                             |             |
|      | Virtis Error.jpg                               |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 10/15/2009 1:42:11 PM Mountain Daylight Time  
 Issue submitted for Michelle Jose:

=====

Hi,

I have a two span curved structure (with straight beams) modeled in Virtis, and I have modeled each beam as a girder line because of the unique skew for each beam (attached is a copy of the deck plan and framing plan). The overhangs vary along the length of the structure, so I have reflected the varying non-composite dead loads as distributed loads. When I run Beam L-1 (fascia beam in Span 1), I get Inventory rating factors of 0 for all trucks at midspan for top flange flexure.. When I run Beam L-5 (fascia beam in Span 2), I similarly get low Inventory rating factors of around 0.03 at midspan. I have checked my stresses at midspan with the dead load (deck load from tributary width and overhang load at midspan) moment and section modulus and I obtain stresses well below the allowable (around 11,000psi actual vs. 17800psi allowable). I lowered my live load distribution factors to 0.01 and got valid rating OPERATING factors (99), but still received inventory rating factors of 0. I've run other points along the beam, and also get valid rating factors. I've decreased the distributed non-composite dead load over the beam, and finally received reasonable inventory rating factors. I've tried placing a diaphragm at midspan. I've also decreased my tributary widths and received reasonable Inventory rating factors. But with all loads, input, and geometry correct, with no data manipulation, I still get stresses below allowable. Can you please explain to me why I am getting INVENTORY rating factors of 0 (only for two fascia beams) when stresses do not exceed allowable?

Thank you,  
 Michelle

Michelle Jose | Assistant Engineer  
 Greenman-Pedersen, Inc.  
 105 Central Street, Suite 4100 | Stoneham, MA 02180  
 ph: 781-279-5500x3002 | fax: 781-279-5501  
 Engineering and Construction Services

=====

FROM: Brian Goodrich DATE: 10/15/2009 1:45:20 PM Mountain Daylight Time  
 Submitted the following additional comments for Michelle Jose:

4/19/2016 3:07:14 PM

HRS AASHTO

1464

Complete Issue Information

=====
Hello again,

In addition to getting Inventory rating factors of 0 for two fascia beams (L-1 and L-5) at midspan regardless of decreased load input, I am getting error messages saying that three out of my eight beams (L-3, L-6, and L-7) have cross-sectional areas of less than 0.01. I have checked my girder sections and reloaded the beam sections under "Beam Shapes," and I still get the error messages.

Thank you for your time again,
Michelle

FROM: Brian Goodrich DATE: 10/15/2009 1:46:23 PM Mountain Daylight Time
It seems like the deck load is being accounted for twice in the input. The Member Loads window contains entries assigned to the "Non-Composite Dead Load" load case, which appear to be for the deck. Then, on the Deck Concrete tab of the Deck Profile window, there are tributary widths entered. These tributary widths are used to automatically calculate the deck dead load. I cleared out the tributary width fields, reran the ASD analysis, and the L-1 inventory rating is now 1.20, which seems reasonable.

Regarding the area issue, this is the same as Incident 7917. The BRASS LFD engine error requires that a section containing a rolled beam be constant over each range. This section is a rolled beam with a tapered slab. The workaround is to input this section as an equivalent plate girder or to assume some constant effective flange width.

FROM: Brian Goodrich DATE: 11/17/2009 4:16:21 PM Mountain Standard Time
E-mail from Michelle Jose:

=====
Hi Brian,

Thank you for reviewing our situation. For the fascia beams, we input a separate "Non-Composite Dead Load" load to accommodate for an overhang that varied in width along the beam to add to the tributary width of deck directly over the beam. We did an independent check and found that the overhang deck load was overstressing the beam causing a 0 rating at midspan. In regards to the rolled section with a tapered slab, we actually already received a response addressing the necessity to maintain a constant effective flange width for rolled beams. We initially assumed that since there is a "Start Effective Flange Width" and an "End Effective Flange Width," a tapered section was feasible.

Thank you for help and comments.

Michelle

=====
Issue ID: 9531
Subject: Crash while retrieving engine properties

Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis            |
| Primary Contact: Ihnat, Joseph                   |
| Submitted By: Lee, Herman 10/16/2009 12:02:31 PM |
| Modified By: jihnat 4/30/2010 3:11:31 PM         |
| Priority: High                                   |
| Category: Bug                                    |

History

| Primary Contact | Status    | Priority | Category                     |
|-----------------|-----------|----------|------------------------------|
| Lee, Herman     | New       | High     | Bug                          |
| Goodrich, Brian | Assigned  |          |                              |
|                 | Suspended |          | Enhance BRASS<br>Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name            | Resource Identifier | Description |
|-----------------|---------------------|-------------|
| Median Test.xml |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/16/2009 8:03:25 AM Eastern Daylight Time  
Submitted on behalf of Andrew Benkert (abenkert@cmeengineering.com).

Received Bridgewater support e-mail:

=====  
Herman, I mentioned to you awhile back that we were having trouble running a short girder (4.11ft) in Virtis. The issue is with the Live Load. Virtis gives an error indicating that the wheel advancement increment is too small for the member. You recommended that we lower the wheel advancement denominator in the engine properties. We followed your reference guide but our computer continues to give us the following error when we select properties for the analysis module. Any suggestions on why this is?  
=====

FROM: Joseph Ihnat DATE: 10/23/2009 9:31:58 AM Eastern Daylight Time

4/19/2016 3:07:14 PM

HRS AASHTO

1466

Complete Issue Information

Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:11:35 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9532                                             |
| Subject: Virtis to BRASS seems to ignore median definition |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Barnhill, Gale          | 10/16/2009 11:31:20 PM |
| Modified By: hlee                     | 7/12/2012 7:18:00 PM   |
| Priority: High                        |                        |
| Category: Enhancement                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gale Barnhill DATE: 10/16/2009 7:35:22 PM Eastern Daylight Time

I defined a girder system with a median appurtance.

I also defined a wearing surface.

The Structure Typical Section clearly shows two roadways on either side of the median.

When I analyze a member, the DW load effect reported is based on the WS applied between the exterior curbs without a deduction for the median.

I copied the Super Def and removed the median from the typical section and redefined the roadway.

4/19/2016 3:07:14 PM

HRS AASHTO

1467

Complete Issue Information

The DW load effect reported is the same as the member with a median.

FROM: Brian Goodrich DATE: 11/2/2009 10:48:52 AM Mountain Standard Time  
The BRASS export does not generate the median or curb commands. Therefore, BRASS cannot internally deduct the median width from the wearing surface. BRASS only supports one median, but Virtis can have multiple. So, BRASS generates these loads using other commands. This explains what is happening. Now what should we do?

A workaround would be to input a negative uniform load to remove the wearing surface in the median region. However, this is only necessary for BRASS.

A partial solution would be to export the median command if there was only one median. But then, what do we do if there are more?

FROM: Herman Lee DATE: 7/12/2012 3:16:35 PM Eastern Daylight Time  
Changed Category from Enhance BRASS to Enhancement.

|                                         |
|-----------------------------------------|
| Issue ID: 9533                          |
| Subject: NSG Analysis for timber bridge |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 10/20/2009 2:10:02 PM |
| Modified By: mkolis                   | 8/30/2012 1:21:04 PM  |
| Priority: High                        |                       |
| Category: Bug - Madero                |                       |

History

| Primary Contact | Status   | Priority | Category              |
|-----------------|----------|----------|-----------------------|
| Duray, Jim      | Assigned | High     | Bug - Export 1<br>Bug |
| Goodrich, Brian |          |          | Bug - Madero          |
| Lee, Herman     | Resolved |          |                       |

4/19/2016 3:07:15 PM

HRS AASHTO

1468

## Complete Issue Information

|  |
|--|
|  |
|--|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | brass.png                         |             |
|      | composite.png                     |             |
|      | Truck19.xml                       |             |
|      | non-composite.png                 |             |
|      | Composite vs Non<br>Composite.png |             |
|      | 00168 - 82182123000S310.xml       |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 10/20/2009 10:10:43 AM Eastern Daylight Time

The NSG analysis results are the same as the standard analysis results for timber bridge. If Madero doesn't support NSG analysis, the rating process needs to check for the type of analysis instead of performing the standard analysis. This may produce unconservative results.

To reproduce, use the timber bridge in the sample database.

FROM: Jim Duray DATE: 4/27/2010 8:07:50 AM Eastern Daylight Time

The Madero input file after a NSG analysis is the same as the input file for a standard analysis using the same vehicle. I attached the bridge xml file I used. so the Madero export doesn't seem to be using the NSG distribution factor.

FROM: Herman Lee DATE: 5/24/2012 7:03:07 AM Eastern Daylight Time

The Madero engine doesn't support NSG analysis, I updated the Madero export to check for NSG analysis, display an error message and exit the analysis.  
Resolved for 6.4 Release.

FROM: Matt Kolis DATE: 8/30/2012 9:21:04 AM Eastern Daylight Time

Verified in VO64, Beta 4, an error is generated when using the Madero engine with NSG analysis.

Issue ID: 9534

Subject: Composite Deck Increases Live Load Moment

4/19/2016 3:07:15 PM

HRS AASHTO

1469



### Complete Issue Information

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Curtis, Beckie          | 10/21/2009 12:56:58 PM |
| Modified By: hlee                     | 4/7/2010 5:26:19 PM    |
| Priority: High                        |                        |
| Category: Support                     |                        |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Plate_Girder(201.000).pdf |             |
|      | K09993.xml                |             |
|      | MomentDiagram.pdf         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 10/21/2009 9:08:35 AM Eastern Daylight Time

In Virtis STD engine, extending the shear connectors over the pier increases the live load by 25%. Attached is model, screen shot of composite deck, screen shot of non-composite deck, screen shot of Brass Moment.

FROM: Herman Lee DATE: 3/4/2010 2:58:47 PM Eastern Standard Time

I'm not able to reproduce the 25% live load difference between composite and non-composite deck for the Virtis Std Engine. I attached the truck (Truck19.xml) that I used and the live load results comparison (Composite vs Non Composite.png). The Virtis Std Engine composite deck and the BRASS Engine composite deck results are comparable to those in your screen shots. The Virtis Std Engine non-composite deck results are different than your screen shot. I noticed that the difference between composite and non-composite deck results for the BRASS Engine is bigger than the Virtis Std

4/19/2016 3:07:15 PM

HRS AASHTO

1470

Complete Issue Information

Engine.

Please see whether you are able to reproduce the Virtis Std Engine non-composite deck results in your screen shot with the bridge attached in this incident.

FROM: Herman Lee DATE: 4/6/2010 10:10:33 AM Eastern Daylight Time  
Information Needed E-mail sent on 4/6/10.

FROM: Beckie Curtis DATE: 4/7/2010 11:41:39 AM Eastern Daylight Time  
This may be an engine related assumption issue, but it seemed odd to me. I didn't analyze as completely non-composite, I just made the deck non-composite in the negative moment region (25.75-ft on either side of the pier). Below are my results for negative moment over pier of the interior beam using HS-20 lane.

fully composite  
806 - Virtis  
642 - Brass

fully noncomposite  
827 - Virtis  
819 - Brass

partially composite  
655 - Virtis  
644 - Brass

It may be just that the Virtis STD engine uses the composite section properties when calculating the load even though it is in the negative moment region, while Brass does not. Even if this is not a "bug", I would like the implications of this to be considered for development of the AASHTO LFR engine.

FROM: Herman Lee DATE: 4/7/2010 12:43:41 PM Eastern Daylight Time  
From the Engine capabilities comparison table in 6.0 Release Notes:  
For the member stiffness used in structural analysis, Virtis Std Engine uses positive flexure properties (beam + slab) over entire beam length and BRASS uses positive flexure properties (beam + slab) in positive moment regions and negative flexure properties (beam + rebar) in negative moment regions.

|                                                  |
|--------------------------------------------------|
| Issue ID: 9535                                   |
| Subject: LRFR Problem with AASHTO 6.10.7.3 Check |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Koenig, David           | 10/23/2009 3:21:02 PM |
| Modified By: bgoodrich                | 10/30/2012 6:58:50 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

4/19/2016 3:07:15 PM

HRS AASHTO

1471

## Complete Issue Information

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 10/23/2009 11:28:26 AM Eastern Daylight Time  
We have rated a steel structure and are getting zero ratings on the exterior girders for Structure Definition 3. The problem stems from the check that BRASS LRFR does for AASHTO 6.10.7.3 at the 210 point. This is a ductility check to ensure that the flange yields before the slab crushes. The problem is that it is checking this at a negative moment location. There is some positive live load moment on the envelope, but the dead load moment is significantly higher than the live loads. We don't believe that it should even be checking this requirement at this point. The Virtis file and some PDF files with the output are attached.

FROM: Brian Goodrich DATE: 3/24/2010 4:16:31 PM Mountain Daylight Time  
See Structure\_Definition\_3\G1\Plate\_Girder.

I forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM: David Koenig DATE: 12/2/2010 9:46:47 AM Eastern Standard Time  
What is the status on this incident? It was submitted over a year ago and nothing appears to have been done with it at this point. Was a BRASS problem log ever assigned?

FROM: Brian Goodrich DATE: 5/18/2011 8:22:18 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 49.

FROM: Brian Goodrich DATE: 10/30/2012 12:08:27 PM Mountain Daylight Time  
This issue no longer occurs as of BRASS-GIRDER(LRFD) Version 2.1.0. It was addressed as part of BRASS Incident 43.

4/19/2016 3:07:15 PM

HRS AASHTO

1472

Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 9539                      |
| Subject: Unable to save Bridge data |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Schiller, Brent         | 10/27/2009 5:04:23 PM |
| Modified By: hlee                     | 6/3/2010 4:07:44 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned |          | Support  |
|                    | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brent Schiller DATE: 10/27/2009 1:10:49 PM Eastern Daylight Time  
 We get the error listed below when trying to save the file to our SQL database. We've looked through the input and can't find any apparant problems. I've attached the xml file. Any thoughts?

-----  
 Brent Schiller  
 Forsgren Associates  
 bschiller@forsgren.com

Unable to save Bridge data!  
 11:09:16 AM - Line 885 in source file .\UiBWSDoc.cpp.

Complete Issue Information

Saving New and Modified objects failed while processing CDmStlBearingStiffLoc (SaveOrder object 613).

11:09:16 AM - Line 448 in source file .\DmBridgeCache.cpp.

Error updating database record set.

11:09:16 AM - Line 973 in source file .\DmStlBearingStiffLoc.cpp.

State:Micro,Native:30000,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:37000,Native:3609,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

tl\_abw\_stl\_bearing\_stiff\_loc: Cannot insert because primary key value not found in abw\_stl\_beam\_def -- On Child Insert RESTRICT: R\_2150(abw\_stl\_beam\_def, abw\_stl\_bearing\_stiff\_loc) The transaction ended in the trigger. The batch has been aborted.

FROM: Mehrdad Ordoobadi DATE: 4/6/2010 9:45:01 AM Eastern Daylight Time  
No bridge XML export file is attached. Please attach the bridge export file.

FROM: Herman Lee DATE: 5/6/2010 4:38:23 PM Eastern Daylight Time  
Information Needed E-mail sent on 5/6/10.

FROM: Herman Lee DATE: 5/28/2010 2:14:23 PM Eastern Daylight Time  
Information Needed E-mail sent on 5/28/10.

FROM: Herman Lee DATE: 6/3/2010 12:01:27 PM Eastern Daylight Time  
Received Bridgeware e-mail (6/3/2010):

=====  
This issue has been overtaken by events. Thanks!

Brent Schiller, P.E., S.E.  
=====

Status changed to Closed.

Issue ID: 9544  
Subject: attribute list for stand alone data base

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Metcalf, William 11/5/2009 8:10:32 PM  
Modified By: mordoobadi 4/6/2010 1:43:51 PM  
Priority: High  
Category: Support

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Bhanushali, Girish | Assigned |          |          |
| Li, Xinmei         | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 35085 - Copy_of_7712410.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 11/5/2009 3:18:33 PM Eastern Standard Time

In Virtis we have items in our attribute lists. County names, District names, etc. which are specific to our state. We have set up Virtis to be used by some of our designers on their computers with a 'stand alone' SQL express or whatever it is called database. We would like to have our state specific items in the attribute list. Is it possible to import these or to otherwise accomplish this? If so how is it done?

FROM: Mehrdad Ordoobadi DATE: 4/6/2010 9:38:32 AM Eastern Daylight Time

Currently there is no automated way for transferring this information. You may want to ask your database administrator to prepare SQL scripts that can be created based on the data in the PARAMTRS table and can be used to populate the stand alone databases.

### Complete Issue Information

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 9545                                                                            |
| Subject: AngleBox Deterioration Will Not Validate With Only Web Plate Deterioration Coded |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Campisi, Paul           | 11/6/2009 8:44:57 PM |
| Modified By: jduray                   | 5/6/2010 2:38:34 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | L21U21 Section Properties.png   |             |
|      | L21U21 Compression Capacity.png |             |
|      | 090-0030 TFS - Cedar Street.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 11/6/2009 4:38:08 PM Eastern Standard Time  
Angle box deterioration commands for two successive Members of Interest will not validate unless you code the first Member of Interest with at least one line of angle deterioration. Refer to the attached .xml file for an example where the left truss validates and the right does not. The only difference is the angle deterioration coding added to the command language for the first Member of Interest - Left Truss.

4/19/2016 3:07:16 PM

HRS AASHTO

1476

Complete Issue Information

Note: I tried Version 6.1 and the same error occurred.

Shown below is the coding that validates for the Left Truss.

```

MemberOfInterest
L0L1
Deterioration
LeftWebPlate
1 15.0 0.0 L0 0.0 1.0
RightWebPlate
1 15.0 0.0 L0 0.0 1.0
Angles <===== You need to add this coding for the truss to validate.
TopLeft HorizontalLeg 0 0 L0 0 0 <===== You need to add this coding for the truss to validate.
L1L2
Deterioration
LeftWebPlate
1 15.0 0.0 L1 0.0 1.0
RightWebPlate
1 15.0 0.0 L1 0.0 1.0
`

```

Thanks

Paul Campisi  
NYSDOT

FROM: Herman Lee DATE: 1/21/2010 1:43:27 PM Eastern Standard Time  
I confirmed that this is a bug in the truss validation.

FROM: Xinmei Li DATE: 3/4/2010 9:13:25 AM Eastern Standard Time  
Resolved for 6.2.  
The problem was caused due to MAX\_COMMAND not updated after new command added.

FROM: Jim Duray DATE: 5/6/2010 10:34:51 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 9546                                      |
| Subject: Truss rating drops from version 6.0 to 6.1 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Armbrecht, Tim          | 11/8/2009 2:38:50 AM  |
| Modified By: hlee                     | 1/23/2010 10:36:15 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category                                     |
|-----------------|----------|----------|----------------------------------------------|
| Lee, Herman     | New      | High     | Bug                                          |
| Goodrich, Brian | Assigned |          | Bug - BRASS<br>Support<br>Bug<br>Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | 35078 -<br>Example_Horiz_Leg.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krishna Kennelly DATE: 11/7/2009 9:39:05 PM Eastern Standard Time  
Submitted on behalf of Tim Ambrecht, Illinois DOT via email:

From: Shoup, Scott M  
Sent: Wednesday, November 04, 2009 3:49 PM  
To: Souther, Timothy E  
Subject: New Virtis Release

Tim,

Did we get the Virtis Release Notes for the new Virtis 6.1.0 update? I am rating the gusset plates for 090-0030 and noticed that there is a significant drop in the truss rating from my original truss run. I am wondering what they changed that caused this.

Thanks.

Scott

FROM: Herman Lee DATE: 11/9/2009 12:17:07 PM Eastern Standard Time  
For the truss in Span 10 superstructure definition, dead load and live load actions in 6.1 are the same

4/19/2016 3:07:16 PM

HRS AASHTO

1478

Complete Issue Information

as 6.0. The section properties and compression capacity of the critical member (L21U21) are different. It's related to the fix for Incident 9292 (Virtis Calculating Incorrect Angle Box and Built-up Member Section Properties).

May, please confirm the reported (see attached) section properties and compression capacity for L21U21.

FROM: Xinmei Li DATE: 11/17/2009 10:00:03 AM Eastern Standard Time  
Herman is right. The difference was due to the fix for incident 9292. Version 6.1 gives correct rating results.

L21U21 section property is defined as follows:

Builtup = VSec2 //V19, V21, V23  
TopFlangePlate  
1.00 0.0625  
BottomFlangePlate  
1.00 0.0625  
TopAngles L6x4x7/16 Vertical  
BottomAngles L6x4x7/16 Vertical  
BackToBack 19.25  
Connection Riveted 0.00  
Lacing Web

The TopAngles and BottomAngles are Vertical, which means the local y axis of angle is parallel to the y axis of the overall section. This was not correctly coded in the calculation in 6.0, but fixed in 6.1.

FROM: Xinmei Li DATE: 11/17/2009 10:53:23 AM Eastern Standard Time

FROM: Tim Armbrecht DATE: 11/18/2009 8:49:59 AM Eastern Standard Time  
This solves the issue for us, but please note the following from my consultant:

-----  
First of all the rating of this structure is now the same. It looks like they adjusted the orientation of the angles with Virtis Version 6.1. Therefore, I needed to adjust my model from "Vertical" to "Horizontal" for the angle call outs on the vertical Builtup Members (This is the info that would have been nice to get from Baker). When I did this, I got the same answer as Version 6.0.

We will need to keep this in mind when opening previous Virtis truss structures. It may be necessary to adjust the "Builtup Members" sections.

-----  
Because this fix is significant and may cause some confusion with the results of previously modeled trusses, I suggest sending out an advisory to the users as an e-notification. I also recommend updating the documentation, and perhaps attaching it to the notification to explain the changes.  
Thanks, Tim

FROM: Herman Lee DATE: 11/25/2009 8:17:53 AM Eastern Standard Time  
We are preparing a Technical Note to be sent out by eNotification.

4/19/2016 3:07:16 PM

HRS AASHTO

1479

Complete Issue Information

FROM: Herman Lee DATE: 1/23/2010 5:30:10 PM Eastern Standard Time  
Technical Note 13 (Incorrect Truss Angle Box and Built-up Member Section Properties) is posted on the Virtis/Opis Technical Support website.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 9549                                                     |
| Subject: Built-Up Members With Section Loss Incorrectly Calculated |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Campisi, Paul           | 11/9/2009 6:40:04 PM  |
| Modified By: hlee                     | 10/15/2011 9:58:52 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 11/9/2009 1:42:54 PM Eastern Standard Time  
Virtis is miscalculating built-up member section properties when the member is reduced for horizontal leg section loss. When the built-up member is transformed into an equivalent plate girder by the BRASS engine, the percent loss of section coded for the horizontal angle legs is applied to the entire plate girder flange thickness. This reduces the total area of the angle (vertical and horizontal legs) by the percentage section loss coded for the horizontal legs. This results in substantially lower section properties. There should not be "horizontal" and "vertical" leg section loss coding in Virtis if it is taken into account.

The attached file is an example of a built-up member (Floorbeam 2) having 60% horizontal leg section loss and the section properties coming out substantially lower. Looks like the reason for this error is Virtis/BRASS is reducing (due to the section loss) the transformed flange thickness to compute the b/t

4/19/2016 3:07:16 PM

HRS AASHTO

1480

Complete Issue Information

ratio per AASHTO 10.48.2.1 for the reduced section. The b'/t might be correct but the flange area is wrong.

Per BRASS Output file:

F critical for compression flange ( $[4400 t/b]**2 \leq F_y$ ) = 19054.8 psi  
Yield moment top, bottom  
AMUT= 113.6 AMUB= 260.9 ft-kips

Floorbeam 2 Section Properties by BRASS

Ixx (no deterioration) = 1199 in<sup>4</sup> =====ok  
Ixx (calculated by Virtis w/60% loss to horizontal legs) = 847 in<sup>4</sup> ===incorrect  
Ixx (correct w/60% loss to horizontal legs) = 988 in<sup>4</sup>

Note: I did not check the vertical leg, but this should also be investigated.

Paul Campisi  
NYSDOT  
Load Rating Engineer

FROM: Brian Goodrich DATE: 11/12/2009 7:50:52 AM Mountain Standard Time  
Requested file from Paul.

FROM: Brian Goodrich DATE: 11/20/2009 11:02:54 AM Mountain Standard Time  
Virtis supports different leg thicknesses for angles, so the error is not on the Virtis side. It's the BRASS engine that does not support different leg thicknesses. I will forward this issue to WYDOT to see if there is something that can be done there.

FROM: Brian Goodrich DATE: 1/28/2010 12:01:25 PM Mountain Standard Time  
I discussed this issue with WYDOT at our quarterly meeting. We discussed the option of revising BRASS to allow different leg thicknesses, but this option was not approved. WYDOT's suggestion was to model this member as an equivalent plate girder with the section loss accounted for in the flange dimensions.

It might be possible to revise the export to generate an equivalent plate girder for a built-up member with deterioration.

Issue ID: 9553  
Subject: System Error while saving the .xml file

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Nakrani, Navnit 11/12/2009 6:06:01 PM  
Modified By: mordoobadi 11/18/2009 8:48:59 PM  
Priority: High  
Category: Bug

4/19/2016 3:07:17 PM

HRS AASHTO

1481

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | RC Parabola 10030 TI.xml |             |
|      | 10030 revised by GAB.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 11/12/2009 1:13:39 PM Eastern Standard Time

Hi,

This is Balaji from United International Corporation, CT. While I was trying to save the virtis file which I just started specifying the data, it gives system error and unable to save the file.

I'm herewith attaching the .xml file and the screen shot of the system error, for your review.

Thanks,  
Balaji

FROM: Mehrdad Ordoobadi DATE: 11/16/2009 9:57:10 AM Eastern Standard Time

From: Bridgeware,  
Sent: Thursday, November 12, 2009 3:45 PM  
To: bmahalingam@uiceng.com; Bridgeware,  
Subject: RE: System Error while saving the .xml file

Hi Balaji,

Attached is your bridge export XML file with some minor modification. With the attached XML file you should be able to save. You will get a message that indicates that the file checksum doesn't match original checksum. Ignore that warning and import and save the bridge.

4/19/2016 3:07:17 PM

HRS AASHTO

1482

Complete Issue Information

Regards,  
Mehrdad Ordoobadi

FROM: Mehrdad Ordoobadi DATE: 11/16/2009 10:00:35 AM Eastern Standard Time

From: Balaji Mahalingam [mailto:bmahalingam@uiceng.com]  
Sent: Friday, November 13, 2009 4:27 PM  
To: Bridgeware,  
Subject: RE: System Error while saving the .xml file

Dear Mr.Ordoobadi,

Please disregard the previous email sent on Nov. 12 , 2009 at 4:01 Pm.

I gave the truck percentage as 100 in the " Bridge description data" . Thats why it was giving the error message. Now its working fine.

Sorry for the inconvenience.

Sincerely,

Balaji.

----- Original Message -----

From: bmahalingam@uiceng.com  
Sent: Thu, November 12, 2009, 4:01 PM  
Subject: RE: System Error while saving the .xml file

Dear Mr.Ordoobadi,

Thanks for the reply. I could save the file now, but after I try to input the Traffic data in the 'Bridge Description', and try to save it gives the system error like

" Unable to Save Bridge Data  
Saving new and modified objects failed while processing CDmBridge (Saveorder Object:53)  
.....  
-----"

similar to the system error received by Ms.Kimberly Coleman, for the Prestress strands, which I saw in the issue browser. Actually this happened before you fixed this problem for this .xml file.

Could you please help me in this regard.

Thanks,

Balaji.

---

4/19/2016 3:07:17 PM

HRS AASHTO

1483

### Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9556                                             |
| Subject: BRASS warning message with RC Parabolic variation |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Barnhill, Gale          | 11/13/2009 7:32:41 PM |
| Modified By: hlee                     | 5/9/2010 3:55:47 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 11/13/2009 2:48:06 PM Eastern Standard Time

We modeled an continuous RC Tee member with a single parabolic segment in Span 1 and 3 and two adjoining segments in Span 2.

For the shear check member, we changed the BRASS LFD properties to 5-only user defined POI and input the POI we wanted checked. ("d" from CL support and all 10th points in between).

In the BRASS output for the shear member, we see this warning multiple times.

**\*\* WARNING:** Two adjacent web segments on Span No. 1 have geometry that indicate that they are part of

    a continuous parabolic or elliptical profile. However, because the adjacent web depths are not equal, the RIGHT-MOST segment will not be considered as part of the continuous profile.

For the moment members, the BRASS LFD properties are set at 3-10th points plus user defined. We did not define any extra POI for the moment members. There are no warning messages in the BRASS output of the moment members.

4/19/2016 3:07:17 PM

HRS AASHTO

1484

Complete Issue Information

The warnings do not appear to change the results.

FROM: Brian Goodrich DATE: 11/18/2009 11:01:07 AM Mountain Standard Time  
In span 1, there is a web segment that has a depth that is slightly different at the end than at the start of the next segment.

SPAN-WEB-GENERAL 1, 24.8161, 3, 30.2813, 26.5975  
SPAN-WEB-GENERAL 1, 26.6093, 3, 32.2813, 28.2717

The error message is repeated several times due because of a loop that searches through an array. I will check with WYDOT to see if I can add something so the message only gets reported once.

Due to the reinforcement that is input, multiple cross sections are determined along the span. There must be a short range that was merged with another when Virtis generates cross sections and ranges for BRASS to export.

FROM: Brian Goodrich DATE: 11/19/2009 8:39:25 AM Mountain Standard Time  
E-mail from Gale:

=====

Brian,  
I'm not sure how to add new comments in Elsinore.

For the bridge in this Issue, there is a bar cut-off within a few 100ths of a foot from POI 107 and 303. I changed the web variation to linear segments to eliminate the parabolic error message. In checking that model, I discovered that 107 and 303 were not getting near symmetrical results and found that due to the section change proximity issue that you explained to me in Denver, BRASS was analyzing using the cutoff bar at POI 107 and not using it at POI 303. I moved the bar cutoff 3 inches so both 107 and 303 now do not use the bar and am getting nearly symmetrical output.

I've attached my revised model with the linear segments and revised bar. See the notes on the Super Def window, Description Box.

Gale

=====

Attached 10030 revised by GAB.xml.

FROM: Brian Goodrich DATE: 1/28/2010 10:04:55 AM Mountain Standard Time  
WYDOT did not authorize any changes to limit the number of warning messages. This issue does not occur in the merged BRASS engine, which will eventually replace the BRASS LFD engine.

FROM: Brian Goodrich DATE: 3/24/2010 4:07:38 PM Mountain Daylight Time  
This issue appears to be resolved by changing the input.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 9557<br>Subject: Update StdEngine source code to Intel Fortran Compiler v10.1.013 . |
|-----------------------------------------------------------------------------------------------|



Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Lee, Herman                        |
| Submitted By: Lathia, Hasmukh 11/13/2009 8:44:12 PM |
| Modified By: hlee 11/13/2009 9:01:36 PM             |
| Priority: High                                      |
| Category: Enhancement                               |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Bug            |
| Duray, Jim      | Assigned |          | Bug - Warranty |
|                 | Resolved |          |                |
|                 | Closed   |          |                |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 00038 - 11104026.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Hasmukh Lathia DATE: 11/13/2009 3:49:11 PM Eastern Standard Time  
 PennDOT has updated their BAR7 source code to Intel Fortran Compiler v10.1.013. Any updates received from or exchanged with PennDOT may not be compatible because of different versions of compilers. Also Intel may not support older version of their compiler.

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 9561                                            |
| Subject: LRFR Legal Load Rating - Inconsistent LL Factors |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Duray, Jim           |                       |
| Submitted By: Thompson, Todd          | 11/17/2009 9:56:02 PM |
| Modified By: hlee                     | 5/13/2010 3:24:13 PM  |
| Priority: High                        |                       |
| Category: Bug - Warranty              |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 11/17/2009 4:59:50 PM Eastern Standard Time  
I've been having issues in getting inconsistent live load factors for legal load ratings using Virtis LRFR ratings.

Example:  
ADTT = 40

## Complete Issue Information

therefore Table 6.5 reflects factor of 1.4

BRASS LRFR has 1.4 factor used  
VIRTIS LRFR has a 1.64 factor used.

On some bridges it seems to be ok. On other bridges, not ok. Have not been able to track it down. But in comparing about 6 or 7 bridges - some agree between BRASS and VIRTIS for legal trucks within 0.2% and yet others are 20% difference - all due to incorrect LL factors being used.

Not sure if I'm missing something?

I'll attach one that has incorrect values.

FROM: Todd Thompson DATE: 11/18/2009 9:32:19 AM Eastern Standard Time  
11-18-2009

In following up with the attached structure.

If ADTT = 5000, Virtis has correct LL factor of 1.8

If ADTT = 1000, Virtis has correct LL factor of 1.65

if ADTT = 100, Virtis has correct LL factor of 1.4

but when ADTT is below 100, it incorrectly computes LL factors greater than 1.4, when they should be 1.4

FROM: Todd Thompson DATE: 11/24/2009 3:04:46 PM Eastern Standard Time

In checking Permit loads with various ADTT values - those appear to be correct.

This appears to only happen with ADTT less than 100 and when dealing with LRFR Legal load checks.

## Warranty Bug

FROM: Todd Thompson DATE: 1/11/2010 2:58:05 PM Eastern Standard Time

Not sure if this should also be considered a critical bug since you get incorrect rating results?

FROM: Herman Lee DATE: 1/12/2010 12:42:35 PM Eastern Standard Time

Our current process is to include all the bugs that will or have the potential to create unconservative results since we don't want to create a big list and nobody wants to read it. This is not a strict rule, in my opinion any bug that will affect a lot of users should also be included in the critical bugs list.

Todd, what's your comments or opinion on this?

FROM: Todd Thompson DATE: 3/1/2010 2:01:59 PM Eastern Standard Time

This bug does product "conservative" results unless one is possibly need to post a bridge because of the results being wrong. The economic and political impact can be quite large when one has to post a bridge.

So while this might not be critical, it does have the impact to affect users. Not sure if there is a large number of users.

Hopefully we can just fix this in 6.2 and move on.

FROM: Jim Duray DATE: 3/4/2010 2:13:45 PM Eastern Standard Time

Problem for ADTT < 100 for legal loads.

Fixed for 6.2

FROM: Jim Duray DATE: 4/30/2010 3:23:44 PM Eastern Daylight Time

4/19/2016 3:07:18 PM

HRS AASHTO

1488

Complete Issue Information

Verified - 6.2 alpha 4.

FROM: Todd Thompson DATE: 5/11/2010 1:34:54 PM Eastern Daylight Time  
6.2 Beta 1

Tried some various ADTT values and appears to be fixed for <100 ADTT values.

|                       |
|-----------------------|
| Issue ID: 9562        |
| Subject: NSG Analysis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lathia, Hasmukh      |                       |
| Submitted By: Curtis, Beckie          | 11/18/2009 4:43:59 PM |
| Modified By: hlee                     | 5/14/2010 5:58:45 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
| Lathia, Hasmukh | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier                                                                      | Description |
|------|------------------------------------------------------------------------------------------|-------------|
|      | 00025 -<br>CL25125032000B010.xml                                                         |             |
|      | Interior_Girder_2W_<br>(Original_Fascia_Girder) -<br>NSG_(Centered)_-_ADJ_<br>(None).dat |             |
|      | Exterior_Girder_1W_<br>(Widened_Fascia_Girder) -<br>NSG_(Centered)_-_ADJ_                |             |

4/19/2016 3:07:18 PM

HRS AASHTO

1489

## Complete Issue Information

(None).dat  
Exterior\_Girder\_1W\_  
(Widened\_Fascia\_Girder) -  
NSG\_(Centered)\_-\_ADJ\_  
(None).OUT

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 11/18/2009 11:52:39 AM Eastern Standard Time

We haven't done many NSG's yet, so hopefully this will end up being education. In the attached file, we are trying to analyze for the distribution factor at pier 5. The model kept crashing Virtis when analyzed as NSG, and so we created a dummy model that was just spans 5 and 6. This model also crashes when doing a NSG analysis. I have attempted to decrease the settings, change which truck was being analyzed, etc but Virtis crashes each time.

FROM: Herman Lee DATE: 3/5/2010 7:50:50 AM Eastern Standard Time

Virtis Std Engine crashes while generating the output file. The input data file is attached in this incident.

Hasmukh, the distribution factors in the input data file are coming from the Non-Standard Gage analysis. This girder doesn't have live load on it, that's why the numbers are small.

FROM: Hasmukh Lathia DATE: 3/5/2010 6:34:45 PM Eastern Standard Time

Virtis Std Engine crashes because the format width to print the Shear Strength is not big enough. For some reason the Shear Strength values for certain sections in span 2 are infinite (9999999.99). Either the format statement needs to be changed or the Shear Strength needs to be set to 99999.9 to avoid this problem. Why the Shear Strength is infinite for certain sections needs to be investigated further.

FROM: Hasmukh Lathia DATE: 3/9/2010 1:39:30 PM Eastern Standard Time

Upon further investigation, it was found that the shear strength at certain sections in span 2 are set to infinite because the live load shear at these sections are negligible. Since the live load distribution factor is entered as a very small value (0.001), live load shears at these sections are negligible, hence the shear rating factor is infinite and thus the live load strength is also set to 99999999.9. Since BAR7 was not intended to do just the dead load analysis (no live load on the structure) some of these issues are coming up. The above mentioned fix should eliminate the output conversion error.

FROM: Herman Lee DATE: 3/30/2010 12:50:58 PM Eastern Daylight Time

Resolved by Hasmukh Lathia on 3/30.

FROM: Herman Lee DATE: 5/9/2010 11:56:31 AM Eastern Daylight Time

Tested "SB Dummy Span" superstructure. Virtis Std Engine crashes while generating the output file in 6.2 Beta 1.

Hasmukh, please run the attached input file (Exterior\_Girder...) in your standalone version. If it doesn't crash, send us the updated files for this fix so we can compare to see whether SourceSafe has the updated files. Thanks.

4/19/2016 3:07:18 PM

HRS AASHTO

1490

Complete Issue Information

FROM: Has Mukh Lathia DATE: 5/13/2010 5:04:42 PM Eastern Daylight Time  
 The inputr file Exterior\_Girder... runs fine in VSE 6.2 standalone version. Emailed fortran source file Rategf.for to Herman.

FROM: Herman Lee DATE: 5/14/2010 8:19:14 AM Eastern Daylight Time  
 SourceSafe has the updated Rategf.for file. We will verify the fix for this incident again in 6.2 Beta 2.

FROM: Herman Lee DATE: 5/14/2010 1:16:44 PM Eastern Daylight Time  
 I tested this incident with the updated Virtis Std Engine DLL built today for Incident 9483. NSG Analysis completed successfully.

|                       |
|-----------------------|
| Issue ID: 9563        |
| Subject: memory issue |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Jensen, Paul            | 11/18/2009 5:08:49 PM |
| Modified By: dkoenig                  | 3/17/2010 1:03:55 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Assigned  |          |          |
|                 | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

4/19/2016 3:07:18 PM

HRS AASHTO

1491

Complete Issue Information

FROM: Paul Jensen DATE: 11/18/2009 12:11:41 PM Eastern Standard Time  
me thinks the memory issue is back-

after switching back and forth from brass and std eng i got this error (about the 6th run on the same element)

Error loading Virtis Std ASD/LFD DLL!  
(Error Code = 8) Not enough storage is available to process this command.

10:06:14 AM - Line 1921 in source file .\AbxVirtisStdEngine.cpp.

This happened in 6.0 sometimes, now it is happening all of the time...

please advise...

FROM: Paul Jensen DATE: 11/18/2009 12:12:54 PM Eastern Standard Time  
btw- i have 2.3gb drive space and using 1 gb swap and 1 gb physical memory.

paul

FROM: Herman Lee DATE: 3/16/2010 2:37:37 PM Eastern Daylight Time  
Duplicate of Incident 8877.

FROM: David Koenig DATE: 3/17/2010 9:03:54 AM Eastern Daylight Time  
This is also the same issue as Incidents 9648 and 9529. We had this issues several years ago and it was attributed to Windows 2000. The bottom line is that this memory issue has been around off and on for a long time and is happening in all versions of Windows. We can't run a large group of bridges without getting the error. Once you get the error, you have to reboot your machine to clear everything out. That is not a very efficient way to operate. We need to do a detailed examination on how the program is operating so that we can determine what is causing this issue and get it fixed once and for all. From our viewpoint, it has never been addressed going all the way back to the incidents we submitted in 2006.

|                                                                                                                  |                       |
|------------------------------------------------------------------------------------------------------------------|-----------------------|
| Issue ID: 9564                                                                                                   |                       |
| Subject: Reduction of Load Distribution Factors for Moment in Longitudinal Beams on Skewed Supports (4.6.2.2.2e) |                       |
| Folder: /Virtis/Support Center/Virtis                                                                            |                       |
| Primary Contact: Kennelly, Krisha                                                                                |                       |
| Submitted By: Murgoitio, Shanon                                                                                  | 11/18/2009 5:16:34 PM |
| Modified By: kkennelly                                                                                           | 5/8/2010 2:28:52 AM   |
| Priority: High                                                                                                   |                       |
| Category: Bug                                                                                                    |                       |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Bug      |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B-40-0112.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Steve Mample DATE: 11/18/2009 1:39:45 PM Eastern Standard Time

I have a prestressed girder bridge that I am analyzing using the BRASS-LRFR engine. I used the "Compute from Typical Section" button in the Live Load Distribution window to have Virtis calculate the values for me. I reviewed the Calculations and found that Table 4.6.2.2.3c (Correction Factors for Load Distribution Factors for Support Shear of the Obtuse Corner) is being used but Table 4.6.2.2.2e (Reduction of Load Distribution Factors for Moment in Longitudinal Beams on Skewed Supports) is not. Is this correct?

Mary Walker

Idaho Transportation Department

FROM: Krisha Kennelly DATE: 4/9/2010 9:06:52 PM Eastern Daylight Time

There is a bug that prevents the 4.6.2.2.2e (reduction for moments on skewed supports) from being applied to interior beams.

This bug has been fixed for Version 6.2.

There is no workaround for Version 6.1 or prior. 4.6.2.2.2e does reduce the moment distribution factor so Opis results should be conservative.

FROM: Krisha Kennelly DATE: 5/7/2010 10:27:01 PM Eastern Daylight Time

Verified fix in 6.2 beta 1. 4.6.2.2.2e is now applied to the interior beams.



### Complete Issue Information

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 9565                                                                                |
| Subject: Checking the "Consider wearing surface for rating" checkbox results in higher rating |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 11/18/2009 6:27:16 PM |
| Modified By: hlee                     | 1/23/2010 10:29:44 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 00493 - 0002133443__L.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 11/18/2009 1:29:01 PM Eastern Standard Time  
Submitted on behalf of Dennis Morgan, Michael Baker Jr., Inc.

To reproduce, rate G7 in the SPAN 1, 2, 3 Superstructure Definition with the HS20 vehicle. Operating rating is higher when the "Consider wearing surface for rating" checkbox is checked.

FROM: Brian Goodrich DATE: 11/19/2009 9:05:33 AM Mountain Standard Time  
I investigated the difference in the ratings between the two runs: without and with the wearing surface. I tracked the problem to the input of the BRASS LFD engine "Points of Contraflexure" (see the Engine tab on the Member Alternative Description window). These percentages need to correspond to the dead load actions reported by BRASS. I changed Span 1 to 66%, Span 2 to 24% and 76%, and Span

4/19/2016 3:07:19 PM

HRS AASHTO

1494

Complete Issue Information

3 to 34%, roughly. Now the ratings are lower when the additional load of the wearing surface is included.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 9566                                                          |
| Subject: Virtis Crashes when trying to copy top flange to bottom flange |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Doerr, Gary             | 11/19/2009 4:13:48 PM |
| Modified By: jihnat                   | 4/30/2010 3:31:55 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gary Doerr DATE: 11/19/2009 11:20:08 AM Eastern Standard Time  
When trying to input the girder information, when we get to the bottom flange (steel plate girder)  
1 the save button does not come on when entering new data

4/19/2016 3:07:19 PM

HRS AASHTO

1495

Complete Issue Information

2 after entering data (even if copied from top flange) and selecting apply the program crashes  
3 we were able to work around by entering a line then accepting to return to tree and going back into the Girder description tab and then I could save.

I've attached file for your review

Gary L. Doerr  
NDDOT  
701-328-4844  
gldoerr@nd.gov

FROM: Joseph Ihnat DATE: 2/2/2010 9:08:15 AM Eastern Standard Time  
For any window, Save will only become enabled after the user clicks OK or Apply.  
I'm able to reproduce the crash by clicking Copy twice then clicking Apply.

FROM: Joseph Ihnat DATE: 2/2/2010 2:02:50 PM Eastern Standard Time  
Fixed for version 6.2  
Also fixed similar bug in cover plate tab, and in the corresponding Member Def windows.

FROM: Joseph Ihnat DATE: 4/30/2010 11:32:00 AM Eastern Daylight Time  
Verified - 6.2 alpha 4

Issue ID: 9568  
Subject: Control Options

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Curtis, Beckie 11/20/2009 3:36:10 PM  
Modified By: gcolgrove 9/27/2010 6:30:05 PM  
Priority: High  
Category: Bug - Database 1

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

4/19/2016 3:07:19 PM

HRS AASHTO

1496

### Complete Issue Information

|             |           |      |                |
|-------------|-----------|------|----------------|
|             | Assigned  |      | Bug            |
|             |           |      | Bug - Warranty |
| Lee, Herman | New       | High | Bug            |
|             | Duplicate |      |                |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 11/20/2009 10:41:39 AM Eastern Standard Time

In the control options tab at the member alt level, the shear for LRFR is set to ignore shear as the default, and so we need to go into every member alternative to change this. Is there a location to change the default?

FROM: Herman Lee DATE: 11/20/2009 12:24:26 PM Eastern Standard Time

When creating a new RC and PS member alternatives, the default for "Shear Computation Method" is General Procedure and both "Ignore design & legal load shear" and "Ignore permit load shear" are selected by default. These defaults cannot be overwritten in 6.1.

For XML and database migrated bridges, the "Shear Computation Method" is set to General Procedure if shear is not to be ignored in previous version. Both "Ignore design & legal load shear" and "Ignore permit load shear" are selected by default. These migration defaults also cannot be overwritten.

FROM: Beckie Curtis DATE: 11/24/2009 11:30:33 AM Eastern Standard Time

I don't believe this is resolved, and I don't believe it is correctly identified as education.

It seems that a bridge modeled in 6.0 would have checked shear. Now that bridge has ignore shear checked in 6.1. This changes the analysis in the new version. At least this is the case for my database.

FROM: Herman Lee DATE: 11/24/2009 11:44:03 AM Eastern Standard Time

Changed Status back to Assigned and Category to Bug.

FROM: Herman Lee DATE: 11/25/2009 8:14:09 AM Eastern Standard Time

Looks like currently the "Ignore design & legal load shear" and "Ignore permit load shear" will always be checked in the migrated bridges.

For XML and database migrated bridges, if the "LRFR Ignore Shear" is NOT checked in 6.0, I think both the "Ignore design & legal load shear" and "Ignore permit load shear" SHOULD NOT be checked

4/19/2016 3:07:19 PM

HRS AASHTO

1497

## Complete Issue Information

in 6.1.

FROM: Herman Lee DATE: 12/3/2009 1:05:25 PM Eastern Standard Time

Description of the issue

=====

When migrating a 6.0 database to 6.1 or importing a 6.0 bridge XML file into 6.1, "Ignore design & legal load shear" and "Ignore permit load shear" will always be selected in the Member Alternative Description window's Control Options tab. Note that these two options are for LRFR only and only available for PS and RC member alternatives.

When "LRFR Ignore Shear" is NOT selected in 6.0, the LRFR control option "Shear Computation Method" is correctly set to "General Procedure" in 6.1 but both Ignore shear options are selected. As a result, based on what selected in the user interface, the migrated/imported 6.1 bridge will ignore shear but the 6.0 bridge will consider shear.

Investigation

=====

Since the bridges have already migrated to 6.1 and control options may have been modified by the user, a suitable/conservative solution is the following.

If the LRFR control option "Shear Computation Method" is "General Procedure" or "Simplified Procedure", set "Ignore design & legal load shear" and "Ignore permit load shear" to uncheck if and only if both of them are currently checked.

In the past several days, we worked on a utility for the above solution and also corrected the version conversion DLL in 6.1.

During developing the test cases for this utility, we found out that although "LRFR Ignore Shear" is NOT selected in the 6.0 user interface, the BRASS LRFR Engine in 6.0 will ignore shear ratings by default when searching for the critical ratings (see details in Incident 9410). Attached is the rating results comparison for a member alternative between 6.0 and 6.1. In conclusion, even though the ignore shear options are different between 6.0 and 6.1, the rating results are the same since both will ignore shear.

Resolution options

=====

1. Prepare Technical Note and provide the utility and the corrected version conversion DLL for those users that concern more about matching ignore shear options between 6.0 and 6.1 than matching rating results. Note that the utility only provides a conservative solution.
2. Prepare Technical Note to describe the issue and what needs to be reviewed.
3. Do nothing.

FROM: Herman Lee DATE: 1/5/2010 10:13:42 AM Eastern Standard Time

Please give us feedback on the resolution options.

4/19/2016 3:07:19 PM

HRS AASHTO

1498

Complete Issue Information

FROM: Herman Lee DATE: 1/6/2010 3:44:33 PM Eastern Standard Time  
Beckie Curtis e-mail on 1/5/2010:

=====  
I would prefer option 1.

Beckie Curtis  
Load Rating Engineer  
MDOT - Construction and Technology Division Bridge Operations Unit  
=====

FROM: Herman Lee DATE: 2/27/2010 6:09:29 AM Eastern Standard Time  
Option 1's Technical Note14 (Issue with LRFR ignore shear option for bridges migrated to version 6.1),  
utility and corrected version conversion DLL are done.

FROM: Herman Lee DATE: 3/12/2010 10:23:35 AM Eastern Standard Time  
Posted Technical Note14 to Virtis/Opis Technical Support website.

FROM: George Colgrove DATE: 9/27/2010 1:24:24 PM Eastern Daylight Time  
These items worked with VO61 with all the new utilities. Instructions were helpful.

Issue ID: 9569  
Subject: LRFR Impact set to 0 for existing models

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Curtis, Beckie 11/20/2009 3:44:18 PM  
Modified By: hlee 11/20/2009 6:49:23 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:19 PM

HRS AASHTO

1499

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 11/20/2009 10:46:14 AM Eastern Standard Time

For models that were created prior to 6.1 (this may be prior to 6.0 actually, but they are the existing models in our now 6.1 database), the LRFR impact is set to 0. Is there an easy way to change this without manually changing each member alternative?

FROM: Herman Lee DATE: 11/20/2009 1:24:06 PM Eastern Standard Time

Please see Incident 9287 and 9519 for more information related to this issue. The script (one for each type of database) attached in 9287 allows you to change the LRFD Dynamic Allowances for all the member alternatives and member definitions in your database to the AASHTO default values. Let us know if you need instruction in applying the script and please backup your database before applying the script.

|                                       |
|---------------------------------------|
| Issue ID: 9574                        |
| Subject: Entering RC T-Beam Web Depth |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Armbrecht, Tim          | 11/25/2009 3:36:26 PM |

### Complete Issue Information

|                     |                       |
|---------------------|-----------------------|
| Modified By: hlee   | 11/25/2009 4:06:02 PM |
| Priority: High      |                       |
| Category: Education |                       |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Li, Xinmei      | Assigned           |          | Support  |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Ext Eff Flange 11285.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 11/25/2009 10:37:56 AM Eastern Standard Time  
From my consultant:

RE: Girder Profile, Web tab.

The Virtis Help doesn't adequately describe what should be entered for the web depth of a RC Tee-beam (Begin Depth & End Depth). There are two possibilities for the dimension:

1. Bottom of stem to bottom of deck slab.
2. Bottom of stem to top of deck slab.

From the Help, under Girder Profile: Web, all it says is, for Begin Depth, "Enter the depth of the web at the beginning of the range." For End Depth it's, "Enter the depth of the web at the end of the range." The only way I've been able to resolve this was by going to the BRASS output and seeing, under Beam Properties, that the listed web depth is the Web depth entered in Virtis less the slab thickness. This should not be necessary.

Bottom line: The Virtis Help needs to be revised so that it specifies exactly that what is meant by Begin Depth and End Depth, is "Bottom of stem to top of deck slab."

4/19/2016 3:07:20 PM

HRS AASHTO

1501



Complete Issue Information

FROM: Herman Lee DATE: 11/25/2009 10:41:30 AM Eastern Standard Time  
Tim, please ask your consultant to select the Web Help for Reinforced Concrete Member (see attached "Girder Profile RC Members.png"), not the Web Help for Steel Shape. Attached "Girder Profile Web Help.png" is the Web Help for Reinforced Concrete Member.

|                                                  |
|--------------------------------------------------|
| Issue ID: 9575                                   |
| Subject: Exterior PS Girder Effective Slab Width |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Barnhill, Gale          | 11/25/2009 5:57:38 PM |
| Modified By: jduray                   | 5/6/2010 2:42:48 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gale Barnhill DATE: 11/25/2009 1:01:32 PM Eastern Standard Time  
For this PS Type IV Girder bridge, I can not verify the Exterior Member Eff Flange Width (STD) computed by Virtis.

Type IV web = 8 in = Eff Web  
Girder Spacing = 11 ft = 132 in  
Span Length = 64 ft = 768 in  
Structural Slab = 7.25 in  
Deck Cantilever (CL Girder to back of slab) = 42 in

I assume per AASHTO 8.10.1,

4/19/2016 3:07:20 PM

HRS AASHTO

1502

Complete Issue Information

Max Eff Slab = Span Length / 4 = 192 in

Or

Girder Space / 2 + Deck Cantilever = 132 / 2 + 42 = 108 in

Or

6 times Structural Slab + Eff Web / 2 + Deck Cantilever = 6 \* 7.25 + 8 / 2 + 42 = 89.5 in

In the Deck Profile, Virtis COMPUTE gets 93.5 in which appears to be using the total Eff Web width in the last calculation.

What am I missing ??

I've attached the Virtis 6.0 model.

Thanks,  
Gale Barnhill

FROM: Xinmei Li DATE: 2/19/2010 9:55:35 AM Eastern Standard Time  
Gale, I can't see any document attached to this incident. Could you please attach the birdge xml file to this incident? Thanks.

FROM: Gale Barnhill DATE: 2/19/2010 10:21:19 AM Eastern Standard Time  
Xinmei, I've attached the model. Sorry, I must not have saved it with attachment originally.

FROM: Xinmei Li DATE: 3/4/2010 4:56:04 PM Eastern Standard Time  
It's a bug and resolved for 6.2

FROM: Jim Duray DATE: 5/6/2010 10:40:07 AM Eastern Daylight Time  
Verified - 6.2 alpha 4.

Issue ID: 9578  
Subject: Difference between BRASS & LARS - serviceability calculations?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 12/1/2009 5:58:32 PM  
Modified By: bgoodrich 1/26/2010 8:29:20 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          | Support  |

4/19/2016 3:07:20 PM

HRS AASHTO

1503

### Complete Issue Information

|                  |           |      |     |
|------------------|-----------|------|-----|
| Lee, Herman      | Resolved  |      |     |
|                  | New       | High | Bug |
|                  | Assigned  |      |     |
| Kennelly, Krisha |           |      |     |
| Duray, Jim       |           |      |     |
|                  | Duplicate |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00169 - 17117072000B030.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 12/1/2009 1:18:50 PM Eastern Standard Time  
From one of my staff. Please review and determine the reason for the differences. Thanks.

Tim, as discussed here is the xml file and the member summary rating page for the subject structure. As discussed, VIRTIS is showing rating factors of 0.607 (HS 12.1) for inventory and 1.013 (HS 20.3), serviceability controlling. While LARS is showing rating factors of 0.85 (HS 17.1) for inventory and 1.42 (HS 28.4) for operating, flexure (moment) controlling. The serviceability rating factors from LARS are 1.17 (HS 23.4) for inventory and 1.95 (HS 39.1) for operating. The controlling member is the 1931 steel beams in span 8. The 1931 steel beams in spans 4-7 have slightly higher (0.618) rating factors for serviceability. BARS gives rating factors of 1.1424 and 1.904 for serviceability for inventory and operating for the same beam.

Michael K. Tackett  
Senior Bridge Rating Engineer  
Illinois Department of Transportation  
Bureau of Bridges & Structures  
2300 S. Dirksen Parkway  
Springfield, IL 62674  
Phone: (217) 524-8625  
E-Mail: Michael.Tackett@illinois.gov

FROM: Brian Goodrich DATE: 1/26/2010 9:51:21 AM Mountain Standard Time  
I am able to duplicate the user's results for:  
Structure Def: Span 8 WF-x  
Member: 3rd N Int-x

4/19/2016 3:07:20 PM

HRS AASHTO

1504

Complete Issue Information

Member Alt: B28x91-Comp.

This is a simple-span structure definition, but there is one contraflexure location set to 79.90%. Generally, no contraflexure locations should be input for a simple span. If I clear this value in the BRASS LFD engine properties for the member alternative, the inventory rating is 1.183 and the operating rating is 1.975.

If this does not address the issue, please submit detailed calculations of how the other engines arrived at their ratings.

FROM: Tim Armbrecht DATE: 1/26/2010 2:32:49 PM Eastern Standard Time  
Brian, we concur. We were able to match your ratings after taking out the contraflexure location. We consider the issue closed. Thanks.

FROM: Brian Goodrich DATE: 1/26/2010 1:32:19 PM Mountain Standard Time  
Closed.

|                                  |
|----------------------------------|
| Issue ID: 9580                   |
| Subject: Virtis STD engine error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Curtis, Beckie          | 12/2/2009 1:46:59 PM |
| Modified By: hlee                     | 3/15/2010 8:21:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 12/2/2009 8:51:07 AM Eastern Standard Time

4/19/2016 3:07:21 PM

HRS AASHTO

1505

Complete Issue Information

The attached bridge will not rate in Virtis STD. Brass LFR, LRFR and Opis LRFR work.

FROM: Beckie Curtis DATE: 12/2/2009 1:16:45 PM Eastern Standard Time  
Correction - Virtis LRFR does not work.

FROM: Herman Lee DATE: 12/2/2009 3:07:51 PM Eastern Standard Time  
For the Virtis Std Engine, there's a defect in converting the beam model based shear reinforcements to span model based.  
This is fixed for the 6.2 Release.

For the Virtis LRFR Engine, analysis log has the following error message.  
A fatal error encountered while processing article "5.7.3.2 - Flexural Resistance (Prestressed Concrete)"

FROM: Herman Lee DATE: 3/15/2010 4:14:18 PM Eastern Daylight Time  
This is a duplicate of Incident 9629. A workaround for now is to enter the shear key dimensions for the box beam.

Issue ID: 9581  
Subject: NSG analysis error - 'All members do not have the same number of nodes!' (skewed bent)

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Metcalf, William 12/2/2009 3:17:57 PM  
Modified By: kkennelly 12/16/2009 5:57:33 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

4/19/2016 3:07:21 PM

HRS AASHTO

1506

Complete Issue Information

|                  |          |      |                |
|------------------|----------|------|----------------|
| Kennelly, Krisha | Assigned |      |                |
| Lee, Herman      | New      | High | Bug            |
| Goodrich, Brian  | Assigned |      | Bug - Export 1 |
|                  |          |      | Bug            |
|                  | Resolved |      |                |
|                  | Resubmit |      |                |
| Lee, Herman      | Assigned |      |                |
| Ihnat, Joseph    |          |      |                |
| Goodrich, Brian  |          |      | Bug - Export 1 |
|                  |          |      | Bug - BRASS    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00171 - 82182291000S148.xml |             |
|      | beta test bridge.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 12/2/2009 10:44:32 AM Eastern Standard Time

We are getting an error running NSG on two separate bridges, both of which have skewed bents. This could be similar to Issues #8980 and #9000, but not sure. We have tried lowering tolerances to 0.1 for in/ft to no avail. Does a change in skew angle from bent to bent cause this, and how can this be averted?

As a side note, Virtis crashes anytime the analysis fails to run. I've seen this problem posted before but never a resolution to it. But the main concern is getting it to run correctly in the first place.

The spans of concern in the attached files are

@ 018321 - Span 3&4

@ 040198 - 26.25 m Type IV

4/19/2016 3:07:21 PM

HRS AASHTO

1507

Complete Issue Information

(copy and pasted error from 018321 file)

Unable to generate model.  
09:14:26 AM - Line 1817 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to generate girder system finite element model.  
09:14:26 AM - Line 575 in source file .\AbxVirtisDistFactModelGen.cpp.

All members do not have the same number of nodes! Model cannot be generated!  
09:14:26 AM - Line 1621 in source file .\AbxVirtisDistFactModelGen.cpp.

FROM: Krisha Kennelly DATE: 12/15/2009 3:39:33 PM Eastern Standard Time  
There is a problem with tolerances in these bridges.

A workaround for 040198 - 26.25 m Type IV is as follows:  
For G2, change the deck profile length and haunch profile length from 23.438846 to 23.438845  
For G3, change the deck profile length and haunch profile length from 23.593523 to 23.593522

The NSG analysis will then run.

I am unable to find a workaround for 018321.

Notes to programmer:  
Code to fix the tolerance problem was added to AbxVirtisDistFactModelGen.cpp.

FROM: Krisha Kennelly DATE: 12/16/2009 12:57:20 PM Eastern Standard Time  
Error handling also added.

Fixed for 6.2.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 9582                                         |
| Subject: Brass LFR Shear Rating changes based on input |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Curtis, Beckie          | 12/2/2009 4:23:30 PM   |
| Modified By: hlee                     | 10/15/2011 10:22:57 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 12/2/2009 11:30:41 AM Eastern Standard Time

In the attached structure, I first entered a stiffener at 42in from support 2. I then changed and entered the stiffener at 447in from support 1, which is the same location as the first try. The results changed significantly.

FROM: Brian Goodrich DATE: 1/22/2010 12:56:08 PM Mountain Standard Time

I ran both cases and found that there is no STIF-TRAN-SCHEDULE command exported for span 1 when the stiffener is input from support 2. The workaround is to input a stiffener range for span 1, with a spacing of 405".

The BRASS engine requires that the schedule be input for the entire length of the structure. The export must be revised to look for gaps in the schedules input by the user.

FROM: Brian Goodrich DATE: 1/26/2010 9:09:08 AM Mountain Standard Time

I revised the export to use the bearing stiffeners as transverse stiffeners when there are no intermediate transverse stiffeners within a span. The ratings are now the same for the structure in question regardless of how the stiffeners are referenced. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/9/2010 12:40:36 PM Eastern Daylight Time

Verified in 6.2 Beta 1.

FROM: Beckie Curtis DATE: 5/12/2010 4:24:19 PM Eastern Daylight Time

See Test 9582, g2. When stiffeners are modeled in each span, ratings are fine. When you enter the stiff as -12 inches from support 2, the stiffener is shown in the model as being in the right spot, but Brass results drop.

FROM: Brian Goodrich DATE: 6/1/2010 12:52:18 PM Mountain Daylight Time

I ran the G2 member from Test 9582. A different transverse stiffener schedule is exported for the "Copy of plate girder odd stiffeners" alternative. For one of the input schedules, the spacing itself is entered as a negative value, which is not supported by the BRASS export. If the start distance is input as a negative value, the correct schedules are exported. The workaround would be to not input negative spacings.

Herman - Are negative spacings a valid entry?

FROM: Herman Lee DATE: 6/2/2010 6:18:39 AM Eastern Daylight Time

4/19/2016 3:07:21 PM

HRS AASHTO

1509



Complete Issue Information

FROM: Joseph Ihnat DATE: 6/2/2010 8:21:51 AM Eastern Daylight Time  
A negative spacing value is a valid entry .

FROM: Brian Goodrich DATE: 6/2/2010 10:22:23 AM Mountain Daylight Time  
The BRASS export will need to be revised to consider the negative spacings for the transverse stiffener schedules. Stirrups and bracing must be changed as well.

|                                                      |
|------------------------------------------------------|
| Issue ID: 9583                                       |
| Subject: Stiffener spacing used for Shear at support |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 12/2/2009 4:33:18 PM |
| Modified By: hlathia                  | 12/3/2009 9:15:29 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 12/2/2009 11:44:50 AM Eastern Standard Time  
At a location of a change in stiffener spacing, the larger spacing is used for the analysis, which I agree with for intermediate spacings since the shear shouldn't change significantly on either side of the point of interest. However, at the support of continuous beams, the shear can be very different on each side of the support and therefore the requirement for stiffeners would be different.  
I verified the program uses the larger spacing at the support for the Virtis STD engine, not sure about Brass LFR engine (see previous issue) and I did not check LRFR.

4/19/2016 3:07:21 PM

HRS AASHTO

1510

Complete Issue Information

I recommend the program use the shear and the stiffener spacing on the side of the support that is being checked rather than the shear from one side and the stiffener spacing from the other side.

FROM: Beckie Curtis DATE: 12/2/2009 11:45:31 AM Eastern Standard Time  
Issue referred to above is 9582

FROM: Herman Lee DATE: 12/2/2009 1:16:58 PM Eastern Standard Time  
I interpret this as an enhancement request.

FROM: Tim Armbrecht DATE: 12/2/2009 4:21:02 PM Eastern Standard Time  
While I haven't seen the numbers for myself, it sounds like a bug the way Beckie describes it. If the shear is different on each side of the support, the capacity for each side needs to be calculated. If the stiffener spacing is different on each side of the support, it stands that if the capacity depends on the spacing, then the capacity is also different on each side. You can't compare the capacity based on the stiffener spacing on one side of the support with the shear on the other side.

FROM: Herman Lee DATE: 12/2/2009 5:06:48 PM Eastern Standard Time  
I would consider this as an enhancement since BAR7 is implemented as-is. I don't think BAR7 will consider stiffener spacings when determining the shear capacity. We are checking on how BAR7 handles the situation described above.

FROM: Tim Armbrecht DATE: 12/3/2009 10:15:32 AM Eastern Standard Time  
Herman, good point about BAR7. Thanks.

FROM: Beckie Curtis DATE: 12/3/2009 3:21:23 PM Eastern Standard Time  
Does anyone know what Virtis LRFR will do?

FROM: Herman Lee DATE: 12/3/2009 3:26:48 PM Eastern Standard Time  
We are currently working on the Virtis LRFR Engine steel module for the 6.2 Release. We will pay attention to what described above during the development.

FROM: Hasmukh Lathia DATE: 12/3/2009 4:15:29 PM Eastern Standard Time  
I agree with Beckie about using the stiffener spacing at the side of support where the shear capacity is calculated. This is a shortcoming of BAR7 which was implemented in Virtis Std Engine as received from PennDOT for steel girders. This needs to be corrected, but it would be an enhancement for Virtis Std Engine.

|                                        |                      |
|----------------------------------------|----------------------|
| Issue ID: 9584                         |                      |
| Subject: tee beam model crashes virtis |                      |
| Folder: /Virtis/Support Center/Virtis  |                      |
| Primary Contact: Li, Xinmei            |                      |
| Submitted By: Curtis, Beckie           | 12/3/2009 6:33:21 PM |
| Modified By: hlee                      | 5/27/2010 5:11:57 PM |
| Priority: High                         |                      |
| Category: Bug                          |                      |

Complete Issue Information

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 12/3/2009 1:42:27 PM Eastern Standard Time  
 When running member 4 (only member entered) the program crashes with Virtis STD engine. Brass will run.

FROM: Beckie Curtis DATE: 12/3/2009 3:20:26 PM Eastern Standard Time  
 Looking further into Brass results - There are bent bars used as reinforcement. I had originally checked them as inverted, but looking into Brass output this was putting the bars 30in or so outside of the beam. So, I unchecked the inverted box, but now the bars are 30-in too far the other way. I analyzed the beam with them as straight and they plopped in the right spot, at least at midspan. This may be why it was not working in Virtis STD. I also had issues with LRFR - Brass and Virtis.

FROM: Herman Lee DATE: 12/4/2009 10:26:08 AM Eastern Standard Time  
 For the Virtis Std Engine, we added a check for c.g. lies outside the section so it will not crash. This is fixed for the 6.2 Release.

For BRASS LRFR and Virtis LRFR, please specify the issues you have and attached the straight bar model if it's still available.

FROM: Herman Lee DATE: 1/5/2010 10:02:44 AM Eastern Standard Time  
 Information Needed E-mail sent on 1/5/09.

FROM: Herman Lee DATE: 1/9/2010 6:43:34 PM Eastern Standard Time  
 Beckie Curtis e-mail to Bridgeware on 1/8/2010:

=====

Complete Issue Information

I uploaded the file. I also uploaded the plans.

If you could let me know how the bar should be entered to model it bending I would appreciate it. Or I will just tell my folks to always put them in straight.

Thanks.

Beckie Curtis  
Load Rating Engineer  
MDOT - Construction and Technology Division Bridge Operations Unit  
=====

FROM: Herman Lee DATE: 1/9/2010 9:10:52 PM Eastern Standard Time  
Beckie, the "Girder Profile: Reinforcement" help topic has specific information for entering Type 3 bar. If your folks couldn't locate the problem after reviewing the help topic, please attach the bridge file and we will take a look at the inputs.

FROM: Beckie Curtis DATE: 2/9/2010 1:25:07 PM Eastern Standard Time  
I added an image of the help, I am thinking one of the images is misleading.

FROM: Herman Lee DATE: 5/27/2010 11:59:17 AM Eastern Daylight Time  
We have updated the description of the inverted bar mark definition image in Virtis/Opis Help. Fixed in 6.2 Beta.

Issue ID: 9585  
Subject: Unable to connect to datasource. Database Exception SQL Server does not exist or access denied. ConnectionOpen (Connect()).

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Watters, John 12/7/2009 2:07:33 PM  
Modified By: hlee 1/23/2010 10:28:37 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:22 PM

HRS AASHTO

1513

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: John Watters DATE: 12/7/2009 9:11:47 AM Eastern Standard Time  
After running Windows Updates we are receiving the following error when trying to open Virtis:  
Unable to connect to datasource. Database Exception SQL Server does not exist or access denied.  
ConnectionOpen (Connect()).

FROM: Joseph Ihnat DATE: 12/7/2009 10:16:30 AM Eastern Standard Time  
We've seen two causes of this error message.  
The first thing to check is to make sure the SQL Server (MSSQLServer) service is running.  
You can also get this error if the machine name has been changed.

FROM: Joseph Ihnat DATE: 12/8/2009 9:26:33 AM Eastern Standard Time  
John reports that Virtis is working OK today.

|                                                                                                       |
|-------------------------------------------------------------------------------------------------------|
| Issue ID: 9590<br>Subject: Enhancement request - option to always select lever rule for outside beams |
|-------------------------------------------------------------------------------------------------------|

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Li, Xinmei<br>Submitted By: Armbrecht, Tim<br>12/9/2009 4:59:14 PM |
|------------------------------------------------------------------------------------------------------------------------------|

### Complete Issue Information

|                          |                     |
|--------------------------|---------------------|
| Modified By: plitchfield | 6/4/2013 2:39:16 PM |
| Priority: High           |                     |
| Category: Enhancement    |                     |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Assigned  |          |          |
|                 | Resolved  |          |          |
|                 | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | V60 to V61 bad results 12105<br>V61 model.xml |             |
|      | V60 to V61 bad results 12105<br>V60 model.xml |             |
|      | V60 to V61 bad results<br>12105.txt           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 12/9/2009 12:01:34 PM Eastern Standard Time

The values for Shear and Moment are based on the greater of S/5.5 and the lever-rule computed value. This might be acceptable for a new design, where one would want to ensure that the outside beam is designed for at least the LLDF of the interior beams. However, when dealing with the analysis of an already existing in-service outside beam, it is the most common practice to use the lever-rule to determine the LLDF. Would like to see an enhancement that would provide the user with the ability to set this computation to always use the lever-rule.

FROM: George Huang DATE: 6/29/2012 6:31:27 PM Eastern Daylight Time

One case for steel girder spacing @8.25' is checked. The results seems fine, however there may be some errors in the LLDF calculation files. Two files with comments in red are attached.

Another question I have is for the AASHTO Std Specs. Section 3.23.2.3.1.4 is conflict to Section 3.23.2.3.1.5. For this case, LLDF for exterior girder is s/6.06 is less than that of the interior girder S/5.5.

4/19/2016 3:07:22 PM

HRS AASHTO

1515

Complete Issue Information

FROM: George Huang DATE: 7/2/2012 11:58:51 AM Eastern Daylight Time  
One case for concrete T-beam has been checked. The LLDFD for exterior is always usinf lever rule, 3.23..2.3.1.4 never used. The bridge model 24\_0261RR in VI11164 is used.

FROM: George Huang DATE: 7/2/2012 12:19:57 PM Eastern Daylight Time  
For PC/PS girders, the LLDFD for exterior is always usinf lever rule, 3.23..2.3.1.4 is not used. Bridge model 56-0643GH.xlm is attached.

FROM: George Huang DATE: 7/2/2012 1:56:32 PM Eastern Daylight Time  
For steel girder with  $s \leq 6'$ , the results are verified.

FROM: Xinmei Li DATE: 7/2/2012 2:19:10 PM Eastern Daylight Time  
1, In attached word files, the check for  $s \leq 10.0$  and  $s \leq 16.0$  always display the same for concrete deck, S should be 7 in interior girder calculatong details. They are both release bugs, not related to the lever rule enhancement. This is reported in a seperate incident 11686.  
2, Section 3.23.2.3.1.4 has never been considered by the software since only rating is considered for LFD, not new design. Article 3.23.2.3.1.4 is geared to a new design.  
3, This enhancement is for all beam types. 3.28.2 for PS beams is ignored if this enhancement is being used.  
Please see attached email between Tim and Krisha regarding this enhancement.

FROM: Phil Litchfield DATE: 7/24/2012 7:11:18 PM Eastern Daylight Time  
From consultant (Souther):

The enhance appears to work as intended but only for exterior steel beams and stringers on the left edge of a superstructure or floor system. Even though the option is selected, the LLDF for the right-side exterior beam is computed in the default method.

FROM: Xinmei Li DATE: 8/9/2012 3:54:36 PM Eastern Daylight Time  
Resolved for next build.

FROM: Phil Litchfield DATE: 6/4/2013 10:39:15 AM Eastern Daylight Time  
Fixed in 6.4.1

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 9591                                                            |
| Subject: Virtis 6.1 results differ from Virtis 6.0 for PS Voided Box Beam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Barnhill, Gale          | 12/11/2009 3:25:23 PM |
| Modified By: hlee                     | 1/23/2010 10:27:29 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | B-16-281=S-17-38 Con-A<br>0137.tif |             |
|      | B-16-281=S-17-38 Con-A<br>0155.tif |             |
|      | EngineProperties.png               |             |
|      | FB error.doc                       |             |
|      | B-16-281=S-17-38 Con-A<br>0138.tif |             |
|      | B-16-281_(3EB).xml                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 12/11/2009 10:41:02 AM Eastern Standard Time

I migrated a 6.0 DB to 6.1.

For a PS Voided Box Beam superstructure, the results are not the same.

It appears that 6.1 does not include the Wearing Surface dead load.

I have attached the 6.0 and 6.1 models and a portion of the BRASS output files showing the difference in BRASS input commands.

FROM: Herman Lee DATE: 12/11/2009 1:27:41 PM Eastern Standard Time

Gale, this is related to the fix for Incident 8504. Please see 8504 for information on the fix.



Complete Issue Information

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 9592                                                                        |
| Subject: GFS: Floorbeam analysis stuck in an endless loop. Cannont analyze floorbeams |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Walsh, Joanne           | 12/11/2009 11:41:40 PM |
| Modified By: hlee                     | 12/14/2009 2:31:47 PM  |
| Priority: High                        |                        |
| Category: Education                   |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | Floor System Geometry Error<br>14565.JPG |             |
|      | Floor System Geometry Error<br>14565.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Joanne Walsh DATE: 12/11/2009 6:46:27 PM Eastern Standard Time  
 Bridge description: multispan girder-floorbeam-stringer viaduct (upperdeck and lowerdeck) with steel bents. The Virtis model will analyze each span as a simple spans. Floorbeams are modeled in place of the bents just in Virtis just to complete the model (bent analysis performed by another program). I have attached the framing plans, bridge cross section and the errors I have encountered.

Issue: When I try to analyze the floorbeams in my Girder-Floorbeam-Stringer model, Virtis gets "stuck" in an endless loop. The error seems to occur during the "Generating Influence Functions" part of the program and the error is in the form of a loop at the "Time Check of 500 Positions" (see attached .doc).

4/19/2016 3:07:23 PM

HRS AASHTO

1518

Complete Issue Information

I can analyze the stringers, and am able to obtain the rating values for them. Please review the models "Span 39" and "Span 41" (see attached .xml). Another engineer is working independently on this project and she developed the same error.

Please feel free to contact me at bdartista@hntb.com. Any insight you can provide on this matter is greatly appreciated. Thank you for your time and effort.

FROM: Herman Lee DATE: 12/14/2009 9:09:30 AM Eastern Standard Time  
Decrease the wheel advancement denominator and increase the lane advancement increment will speed up the floor beam rating (see attached EngineProperties.png) but the analysis will be less refined.

|                                      |
|--------------------------------------|
| Issue ID: 9595                       |
| Subject: Floor System Geometry Error |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Barnhill, Gale          | 12/15/2009 7:27:07 PM |
| Modified By: hlee                     | 12/18/2009 4:21:48 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gale Barnhill DATE: 12/15/2009 2:42:17 PM Eastern Standard Time  
In a Girder-Floor Beam-Stringer bridge, the stringers are continous over 30 FB. In order to analyze, I want to use 3 stringer groups to cover the two different FB spacings.

4/19/2016 3:07:23 PM

HRS AASHTO

1519

Complete Issue Information

I am able to connect Unit 1 and Unit 2 to a Stringer Group Definition, but when I try to connect Unit 3, I get the attached error.

I can connect various combinations for Units 1 and 2, but always get the error for Unit 3.

I've attached the 6.1 model.

FROM: Herman Lee DATE: 12/18/2009 11:18:13 AM Eastern Standard Time  
Received Bridgewater e-mail (12/17/2009):

=====  
You may cancel Incident 9595.  
I was trying to do something the program is not intended to do.

Gale A. Barnhill, P.E.  
=====

Issue ID: 9596  
Subject: Virtis' Brass 2.0 vs Brass 1.6.5

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Haney, Tyler 12/16/2009 6:05:31 PM  
Modified By: hlee 1/23/2010 3:50:42 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | New      | High     | Bug      |
|                 | Assigned |          |          |

Complete Issue Information

|                    |          |      |         |     |
|--------------------|----------|------|---------|-----|
|                    | Resolved |      |         |     |
| Lee, Herman        | New      | High | Support | Bug |
| Ihnat, Joseph      | Assigned |      |         |     |
| Ordoobadi, Mehrdad | Resolved |      |         |     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Copy Super Def error 14565.JPG |             |
|      | Copy Super Def error 14565.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 12/16/2009 11:05:49 AM Mountain Standard Time  
Submitted for Tyler Haney:

-----  
Herman,

First of all, I just want to say that I understand if this is too much for you to run through...

I have a bridge that was rated with Brass 1.6.5 and received a Inventory Rating of 1.05 (HL-93 TANDEM @ Const. Stg 3 - LRFD 6.10.4.2.2 Flexural Stress) and an Operating Rating of 1.37 (HL-93 TANDEM @ Const. Stg 3 - LRFD 6.10.4.2.2 Flexural Stress). I noticed that the initial bridge appears to not have been design for the utility loading. I've modeled that same bridge in Virtis (file attached) and can't seem to get an Inventory rating of higher than 0.913 for G1 girder (no utility loading to match the initial brass 1.6.5 rating – utility loading is 7 girder spacings away)

Do you have any idea why this may be? The bridge is on a funky orientation (as shown in the pdf) so it runs diagonally through an intersection. I have run both 4 lanes across the bridge and hard wired VIRTIS to only use two lanes, but no difference in rating was seen. Just as an FYI - the exterior girders on this bridge are actually interior girders as well so distribution factors should all be the same (the interior section of the bridge was modeled during design and I have followed this same practice for the rating.)

4/19/2016 3:07:23 PM

HRS AASHTO

1521

Complete Issue Information

To me, all the input looks relatively similar (close enough that I didn't think it would decrease the rating – one difference is the design included a future wearing surface when I am not including this. So my wearing surface is 280 plf where the initial design was including 514 plf... you'd think this would cause a higher rating.) The difference I found in the output was interesting. The numbers generated for the Moments under Flexural stress were quite different (shown below)... I'm not sure why these numbers are so different when all the inputs seemed very similar if not the same... am I missing something? I just don't know how to explain the lower rating at the moment and have scoured through all this, but haven't really come across anything clear.

VIRTIS OUTPUT USING BRASS 2.0

STRENGTH LIMIT STATE SUMMARY:

Point of Interest : 105.000

Construction Stage: 3

Live Load Combo : 2 - DTM\_HL-93\_~2 + DLN\_HL-93\_~5 (DTM)

AASHTO Reference: LRFD 6.10.7, Appendix A Flexure (ft-k or ksi)

| Limit State:        | STRENGTH I |       | STRENGTH II |       | STRENGTH III |         | STRENGTH IV |         |
|---------------------|------------|-------|-------------|-------|--------------|---------|-------------|---------|
| Effects :           | (max)      | (min) | (max)       | (min) | (max)        | (min)   | (max)       | (min)   |
| Effect Type: *      | f          | M     | f           | M     | f            | M       | f           | M       |
| Resistance          | 50.0       | 0.0   | 50.0        | 0.0   | 50.0         | 0.0     | 50.0        | 0.0     |
| 6.10. or Appendix A | 7.2.2-2    | N/A   | 7.2.2-2     | N/A   | 7.2.2-2      | N/A     | 7.2.2-2     | N/A     |
| Dead Load Effect    | 22.4       | 0.0   | 22.4        | 0.0   | 0.0          | 0.0     | 0.0         | 0.0     |
| Live Load Effect    | 30.3       | 0.0   | 23.4        | 0.0   | 0.0          | 0.0     | 0.0         | 0.0     |
| Total Load Effect   | 52.6       | 0.0   | 45.7        | 0.0   | 0.0          | 0.0     | 0.0         | 0.0     |
| Resistance - Dead   | 27.6       | 0.0   | 27.6        | 0.0   | 50.0         | 0.0     | 50.0        | 0.0     |
| Design Ratio        | 0.95       | N/A   | 1.09        | N/A   | ( N/A )      | ( N/A ) | ( N/A )     | ( N/A ) |
| Rating Factor       | 0.91       | N/A   | 1.18        | N/A   | ( N/A )      | ( N/A ) | ( N/A )     | ( N/A ) |

\* Effect Type: M = Moment, f = Stress

AASHTO Reference: LRFD 6.10.9 Shear Resistance (kips)

| Limit State:     | STRENGTH I |        | STRENGTH II |        | STRENGTH III |       | STRENGTH IV |       |
|------------------|------------|--------|-------------|--------|--------------|-------|-------------|-------|
| Effects :        | (max)      | (min)  | (max)       | (min)  | (max)        | (min) | (max)       | (min) |
| Resistance       | 207.7      | -207.7 | 207.7       | -207.7 | 207.7        | 207.7 | 207.7       | 207.7 |
| Dead Load Effect | 0.0        | 0.0    | 0.0         | 0.0    | 0.0          | 0.0   | 0.0         | 0.0   |
| Live Load Effect | 45.6       | -45.6  | 35.2        | -35.2  | 0.0          | 0.0   | 0.0         | 0.0   |

Complete Issue Information

|                   |       |        |       |        |         |         |         |         |
|-------------------|-------|--------|-------|--------|---------|---------|---------|---------|
| Total Load Effect | 45.6  | -45.6  | 35.2  | -35.2  | 0.0     | 0.0     | 0.0     | 0.0     |
| Resistance - Dead | 207.7 | -207.7 | 207.7 | -207.7 | 207.7   | 207.7   | 207.7   | 207.7   |
| Design Ratio      | 4.55  | 4.55   | 5.90  | 5.90   | ( N/A ) | ( N/A ) | ( N/A ) | ( N/A ) |
| Rating Factor     | 4.55  | 4.55   | 5.90  | 5.90   | ( N/A ) | ( N/A ) | ( N/A ) | ( N/A ) |

Brass 1.6.5 OUTPUT FROM ORIGINAL DESIGN/RATING

STRENGTH LIMIT STATE SUMMARY:

Point of Interest : 105.000

Construction Stage: 3

Live Load Combo : 1 - HL-93-TANDEM (TRK)

AASHTO Reference: LRFD 6.10.7, Appendix A Flexure (ft-k or ksi)

| Limit State:        | STRENGTH I |       | STRENGTH II |       | STRENGTH III |         | STRENGTH IV |         |
|---------------------|------------|-------|-------------|-------|--------------|---------|-------------|---------|
| Effects :           | (max)      | (min) | (max)       | (min) | (max)        | (min)   | (max)       | (min)   |
| Effect Type: *      | M          | M     | M           | M     | M            | M       | M           | M       |
| Resistance          | 1585.0     | 0.0   | 1585.0      | 0.0   | 1585.0       | 0.0     | 1585.0      | 0.0     |
| 6.10. or Appendix A | 7.1.2-2    | N/A   | 7.1.2-2     | N/A   | 7.1.2-2      | N/A     | 7.1.2-2     | N/A     |
| Dead Load Effect    | 408.1      | 0.0   | 408.1       | 0.0   | 408.1        | 0.0     | 447.8       | 0.0     |
| Live Load Effect    | 678.1      | 0.0   | 523.1       | 0.0   | 0.0          | 0.0     | 0.0         | 0.0     |
| Total Load Effect   | 1086.2     | 0.0   | 931.2       | 0.0   | 408.1        | 0.0     | 447.8       | 0.0     |
| Resistance - Dead   | 1176.8     | 0.0   | 1176.8      | 0.0   | 1176.8       | 0.0     | 1137.2      | 0.0     |
| Design Ratio        | 1.46       | N/A   | 1.70        | N/A   | ( 3.88 )     | ( N/A ) | ( 3.54 )    | ( N/A ) |
| Rating Factor       | 1.74       | N/A   | 2.25        | N/A   | ( N/A )      | ( N/A ) | ( N/A )     | ( N/A ) |

\* Effect Type: M = Moment, f = Stress

AASHTO Reference: LRFD 6.10.9 Shear Resistance (kips)

| Limit State:      | STRENGTH I |        | STRENGTH II |        | STRENGTH III |       | STRENGTH IV |       |
|-------------------|------------|--------|-------------|--------|--------------|-------|-------------|-------|
| Effects :         | (max)      | (min)  | (max)       | (min)  | (max)        | (min) | (max)       | (min) |
| Resistance        | 207.7      | -207.7 | 207.7       | -207.7 | 207.7        | 207.7 | 207.7       | 207.7 |
| Dead Load Effect  | 0.0        | 0.0    | 0.0         | 0.0    | 0.0          | 0.0   | 0.0         | 0.0   |
| Live Load Effect  | 38.4       | -38.4  | 29.7        | -29.7  | 0.0          | 0.0   | 0.0         | 0.0   |
| Total Load Effect | 38.4       | -38.4  | 29.7        | -29.7  | 0.0          | 0.0   | 0.0         | 0.0   |

Complete Issue Information

Resistance - Dead      207.7   -207.7   207.7   -207.7   207.7   207.7   207.7   207.7

-----  
Design Ratio            5.40   5.40   7.00   7.00 ( N/A )( N/A )( N/A )( N/A )  
Rating Factor           5.40   5.40   7.00   7.00 ( N/A )( N/A )( N/A )( N/A )

Thanks!,

Tyler Haney, P.E.  
Structural Engineer

3501 W Elder St, Ste 200 | Boise, ID 83705  
D 208.275.8724 | O 208.342.5400 | F 208.342.5353  
-----

FROM: Brian Goodrich DATE: 12/16/2009 11:09:33 AM Mountain Standard Time  
E-mail from Herman Lee:

-----  
Hi Tyler,

Looks like the live load combination used in the two BRASS versions are different. I forwarded your support request to BridgeTech, they maintain the BRASS programs for Wyoming DOT.

Herman  
-----

E-mail from Tyler Haney:

-----  
After looking through it some more, we've noticed that, for the output shown below, not only are the live loads different as you have mentioned, but the method used to compute the resistance is different. The old brass uses 6.10.7.1.2-2 assuming a compact section where the virtis' brass is using 6.10.7.2.2-2 assuming a noncompact section. The beam used is a W18x76 and with the composite action is appears to still be a compact section so we don't know why it is using the noncompact section formula which may account for part of the change in rating... Do you know what in Virtis might be triggering the computation using the noncompact section formula or if this is part of Brass 2.0?

Thanks!,

Tyler Haney, P.E.  
-----

FROM: Brian Goodrich DATE: 12/16/2009 11:11:09 AM Mountain Standard Time  
E-mail from Tyler Haney:

-----  
Brian,

Let me know if you need the original 1.6.5 file or if you have any questions. I still can't figure out why a bridge we rated previously that was fine is now computing with a 0.9 inventory rating...

4/19/2016 3:07:23 PM

HRS AASHTO

1524

Complete Issue Information

Thanks,

Tyler Haney, P.E.

FROM: Brian Goodrich DATE: 12/16/2009 11:11:59 AM Mountain Standard Time  
I reviewed the output file and agree with Herman that the live loads are different. I also found differences in the dynamic load allowance, live load distribution factors, and a specification control option.

1. The 1.6.5 file uses a % of Dynamic Load Allowance of 0%, while the 2.0.0 file uses 100%.
2. The 1.6.5 file uses the tandem truck by itself along with beam distribution factors of 1.0. The 1.6.5 file was coded to have BRASS calculate the live load distribution factors, but then some DIST-BEAM-SCHEDULE commands were added, which override the automatic calculations. These commands default the live load distribution factors to 1.0. This could be an input error. The 2.0.0 file has a tandem plus lane load with beam distribution factors calculated by BRASS.
3. The STEEL-SPECIFICATION command was not input in the 1.6.5 file. Therefore, the second parameter (Allow Plastic Analysis) was automatically defaulted to YES. In the 2.0.0 file, this command was generated with parameter 2 being NO. This is why the 2.0.0 flexural resistances are in terms of stress, while the 1.6.5 flexural resistances are in terms of moment. The resistances should match up once this inconsistency is addressed.

Please let me know if this helps address your questions.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 9597                                            |
| Subject: Error trying to copy a superstructure definition |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Barnhill, Gale          | 12/17/2009 4:22:58 PM |
| Modified By: hlee                     | 5/9/2010 4:46:29 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | FS5-Skewed End Panel Floor System Example.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 12/17/2009 11:30:24 AM Eastern Standard Time  
I get the attached error message when I try to copy the superstructure definition for this bridge. The girder member will analyze, so I assume I have everything defined. I don't get any error messages when I save the bridge. I've attached the Virtis 6.1 model.

FROM: Mehrdad Ordoobadi DATE: 1/14/2010 9:27:42 AM Eastern Standard Time  
Fixed for 6.2.0.

FROM: Mehrdad Ordoobadi DATE: 1/14/2010 12:00:35 PM Eastern Standard Time  
Pinned in version 6.1 for SP1.

FROM: Herman Lee DATE: 5/9/2010 12:45:03 PM Eastern Daylight Time  
Tested copying the superstructure definition in the XML file in this incident. Verified in 6.2 Beta 1.

Issue ID: 9598

Subject: GFS System: Error when analyzing girder.

Folder: /Virtis/Support Center/Virtis

Primary Contact: Li, Xinmei

Submitted By: Walsh, Joanne

12/17/2009 10:19:04 PM

4/19/2016 3:07:24 PM

HRS AASHTO

1526

### Complete Issue Information

|                   |                      |
|-------------------|----------------------|
| Modified By: hlee | 1/23/2010 3:51:07 PM |
| Priority: High    |                      |
| Category: Support |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | BRASS Engine Properties<br>2.png |             |
|      | BRASS Engine Properties.png      |             |
|      | error.docx                       |             |
|      | 0029033013 R.xml                 |             |
|      | 0029033013 R2.xml                |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

West Plate Girder:

I got the following validation errors, so I changed the flange ranges in Girder profile to eliminate these errors.

West Plate Girder (Member Alternative)

ERROR: Web and top flange total lengths are not equal.

ERROR: Web and bottom flange lengths are not equal.

ERROR: Beam shape not defined over entire length of member

alternative.

Then I did BRASS analysis with west plate girder, got zero rating factors. In BRASS output files I found the following warning messages.

4/19/2016 3:07:24 PM

HRS AASHTO

1527

Complete Issue Information

\*\*\* WARNING \*\*\*

TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK # 1 DOES NOT SATISFY CURRENT

AASHTO CRITERIA. ENGINEER SHOULD REVIEW.

\*\*\*WARNING STIFFENER SPACNG IS NOT ADEQUATE. REVIEW PRECEDING OUTPUT FOR LOCATION AND MORE DETAIL.

So I added transverse and longitudinal stiffeners. I got valid rating factors with the revised west plate girder. FROM: Joanne Walsh DATE: 12/17/2009 5:29:38 PM Eastern Standard Time  
Bridge description: multispan girder-floorbeam-stringer viaduct (upperdeck and lowerdeck) with steel bents. The Virtis model will analyze each span as a simple spans.

Issue: When I try to analyze the east girder in Span 41 of my Girder-Floorbeam-Stringer model, I receive the following error:

Error generating LFD/ASD load commands!

Error generating load group commands!

Unable to compute average dead load of stringer unit!

Error in the loads utility!

The west girder of Span 41 does not error but produces rating values of zero. The stringers and floorbeams in this span do not error when analyzed and produce reasonable rating values. I was looking at a similar bridge and I noticed that my stringer units seem to be labeled on top of one another in my framing plan. This might be an indicator of the error. I have attached the .xml file of my model.

Any insight you can provide on this matter is greatly appreciated. Thank you for your time and effort.

FROM: Herman Lee DATE: 12/18/2009 12:01:45 PM Eastern Standard Time

When I try to rate the "East Plate Girder" and "West Plate Girder" in the "Span 41" Superstructure Definition, Virtis complains the effective slab width (Std) is missing. Please attach the bridge XML file for reproducing the above error message.

FROM: Joanne Walsh DATE: 12/18/2009 2:01:29 PM Eastern Standard Time

I have attached the .xml file. This should be the version that reproduces the error. If the effective slab error pops up again, just delete the line in the deck profile. Thanks again for the help.

FROM: Joanne Walsh DATE: 1/6/2010 12:06:51 PM Eastern Standard Time

Any update? Thank you.

FROM: Xinmei Li DATE: 1/12/2010 9:44:42 AM Eastern Standard Time

The zero rating factors in west girder of span 41 was due to lack of stiffener definitions. There is no stiffeners defined for west plate girder. After adding valid transverse and longitudinal stiffeners, the analysis produces rating factors.

BRASS output file gives warning messages as follows:

\*\*\* WARNING \*\*\*

TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK # 1 DOES NOT SATISFY CURRENT

AASHTO CRITERIA. ENGINEER SHOULD REVIEW.

4/19/2016 3:07:24 PM

HRS AASHTO

1528

Complete Issue Information

\*\*\*WARNING STIFFENER SPACNG IS NOT ADEQUATE. REVIEW PRECEDING OUTPUT FOR LOCATION AND MORE DETAIL.

\*\*\* SHEAR RATING IS BASED ON THE EXISTENCE OF TRANSVERSE STIFFENERS AND LONGITUDINAL STIFFENERS WITH THE MINIMUM PROPERTIES (I&A) SHOWN. IF THE ACTUAL STIFFENERS WILL NOT MEET THIS CRITERIA, RATING FOR VERTICAL SHEAR WILL BE IN ERROR. ENGINEER SHOULD REVIEW. AASHTO EQN 10-32a MAY PRODUCE A NEGATIVE VALUE FOR MINIMUM AREA.

FROM: Joanne Walsh DATE: 1/12/2010 10:37:48 AM Eastern Standard Time  
What about for the east girder? The following error is what I receive for the east girder:

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Unable to compute average dead load of stringer unit!  
Error in the loads utility!

I will add stiffeners to both girders and run the analysis again. Thank you again for the help.

FROM: Joanne Walsh DATE: 1/12/2010 3:13:55 PM Eastern Standard Time  
Issue: When I try to analyze the east girder in Span 41 of my Girder-Floorbeam-Stringer model, I receive the following error:

Error generating LFD/ASD load commands!  
Error generating load group commands!  
Unable to compute average dead load of stringer unit!  
Error in the loads utility!

The west girder of Span 41 does not error. I added stiffeners to both girders and I still get the same error on the east girder. I have attached an updated .xml file of my model.

Any insight you can provide on this matter is greatly appreciated. Thank you for your time and effort.

FROM: Xinmei Li DATE: 1/13/2010 10:34:03 AM Eastern Standard Time

For the error message you got while analyzing East girder was due to stringer definitions. If you validate "Span 41" you will get errors as follows,

Unit1 Stringer3 (Floor System Stringer Member)  
Existing member alternative: Stringer 3 Alt  
Current member alternative: Stringer 3 Alt  
Stringer 3 Alt (Stringer Member Alternative)  
ERROR: The stringer definition length of 26.6667 ft assigned

to this stringer

member alternative does not match the stringer member

length of 26.7580 ft.

4/19/2016 3:07:24 PM

HRS AASHTO

1529

### Complete Issue Information

Similar errors in other stringers and floorbeams, you will need to revise the span length in stringer definition and floorbeam definition windows to eliminate validation errors. Please refer to Tutorial "FS5-Skewed End Panel Floor System Example" as example to revise your bridge.

|                                        |
|----------------------------------------|
| Issue ID: 9599                         |
| Subject: Counterflexure location error |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Doerr, Gary             | 12/18/2009 3:24:37 PM |
| Modified By: hlee                     | 1/23/2010 10:26:45 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gary Doerr DATE: 12/18/2009 10:35:59 AM Eastern Standard Time  
when trying to load rate the attached bridge, we get the error also attached, which indicates that the first contraflexure location must be less than the second.

It happened on another bridge but I got it to rate by using the virtis engine.

Gary

FROM: Herman Lee DATE: 12/18/2009 11:22:04 AM Eastern Standard Time  
Please enter the second contraflexure location in Span 4 (see attached BRASS Engine Properties.png) and try to rate the bridge again.

FROM: Gary Doerr DATE: 12/30/2009 3:52:26 PM Eastern Standard Time  
Herman,

4/19/2016 3:07:24 PM

HRS AASHTO

1530

Complete Issue Information

where is that screen? it looks like a Brass input screen and I've never seen it before. The only thing similar is the screen to automatically input the deck information but not exactly and when we do that all of the contraflexure locations are filled in.

It still won't rate.

gary

FROM: Gary Doerr DATE: 12/30/2009 3:58:30 PM Eastern Standard Time  
I added the file to show where we are at this time. gary

FROM: Herman Lee DATE: 1/1/2010 10:00:53 PM Eastern Standard Time  
Gary, please see attached "BRASS Engine Properties 2.png" file for the location of the BRASS LFD Engine Properties window. The bridge has a composite deck, the exported section properties are based on the locations of the contraflexure locations. Make sure the entered locations match those reported in the BRASS Output file.

FROM: Gary Doerr DATE: 1/4/2010 10:50:56 AM Eastern Standard Time  
That was it. thanks Herman.  
Gary

Issue ID: 9600  
Subject: Different HS20 rating results when it is run with the H20 vehicle.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Schiller, Brent 12/18/2009 6:16:50 PM  
Modified By: hlee 5/9/2010 4:50:52 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Goodrich, Brian | Assigned | High     | Bug<br>Bug - BRASS |
|                 | Resolved |          |                    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:25 PM

HRS AASHTO

1531

Complete Issue Information

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | HS20 Axle Operating.png             |             |
|      | 9601_channel_beam_T1_very_small.out |             |
|      | copyof3B152.xml                     |             |
|      | 3B152.xml                           |             |
|      | 9601_channel_beam_T1_very_small.dat |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/18/2009 1:17:50 PM Eastern Standard Time  
 Submitted on behalf of Brent H. Schiller [BSchiller@Forsgren.com].

Received Bridgware e-mail:

=====  
 We are experiencing a strange issue that we ran across accidentally. We have a basic concrete deck on steel girder type bridge and are rating it using the BRASS LFD engine. We are running H20 and HS20 trucks for the ratings. When we run the HS20 by itself on girder G2 on the superstructure labeled "continuous 3-span CSC girder bridge", it gives a different operating rating for the axle load than if we run the H20 + the HS20 in the same run. The controlling location also seems to change. This doesn't make sense to us since we should get duplicate results for the HS20 regardless of whether we run if by itself or with another vehicle. Is this a known program bug? I've attached the xml file of the virtis model. Thank you!  
 =====

I'm able to reproduce the issue. See attached "HS20 Axle Operating.png" file.

FROM: Brian Goodrich DATE: 12/21/2009 12:17:56 PM Mountain Standard Time  
 This issue no longer occurs when using BRASS LFD 6.0.2. This version has not been released with Virtis yet.

FROM: Herman Lee DATE: 5/9/2010 12:47:18 PM Eastern Daylight Time  
 Tested the XML file in this incident.  
 Verified in 6.2 Beta 1.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 9601                                                 |
| Subject: Channel beam modeled as box beam in Virtis Std Engine |

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Lee, Herman                    |
| Submitted By: Lee, Herman 12/18/2009 7:19:15 PM |
| Modified By: hlee 5/9/2010 4:51:59 PM           |
| Priority: High                                  |
| Category: Bug                                   |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Lathia, Hasmukh | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | Virtis Output and Hand Calcs.pdf   |             |
|      | Voided_Slab_Beam.log               |             |
|      | Voided_Slab_Beam A.OUT             |             |
|      | Voided_Slab_Beam 0.OUT             |             |
|      | Non-Transformed Section Losses.pdf |             |
|      | NCHRP 496.pdf                      |             |
|      | Voided_Slab_Beam.dat               |             |
|      | VirtisFile.xml                     |             |
|      | Transformed Section Losses.pdf     |             |

Tasks

4/19/2016 3:07:25 PM

HRS AASHTO

1533



Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/18/2009 2:19:22 PM Eastern Standard Time  
Submitted on behalf of Adil Bukhari [Adil.Bukhari@stantec.com].

Received Bridgware e-mail:

=====  
I did create the channel beam that I described before and it worked fine with the BRASS Engine, when analyzing the beam. But when I use the Virtis Engine (NJDOT wants us to use Virtis Engine) the program freezes and closes after an error message. Is this a typical problem with program and what I should do to solve this issue?  
=====

Virtis Std Engine export should check for 0" inputs in the box beam.

FROM: Herman Lee DATE: 12/21/2009 3:13:24 PM Eastern Standard Time  
Received Bridgware e-mail:

=====  
I have modeled the channel beam as a double tee beam for the Virtis Std Engine as you suggested and it gives me the same problem as the model before. It freezes and then shuts down the program. Please see attached for the XML File.  
=====

FROM: Herman Lee DATE: 3/15/2010 10:17:38 AM Eastern Daylight Time  
Box beam without bottom slab (thickness equals to 0) is not supported by the Virtis Std Engine. I added checks in Virtis Std Engine export for top and bottom slab thicknesses. Fixed for 6.2 Release.

FROM: Hasmukh Lathia DATE: 3/15/2010 7:20:10 PM Eastern Daylight Time  
Modeling a channel section as a tee beam with W1 equal to W3 and specifying T1 = 0.001 would overcome the overflow error in Virtis Std Engine. The user need to verify if the section properties reported and used by Virtis Std Engine and the rating results are acceptable. May be the export program be modified to handle channel beam modeled as an I beam. The output file with above modifications is attached for user's review.

FROM: Herman Lee DATE: 3/16/2010 10:44:41 AM Eastern Daylight Time  
Updated Virtis Std Engine export to handle tee beam as I beam with bottom flange thickness equals to 0.01 in.  
Resolved for 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 12:51:51 PM Eastern Daylight Time  
Verified in 6.2 Alpha Build.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 9602<br>Subject: Transform Properties issue with Adjacent Non-Composite P/S Box Beam |
|------------------------------------------------------------------------------------------------|

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis             |
| Primary Contact: Lathia, Hasmukh                  |
| Submitted By: Koenig, David 12/22/2009 4:43:35 PM |
| Modified By: akemna 5/26/2010 6:12:50 PM          |
| Priority: High                                    |
| Category: Bug                                     |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          | Bug            |
|                 | Closed   |          | Bug - BRASS    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | AdjBoxMoDOT.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Koenig DATE: 12/22/2009 11:45:13 AM Eastern Standard Time  
 The following incident came from a consultant. We cannot verify due to time constraints and difficulties we have with running the Virtis Engine with Windows 2000.

Adjacent P/S Box Beam bridge with no slab:  
 Virtis LFD uses transformed properties for stage 1 loads, but uses gross section properties for stage 2 DL and Live Loads when calculating stresses. This does not seem correct.

## Complete Issue Information

In addition to the above incident, the consultant mentioned that Virtis includes elastic shortening losses while using transformed properties to calculate stresses. From what I understand, this loss is inherently included when you transform properties and thus should not be added. Similarly, elastic gains should not be included when you transform properties.

If you would like more information on the above topics, or need some clarification, I recommend contacting one of our rating engineers, Aaron Kemna, at (573-522-8075).

FROM: Herman Lee DATE: 12/23/2009 1:41:43 PM Eastern Standard Time  
Please export the bridge to a XML file and attach to this incident for our investigation.

FROM: David Koenig DATE: 12/23/2009 2:34:15 PM Eastern Standard Time  
We will try to get the file from the consultant as soon as possible. Until then, the XML file attached to Incident 9603 should replicate the issue.

FROM: Herman Lee DATE: 12/23/2009 4:40:55 PM Eastern Standard Time  
We will use the bridge attached to Incident 9603 for our investigation.

FROM: Hasmukh Lathia DATE: 12/28/2009 3:06:10 PM Eastern Standard Time  
Virtis Std Engine is incorrectly calculating transformed composite section properties (used for calculating DL2 and LL stresses) when the section is specified as non-composite. It is setting these properties equal to equal to basic beam gross section properties. This error has been traced to the Beam Section Properties Program that came with BAR7 from PennDOT. A fix has been found. PennDOT has been notified. The current work around is to run a non-composite PS beam as a composite section with a negligible slab thickness. Virtis Std Engine needs to be fixed for this error.

I am not clear about the issue with including elastic shortening losses using the transformed sections properties Can you provide a reference (AASHTO article or else) where it states this loss should not be included when using transformed section properties?

FROM: David Koenig DATE: 12/29/2009 9:37:18 AM Eastern Standard Time  
This was sent to us by the consultant.

As requested, please find attached some backup calculation and references for Incident 9602. Attached is the Virtis file which was analyzed, a pdf of the output from this Virtis file and hand calculations verifying the computed stresses, a pdf from NCHRP Report 496 regarding Elastic Shortening Losses, and two pdf's of the prestressed losses computed in Conspan (One using transformed section properties, and one using gross section properties). You will note that the losses from the Conspan file using gross section properties computes losses within 0.16% of that calculated by Virtis.

Comments by Aaron Kemna as it relates to transformed properties & prestress losses, AASHTO C5.9.5.2.3a is clear on the issue for LRFD. The same concept should apply for LFD, but this code is no longer updated. Dr. Maher K. Tadros, professor at the University of Nebraska would be the best contact if clarification is needed.

FROM: Hasmukh Lathia DATE: 1/4/2010 12:37:06 PM Eastern Standard Time  
Setting and using the transformed section properties for the calculations of DL2 and LL stresses will be considered as a bug fix for the Virtis Std Engine. We are awaiting a concurrence from PennDOT on this fix.

4/19/2016 3:07:25 PM

HRS AASHTO

1536

Complete Issue Information

Revising the Virtis Std engine for Elastic Shortening Losses per AASHTO LRFD C5.9.5.2.3a will be considered as an enhancement and it may need a Tast Force approval.

FROM: Herman Lee DATE: 3/30/2010 12:54:14 PM Eastern Daylight Time  
Resolved by Hasmukh Lathia on 3/30.

FROM: Herman Lee DATE: 5/9/2010 12:51:41 PM Eastern Daylight Time  
Verified in 6.2 Alpha Build.

FROM: Aaron Kemna DATE: 5/26/2010 2:08:48 PM Eastern Daylight Time  
Verified Bug fix in Beta 6.1

Recommend creating an enhancement request for the Elastic Shortening Losses as it relates to transformed properties. I could try to create one, but the information needed is already in this incident.

FROM: Aaron Kemna DATE: 5/26/2010 2:12:50 PM Eastern Daylight Time  
Sorry, Verified Bug fix in 6.2 Beta Build 1

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 9603                                                           |
| Subject: DL2 Distribution Error for Adjacent Non-Composite P/S Box Beams |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Koenig, David           | 12/22/2009 4:49:22 PM  |
| Modified By: hlee                     | 10/15/2011 10:22:40 PM |
| Priority: High                        |                        |
| Category: Bug - BRASS                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: David Koenig DATE: 12/22/2009 11:58:16 AM Eastern Standard Time  
Incident 8504 discusses how the DL2 loads are being distributed according to the DL1 distribution defined in Virtis for non-composite P/S girders. It is our understanding that the incident will be fixed in 6.2. I was looking at an Adjacent P/S Slab Beam bridge that does not have a deck. Virtis 6.1 (BRASS Engine) is calculating and reporting three non-composite loads; superimposed dead load, DL2 - Railing, DL2 - FWS. The superimposed dead load is the combination of the Railing + FWS weight distributed according to the Stage 1 setting. The DL2 - Railing & DL2 - FWS loads are distributed according to the Stage 2 setting. BRASS is applying all of these loads on the structure, thus doubling the DL2 loads, essentially. This may apply to more structures or engines than mentioned here.

FROM: Herman Lee DATE: 12/22/2009 2:55:08 PM Eastern Standard Time  
Incident 8504 has been fixed in 6.1 Release.

FROM: Brian Goodrich DATE: 12/23/2009 9:01:51 AM Mountain Standard Time  
Requested bridge file.

FROM: David Koenig DATE: 12/23/2009 11:27:21 AM Eastern Standard Time  
It just occurred to me that this file was exported from Version 6.0 and imported into 6.1. Maybe this is a migration issue.

FROM: David Koenig DATE: 12/23/2009 1:53:35 PM Eastern Standard Time  
In talking with Tim Armbrrecht a couple of days ago, he indicated the Incident 8504 was not in Version 6.1, but would be in Version 6.2

FROM: David Koenig DATE: 12/23/2009 2:20:07 PM Eastern Standard Time  
Clarification. The bridge file attached was exported from 6.0. The problems occur after importing to 6.1. We are still in the process of upgrading our production database to 6.1. That's why we had to do this exporting importing workaround.

FROM: Brian Goodrich DATE: 12/23/2009 1:12:44 PM Mountain Standard Time  
I was able to duplicate the results reported by David. The export is accounting for some of the dead loads twice. I will investigate the source code.

FROM: Brian Goodrich DATE: 1/8/2010 8:55:01 AM Mountain Standard Time  
I corrected the BRASS export to only generate the member load commands when a non-composite P/S member has deck loads distributed uniformly in stage 2. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/5/2010 4:41:53 PM Eastern Daylight Time  
Verified in 6.2 Alpha 4.

FROM: David Koenig DATE: 5/11/2010 3:56:29 PM Eastern Daylight Time  
Verified in 6.2 Beta

Issue ID: 9604

Subject: GFS - Virtis (BRASS) results significantly different from LARS using same Virtis model

Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Armbrecht, Tim 12/22/2009 5:08:53 PM |
| Modified By: hlee 12/6/2010 3:15:04 PM             |
| Priority: High                                     |
| Category: Support                                  |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Duplicate |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 12/22/2009 12:12:25 PM Eastern Standard Time  
 For this GFS, Virtis is rating the girder HS 11.4 inventory and HS 19.1 Operating, which is much lower than the results from LARS (which grabbed its info from Virtis using the Connector program) Also attached a copy of the LARS Results Summary.

FROM: Brian Goodrich DATE: 12/23/2009 9:04:58 AM Mountain Standard Time  
 I tried all the girders in the bridge, but none of them result in an HS 11.4 inventory rating. Please note exactly which girder is giving the difference.

Sometimes the differences can be attributed to the engine properties, particularly for steel. BRASS LFD requires the user to specify the contraflexure locations and the pier compactness in these engine properties.

FROM: Brian Goodrich DATE: 12/23/2009 1:52:12 PM Mountain Standard Time  
 Requested more information to narrow down the differences.

FROM: Herman Lee DATE: 1/5/2010 10:09:06 AM Eastern Standard Time

4/19/2016 3:07:26 PM

HRS AASHTO

1539

Complete Issue Information

Information Needed E-mail sent on 1/5/09.

FROM: Tim Ambrecht DATE: 1/6/2010 12:15:32 PM Eastern Standard Time  
I'm a little short on manpower right now. I'll try to verify why we came up with a HS 11.4 and Brian did not.

FROM: Brian Goodrich DATE: 1/20/2010 10:37:55 AM Mountain Standard Time  
I'm able to duplicate the rating now. We do need information on how LARS arrived at the higher rating factor. BRASS LFD requires the user to specify the contraflexure locations and the pier compactness in these engine properties. I'm not sure if this is part of the issue or not. Also, Baker provided a flowchart for comparing results. The BRASS intermediate results for the critical POI should be turned on to compare to the LARS results at the same point. This should help isolate the issue.

FROM: Tim Ambrecht DATE: 2/22/2010 4:50:23 PM Eastern Standard Time  
I have attached some LARS reports for your use. The detailed member report (FlexuralMemberReport) should give you the info you need to compare results. If you need any additional information, please let me know. Thanks.

FROM: Brian Goodrich DATE: 4/17/2010 7:04:24 PM Mountain Daylight Time  
Ran BRASS-LFD for Member Alt: 0020003\Spans\_1-3\_(GFS)\1\_-\_E\_Girder\120\_\_WPG\BRASS\_LFD.

From the BRASS output file:

LOAD NO. 1: Truck: AASHTO H 20-S 16 Loading, 1944 Ed  
TOTAL VEHICLE WT. : 36.00 (tons)  
CONTROLLING POINT : 103.00  
Limit State : STEEL GIRDER (FLEXURAL - STEEL STRENGTH )  
RATING FACTOR (pos): 0.48  
LOAD RATING : 17.39 (tons)

Strength Rating Factor - Flexure (Positive Action) - BOTTOM OF SECTION  
Dead Load Moment = 2075.93 (ft-kips)  
Live Load Moment = 2366.67 (ft-kips)  
Nominal Capacity = 5180.75 (ft-kips)

$$\text{R.F.} = \frac{[(\Phi(\text{flexure}) * Mn) - (\text{Gamma} * \text{Beta}(\text{DL}) * \text{DLM})]}{(\text{Gamma} * \text{Beta}(\text{LL}) * \text{LLM})}$$

\*\*R.F. = 0.4831

The dead and live load moments show above are unfactored.

There is a difference in the capacity from how I'm reading the LARS reports. At the 1.3, LARS is showing 5789.5 ft-kips. Please confirm and expand on how this value was determined.

FROM: Herman Lee DATE: 5/6/2010 4:46:16 PM Eastern Daylight Time  
Information Needed E-mail sent on 5/6/10.

FROM: Tim Ambrecht DATE: 5/6/2010 5:13:53 PM Eastern Daylight Time

4/19/2016 3:07:26 PM

HRS AASHTO

1540

## Complete Issue Information

I forwarded this to Bentley to look at. When I get a response, I'll post it here.

FROM: Tim Ambrecht DATE: 7/12/2010 3:44:31 PM Eastern Daylight Time  
From Bentley:

Hi Tim,

Regarding the rating difference between BRASS and LARS for bridge 0020003, member "Spans1\_3\_(GFS)\1\_-\_E\_Girder\120\_WPG" (Girder G2 in LARS) we have found the following:

The LARS Connector is not extracting all of the superimposed dead load for Virtis GFS superstructures correctly which is affecting the member in question. Work is underway to remedy this problem.

To properly model this member in LARS for comparison with BRASS, we applied the dead load to the girder extracted from Virtis exactly as specified in the BRASS output that you sent us. Using the LARS rating of this model to compare to the BRASS results we found the following:

Dead load and live load moments at the checkpoint in question (i.e. cp 1.3) were within a reasonable tolerance.

LARS makes two assumptions when processing longitudinal stiffeners:

- 1) the stiffener is in effect the entire length of the member
- 2) the location of the stiffener (i.e. the  $d_s$  term used in section 10.48.4.1) is automatically computed by LARS as  $D/5$ .

When we extract members from Virtis longitudinal stiffeners are detected and their presence is made known to LARS, but the above actual  $d_s$  valued is needed to correctly compute the moment capacity. The value of  $d_s$  is not passed through DataConnector.

When computing  $\mu_u$  according to eq. 10-103a ( $\mu_u = \mu_r * R_b$ ), a discrepancy was discovered in the calculation of  $R_b$ . LARS computes a value  $R_b$  equal to 1.0 while Virtis computed a value of  $R_b = .737$ . If you multiply the LARS  $\mu_u$  by 0.737, the resulting lower rating is consistent with the BRASS rating. The reason for this discrepancy is the difference in the  $d_s$  value. LARS uses a value  $120/5=24$  and passes the criteria of  $D/t_w \leq 5460 (k/f_b)$ , resulting in  $R_b=1.0$ . Virtis uses a value 120 and fails the criteria resulting in  $R_b=.737$ . This is the difference between the LARS moment capacity of 7527 and BRASS moment capacity of 5549. If you multiple the LARS moment capacity of 7527 \* .737, the result is 5547 – close to the BRASS value of 5549. Therefore, when the same value is input, both LARS and BRASS are performing in the same manner.

A possible workaround would be to add the maximum  $d_s$  value in a stiffener ranges when DataConnector gets the stiffener data. Would this solution be acceptable to you?

Please let us know if you have any questions. Ron and I are would be happy to get on a call to discuss this with you further.

Thanks,

Rita

Rita K. Oglesby, PE,FACI  
Bentley Systems, Inc.

4/19/2016 3:07:26 PM

HRS AASHTO

1541



Complete Issue Information

www.bentley.com  
510 Shotgun Road  
Suite 300  
Sunrise, FL 33326  
Phone: 954/BENTLEY (236-8539)  
Fax: 954/343-9360  
email: rita.oglesby@bentley.com

FROM: Tim Armbrecht DATE: 7/12/2010 3:45:37 PM Eastern Daylight Time  
So, related to the above explanation from Rita, how does Virtis/Lars get the ds value she mentions? is it entered by the user, or is it calculated by either/both of the programs?

FROM: Tim Armbrecht DATE: 7/12/2010 3:46:15 PM Eastern Daylight Time  
Sorry, I meant "Virtis/BRASS", not "Virtis/Lars"

FROM: Herman Lee DATE: 7/13/2010 8:21:38 AM Eastern Daylight Time  
ds should be based on the vertical distance entered for the longitudinal stiffener range in the user interface. Brian, please confirm the exported BRASS STIF-LONG-GROUP command. Thanks.

FROM: Brian Goodrich DATE: 9/2/2010 10:23:08 AM Mountain Daylight Time  
If the user inputs a fixed longitudinal stiffener distance, BRASS exports that distance as parameter 4 on the STIF-LONG-GROUP command. If the user inputs a percent of web, BRASS is supposed to export the web depth times that percent, but that wasn't happening correctly until v6.2 beta6 (see VI 10134). BRASS does not automatically calculate this distance if left blank. The GUI input shows the distance input as 24" from the bottom flange. The BRASS resulting BRASS output shows ds = 24". I would like to see the BRASS output showing the ds = 120".

FROM: Herman Lee DATE: 10/4/2010 8:08:49 AM Eastern Daylight Time  
Information Needed E-mail sent on 10/4/10.

FROM: Herman Lee DATE: 12/3/2010 9:47:14 PM Eastern Standard Time  
Information Needed E-mail sent on 12/3/10.

FROM: Herman Lee DATE: 12/6/2010 9:54:13 AM Eastern Standard Time  
E-mail from Tim Armbrecht on 12/6/2010:

=====  
Herman, looks like we can close this out – see attached from Bentley. LARS can analyze either with no longitudinal stiffeners or with longitudinal stiffeners along the entire member; no ranges.

Timothy A. Armbrecht, P.E., S.E.  
Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures  
=====

Issue ID: 9605

### Complete Issue Information

Subject: Analysis Results for Virtis Engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Koenig, David 12/22/2009 5:38:14 PM  
Modified By: akemna 4/26/2011 5:24:47 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 29 0204L.xml        |             |
|      | pic26484.jpg        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 12/22/2009 12:39:01 PM Eastern Standard Time  
We currently use the BRASS engine for various reasons, but an important one to us is that you can get a detailed tabular report for all trucks (with impact, without impact, single lane and multilane). Can we get this same report or something similar for the Virtis Engine. We would prefer not to use the Virtis Engine with its current limitations.

FROM: Herman Lee DATE: 12/22/2009 2:26:07 PM Eastern Standard Time  
Duplicate of Incident 6917.

FROM: Aaron Kemna DATE: 4/26/2011 1:24:47 PM Eastern Daylight Time  
Since the AASHTO engine has addressed this issue, I will mark as accepted.

4/19/2016 3:07:26 PM

HRS AASHTO

1543

Complete Issue Information

Issue ID: 9606  
Subject: Enhance Virtis Std Engine Girder Dead Load input form

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Huang, George 12/22/2009 6:19:59 PM  
Modified By: ghuang 4/20/2011 2:50:21 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/22/2009 1:20:46 PM Eastern Standard Time  
Submitted on behalf of George Huang, Caltrans.

Received Bridgeware e-mail:

=====

4/19/2016 3:07:26 PM

HRS AASHTO

1544

Complete Issue Information

Hi Jim,

I'm not sure what's the logic and necessity to limit the concentrated load to 99.999. I hope this limit to be modified. Thanks.

George

"Bridgeware,"  
<Bridgeware@mbakercorp.com>  
To  
Murugesu Vinayagamoorthy  
12/22/2009 06:16 AM <murugesu\_vinayagamoorthy@dot.ca.gov>  
v>  
cc  
George Huang  
<george\_huang@dot.ca.gov>  
Subject  
RE: Possible Error within Virtis  
LFD

Hi Vinacs,

Virtis Std Engine requires those DC2 concentrated loads to satisfy the XX.XXX input format (see Page 5-6 in the Virtis Std Engine User Manual).  
The Py loads entered for the "Copy of Interior Steel Girder (1966) 11/09" exceed this input format.

Herman Lee

-----Original Message-----

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]

Sent: Monday, December 21, 2009 6:47 PM

To: Bridgeware,

Cc: George Huang

Subject: Possible Error within Virtis LFD

Hi

We have placed additional concentrated loads (Load Case 2) using member load GUI.

When we tried to analyze the bridge using VirtisLFD engine the following error popped up. (BRASS LFD continued to analyze the bridge)

Could you please let us know what causes for the VirtisLFD program to terminate the analysis.

(Embedded image moved to file: pic26484.jpg)

4/19/2016 3:07:26 PM

HRS AASHTO

1545

Complete Issue Information

Here is the bridge is attached for your information.

Structure Name: Copy of Span 2 (model 1) 11/09 Member Name: Copy of Interior Steel Girder (1966) 11/09

(See attached file: 29 0204L.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-8657

=====

FROM: George Colgrove DATE: 5/11/2010 1:10:19 PM Eastern Daylight Time  
See work around tab

FROM: George Huang DATE: 4/20/2011 10:50:21 AM Eastern Daylight Time  
It has been resolved in AASHTO LFD engine.

|                                                 |
|-------------------------------------------------|
| Issue ID: 9608                                  |
| Subject: continuous concrete beam railing error |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Curtis, Beckie          | 12/30/2009 6:05:25 PM |
| Modified By: kkennelly                | 1/4/2010 4:30:49 PM   |
| Priority: High                        |                       |
| Category: Education                   |                       |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Lee, Herman      | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 80180023000S070.xml |             |

4/19/2016 3:07:27 PM

HRS AASHTO

1546

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 12/30/2009 1:31:45 PM Eastern Standard Time  
Attached structure won't run in Virtis STD engine.

#### Gives error:

Cannot compute appurtenance dead load by continuous beam analysis!

FROM: Krishna Kennelly DATE: 1/4/2010 11:19:28 AM Eastern Standard Time

The dead load distribution by continuous beam analysis is not available for the Virtis STD engine as descibed in the Engine Related help for the Virtis Std Engine.

The system error message is misleading, there was no error computing the load. That method of computing the load just isn't available for this engine.

For 6.2 warning message will be issued that this method of computing the load isn't available instead of issuing the system error message.

Issue ID: 9609

Subject: Incorrect steel shear capacity calculation in Virtis std Engine

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: vinayagamoorthy, vinacs 1/5/2010 2:58:35 PM

Modified By: hlee 5/17/2010 7:45:03 PM

Priority: High

Category: Bug

### History

4/19/2016 3:07:27 PM

HRS AASHTO

1547

Complete Issue Information

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Lee, Herman     | New       | High     | Bug            |
| Lee, Herman     | New       | High     | Bug            |
| Goodrich, Brian | Assigned  |          | Bug - Export 1 |
|                 | Duplicate |          | Bug            |
|                 |           |          | Bug - BRASS    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | PS Voided<br>Beam_6_1_WITH_WS_TYP_S<br>ECT.txt |             |
|      | PS Voided Beam WS.xml                          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Xinmei Li DATE: 1/5/2010 9:59:07 AM Eastern Standard Time  
This is submitted by Vinacs M Vinayagamoorthy from CA DOT.

I did some hand calculations as below, result matches BRASS output.

$$F_y = 50 \text{ ksi} = 50000 \text{ psi}$$

$$t_w = 0.375''$$

$$D = 106''$$

$$d_0 = 18''$$

$$d_0/D = 48/106 = 0.453 < 3$$

$$V_p = 0.58 (106)(0.375)(50) = 1152.75 \text{ kips} \quad (10-115)$$

$$k = 5 + (5/(0.453^2)) = 29.38$$

$$D/t_w = 106/0.375 = 282.67$$

$$7500 \cdot \sqrt{k}/\sqrt{F_y} = 7500 \cdot \sqrt{29.38}/\sqrt{50000} = 181.80$$

Since  $D/t_w > 7500 \cdot \sqrt{k}/\sqrt{F_y}$ ,

4/19/2016 3:07:27 PM

HRS AASHTO

1548

Complete Issue Information

$$C = 4.5 \times 10^7 \text{ k} / ((D/tw)^2 \cdot Fy) = 4.5 \times 10^7 \cdot 29.38 / ((282.67^2) \cdot 50000) = 0.331 \quad (10-117)$$

Since  $d0/D < 3$ , use (10-114) to calculate shear capacity

$$Vu = Vp \cdot (C + (0.87 \cdot (1 - C)) / (\sqrt{1 + (d0/D)^2})) = 1152.75 \cdot (0.331 + (0.87 \cdot (1 - 0.331)) / (\sqrt{1 + 0.453^2})) = 992.5 \text{ kips} \quad (10-114)$$

In Virtis LFD output shear capacity was calculated with Equation 10-113 or 10-119,  $Vu = C \cdot Vp = 0.331 \cdot 1152.75 = 381.56 \text{ kips}$ .

Standard spec 10.48.8.1 says for beams and girders with unstiffened webs, the shear capacity should be calculated with Eq. 113. This member has both transverse and longitudinal stiffeners.

Standard spec 10.48.8.3 says the first stiffener space at the simple support end of a transversely or longitudinally stiffened girder, use Eq. 119. The analyzed location is not at the first stiffener space.

Since  $(d0/D)$  is less than 3, I think 10-114 should be used to calculate shear capacity at this location.

-----Original Message-----

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
Sent: Monday, December 28, 2009 4:11 PM  
To: Bridgewater,  
Cc: George Huang; Anthony Gugino  
Subject: Shear Capacity Estimate by Virtis-LFD and BRASS-LFD software

Hi

I noticed the shear capacity estimate by the Virtis-LFD and BRASS-LFD drastically different for the attached bridge at 28.5ft away from support.

Consider the 'Left Interior Girder Model' for the comparison.

Check the location at 28.5ft away from support. You may have to create the analysis point to get the BRASS-LFD results.

Here is the summary of the results from BRASS-LFD, Virtis-LFD and Hand Calc (At the location of 28.5 ft)

(Embedded image moved to file: pic02929.jpg)

If you notice the results, Capacity estimated by the Virtis-LFD is 381.5 compare to 992.75 kips estimated by the BRASS and HandCalc.

It appears that the Virtis-LFD did not use the Equation 10-114, instead it used the 10-113 and or 10-119.

Could you please review and let us know which analysis engine is wrong.

(See attached file: 39\_0164L.xml)

4/19/2016 3:07:27 PM

HRS AASHTO

1549



Complete Issue Information

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-8657

FROM: Herman Lee DATE: 1/5/2010 12:29:17 PM Eastern Standard Time  
Virtis Std Engine uses Eq 10-113 if the girder has an unstiffened web or has a stiffened web and the  $d_0/D$  ratio is greater than 3, or if it is an end panel or if the girder is hybrid. It uses Eq 10-114 if the girder has a stiffened web and the  $d_0/D$  ratio is less than or equal to 3.

Please let us know if you want to change this to an enhancement request.

FROM: vinacs vinayagamoorthy DATE: 4/27/2010 3:47:56 PM Eastern Daylight Time  
Virtis LFD did not use Eq10-114 though the  $d_0/D \leq 3$  with stiffeneed web (if it did, the capacity should have been around 992 kips. I think it is a bug NOT an enhancement

FROM: Herman Lee DATE: 4/27/2010 5:37:51 PM Eastern Daylight Time  
Vinacs, if I remember right, Virtis LFD uses Eq 10-113 because it's a hybrid girder.

FROM: George Colgrove DATE: 5/11/2010 1:09:41 PM Eastern Daylight Time  
Please look at George Huang's comments

FROM: George Huang DATE: 5/12/2010 5:02:30 PM Eastern Daylight Time  
This is not a hybrid girder. If there is no plan to update the Virtis Std LFD engine, this mistake, which is a bug, should be informed to all users. Although this bug yields LOWER ratings, it may cause some unnecessary very very long detour. This is un-wanted so called conservative.

FROM: Herman Lee DATE: 5/13/2010 11:27:52 AM Eastern Daylight Time  
Please see attached for the top flange input in the Girder Profile window of the bridge attached in this incident. The top flange has both the 42 and 46 ksi materials entered. Let us know if you would like to change this to an enhancement request for the Virtis Std Engine.

FROM: Herman Lee DATE: 5/17/2010 3:42:55 PM Eastern Daylight Time  
Related to Incident 9483.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 9610                                                            |
| Subject: PS Voided Beam with Wearing Surface - extra uniform load created |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Barnhill, Gale          | 1/5/2010 3:16:25 PM   |
| Modified By: hlee                     | 10/15/2011 9:46:07 PM |

4/19/2016 3:07:27 PM

HRS AASHTO

1550

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Assigned  |          |          |
|                 | Resolved  |          |          |
|                 | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 1/5/2010 10:25:06 AM Eastern Standard Time

This is a follow-up to Incident 9591.

In my report for 9591, I had the results reversed, 6.0 did not create a WS load evenly distributed to all members, 6.1 does.

However, I now see an additional load created in both 6.0 and 6.1 that appears to be the WS applied as a tributary load.

If I remove the WS input from the Typical Section, then both loads go away.

I've attached the 6.1 model and a portion of the BRASS output with notes.

FROM: Herman Lee DATE: 1/5/2010 12:38:39 PM Eastern Standard Time

I think this is a duplicate of Incident 9603.

FROM: Brian Goodrich DATE: 1/8/2010 9:14:03 AM Mountain Standard Time

This is a duplicate of 9603.

## Complete Issue Information

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 9611                                                                   |
| Subject: Virtis STD gives incorrect value for axle loads greater than 99.99 kips |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Curtis, Beckie          | 1/5/2010 7:45:19 PM   |
| Modified By: hlee                     | 1/23/2010 10:25:29 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 1/5/2010 2:47:58 PM Eastern Standard Time

We were looking at some construction loads (don't worry, we aren't actually approving axle loads quite that big yet) and the Virtis STD engine is giving really inaccurate values when the axle loads are greater than 99.99 kips. We were looking at a steel beam superstructure. Brass engine worked fine.

FROM: Herman Lee DATE: 1/5/2010 4:10:40 PM Eastern Standard Time

Virtis Std Engine doesn't support axle load greater than 99.99 kips since the input format for Axle Load is XX.XX. The fix for Incident 8965 (Virtis Std Engine needs to check valid input format.) will stop the rating process in 6.2 Release.

Please let us know if you want to change this to an enhancement request.

FROM: Beckie Curtis DATE: 1/5/2010 5:15:31 PM Eastern Standard Time

Just giving an error rather than an incorrect result is enough. Thanks.

4/19/2016 3:07:28 PM

HRS AASHTO

1552

## Complete Issue Information

Issue ID: 9613  
Subject: Error in second span web

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Doerr, Gary 1/6/2010 5:32:07 PM  
Modified By: hlee 1/23/2010 10:24:33 PM  
Priority: High  
Category: Support

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:07:28 PM

HRS AASHTO

1553

Complete Issue Information

0013390119.xml

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gary Doerr DATE: 1/6/2010 12:36:11 PM Eastern Standard Time  
 When trying to load rate the attached bridge we get an error that indicates that there is a problem with the second span web depth.

Gary

FROM: Herman Lee DATE: 1/6/2010 3:32:17 PM Eastern Standard Time  
 I got the following error message when I tried to rate the exterior girder.

----- Contents of BRASS Error File -----  
 File: C:\Program Files\AASHTOWARE\VirtisOpis61\013390119\Existing\_Structure\G1  
 \Exterior\_Girder\BRASS\_LFD\Exterior\_Girder.ERR  
 Fatal Error Encountered - Unexpected Termination  
 Data File: Exterior\_Girder\BRASS\_LFD\Exterior\_Girder.DAT

-----  
 Error No.: 1200  
 Type : Input Error  
 Location : web\_gen.for

A web depth on span 2 could not be determined due to an invalid range. (iseg\_store = 0)

----- End of Contents of BRASS Error File -----

FROM: Brian Goodrich DATE: 1/8/2010 1:40:39 PM Mountain Standard Time  
 I believe there is an input problem on the Deck Concrete tab in the Deck Profile window. The second entry has a length of 14.496' and the third entry has a start distance of 129.996' with a length of 109.004'. Changing these to 14.5', 130.0', and 109.0', respectively, allows the structure to be run.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 9614                                             |
| Subject: LRFR - LL DF calcs - not getting to GUI correctly |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Thompson, Todd          | 1/8/2010 4:20:54 PM  |
| Modified By: tthompson                | 5/11/2010 5:39:04 PM |
| Priority: High                        |                      |

### Complete Issue Information

Category: Bug

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Bug         |
|                 | Assigned           |          |             |
|                 | Resolved           |          |             |
| Lathia, Hasmukh | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
|                 | Suspended          |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                         | Description |
|------|---------------------------------------------|-------------|
|      | 00126 - 25125132000S340.xml                 |             |
|      | New_Interior_Beam_<br>(Beam_G_JN_90115).dat |             |
|      | New_Interior_Beam_<br>(Beam_G_JN_90115).OUT |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/8/2010 11:30:32 AM Eastern Standard Time

I was working with a 3 span cont RC Slab bridge.

I used the compute from typical section (used 42.6667 ft and 2 lanes along with 12 in wide slab) and did ok.

It pasted into Virtis the LL DF's for LRFR. But when I reviewed the calcs - vs what was in Virtis - I noticed that for Span 3 - it placed the Span 2 value for Moment and for Shear.

When I review the calc's and and summary - they are correct for Span 3. Just the data isn't getting to Virtis from the LRFR LL DF Calculation correctly.

I've attahed screen shot after running LRFR LL DF calculation, I've attached the calcs and I've attached an xml of the bridge.

4/19/2016 3:07:28 PM

HRS AASHTO

1555

Complete Issue Information

Virtis 6.1 - SQL Server DB

FROM: Todd Thompson DATE: 3/2/2010 10:27:38 AM Eastern Standard Time  
I've added another bridge in which the last span doesn't get captured from the LLDF calculation and saved into Virtis correctly.

This Bug causes me to have to review every single one and verify that the correct DF's are placed into Virtis and when they don't I have to manually correct the application.

Hopefully this bug will be fixed and in the 6.2 Release.

I added structure 58033060

FROM: Todd Thompson DATE: 3/2/2010 10:44:49 AM Eastern Standard Time  
Added another structure, including all the screenshots.. 58043060

FROM: Krisha Kennelly DATE: 3/3/2010 10:46:57 PM Eastern Standard Time  
Fixed for 6.2 release.

bug only appears to be a problem with rc slab line member alts.

FROM: Krisha Kennelly DATE: 5/7/2010 10:29:31 PM Eastern Daylight Time  
verified in 6.2 beta 1 build. Ran Distribution factor wizard for all 3 attached bridges. last span now shows the correct DF in the UI.

FROM: Todd Thompson DATE: 5/11/2010 1:39:04 PM Eastern Daylight Time  
6.2 Beta 1  
I checked 36480091 and appears to be fixed.  
I'll continue to monitor this to make sure.

|                                   |
|-----------------------------------|
| Issue ID: 9615                    |
| Subject: Prestressed Beam Results |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lathia, Hasmukh      |                       |
| Submitted By: Curtis, Beckie          | 1/8/2010 9:28:57 PM   |
| Modified By: hlee                     | 1/14/2010 12:54:37 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:07:28 PM

HRS AASHTO

1556

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Beckie Curtis DATE: 1/8/2010 4:34:43 PM Eastern Standard Time

In G7 of span 1 or 4 (JN 90115) Virtis gives 1.002 for rating of HS-20 at 60% and Brass gives 1.297. This is a prestressed beam, fairly short span with only four prestressing strands.

FROM: Herman Lee DATE: 1/9/2010 10:00:24 PM Eastern Standard Time

Virtis Std Engine uses flexural strength reduction factor k (AASHTO Manual 6.6.3.3) when  $\Phi * M_n$  is less than 1.2 times cracking moment  $M_{cr}$ . BRASS Engine doesn't use flexural strength reduction factor.

If you would like us to investigate further, please narrow down the difference to the point that the rating diverge so we can provide more specific help.

FROM: Beckie Curtis DATE: 1/11/2010 9:34:33 AM Eastern Standard Time

But we are at or over the  $\Phi * M_n = 1.33 * \mu$ , so k should be near or at 1.0, and the capacity should not be reduced. This is in MBE 6B.6.3.3 and AASHTO LFD 9.18.2.2

FROM: Hasumkh Lathia DATE: 1/12/2010 4:57:50 PM Eastern Standard Time

Virtis Std Engine does not check for provision of AASHTO LFD 9.18.2.2. It was set to conform to AASHTO 1996 LFD Specs. 1996 LFD specs did not have a waiver of Article 9.18.2.1.

Can you provide some backup calculations to your statement "But we are at or over the  $\Phi * M_n = 1.33 * \mu$ , so k should be near or at 1.0, and the capacity should not be reduced."?

FROM: Beckie Curtis DATE: 1/12/2010 5:40:00 PM Eastern Standard Time

Using HS-20 truck at 40%:

$$\mu = 1.3 * (164.61 + 16.5) + 2.17 * (274.37) = 830.82 \text{ k*ft}$$

$\Phi * M_n = 1022.45 \text{ k*ft}$  per detailed rating output

$$k = \Phi * M_n / (1.33 * \mu) = 1022.45 / (1.33 * 830.82) = 0.93, \text{ which I believe is higher than}$$

So the revised nominal moment capacity is 950k\*ft, giving you a rating factor of 1.2 (instead of the 1.32 that you would have had if you chose to ignore k).

Even if this isn't added to Virtis Std Engine, I feel it should be an option (off or on) for the Opis LFR.

FROM: Beckie Curtis DATE: 1/12/2010 5:42:29 PM Eastern Standard Time

Revising:

4/19/2016 3:07:28 PM

HRS AASHTO

1557



Complete Issue Information

So the revised nominal moment capacity is 950k\*ft, giving you a rating factor of 1.2 (instead of the 1.32 that you would have had if you chose to ignore k and more than the 1.014 that Virtis STD is giving).

Even if this isn't added to Virtis Std Engine, I feel it should be an option (off or on) for the Opis LFR. It makes a bigger difference for my legal/overloads at operating level.

FROM: Hasmukh Lathia DATE: 1/13/2010 2:28:52 PM Eastern Standard Time

I agree that there should be a user option to use or not to use the reduction factor k per MEB 6.6.3.3, but I am not sure if you can check the provision of AASHTO LFD 9.18.2.2 by taking a ratio of  $\phi * M_n / (1.33 * \mu)$ . In a rating analysis,  $\mu$  is a function of the live load being rated where the rated load is equal to the rating factor times the rating vehicle. In any case, either adding an option for k or checking AASHTO LFD 9.18.2.2 will be an enhancement to Virtis Std Engine. The provision of LFD 9.18.2.2 is more of a design specification rather than a rating specification.

FROM: Herman Lee DATE: 1/14/2010 7:58:43 AM Eastern Standard Time

Hasmukh checked with PennDOT. PennDOT PS3 does not check for the provision of 9.18.2.2. Category changed to Enhancement.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 9616                                         |
| Subject: LRFR Exterior Girder Load Distribution Factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Metcalf, William        | 1/11/2010 5:09:56 PM |
| Modified By: kkennelly                | 2/6/2010 12:51:38 AM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          | Support  |
|                  | Resolved |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:28 PM

HRS AASHTO

1558

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 1/11/2010 12:21:46 PM Eastern Standard Time

I have a question regarding the LRFD exterior girder live distribution factor calculation from typical section. The attached bridge does NOT have any diaphragm or cross frame. The software still used the special analysis to calculate the distribution factor and which does control the result. I think the DF should be calculation per lever rule only.

Please review the calculation.

Thanks,  
Dana

FROM: Krisha Kennelly DATE: 2/5/2010 6:52:30 PM Eastern Standard Time

There is no bridge attached to this incident but I do see in the code where the check for diaphragms was not made.

Code has been revised to only process the rigid deck distribution in Art. 4.6.2.2.2d if diaphragms exist. Code was tested on BID10. Fixed for Version 6.2

|                     |
|---------------------|
| Issue ID: 9617      |
| Subject: NSG Report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Curtis, Beckie          | 1/12/2010 4:02:00 PM |
| Modified By: sthogaru                 | 6/2/2010 6:59:23 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:07:29 PM

HRS AASHTO

1559

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Gale Builtup member.xml      |             |
|      | Gale Builtup member L1U1.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 1/12/2010 11:04:32 AM Eastern Standard Time

Report doesn't say if the distribution factor shown in the NSG report is lane or wheel. I don't believe the tutorial specifies either. I believe it's lane - but would like verification of that and also believe the report should specify the "units"

FROM: Herman Lee DATE: 1/12/2010 1:19:34 PM Eastern Standard Time

Yes, the distribution factor shown in the NSG report is in Lanes unit. We will add the unit to the table header in the NSG report.

FROM: Srujana Thogaru DATE: 6/2/2010 2:59:07 PM Eastern Daylight Time

Error fixed for 6.2 Beta Build 3

Complete Issue Information

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 9618                                                                       |
| Subject: Truss built-up section with lacing but without top and bottom flange plates |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Barnhill, Gale          | 1/13/2010 6:59:11 PM |
| Modified By: bmccaffrey               | 5/7/2010 3:22:57 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lathia, Hasmukh | Assigned | High     | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | Interior_36__RC_Tee_Beam.<br>dat |             |
|      | Interior_36__RC_Tee_Beam.<br>OUT |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/13/2010 1:59:46 PM Eastern Standard Time  
Submitted on behalf of Gale Barnhill, AECOM.

E-mail received 1/13/10:

=====

Herman,  
Here's the 6.1 model.  
The member is in Truss - North Truss Real Counters.  
The Angle Box definition is first and then the Builtup for the same L1U1 member.

4/19/2016 3:07:29 PM

HRS AASHTO

1561

Complete Issue Information

I've attached the plans for L1U1.  
Thanks,

Gale A. Barnhill, P.E.  
Senior Project Manager

=====  
May, please try this builtup section in 6.0 to see whether you are able to validate the truss. If yes, this is a bug introduced in the 6.1 Release. If no, correct the TopFlangePlate and BottomFlangePlate Notes section in the Truss Command Language Manual.

FROM: Herman Lee DATE: 1/13/2010 2:21:18 PM Eastern Standard Time  
I tried the built-up section (with lacing and without top and bottom flange plates) in 6.0. I'm not able to validate the built-up section in 6.0.  
May, please check the code that this is not supported and correct the TopFlangePlate and BottomFlangePlate Notes section in the Truss Command Language Manual.

FROM: Xinmei Li DATE: 1/14/2010 1:26:19 PM Eastern Standard Time  
By adding TopFlangePlate and BottomFlangePlate lines I was able to validate the truss section. If you look at the command language manual, this builtup section is I section w/o web plate but w/ lacing. In this builtup section, web plate is not defined, top and bottom flange plates are mandatory. I will revise the command language accordingly.

FROM: Xinmei Li DATE: 1/14/2010 2:26:19 PM Eastern Standard Time  
Truss Command Language Manual is updated for 6.2.

Issue ID: 9619  
Subject: Unable to generate Virtis Std Engine influence line output

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lathia, Hasmukh  
Submitted By: Benshoof, Rob 1/16/2010 1:09:30 PM  
Modified By: hlee 3/30/2010 8:13:37 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:29 PM

HRS AASHTO

1562

Complete Issue Information

Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | 35636 - girder floorbeam.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/16/2010 8:10:31 AM Eastern Standard Time  
Reported by Rob Benshoof, TN DOT.

I got the following error message when I tried to generate the influence line output with a Type 3 vehicle.

Input Errors (1095) - For influence line output (IOUT = 9) only one live load may be entered.

FROM: Has Mukh Lathia DATE: 1/16/2010 9:15:05 AM Eastern Standard Time  
This appears to be a bug in Virtis Std Engine. It checks for a combination of the OUTPUT code and the LIVE LOAD code before reading the NO OF SP LL in the Control and Criteria line. Currently there is no workaround for this problem. This needs to be fixed in the next release of Virtis.

FROM: Herman Lee DATE: 3/30/2010 4:11:07 PM Eastern Daylight Time  
Resolved by Has Mukh Lathia on 3/30 for 6.2 Release.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 9621                                            |
| Subject: Virtis Unable To Analyze Girder-FloorBeam Bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Campisi, Paul           | 1/20/2010 4:58:03 PM |

4/19/2016 3:07:30 PM

HRS AASHTO

1563

Complete Issue Information

|                        |                      |
|------------------------|----------------------|
| Modified By: bgoodrich | 5/18/2011 2:34:05 PM |
| Priority: High         |                      |
| Category: Bug - BRASS  |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 1/20/2010 12:05:09 PM Eastern Standard Time

The attached girder floorbeam bridge has four main load carrying longitudinal girders. When I run any of the floorbeams I get the following error message.

----- Contents of BRASS Error File -----

File: C:\Program Files\AASHTOWARE\VirtisOpis60\3348270\Span\_4\Floorbeam5\FB5  
 \BRASS\_LFD\FB5.ERR  
 Fatal Error Encountered - Unexpected Termination  
 Data File: 48270\Span\_4\Floorbeam5\FB5\BRASS\_LFD\FB5.DAT

```

-----
Error No.: 1103
Type   : Input Error
Location : prgen.for
      ****ERROR**** A GIRDER CROSS SECTIONAL AREA LESS THAN 0.01 EXISTS IN SPAN
1 SPAN POINT = 19
  RUN STOPPED.
  REVIEW INPUT OF CROSS SECTION DATA AND SPAN DATA.

```

----- End of Contents of BRASS Error File -----

I do not see where any of the required floorbeam parameters in Virtis are undefined.

Complete Issue Information

Paul Campisi  
NYSDOT  
Office of Structures  
Load Rating

FROM: Brian Goodrich DATE: 1/22/2010 11:33:21 AM Mountain Standard Time  
The 1 ft cantilevers are so small that BRASS cannot create tenth points in the model because the nodes would be too close together. Cantilevers of 1.2 ft seem to work. The workaround is either to enter a slightly longer cantilever or to eliminate the cantilever all together.

The only other option would require a change to BRASS to generate fewer nodes for a short span. I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 1/26/2010 12:03:13 PM Mountain Standard Time  
This is similar to Incident 7639.

FROM: Brian Goodrich DATE: 1/28/2010 10:00:57 AM Mountain Standard Time  
WYDOT assigned this issue to BRASS Problem Log 933.

FROM: Brian Goodrich DATE: 5/18/2011 8:24:52 AM Mountain Daylight Time  
For extremely short spans that cannot physically consist of ten elements due to the short element limitation, fewer elements must be created. The girder engines were revised add fewer elements for this condition. Additionally, the algorithms that generate points of interest at tenth points were modified to only generate points of interest at tenth points that coincide with the generated mesh. For example, if a span had five original elements, then points of interest would be generated at 0%, 20%, 40%, 60%, 80%, and 100%. Fixed for BRASS-GIRDER(STD) 6.0.3 and BRASS-GIRDER(LRFD) 2.0.3. Fixed for Virtis 6.2.

Issue ID: 9622  
Subject: Incorrect live load limitations in the Virtis Std User Manual

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 1/21/2010 5:42:38 PM  
Modified By: hlee 5/9/2010 5:01:22 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:07:30 PM

HRS AASHTO

1565



Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/21/2010 12:50:53 PM Eastern Standard Time  
The SP LL NO and NUMBER OF AXLES information in the Virtis Std User Manual are incorrect.

FROM: Herman Lee DATE: 3/17/2010 8:46:06 AM Eastern Daylight Time  
Updated the Virtis Std User Manual.  
Resolved for 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 1:01:09 PM Eastern Daylight Time  
Verified Virtis Std User Manual in 6.2 Beta 1.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 9623<br>Subject: Ignore shear in point of interest |
|--------------------------------------------------------------|

Complete Issue Information

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis          |
| Primary Contact: Kennelly, Krisha              |
| Submitted By: Lee, Herman 1/21/2010 6:24:05 PM |
| Modified By: sthogaru 5/5/2010 8:17:56 PM      |
| Priority: High                                 |
| Category: Bug                                  |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0640035.xml         |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/21/2010 1:24:46 PM Eastern Standard Time  
 Submitted on behalf of Scott Cavanaugh, HNTB (SCavanaugh@HNTB.COM).

AASHTO Engine should only use the shear information in the point of interest when Override schedule is checked.

FROM: Krisha Kennelly DATE: 1/30/2010 11:19:56 PM Eastern Standard Time  
 I need some more information to investigate this.

What engine are you running: AASHTO LRFD or AASHTO LRFR?

And which information is being used even though you have not checked Override?

Please attach an xml version of your bridge. Thanks.

4/19/2016 3:07:30 PM

HRS AASHTO

1567

Complete Issue Information

FROM: Herman Lee DATE: 1/31/2010 9:55:01 AM Eastern Standard Time

To reproduce:

1. Use Example7 G2 member
2. Change LRFR Shear Computation Method to General Procedure and uncheck both LRFR Ignore Shear options
3. Remove all existing points of interest
4. Rate G2 with the Virtis LRFR Engine
5. Spec Check at mid-span evaluates both 6.4.2.1 Concrete Flexure and Shear
6. Add a point of interest at mid-span without overriding schedule
7. Rate G2 again
8. Spec Check at mid-span only evaluates 6.4.2.1 Concrete Flexure

Looks like the spec check is reading the disabled LRFR ignore shear options in the point of interest.

FROM: Krisha Kennelly DATE: 4/7/2010 1:01:26 PM Eastern Daylight Time

A work around is to:

1. Select the Override Schedule checkbox on the Shear tab on the POI window.
2. Unselect the 2 'Ignore shear' options for LRFR.
2. Select the Override Schedule checkbox again (so that the box is not checked.)
3. Lrfr analysis will now include shear checks at the POI.

FROM: Krisha Kennelly DATE: 4/11/2010 12:54:16 PM Eastern Daylight Time

Fixed for 6.2

FROM: Srujana Thogaru DATE: 5/5/2010 4:12:18 PM Eastern Daylight Time

Verified for 6.2 Beta build 1.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 9627                                            |
| Subject: Error with floorbeams with intermediate supports |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Armbrecht, Tim          | 1/28/2010 3:34:21 PM  |
| Modified By: hlee                     | 10/15/2011 9:48:25 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:30 PM

HRS AASHTO

1568

## Complete Issue Information

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Copy of 32SR0320001.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 1/28/2010 10:40:38 AM Eastern Standard Time

From my consultant:

There is an error that occurs when running the rating for this bridge. I have it narrowed down to something involved with the intermediate support of the floorbeam. All of the stringers appear to run correctly, but the error occurs when BRASS is rating the floorbeam. I haven't pin pointed the issue. When I delete the intermediate supports of the floorbeam, BRASS runs. A low rating is generated.

(xml attached)

The particular floorbeam with section loss is in "Unit I – 3-Sp Cont-x". It is Flbm25, however this error message occurs with all floorbeams with intermediate supports.

FROM: Brian Goodrich DATE: 2/4/2010 9:56:38 AM Mountain Standard Time

I have confirmed this is a bug. It appears to be with the export and engine properties.

This is the error message I get:

```
Error generating LFD/ASD schedule commands!  
The contraflexure locations cannot be equal!  
Invalid BRASS engine properties for the member alternate!  
Error generating STEEL-GIRDER-CONTROL command!
```

Is this the same error you are getting?

FROM: Brian Goodrich DATE: 3/23/2010 8:35:06 AM Mountain Daylight Time

E-mail from Bob Perkins (2/10/2010):

This is the error message I'm receiving:

```
Error generating LFD/ASD schedule commands!  
The first contraflexure location must be less than the second!  
Invalid BRASS engine properties for the member alternate!  
Error generating STEEL-GIRDER-CONTROL command!
```

Bob Perkins

FROM: Brian Goodrich DATE: 3/23/2010 8:38:22 AM Mountain Daylight Time

4/19/2016 3:07:30 PM

HRS AASHTO

1569

### Complete Issue Information

The contraflexure locations in the BRASS engine properties are based on the number of spans. When the intermediate supports are used, the spans of the contraflexure locations don't match up, which leads to the error messages we are seeing.

FROM: Brian Goodrich DATE: 4/18/2010 10:18:05 AM Mountain Daylight Time

One option is to revise the engine properties to include the intermediate supports when determining the number of spans. This still provides the user with control over the contraflexure locations exported to BRASS. We should discuss how this would affect existing structures and what we can do to correct these structures.

|                                          |
|------------------------------------------|
| Issue ID: 9628                           |
| Subject: File error during NSG analysis. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Benshoof, Rob           | 1/28/2010 10:42:15 PM |
| Modified By: hlee                     | 3/18/2010 9:37:13 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 1/28/2010 5:42:57 PM Eastern Standard Time  
Submitted on behalf of Rob Benshoof, TN DOT.

NSG analysis tried to create a file with " character in the name. The " character is coming from the member name.

4/19/2016 3:07:31 PM

HRS AASHTO

1570

Complete Issue Information

Error messages:

=====

Unable to open beam related output files!  
04:11:23 PM - Line 4101 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to open the requested file.  
04:10:02 PM - Line 227 in source file .\DoTextList.cpp.  
File exception!  
Error accessing file [C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Girder "B".XML]!  
All or part of the path is invalid.

Unable to open the requested file.  
04:06:18 PM - Line 227 in source file .\DoTextList.cpp.  
File exception!  
Error accessing file [C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Girder "A".XML]!  
All or part of the path is invalid.

Unable to open the requested file.  
12:58:23 PM - Line 2316 in source file .\AbxVirtisDistFactEngine.cpp.

Can't open file C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Data\Girder "C"\_2D.std, error = 3

12:58:23 PM - Line 2315 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to open the requested file.  
12:58:23 PM - Line 227 in source file .\DoTextList.cpp.  
File exception!  
Error accessing file [C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Data\Girder "B"\_2D.xml]!  
All or part of the path is invalid.

Unable to open the requested file.  
12:58:23 PM - Line 764 in source file .\FeModelEx.cpp.

Can't open file C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Data\Girder "B"\_2D.std, error = 3

12:58:23 PM - Line 763 in source file .\FeModelEx.cpp.

Unable to open the requested file.  
12:58:23 PM - Line 227 in source file .\DoTextList.cpp.  
File exception!  
Error accessing file [C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Data\Girder "A"\_2D.xml]!  
All or part of the path is invalid.

Unable to open the requested file.  
12:58:23 PM - Line 764 in source file .\FeModelEx.cpp.

Can't open file C:\Program Files\AASHTOWARE\VirtisOpis60\Copy\_of\_32SR0320001\BRIDGE\_\_1

Complete Issue Information

\\SUPERSTRUCTURE\_\_1\Virtis\_Dist\_Fact\Data\Girder "A"\_2D.std, error = 3

12:58:23 PM - Line 763 in source file .\FeModelEx.cpp.

=====

FROM: Herman Lee DATE: 3/18/2010 5:06:35 PM Eastern Daylight Time  
 Replaced illegal characters with the "\_" character.  
 Resolved for 6.2 Release.

|                                                      |
|------------------------------------------------------|
| Issue ID: 9629                                       |
| Subject: Prestressed box beam crashes in Virtis LRFR |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Curtis, Beckie          | 1/29/2010 3:26:24 PM |
| Modified By: xli                      | 8/23/2010 2:17:51 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Duray, Jim      | Assigned |          |          |
| Li, Xinmei      | Resolved |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00071 - 77177111000B013.xml |             |

Tasks

4/19/2016 3:07:31 PM

HRS AASHTO

1572

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 1/29/2010 10:27:46 AM Eastern Standard Time

attached bridge runs in Brass LRFR, crashes in Virtis LRFR with error message:

A fatal error encountered while processing article "5.7.3.2 - Flexural Resistance (Prestressed Concrete)"

Fatal error occured while computing Prestress Losses.

Error - Error performing prestress loss LRFR specification checking!

Error - Analysis failed!

FROM: Herman Lee DATE: 1/29/2010 11:12:45 AM Eastern Standard Time

May be related to Incident 9629.

FROM: Herman Lee DATE: 3/15/2010 3:03:13 PM Eastern Daylight Time

Correction: My comment on 1/29 should say "May be related to Incident 9580".

FROM: Herman Lee DATE: 3/15/2010 3:09:30 PM Eastern Daylight Time

There's a defect in computing section properties when the shear key dimensions are not entered for the box beam. A workaround is to enter all three shear key dimensions for the box beam. This will be fixed in 6.2 Release.

FROM: Xinmei Li DATE: 3/25/2010 3:28:54 PM Eastern Daylight Time

Incident summary:

There's a defect in computing section properties when the shear key dimensions are not entered for the box beam.

When calculating coordinates of the rectangular void prestress section, zero shear key was not handled correctly.

Workaround:

enter all three shear key dimensions for the box beam

Resolved for:

6.2 release

FROM: Joseph Ihnat DATE: 4/29/2010 3:12:06 PM Eastern Daylight Time

Verified - 6.2 alpha 4.

FROM: Beckie Curtis DATE: 5/12/2010 4:41:26 PM Eastern Daylight Time

verified Beta 1

Issue ID: 9630

Subject: errors and issues with truss and floor systems

4/19/2016 3:07:31 PM

HRS AASHTO

1573





Complete Issue Information

09:29:55 AM - Line 1288 in source file .\EngineExport.cpp.

Error preparing stringer dead load reactions!

09:29:55 AM - Line 3771 in source file .\LoadsUtility.cpp.

This error message doesn't show up if I just rate the bridge – only when I use the UPR button.

- 2) Glulam is not an option in the timber deck input - only nail laminated and plank. Why wasn't the glulam option added? It can't be that hard. I had to manually calculate and enter all of the distribution factors and the timber factors.
- 3) When I add point loads to the girders in a timber deck, steel girder superstructure, I can't rate the deck because "Madero doesn't support point loads". Point loads applied directly to the girders shouldn't affect the deck, and Madero should be able to run. The point loads shouldn't even be exported to Madero.
- 4) It is very frustrating to not have a timber deck option in truss and floor system superstructures. I have to build a completely separate superstructure just to rate the deck.
- 5) The program doesn't allow me to enter section loss directly over the bearing location or to the left of the bearing. The girders on this bridge have section loss in the webs, but only over the bearing area. If I enter the start point for the section loss as a negative number, I get errors when I save the file. If I put the section loss to the right of the bearing (and Virtis requires a minimum section loss distance of half a foot), the girders control in flexure, which is not an issue since the section loss is over the bearing. It would help if there was a bearing length option, not just a point bearing, and the capability of entering section loss just over the bearing – so the girders are checked for bearing capacity with the section loss, but not for flexural capacity.

FROM: Herman Lee DATE: 2/2/2010 1:11:08 PM Eastern Standard Time  
Item 2, 4 and 5 are enhancement requests.

Brian, please investigate Item 3.

Mehrdad, please see whether Item 1 is related to Incident 8570.

FROM: Brian Goodrich DATE: 2/4/2010 10:03:34 AM Mountain Standard Time  
I confirmed the Madero error with Item 3.

FROM: Brian Goodrich DATE: 2/4/2010 2:38:14 PM Mountain Standard Time  
I revised the Madero export to not generate member loads for a deck analysis. Assigned to Mehrdad for Item 1.

FROM: Mehrdad Ordoobadi DATE: 6/22/2010 9:49:16 AM Eastern Daylight Time  
The UPR completes successfully with a database that bridge check-in/out is not enabled.

If I do UPR in version 6.2 for the bridge after enabling the bridge check-in/out without checking out the bridge I get these errors:

Error generating LFD/ASD load commands!  
Error generating load group commands!

4/19/2016 3:07:31 PM

HRS AASHTO

1575

## Complete Issue Information

Error in the loads utility!

Error getting stringer dead load reaction!

Error preparing stringer dead load reactions!

Unable to analyze Stringer Member: Unit2 Stringer8

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer7

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer6

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer5

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer4

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer3

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer2

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit2 Stringer1

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer8

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

OR

- Bridge is not checked-out

Unable to analyze Stringer Member: Unit1 Stringer7

Unable to perform Stringer Dead Load Analysis when

- Bridge is being exchanged

4/19/2016 3:07:31 PM

HRS AASHTO

1576

Complete Issue Information

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer4  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer3  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer2  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer1  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer8  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer7  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer6  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer5  
Unable to perform Stringer Dead Load Analysis when  
- Bridge is being exchanged

OR

Complete Issue Information

- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer4  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer3  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer2  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit2 Stringer1  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer8  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer7  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer6  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer5  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer4  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out  
Unable to analyze Stringer Member: Unit1 Stringer3  
Unable to perform Stringer Dead Load Analysis when
- Bridge is being exchanged  
OR
- Bridge is not checked-out

Complete Issue Information

Unable to analyze Stringer Member: Unit1 Stringer2  
 Unable to perform Stringer Dead Load Analysis when  
 - Bridge is being exchanged  
 OR  
 - Bridge is not checked-out  
 Unable to analyze Stringer Member: Unit1 Stringer1  
 Unable to perform Stringer Dead Load Analysis when  
 - Bridge is being exchanged  
 OR  
 - Bridge is not checked-out

Checking out the bridge results in successful analysis.

So this issue is not related to the issue 8570.

This issue is related to 8826 and 7916 they are both fixed in 6.2.

|                                              |
|----------------------------------------------|
| Issue ID: 9633                               |
| Subject: LRFR distribution factor calculator |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Metcalf, William        | 2/3/2010 3:35:49 PM  |
| Modified By: kkennelly                | 2/5/2010 11:39:55 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:07:32 PM

HRS AASHTO

1579

Complete Issue Information

FROM: William Metcalf DATE: 2/3/2010 10:41:08 AM Eastern Standard Time  
for this span the auto distribution calculation works for G1 but not for any of the other girders I have included a PDF of the error i can not figure out what it means.

thanks.

FROM: Krisha Kennelly DATE: 2/5/2010 6:29:57 PM Eastern Standard Time  
The finite element model that is generated to compute DL contraflexure points will contain nodes at diaphragm locations. For bays 2 thru 6 the diaphragms are entered incorrectly. They have a diaphragm located at 39.5' but the beam is only 38.5' long. So the FE model is not generated correctly and you get that error message.

Fix the diaphragm locations so they are at 38.5' and the live load distribution factors will be generated for you. (Note that if you Validate the Structure Definition you will get error messages that the diaphragms are not on the beams.)

Issue ID: 9634  
Subject: prestressed beam crash during data entry

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Curtis, Beckie 2/9/2010 1:37:24 PM  
Modified By: rcurtis 6/21/2010 9:14:38 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:07:32 PM

HRS AASHTO

1580

Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Lee, Herman   | New       | High | Bug         |
| Ihnat, Joseph | Assigned  |      |             |
| Lee, Herman   | New       | High | Bug         |
|               | Assigned  |      | Support     |
|               | Resolved  |      |             |
|               | Suspended |      | Enhancement |
|               | Resolved  |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 2/9/2010 8:40:57 AM Eastern Standard Time

When we try to change the stress window, it crashes Virtis. It seemed to have worked initially, but any changes since then cause it to crash. This seems to be the only window that crashes.

FROM: Krisha Kennelly DATE: 3/16/2010 12:56:01 PM Eastern Daylight Time

Joe, can you look into this? thanks.

FROM: Joseph Ihnat DATE: 3/16/2010 3:13:55 PM Eastern Daylight Time

The Stress Limits window is expecting all member alternatives to be PS in its validation, but in this case some are RC.

Changed the validation to skip non-PS member alternatives.

Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 11:38:48 AM Eastern Daylight Time

Verified - 6.2 alpha 4

FROM: Beckie Curtis DATE: 5/12/2010 4:47:58 PM Eastern Daylight Time

Tested Beta 1

|                                                      |
|------------------------------------------------------|
| Issue ID: 9635                                       |
| Subject: NSG and using multiple distribution factors |



Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis            |
| Primary Contact: Lee, Herman                     |
| Submitted By: Curtis, Beckie 2/9/2010 2:18:30 PM |
| Modified By: hlee 4/30/2013 2:46:48 PM           |
| Priority: High                                   |
| Category: Enhancement                            |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | New      | High     | Bug<br>Support |
|                 | Assigned |          |                |
|                 | Resolved |          |                |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description    |
|------|-------------------------|----------------|
|      | PlasticMoment4.jpg      |                |
|      | PlasticMoment3.jpg      |                |
|      | PlasticMoment1.jpg      |                |
|      | PlasticMoment2.jpg      |                |
|      | 37C0160LFRHandCalcs.pdf | New hand calcs |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 2/9/2010 9:23:40 AM Eastern Standard Time

I have some questions regarding the NSG analysis.

1. At how many locations is the load distribution factor calculated?
2. When the analysis is performed on the member, what distribution factor is used, the maximum or the distribution at the point in question? Is this dependent on the analysis engine selected for that member? Is it dependent upon LRFR or LFR?
3. If multiple load distribution factors are calculated, is there an easy way for the user to view these results?

4/19/2016 3:07:32 PM

HRS AASHTO

1582

Complete Issue Information

FROM: Herman Lee DATE: 2/9/2010 9:51:49 AM Eastern Standard Time

1. Analysis point will be generated at tenth point, change point (e.g. top flange thickness change) and hinge location.
2. The maximum distribution factor is used in the member analysis. This maximum distribution factor is passed to the engine selected for that member and only LFR is supported currently.
3. The distribution factors at each analysis point are reported in the file with name like "Path 1 (Centered) - Summary". This file can be accessed from the Analysis Output window.

FROM: Beckie Curtis DATE: 2/9/2010 2:20:21 PM Eastern Standard Time

Just want to clarify - is it A, B or C?

- A - the maximum load distribution factor exported from the NSG and then used by the analysis engine to calculate load effects
- B - the load effect (using the load distribution factor) calculated in the NSG analysis and then the load effect is exported to the analysis engine
- C - none of the above

FROM: Herman Lee DATE: 2/10/2010 10:47:05 AM Eastern Standard Time  
NSG analysis implements process A

FROM: Herman Lee DATE: 2/17/2010 8:05:14 AM Eastern Standard Time  
Beckie Curtis e-mail on 2/17/10:

=====  
Herman -

Can you please change this to an enhancement request? I would like LFR to be able to do multiple distribution factors for NSG.

Thanks,  
Beckie

=====

FROM: Herman Lee DATE: 4/30/2013 10:45:05 AM Eastern Daylight Time  
Implemented multiple distribution factors for NSG in the 6.5 release.

Issue ID: 9636  
Subject: LFR (LFD) Rating Method BrassLFD Notepad detail report

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Lee, Herman 2/9/2010 3:14:18 PM  
 Modified By: bgoodrich 5/7/2010 3:48:44 PM  
 Priority: High  
 Category: Support

Complete Issue Information

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | New      | High     | Bug - BRASS |
|                 | Assigned |          |             |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 045101.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 2/9/2010 8:15:48 AM Mountain Standard Time  
 E-mail submitted by Jim Randall via Herman:

-----

Herman,

I have been converting my LRFR example ratings to LFR/LFD method rating. The steel girder example 37C0160JRR (sent to you earlier) used in the LRFR rating was converted to LFD input. The results I am getting using BrassLFD module is producing rating factors that are larger than my check calculations can justify. I have checked the input properties shown in the output file, however, the BrassLFD output is not as detailed as the BrassLRFD output files which do show the details for the capacity calculation. Construction Stage 1 and 2 (not used) beam properties seem ok, however, the Construction Stage 3 @ 105.00 (midspan) composite beam properties are larger than my hand calculations??? ... how can I get the output file to print the details of this critical calculation? In addition, the rating factors are printed in a report listing and the detail of these calculations are not shown. Can I get the same output file similar to the BrassLRFD output file? I have attached my hand rating calculation with the Virtis ratings shown. I am having a hard time accepting the Virtis rating. Jim Randall

-----

FROM: Brian Goodrich DATE: 2/9/2010 8:17:25 AM Mountain Standard Time  
 E-mail from Herman:

Complete Issue Information

-----  
Jim,

Detail rating calculations are available in the Intermediate output. To turn on the Intermediate output for a specific location, create a point of interest at that location in the Bridge Workspace. For your case, create a point of interest at mid-span. You don't have to override any schedule. The detail rating calculations at mid-span will be generated inside the BRASS output file. Search for "Analysis point number 105.000" to quickly locate the detail calculations.

Please let me know if you need additional information.

Herman  
-----

FROM: Brian Goodrich DATE: 2/9/2010 8:18:04 AM Mountain Standard Time  
E-mail submitted by Jim Randall via Herman:

-----  
Herman,

Thanks for the advice on the output file. All of the information seems to check ok when I add the Y1 haunch value to my hand calculations. The one remaining issue is the calculation of the plastic moment  $M_p$ . Do you have a schematic of the lever arm values used by the computer to obtain the 6011.34 ft-kip value. I have not been able to determine how that value is that large? My  $M_p$  value is much lower 4815 ft-kips, possible differences using cg of plate girder to sum moments, missing addition force in the top flange??? I am attaching my latest output file with my check comments. Thanks for your help. JimR  
-----

Added PlasticMoment1.jpg, PlasticMoment2.jpg, PlasticMoment3.jpg, PlasticMoment4.jpg.

FROM: Brian Goodrich DATE: 2/9/2010 8:22:32 AM Mountain Standard Time  
I reviewed the BRASS calculations you submitted. The margin notes indicate agreement with the yield moment of 5125 ft-kips, so the plastic moment has to be more than that. The calculations in the margin notes use the lever arm from neutral axis of the bare steel section instead of the lever arm based on the plastic neutral axis.

I don't have a copy of your bridge, but I suspect there is a 1.0 inch haunch between the top of the steel section and the bottom of the slab. This offset of the slab from the beam results in a higher plastic moment than if there was no haunch.

Please let me know if this addresses your questions.

FROM: Brian Goodrich DATE: 2/9/2010 8:23:11 AM Mountain Standard Time  
E-mails submitted by Jim Randall:  
-----

4/19/2016 3:07:33 PM

HRS AASHTO

1585

Complete Issue Information

Brian,

Thanks for your advice. I did recalculate the Mp value using LRFD Appendix D6. Attached are the hand calculations indicating a Mp value of 6352 ft-kips using Appendix D6. Is there a way of seeing what Virtis (BrassLFD) used to calculate the Mp = 6011.34 ft-kips? Hand calculation pages 3, 2-3-2010, and 2-8-2010 show the Caltrans Bridge Design Spec calculation (page3), page 2-3-2010 is the verification of BrassLFD section modulus calculation, and page 2-8-2010 is the Appendix D6 LRFD calculation. I am looking for additional advice concerning my hand calculation to obtain convergence with the BrassLFD result. Thanks again JimR

-----

Added 37C0160LFRHandCalcs.pdf.

-----

Brian,

Rechecked my Appendix D6 Mp calculation and found a error in the ds concrete slab value that resulted in a Mp hand calculation value of 6015 ft-kips as compared with the BrassLFD Mp value of 6011.34 ft-kips. I would still like to know if there is a way of seeing the componets of the Mp computer program calculation. JimR

-----

FROM: Brian Goodrich DATE: 2/9/2010 8:26:19 AM Mountain Standard Time

It looks like we're in agreement with the plastic moment. The output files with notes that you originally sent as JPG files are the only calculations that BRASS LFD produces from Virtis. There is some extended output that is used for debugging purposes, but this is not available to the user through Virtis. This extended output lists the summary of the force components and associated the lever arms used to calculate the plastic moment. If you would like this output to be made available as part of the regular output, please make that request and I will forward it to WYDOT.

FROM: Brian Goodrich DATE: 2/9/2010 11:22:29 AM Mountain Standard Time

E-mail submitted by Jim Randall:

-----

Brain,

Thanks again for your help. We are developing our expertise using the Virtis program and using the hand calculations for quality control/training to accept the computer rating and debug our in-house rating process. Since Caltrans has not accepted the LRFD rating method for older bridges designed by ASD and LFD methods they have directed us to use LFD rating for our bridge reports. I am not sure how much trouble/effort is involved in adding the additional output for the Mp calculation. Since this is a critical value in the rating process it seems that the current Virtis output is a black-box result only showing the final answer. I am reluctant to make the request with out knowing the scope of the request. We appreciate your help in debugging the hand calculations. JimR

-----

FROM: Brian Goodrich DATE: 2/9/2010 11:37:55 AM Mountain Standard Time

The BRASS LFD output lists various input parameter and the results related to equations 10-123 through 10-128, which are used to obtain the plastic moment. The only thing that appears to be missing from the output is the lever arm to each of the force components. Is this what you are looking

4/19/2016 3:07:33 PM

HRS AASHTO

1586

Complete Issue Information

for? It might help if you could show some sample output that illustrates what you are looking for.

FROM: Brian Goodrich DATE: 2/22/2010 10:58:26 AM Mountain Standard Time  
E-mails submitted by Jim Randall (2/9/2010):

Brian,

The location of the PNA from the top of the slab and the lever arms (as described in Appendix D6) used to calculate the Mp by the program would have allowed me to spot check my check calculations and find the error or question my bridge input model. You can see my notations on the current output file that confirmed most of my hand calculations were in sync with the computer and the code equations referenced ... judging the results is extremely important in accepting the results with confidence. I thought there would be a graphic in the help section that described the computer calculation in detail but did not know where to look. Since I am a relatively new user of Virtis I am not familiar with all of the nuances. We are using Caltrans Bridge Design Specifications that reference AASHTO Standard Specifications 16 th Edition with interim's and did not go back to LRFD Appendix D6 until you made your suggestion. Your comments solved the problem for me, I used this appendix in doing the LRFD rating of the same bridge. I got off on the wrong track using AASHTO "The Manual for Bridge Evaluation" Illustrative Example pg A-46 as a guide ... which has the PNA at the top of the flange. Hope this explanation helps. Thanks again, JimR

FROM: Brian Goodrich DATE: 5/7/2010 8:39:20 AM Mountain Daylight Time  
The BRASS-GIRDER(STD) 6.0.4 engine was revised to output details regarding equations 10-123 through 10-128. This engine will be available in the release after Virtis 6.2.

|                                 |
|---------------------------------|
| Issue ID: 9637                  |
| Subject: LL Distribution Factor |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Befikadu, Elizabeth     | 2/9/2010 6:03:20 PM |
| Modified By: hlee                     | 5/9/2010 5:06:35 PM |
| Priority: High                        |                     |
| Category: Bug - BRASS                 |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:33 PM

HRS AASHTO

1587

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | B-16-281_(3EB).xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 2/9/2010 11:04:04 AM Mountain Standard Time  
 E-mail submitted by Elizabeth Befikadu via Herman:

-----  
 Herman,

How are you doing?

I am working on bridge # 045101 LRFR rating. The last superstructure which is SWsuperstructure (Mod) is a reinforced concrete T-beam structure. I look to the Brass Load Distribution file and the LL distribution factor calculated is as follows.

- 1) LL distribution factor by Lever rule method is zero.
- 2) The LL distribution factor calculated by ridged method is 0.353 although the value NL/Nb by itself is 0.5. The value should be minimum 0.5.

Is there any reason for this ? I have attached the XML file.

Thanks for your help.

Elizabeth Befikadu  
 -----

FROM: Brian Goodrich DATE: 2/9/2010 11:15:40 AM Mountain Standard Time  
 The lever rule issue appears to be a bug. I'll forward this issue to WYDOT.

Regarding the rigid method, both the deflection and rotation of the deck cross section must be considered. Because the live load is eccentric to the C.G. of the girder group as shown in the BRASS DST file, the rotation decreases the load on the left girder and increases the load to the right girder. Note that the sign of the eccentricity depends on which girder is selected as the girder of interest.

FROM: Brian Goodrich DATE: 3/23/2010 8:54:33 AM Mountain Daylight Time  
 This issue is assigned to BRASS Problem Log 938. This issue has been addressed in BRASS-GIRDER(LRFD) 2.0.3. Fixed for Version 6.2.

FROM: Herman Lee DATE: 5/9/2010 1:02:37 PM Eastern Daylight Time  
 Verified in 6.2 Beta 1.

Complete Issue Information

Issue ID: 9638  
Subject: GFS Systems: Girders rating extremely low. Virtis appears not to be analyzing girder as a GFS system where the floorbeams act as concentrated loads on the girder.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Colgrove, George  
Submitted By: Walsh, Joanne 2/9/2010 9:42:08 PM  
Modified By: bgoodrich 4/18/2010 6:47:45 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          | Support  |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | 00178 - 1090350000000S14.xml |             |
|      | detailed nsg.png             |             |
|      | summary xml.png              |             |
|      | Actions.png                  |             |
|      | MI18DL.xml                   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Joanne Walsh DATE: 2/9/2010 4:54:13 PM Eastern Standard Time  
Bridge description: multispan girder-floorbeam-stringer viaduct (upperdeck and lowerdeck) with steel bents. The Virtis model will analyze each span as a simple span.

Issue: The inventory rating factors for the girders in our GFS model are extremely low (0.44 to 0.60).



## Complete Issue Information

There is no major section loss to the girders and the structure was designed for HS-20 loading. The live load moments produced by Virtis were checked against Table C6B-1 of Appendix C6B of the AASHTO Manual for Bridge Evaluation (MBE). MBE Table C6B-1 provides simple span truck moments for a beam bridge based upon truck and span length. The live load moments produced by Virtis and the moments from MBE Table C6B-1 were very close which indicates that Virtis analyzed the girder under a simple span condition (this is also evident by the shear diagram in Virtis) and not by transferring the live load through the stingers then to the floorbeams and then into the girders at concentrated loads from the floorbeam. The girder has floorbeams framing into it at the 1/3 points. We believe a simple span analysis is overly conservative and the reason for the low rating factors. Can you please confirm the methodology used by Virtis in applying the loading on girders in a GFS system? Is there any way that Virtis can analyze the girder under the actual loading condition of a GFS system where the floorbeam reactions are concentrated loads on the girder? Please review the model titled "Squared Span 41" (see attached .xml).

Please feel free to contact me at [bdartista@hntb.com](mailto:bdartista@hntb.com). Any insight you can provide on this matter is greatly appreciated. Thank you for your time and effort.

FROM: Joanne Walsh DATE: 2/18/2010 10:01:00 AM Eastern Standard Time  
Any update? I am not able to continue to work on this project until this issue is resolved. Thank you.

FROM: George Colgrove DATE: 2/19/2010 2:08:36 PM Eastern Standard Time  
TO Brian Goodrich

Hi Brian,

The enclosed VI incident #9638. Joanne Walsh is asking for specifics on how the floor system is analyzed. I think she is right in her assessment. She is using BRASS in her analysis. I don't think there is a work around to do as she wants. Can you confirm this for me. If there is no work around, I will inform her that we will keep the issue open for User Group consideration as an enhancement.

George

FROM: Brian Goodrich DATE: 2/22/2010 8:57:35 AM Mountain Standard Time  
With respect to the BRASS engine, the live loads are NOT applied to the girder through the floorbeam reactions. I don't know of any workaround.

Have other possibilities for the low rating been exhausted: dead loads, unbraced lengths, contraflexure locations, etc.?

FROM: Joanne Walsh DATE: 2/22/2010 1:59:22 PM Eastern Standard Time  
Brian/George,

We pretty much have exhausted all of the other possibilities that would contribute to a low rating. From your discussion, it sounds like Virtis does not have the capability to accurately model a girder in a GFS system since the loading is not transmitted through the floorbeams into the girders. Can you please verify this? Is there another engine that has this capability? What is the timeframe on this possible enhancement commencing? I just want to know if it is worth my time to wait for the enhancement or continue the rating by other means.

Please feel free to contact me at [bdartista@hntb.com](mailto:bdartista@hntb.com). Any insight you can provide on this matter is greatly appreciated. Thank you for your time and effort.

4/19/2016 3:07:33 PM

HRS AASHTO

1590

Complete Issue Information

Benny D'Artista

FROM: Joanne Walsh DATE: 3/3/2010 9:11:25 AM Eastern Standard Time  
Any update? I am not able to continue to work on this project until this issue is resolved. Thank you.

FROM: George Colgrove DATE: 4/13/2010 10:14:07 AM Eastern Daylight Time  
Benny and Joanne,

I was reviewing issue #9638 today. I believe at this point there are no work around solutions for this issue. Right now it appears you will need to wait for an enhancement to be approved by members of the User Group and/or the BRIDGEWare Task Force. You may also want to work with Brian Goodrich to get the BRASS engine enhanced for your needs.

I will change the status of the issue to an Enhancement request.

If there is anything you wish to add to the discussion, please feel free to log into IssueNet.

- George Colgrove

FROM: George Colgrove DATE: 4/13/2010 10:15:38 AM Eastern Daylight Time  
At this point we need to wait for direction from the User Group and the Task Force to include a resolution to this issue.

FROM: Brian Goodrich DATE: 4/18/2010 11:25:27 AM Mountain Daylight Time  
The BRASS engine moves live loads across the girders in a GFS system as if they were those in a girder system. Live loads are not transferred to the girder at the floorbeam locations. However, dead loads are.

Running the HS20 truck and lane, BRASS gives an inventory rating of 0.86.

|                      |
|----------------------|
| Issue ID: 9639       |
| Subject: NSG summary |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 2/10/2010 9:56:37 PM |
| Modified By: hlee                     | 2/17/2010 1:01:10 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:07:33 PM

HRS AASHTO

1591

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 18747.xml           |             |
|      | Error Message.pdf   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 2/10/2010 5:02:29 PM Eastern Standard Time

In the attached structure, the NSG summary shows a DF of .773, while that number is exceeded in the Path Summary.

My path was the MI18DL (attached) at left and adjacent to right.

FROM: Herman Lee DATE: 2/10/2010 5:47:59 PM Eastern Standard Time

The selection of the max DF is based on the comparison of the max and min actions' DF (see attached Actions.png file).

FROM: Beckie Curtis DATE: 2/17/2010 7:53:27 AM Eastern Standard Time

Thanks for the clarification.

|                                               |
|-----------------------------------------------|
| Issue ID: 9640                                |
| Subject: NSG analysis for variable skew spans |

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Emami, Bardia           | 2/11/2010 8:16:39 PM |
| Modified By: jduray                   | 4/29/2010 9:46:46 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
| Lee, Herman      | Resolved |          |          |
|                  | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | pic11560.jpg                         |             |
|      | pic31721.jpg                         |             |
|      | pic29623.jpg                         |             |
|      | pic13251.jpg                         |             |
|      | Left_Exterior_Girder<br>(Virtis).OUT |             |
|      | Results using BRASS.doc              |             |
|      | Bot Plate Thick @ 32.10.png          |             |
|      | Left_Exterior_Girder<br>(BRASS).OUT  |             |
|      | pic21807.jpg                         |             |
|      | 55 0427.xml                          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

4/19/2016 3:07:34 PM

HRS AASHTO

1593

Complete Issue Information

FROM: Herman Lee DATE: 2/11/2010 3:17:38 PM Eastern Standard Time  
Submitted on behalf of Bardia Emami, PB.

=====  
Hi,

Under our current contract, we rate number of bridges for VDOT using Virtis (V6.0). They got an error message during rating of a PS beam bridge in LFD, using Advance Analysis and Non-Standard Gage Vehicle. I attached the XML file to this email. I did some test run and bridge rates without error using Standard Type Analysis. Also Span 1 (which has same skew and same beam length) runs without error using Advance Analysis and Non-Standard Gage Vehicle. It seems this error occurs only to variable skew spans with PS beams (I didn't have this problem with variable skew steel bridges). Do you have any recommendation for us to adjust the model and make it rate the Non-Standard Gage Vehicle?

Feel free to contact me for more information.

Regards,

Bardia Emami, P.E.  
Lead Structural Engineer

PB  
465 Spring Park Place  
Herndon, VA 20170

=====

FROM: Jim Duray DATE: 4/28/2010 2:19:44 PM Eastern Daylight Time  
I am not able to reproduce this error. It is not clear which superstructure causes the error. I ran 1,2 and 3 without error. There have been changes to the generation of the FE model for another incident (8980) that may be related and may have fixed this one as well.

FROM: Jim Duray DATE: 4/29/2010 5:46:32 PM Eastern Daylight Time

Issue ID: 9642  
Subject: Incorrect cross sections exported to the Virtis Std Engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: vinayagamoorthy, vinacs 2/12/2010 8:30:31 PM  
Modified By: hlee 5/13/2010 3:46:41 PM  
Priority: High  
Category: Bug

4/19/2016 3:07:34 PM

HRS AASHTO

1594

Complete Issue Information

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Colgrove, George | Assigned |          |          |
| Li, Xinmei       | Resolved |          |          |
|                  | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                         | Description |
|------|-----------------------------------------------------------------------------|-------------|
|      | VI9643 GAB 22 Feb Angle Flips.zip                                           |             |
|      | VI9643 GAB 22 Feb Bad Areas.zip                                             |             |
|      | TN0013 Incorrect Truss Angle Box and Built-up Member Section Properties.pdf |             |
|      | Joe Page GAB Feb 16 Det Span 1.zip                                          |             |
|      | Joe Page GAB Feb 18 Det error L3L4.zip                                      |             |
|      | Joe Page GAB Feb 17 Det Span 1 error.zip                                    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/12/2010 3:32:35 PM Eastern Standard Time  
 Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====  
 Herman

The rating factor that is reported low is due to the tolerance level set in my computer.

Complete Issue Information

I have the following tolerance level setup

(Embedded image moved to file: pic13251.jpg) With this the rating results from Virtis-LFD is as follows:  
(Embedded image moved to file: pic31721.jpg)

When I change the tolerance level to the following:  
(Embedded image moved to file: pic11560.jpg) With this new setup, The rating results from Virtis-LFD  
is (Embedded image moved to file: pic21807.jpg)

The BRASS results did not get affected by the tolerance level: Here is the BRASS results with the new  
tolerance level (Embedded image moved to file: pic29623.jpg)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

I'm not able to track down the problem in the export (Bot Plate Thick @ 32.10.png) when the ft  
tolerance is 0.05. I tried the bridge (Span 1 G1) in 6.1, it has the same problem.  
Krisha, please check the bottom flange thickness for the domain generated cross section at 32.10'.

FROM: Herman Lee DATE: 3/24/2010 9:52:57 AM Eastern Daylight Time  
When generating cross section ranges for analysis, a list of unique cross sections will be created.  
When comparing two cross sections, the dimensions should be based on inch or mm instead of ft or m.  
If comparison is done in ft with ft tolerance set to 0.04, a cross section with flange thickness 0.625 inch  
(0.05208 ft) is considered to be the same as a cross section with flange thickness 1.000 inch  
(0.08333 ft) since the difference of the two thicknesses in ft (0.03125) is less the 0.04. The comparison should  
be done in inch and compare with inch tolerance.

Fixed for 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 1:07:16 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

Issue ID: 9643  
Subject: How is Deterioration applied to an AngleBox section ??

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Barnhill, Gale 2/16/2010 7:48:19 PM  
Modified By: xli 8/23/2010 3:14:26 PM  
Priority: High  
Category: Bug

History

4/19/2016 3:07:34 PM

HRS AASHTO

1596

### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | Str_Alt_Str_Def_Link_Problem.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 2/16/2010 2:57:50 PM Eastern Standard Time

In the truss named .....Det South in this model for member L2L3, I believe I have the AngleBox section defined with the 6 inch angle leg vertical and 4 inch leg horizontal.

The horizontal legs of the angles are deteriorated.

In the member deterioration input, I show 24% of top left horizontal leg thickness.

The gross area of 6x4x9/16 angle is 5.31 sqin.

Virtis computes a deteriorated area of 4.50 sqin.

That appears to be  $5.31 - 0.24 \times 0.5625 \times 6$ .

I want it to be  $0.24 \times 0.5625 \times 4$ .

FROM: Gale Barnhill DATE: 2/17/2010 5:12:01 PM Eastern Standard Time

I've added another version of the same bridge dated Feb 17.

In the truss named .....Det North in this model for member L0L1, it's an AngleBox with 6x4x3/4 angles.

I entered deterioration of 50% for top angles - left horizontal leg - right vertical leg.

I entered deterioration of 25% for bottom angles - left horizontal leg - right vertical leg.

The member section property report - detailed section property calculations shows the same area for both top angles and the same area for both bottom angles. It appears to be using the 6 inch leg both times.

For the top angles, Y is the same, but AY is different.

For the bottom angles, Y is different and AY is the product of the areas times Y's.

FROM: Gale Barnhill DATE: 2/18/2010 10:08:51 AM Eastern Standard Time

Here's the third model with slight changes.

One truss has not deterioration noted.

It appears the TN13 changes are implemented to show the correct section properties for L3L4 and L4L5.

The other truss has deterioration modeled for L3L4.

Again, the deterioration is applied to the 6 inch vertical leg instead of the 4 inch horizontal leg and I also notice that the section properties are reversed for the angles.

The section property reversal is also carried over to L4L5 which does not have deterioration applied.

4/19/2016 3:07:34 PM

HRS AASHTO

1597



Complete Issue Information

FROM: George Colgrove DATE: 2/19/2010 2:02:04 PM Eastern Standard Time  
Please read the enclosed Technical Note #13. This technical note is only applicable for truss angle box section and truss built-up section composed of uneven leg angles. If this solve the problem we will close this issue. If not, please respond.

FROM: George Colgrove DATE: 2/19/2010 2:06:45 PM Eastern Standard Time  
Hi Brian,

The enclosed VI incident #9638. Joanne Walsh is asking for specifics on how the floor system is analyzed. I think she is right in her assessment. She is using BRASS in her analysis. I don't think there is a work around to do as she wants. Can you confirm this for me. If there is no work around, I will inform her that we will keep the issue open for User Group consideration as an enhancement.

George

FROM: George Colgrove DATE: 2/19/2010 2:07:38 PM Eastern Standard Time  
Erroneous entry - Please delete/ignore

FROM: George Colgrove DATE: 2/19/2010 2:38:04 PM Eastern Standard Time  
From: Barnhill, Gale [mailto:Gale.Barnhill@aecom.com]  
Sent: Friday, February 19, 2010 2:28 PM  
To: Colgrove, George  
Cc: Duray, Jim  
Subject: RE: Deterioration issue (VI9643)

George,

The angles appear to be properly placed (6 inch leg vertical) based on the fix described in the Technote.

However, when Deterioration is applied, the new section properties computed by the Truss Engine revert to the 4 inch leg vertical.

It also appears that the property comps are caught in a loop and report the same reduced area for consecutive members.

In the last model I sent on Feb 18, L3L4 Izz and Iyy for the deteriorated shapes appear to be reversed. L4L5 does not have deterioration applied, yet Izz and Iyy look reversed.

L5L6 (a similar member to L4L5) appears to have Izz and Iyy correct.

Call me if you would like to discuss.

Thanks,

Gale A. Barnhill, P.E.  
Senior Project Manager  
C 402.363.9515  
gale.barnhill@aecom.com  
AECOM  
104 North 2nd Avenue, PO Box 333  
McCool Junction, Nebraska 68401-0333  
www.aecom.com

FROM: Gale Barnhill DATE: 2/22/2010 12:38:59 PM Eastern Standard Time

George,

I've added another version of this problem.

In this model (VI9643...). I've coded a 6x4x1/2 anglebox to be used for most of the lower legs.

4/19/2016 3:07:34 PM

HRS AASHTO

1598

## Complete Issue Information

In the truss V19643 NO DET, there is no deterioration coded. Note that the member section property results show lzz self of 17.40 and lyy self of 6.27 for all members using a 6x4x1/2.

In the truss V19643 DET, I coded deterioration for L2L3.

Now for all members using the 6x4x1/2, lzz and lyy are reversed.

For L3L4, I coded a 6x4x9/16. lzz and lyy are reported the same as for the NO DET results.

I'll continue to check other variations.

Gale

FROM: Gale Barnhill DATE: 2/22/2010 4:23:49 PM Eastern Standard Time

I've added another newer version.

In the model V19643...Bad Areas, I coded several variations of deterioration on the 6x4x1/2 assigned to the lower chords.

I see a common error in the section properties report. The "Y" for Top Right Angle is always reported the same as the "Y" for Top Left Angle. It appears a correct value is computed and used for "AY" and "AY^2", but it is not the value reported.

When the same percent of Length and Width are deteriorated for Top Left and Bottom Left, the Area values are not the same. Top Left appears to be correct.

FROM: Xinmei Li DATE: 4/14/2010 2:19:15 PM Eastern Daylight Time

For the bug reported in Feb16 bridge (Det South, member L2L3) is resolved:

Incident summary:

There's a defect in setting "Vertical" for angles in angle box/ builtup sections with Deterioration.

Workaround:

When entering deterioration for angles in angle box/ builtup sections, enter Horizontal leg % loss as Vertical leg, vise versa.

Resolved for:

6.2 release

FROM: Xinmei Li DATE: 4/15/2010 9:12:49 AM Eastern Daylight Time

For the bug reported in Feb17 bridge (Det North, member L0L1) is resolved:

Incident summary:

There's a defect in xml report for top right angle in angle box sections.

Another defect in setting deterioration angle legs for angle box sections.

Workaround:

There is no workaround now.

Resolved for:

6.2 release

For the bug reported in Feb18 bridge (Truss with Det L3L4, member L3L4):

The bug in L3LL4 (deterioration is applied to wrong leg) is a duplicate of the one reported in Feb 16 bridge.

For the section properties reversal, please refer to TN13.

For the bug reported in Feb22 Angle Flip bridge:

4/19/2016 3:07:35 PM

HRS AASHTO

1599

Complete Issue Information

It's not reproducible. I think the above fix may have resolved this problem

For the bug reported in Feb22 Bad Areas bridge;  
It's a duplicate of the one reported in Feb17 bridge

Incident summary:

There's a defect in xml report for top right angle in angle box sections.

Workaround:

There is no workaround now.

Resolved for:

6.2 release

FROM: Herman Lee DATE: 5/9/2010 1:08:04 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

FROM: Gale Barnhill DATE: 7/6/2010 10:50:43 AM Eastern Daylight Time  
Verified in 6.2 Beta 3.

Accepted

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 9644                                                                                 |
| Subject: Linking Superstructure Definition to Superstructure Alternative after changing #Spans |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Koenig, David           | 2/17/2010 8:22:11 PM |
| Modified By: mordoobadi               | 6/8/2011 6:26:28 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Colgrove, George   | Assigned |          |          |
| Ihnat, Joseph      |          |          |          |
| Duray, Jim         |          |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Verified |          |          |

### Complete Issue Information

|             |           |      |     |
|-------------|-----------|------|-----|
|             | Accepted  |      |     |
|             | Closed    |      |     |
| Lee, Herman | New       | High | Bug |
|             | Duplicate |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | DLL Image.png       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 2/17/2010 3:29:17 PM Eastern Standard Time

I have duplicated an issue one of our raters ran into. If you modify the number of spans in an existing structure definition, then try to link it with the Superstructure Alternative, you get the following message.

"Superstructure Definition length mismatch.

The number of spans in the superstructure definition assigned to this superstructure alternative does not match the number of spans in the superstructure."

Screen shows that the number of spans and length are the same. The bridge was created in 6.0 or earlier and modified in 6.1.

To duplicate:

Modify number of spans. Remove link to superstructure definition in superstructure alternative. Then, try to select the definition again.

I attached an .XML file.

FROM: George Colgrove DATE: 2/19/2010 2:26:19 PM Eastern Standard Time

David,

You may want to reattach the XML file. I tried the steps you listed and I have not been able to get the error. If you post the XML file, I'll give it another try.

George

FROM: David Koenig DATE: 2/19/2010 3:18:53 PM Eastern Standard Time

I thought I attached it. Here it is. You should not be able to link it right away.

4/19/2016 3:07:35 PM

HRS AASHTO

1601

Complete Issue Information

FROM: George Colgrove DATE: 4/13/2010 10:28:16 AM Eastern Daylight Time  
I imported the bridge then I did as you described above. I was able to get the error as you described above.

I did this with other bridges as well without the error however. So it may be something unique with your bridge model.

My suggestion is to change the number of spans then delete the errant Superstructure Alternative. Once deleted recreate it. Then it works.

FROM: George Colgrove DATE: 4/13/2010 11:50:44 AM Eastern Daylight Time  
Another observation is that when I open the data tree to the Structure alternative and go directly to the Structure Alternative and attempt to modify the Superstructure Definition Link - I get the error.

If I open the Bridge Alternative Dialog - then cancel out, then open the Superstructure dialog - then cancel out, and once again enter the Structure Alternative and once again attempt to modify the Superstructure Definition Link - I get success.

I think this is a data issue.

FROM: Joseph Ihnat DATE: 10/14/2010 3:11:46 PM Eastern Daylight Time  
You don't even need to open the Bridge Alt window, just open the Superstructure window then Cancel (at least in version 6.2 that's all you need to do).  
The error comes from the fact that the number of spans in the DoSuperSubStructInterfaceSet object (3) doesn't match the number of spans in the structure def (4). I don't know if that's even possible to accomplish in the current (6.2) version. Opening the Superstructure window must sync it back up, though I'm not sure where.  
Since we seem to have a workaround, and I'm not sure if the problem is reproducible in the current code, I'm not sure if we want to pursue this any further.  
A further fix might be something like adding a check in the import (version conversion) and the migration.

FROM: Jim Duray DATE: 10/14/2010 3:31:27 PM Eastern Daylight Time  
Mehrdad - what do you think?

FROM: Mehrdad Ordoobadi DATE: 2/1/2011 1:14:14 PM Eastern Standard Time  
Since this is reproducible only with this bridge and we are not able to reproduce it with other bridges. We should offer the workaround that is opening the super structure window and closing it then assign the structure definition to struture alt.

FROM: Mehrdad Ordoobadi DATE: 2/1/2011 3:35:18 PM Eastern Standard Time  
Code added to 6.3 to avoid this problem.

FROM: Xinmei Li DATE: 3/28/2011 2:35:37 PM Eastern Daylight Time  
Verified fixed for 6.3 Alpha6.

FROM: Aaron Kemna DATE: 4/26/2011 1:44:10 PM Eastern Daylight Time  
Seems to be fixed for my bridge. Accepted.

|                |
|----------------|
| Issue ID: 9648 |
|----------------|

4/19/2016 3:07:35 PM

HRS AASHTO

1602

### Complete Issue Information

|                                                                                   |                      |
|-----------------------------------------------------------------------------------|----------------------|
| Subject: Brass DLL Error while running large number of bridges in Virtis Explorer |                      |
| Folder: /Virtis/Support Center/Virtis                                             |                      |
| Primary Contact: Lee, Herman                                                      |                      |
| Submitted By: Koenig, David                                                       | 2/19/2010 7:35:28 PM |
| Modified By: hlee                                                                 | 2/22/2010 7:44:05 PM |
| Priority: High                                                                    |                      |
| Category: Bug                                                                     |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Ihnat, Joseph   | Assigned | High     | Bug         |
| Goodrich, Brian |          |          | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | skewed fb.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 2/19/2010 2:50:25 PM Eastern Standard Time

We tried to run about 400 bridges in the Virtis Explorer with a single operating truck. Every time we tried we got the same error (image attached) after a number of bridges ran.

Windows 2007 with 4 GB of RAM. Got error on bridge 200. Tried again. Got error on bridge 165.

Windows 2000 with 2 GB of RAM. Error on bridge 85.

Windows XP with 3 GB of RAM. Error on bridge 77. Got a few more to run. Error on bridge 89.

Error is not bridge specific, and normally we can't run anymore bridges after the error pops up without exiting Virtis or maybe restarting the machine.

4/19/2016 3:07:35 PM

HRS AASHTO

1603

Complete Issue Information

FROM: Herman Lee DATE: 2/22/2010 10:45:33 AM Eastern Standard Time  
Duplicate of Incident 9529.

FROM: David Koenig DATE: 2/22/2010 2:05:32 PM Eastern Standard Time  
I can't find an Incident 9529? Why does it not show up?

FROM: Herman Lee DATE: 2/22/2010 2:38:28 PM Eastern Standard Time  
9529 was submitted during Beta Testing. I changed the Folder from Beta Testing to Support Center.  
Please try again to locate 9529.

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 9649                                                              |
| Subject: Skewed floorbeam problem in Floorbeam-Stringer Floor System bridge |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 2/22/2010 3:49:10 PM  |
| Modified By: hlee                     | 10/15/2011 9:48:07 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/22/2010 10:49:43 AM Eastern Standard Time  
Received Bridgewater Support e-mail (Frank DeOrtentiis, WSP Sells  
[Frank.DeOrtentiis@wspells.com]).

Complete Issue Information

=====

Herman,

Here is the file from Virtis 6.1.

#1 – Look at Span A of the attached file. The 26.0' length FB is along the 40 degree skewed support line, but Virtis is not displaying the Typical Section graphics or framing plan correctly by using the projected length of the floorbeam, 19.92'. Additionally, and much more worrisome, I don't believe Virtis is applying the stringer dead load and live load reactions at the proper location on the floorbeam.

If you analyze the floorbeam and view the analysis chart for the stringer DL reactions from stage 1, you will see that the stringer spacing and their location on the FB is the PERPENDICULAR spacing, not the spacing along the skew, which is wrong. Virtis is analyzing the FB's as they are shown in the typical cross section, which is incorrect.

#2 - I tried to use a floor line superstructure to model this bridge, and no where in that system do I see any mention of skew. Can the floor-line floorbeam/stringer system accommodate skewed floorbeams??

Please get back to me on both issues.

Thank you,  
Frank.

=====

Reply e-mail:

=====

Frank,

I'm able to reproduce the two issues in #1 with your Floorbeam-Stringer Floor System bridge. The floorbeams in the framing plan and structural typical section schematics are not drawn correctly and the stringer DL reactions are not applied in the correct locations along the floorbeam. The stringer DL reactions should be located at 1.71', 6.23', 10.74', 15.26', 19.77' and 24.29' from the left end of the floorbeam measuring along the floorbeam. I will submit an incident on your behalf on Monday. I don't see any workaround to model this bridge using Floor System.

When modeling using Floor Line Superstructure Definition, skew is not required since there's no relationship between the stringers and floorbeams in Floor Line Superstructure Definition. Virtis will not compute the typical section loads and stringer dead loads and apply to the floorbeams for you. You need to enter those loads manually in the Floorbeam Member Loads window.

Herman

=====

Joe, please investigate the schematic problem and assign to Brian for the stringer dead load reaction problem after you are done. Thanks.

FROM: Joseph Ihnat DATE: 2/24/2010 7:54:24 AM Eastern Standard Time  
Schematics are fixed for version 6.2



Complete Issue Information

Issue ID: 9651  
Subject: Unable to perform analysis using Virtis LRFR.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 2/22/2010 7:43:45 PM  
Modified By: tarmbrecht 5/12/2011 7:09:49 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Dialog.bmp          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/22/2010 2:44:28 PM Eastern Standard Time  
E-mail form Tim Armbrecht, IL DOT:

=====  
Herman, could you please create an incident for me? This has to do with the AASHTO engine in LRFR. The VSE was not used. According to Cory, BRASS is OK and produces good results. Thanks,

Tim

Timothy A. Armbrecht, P.E., S.E.

4/19/2016 3:07:36 PM

HRS AASHTO

1606

Complete Issue Information

Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures

Email: Tim.Armbrrecht@illinois.gov  
From: Chamberlain, Cory E  
Sent: Monday, February 22, 2010 1:01 PM  
To: Armbrrecht, Tim A  
Subject: 0250108

Tim,

Here is a screen shot of the error message and the XML file for the subject bridge. The Virtis engine seems to crash at different times while trying to analyze this bridge. It runs fine in Brass LRFR and LFD.

=====

FROM: George Colgrove DATE: 2/22/2010 3:57:46 PM Eastern Standard Time  
This may be similar to a problem I have come acrossed a couple times before. I have tried to copy a girder line from one location to another. This is an effective means of saving time, but at times, the girder I copied never analyzes. I was able to analyze GL 1 and GL 2. GL 3 is essentially the same thing as GL 2 - so I am assuming GL 3 was a copy of GL 2. GL 3 is not analyzing. To test this, completely redefine the GL 3 Member Alternative w/o copying anything. If this works, we need to look at the copy mechanism to determine why we are having trouble.

FROM: Herman Lee DATE: 4/18/2011 1:25:59 PM Eastern Daylight Time  
I'm able to rate all the members in the attached bridge using the AASHTO LRFR Engine in 6.3 Beta 1. The attached 63Beta1Ratings.png file is the rating results for the member that Cory had problem in 6.1. I think the defect has been fixed in 6.3 Beta 1.

Issue ID: 9652  
Subject: Clarify Floorbeam Member Locations

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Colgrove, George 2/22/2010 9:03:36 PM  
Modified By: xli 2/22/2010 10:34:41 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:07:36 PM

HRS AASHTO

1607

### Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | poi reinforced conc beam.xml |             |
|      | GirderG16.zip                |             |
|      | allPointsWith0.9pnt.png      |             |
|      | only0.90pt.png               |             |
|      | allPointsWithout_0.9poi.png  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 2/22/2010 4:07:39 PM Eastern Standard Time

I think we need to add the word Perpendicular to this dialog as shown in the attached dialog to clarify what is asking for in the input.

FROM: Xinmei Li DATE: 2/22/2010 5:05:44 PM Eastern Standard Time

Fixed for 6.2.0

Issue ID: 9653

Subject: Addint POI at 10th point changes analysis results

4/19/2016 3:07:36 PM

HRS AASHTO

1608

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Curtis, Beckie          | 2/23/2010 9:09:13 PM  |
| Modified By: hlee                     | 10/15/2011 9:45:42 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          | Support  |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | BRASS Engine Properties.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 2/23/2010 4:10:15 PM Eastern Standard Time  
When I add a poi at 90% of span 1 for girder 16 I get a different result than with no poi's entered. The control options have 10th points selected.

FROM: Jeff Ruby DATE: 4/13/2011 10:04:51 AM Eastern Daylight Time  
Checked that still not working, or at least something still isn't right with 6.2 Release. I attached the screen shots for the different rating output screens. It is using the BRASS engine.

FROM: Herman Lee DATE: 4/18/2011 2:22:12 PM Eastern Daylight Time  
I confirmed the Girder G16 in the attached 6.1 bridge doesn't have a LRFR analysis module selected. The issue described above is for the selected BRASS LFD Engine.

FROM: Brian Goodrich DATE: 4/25/2011 11:01:09 AM Mountain Daylight Time  
I believe this issue has already been fixed in the BRASS engine. I tried to test this with version 6.3 beta and the export hung in the call to the GirderMbrAltPtr->ResetReinfConcChangePointGeneration()

4/19/2016 3:07:36 PM

HRS AASHTO

1609

Complete Issue Information

function. This is a domain function, so I'm unable to debug this problem.

FROM: Herman Lee DATE: 4/26/2011 9:13:27 AM Eastern Daylight Time  
I'm able to rate both member alternatives in Girder G16 using the BRASS LFD engine in 6.3 Beta 1. Attached zip file contains the BRASS input and output files. Brain, please try it again when we have the Beta version for 3rd-part developers ready. Thanks.

|                             |
|-----------------------------|
| Issue ID: 9656              |
| Subject: Error 1301 Message |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: McDonagh, Derek         | 2/24/2010 4:01:26 PM  |
| Modified By: hlee                     | 2/24/2010 10:26:58 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Derek McDonagh DATE: 2/24/2010 11:04:04 AM Eastern Standard Time  
Trying to model a grider/floorbeam/stringer configuration bridge and get the following error message:

----- Contents of BRASS Error File -----  
File: C:\Program Files\AASHTOWARE\Virtis60\2227780\Span\_1\_-\_Girder\_Floorbeam\_Stringer\Unit\_1  
\Unit1\_Stringer1\Stringer\_1\BRASS\_LFD\Stringer\_1.ERR  
Fatal Error Encountered - Unexpected Termination

4/19/2016 3:07:36 PM

HRS AASHTO

1610

Complete Issue Information

Data File: Stringer1\Stringer\_1\BRASS\_LFD\Stringer\_1.DAT

-----  
Error No.: 1301

Type : Input Error

Location : zero.for

\*\*\*\* ERROR \*\*\*\*

Increment of load movement across span is still too small. Decrease wheel advancement denominator below 50.0 See LIVE-LOAD command 4th parameter. Program terminated

----- End of Contents of BRASS Error File -----

Any ideas??

FROM: Herman Lee DATE: 2/24/2010 11:10:11 AM Eastern Standard Time

Please try changing the wheel advancement input as suggested in the message (see attached screen capture).

FROM: Derek McDonagh DATE: 2/24/2010 11:45:19 AM Eastern Standard Time

That worked - Thanks for the screen shot, it helped out!

Issue ID: 9657  
Subject: "Generate at section change points" issue using BRASS LFD

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 2/25/2010 5:05:24 PM  
Modified By: hlee 10/15/2011 9:43:27 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug            |
|                 | Resolved |          | Bug - Export 1 |
|                 |          |          | Bug - BRASS    |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/25/2010 12:06:15 PM Eastern Standard Time  
Submitted on behalf of Tim Ambrecht, IL DOT.

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

Attached is a xml file for 040-0016. This structure is a multi-unit structure containing a 1-Span Welded Plate Girder & several spans of PPC I-beams. I've had an issue with the "Generate at section change points" option under the Member Alternative Description (control options tab). When this option is checked, Virtis is not calculating the rating at the section change points. In the attached xml file there is a 72" WPG with three top flange sections. I obtained 3 different results when experimenting with the different analysis options.

For the trials below I'm looking at Member "3 - 2nd W Int - x" of the Superstructure Definitions "Sp. 2: 1-Span WPG"

Trial 1) No points of interest entered. These are the options checked:

The Inv/Opr rating is 2.439/4.074, with the controlling rating @ 50% of the Span.

Trial 2) A point of interest entered at the location of the section change of the flange. The same options checked as above. The following error message appears:

It appears that this error message occurs when there is a point of interest located at section change points.

Trial 3) A point of interest entered at the location of the section change of the flange. These are the options checked:

The Inv/Opr ratings are 2.162/3.611, with the controlling rating @ 24.9% of the span. This is the location of the point of interest, which is the location of the section change of the flange. Based on these trials it appears that the "Generate at section change points" option is not calculating a rating at the section change points, or it is using the larger section at this location. If the "Generate at section change points" option is working properly I should get the same results for both Trials 1 & 3.

I have had this occur on several bridges, it doesn't appear to be something with this particular structure.

4/19/2016 3:07:37 PM

HRS AASHTO

1612

Complete Issue Information

Bob Perkins  
(217)557-5701  
Robert.Perkins@illinois.gov

=====

FROM: Tim Ambrecht DATE: 3/2/2010 3:12:22 PM Eastern Standard Time  
Another consultant of mine had a few things to add - Tim.

RE: Member Alternative, Control Options tab (LFD box) & Points of Interest; Example Virtis Model:  
POI\_Generation\_Errors-v61(0400016).xml

I have further investigated the issue that Bob Perkins presented in his email of February 25, 2010,  
Subject: Virtis Problem.

1. When a User-defined POI is specified at the same location (or w/in 0.12') as a section change (flange transition in this case) and, under Control Options, both the "Generate at section change points" and "...at user-defined points" are checked running the bridge model analysis returns an error w/the following text...

----- Contents of BRASS Error File -----

File: C:\Program  
Files\AASHTOWARE\VirtisOpis61\0400016\Span\_2\_WPG\3\_-\_2nd\_W\_Int-x\72\_\_WPG-  
Comp\_\BRASS\_LFD\72\_\_WPG-Comp\_.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: t-x\72\_\_WPG-Comp\_\BRASS\_LFD\72\_\_WPG-Comp\_.DAT

-----

Error No.: 2300  
Type : Structural Analysis Error  
Location : Data File  
The POI 0.0000 is not at a node point, adjust the POI so that it is.

-----

Error No.: 2300  
Type : Structural Analysis Error  
Location : Data File  
\*\*\*\* ERROR \*\*\*\* Points of interest must be within 0.12 feet of a node point location.  
Node point locations are 1/10 points, all range and cross section change locations, and user input POI locations.  
IMPORTANT When node points are generated, ones that are too close together (less than 0.12 feet) will be merged into one node point. The girder properties report turned on by a 1 in parameter one of the ANALYSIS command will report each generated node followed by girder properties.

----- End of Contents of BRASS Error File -----

and

Structural Analysis Errors (2300) - Analysis point and node point do not coincide  
From the line that starts with "IMPORTANT", it appears that the two definitions should be combined as one and analyzed w/o error. Even if that interpretation is wrong, it is not reasonable that a user defined POI at the same location as a system generated point should cause an analysis error.

In this example, but w/"Generate at user-defined points" unchecked, the same error occurs.

2. When "Generate at section change points" is checked and a user-defined POI is specified but not w/in 0.12' of the flange transition (and not 0.00 or at mid-span), the critical location for the load rating is at the flange transition (75.1% of span) with a truck Inventory RF of 2.154. After then unchecking "Generate at section change points" and specifying the flange transitions as User-defined

4/19/2016 3:07:37 PM

HRS AASHTO

1613



Complete Issue Information

POI's the results are the same. These results appear to be the correct ones.

3. When "Generate at section change points" is checked and no User-defined POI is specified, the critical location for the load rating is said to be at the midpoint (50%) of the span, with a lane Inventory RF of 2.439. This is in error. The correct value would be the same as in 2. Despite specifying that the system is supposed to analyze section change points it is only analyzing at the tenth points.

Tim Souther, PE  
%IDOT Local Bridge Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Brian Goodrich DATE: 4/17/2010 2:47:08 PM Mountain Daylight Time  
I revised the BRASS export files (BrassCmd.cpp and BrassEngineProperties.cpp) to address the issues. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/9/2010 1:18:52 PM Eastern Daylight Time  
Tested the XML file in this incident.  
Verified in 6.2 Beta 1.

FROM: Tim Armbrecht DATE: 6/21/2010 2:52:58 PM Eastern Daylight Time  
Appears to be working correctly. Accepted.

|                                              |
|----------------------------------------------|
| Issue ID: 9658                               |
| Subject: Misleading stringer rating results. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Lee, Herman             | 2/25/2010 5:24:15 PM  |
| Modified By: hlee                     | 10/15/2011 9:44:31 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Goodrich, Brian | Assigned | High     | Bug<br>Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | VI Channel Box Det GAB Beta 6.xml  |             |
|      | VI 9659 Beta 6.pdf                 |             |
|      | VI Channel Box Det GAB 16 July.zip |             |
|      | VI Channel Box Det GAB 26 Feb.zip  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 2/25/2010 12:24:41 PM Eastern Standard Time  
Submitted on behalf of Sal Mensah, TSIUUVARAS SIMMONS HOLDERNESS  
[sal.mensah@TSHengineering.com].

When you rate a floorbeam, the stringers sit on the floorbeam will get analyzed for stringer DL reactions. The wheel fraction used in these analyses are 1.0 and rating will be performed also. If you rate those stringers, the wheel fraction used will be the one entered by the user. The BRASS input and output files are available in the Analysis Output window, it is misleading to have different rating results.

To reproduce, rate Floorbeam2 and save a copy of the Unit1 Stringer 1 BRASS files. Rate Unit1 Stringer 1 and compare the BRASS files with those saved.

FROM: Brian Goodrich DATE: 5/12/2010 9:20:01 AM Mountain Daylight Time  
I'm able to duplicate the issue reported by the user. In the export, I found the source code that sets the wheel fraction to 1.0 when the stringer is analyzed just to obtain dead load reactions to the floorbeam.

Issue ID: 9659

Subject: Truss Channel Box deterioration issues

Folder: /Virtis/Support Center/Virtis

Primary Contact: Thogaru, Srujana

Submitted By: Barnhill, Gale

2/26/2010 4:19:54 PM

Modified By: gbarnhill

10/13/2010 8:40:41 PM

4/19/2016 3:07:37 PM

HRS AASHTO

1615

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Colgrove, George | Assigned |          | Support  |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 2267700.xml             |             |
|      | Truss Error Message.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 2/26/2010 11:30:05 AM Eastern Standard Time

This is related to VI9643.

In this model (truss VI Channel Box Det), I coded deterioration to compression members that are Channel Box shapes with a top flange plate.

If I code only deterioration on the top flange (see U1U2), there are no changes in section properties.

If I code only deterioration to the left channel web (see U2U3), the section properties of the right channel are also changed. (same with only right channel web-U3U4)

If I code the top flange and a channel web (see U4U5), then the top flange properties are changed.

I can get the top flange only properties to change if I code a channel web with zero deterioration (see U5U6).

I also found out that the top flange only code MUST be at the end of the command set or I get a verification error (that's why U1U2 is last).

FROM: George Colgrove DATE: 3/3/2010 8:46:08 AM Eastern Standard Time

I just worked with U2U3. I changed the deterioration values to 0 for depth and 0 for width. This should yield the exact same results with having no deterioration entered. Area, Y, AY and AY^2 are all the same. However, the values for Izz and Iyy are all off. Somehow the engine is changing the core shape section properties regardless of the values entered.

- George

4/19/2016 3:07:37 PM

HRS AASHTO

1616

Complete Issue Information

FROM: Xinmei Li DATE: 4/21/2010 9:32:09 AM Eastern Daylight Time

Incident summary:

For problems reported in section properties (U1U2,U2U3, U3U4, U4U5, U5U6), there's a defect in deterioration area calculation in channel box sections.

For verification error, I can't reproduce.

Workaround:

There is no workaround now.

Resolved for:

6.2 release

FROM: Herman Lee DATE: 5/9/2010 1:19:26 PM Eastern Daylight Time

Verified in 6.2 Beta 1.

FROM: Gale Barnhill DATE: 7/6/2010 10:49:26 AM Eastern Daylight Time

I've imported the model into Virtis 6.2 Beta 3.

The Top Plate deterioration is now correctly applied.

Now there is no deterioration applied to the Channels for any variation of input.

FROM: Gale Barnhill DATE: 7/16/2010 12:35:52 PM Eastern Daylight Time

I've installed Beta 4 with July 16 updates.

I've attached a new model with deterioration issues.

Channel Box Top Flange Plate Deterioration coded

U2U3

Deterioration

TopFlangePlate

1 50 0 U2 0 1

Virtis Result = 50% of thickness x 100% of width = ½ total plate area -- OK

Channel Box Channel Web and TopFlange Deterioration coded

U3U4

Deterioration

Channels

Left Web 50 0 U3 0 1

Left TopFlange 50 0 U3 0 1

Virtis Result = No area reduction for either Web or Flange

Channel Box Channel Web and TopFlange Deterioration coded

U4U5

Deterioration

Channels

Left Web 50 99 U4 0 1

Left TopFlange 50 99 U4 0 1

Virtis Result = 50% of thickness x 99% of width = nearly ½ of element area

Why doesn't the same input method as for TopFlangePlate work ??

HOWEVER – Now the calculations for Top Flange Plate and the Channel not deteriorated are bogus.

4/19/2016 3:07:37 PM

HRS AASHTO

1617

Complete Issue Information

Channel Box Channel BottomFlange Deterioration coded  
U5U6

Deterioration

Channels

Left TopFlange 50 99 U5 0 1

Right BottomFlange 50 99 U5 0 1

Virtis Result = Top Flange Plate calculations are OK, Channel TopFlange calculations are OK (11.8 total area minus 1.13 = 10.67), Channel BottomFlange calculations show 2 times the area has been deducted (11.8 total area minus 1.13 x 2 = 9.54).

FROM: Srujana Thogaru DATE: 8/13/2010 9:02:34 AM Eastern Daylight Time

Error in the code fixed to report deteriorated Area for U3U4 and to report correct area for Channel Bottom Flange.

Tested for all above mentioned issues and found be yielding corrected results.

Resolved for: 6.2 Beta Build 6

FROM: Gale Barnhill DATE: 9/7/2010 3:54:11 PM Eastern Daylight Time

I've tested this in Beta 6 and still find errors in the section property calculations.

See the attached screen shot and comments.

I also attached my Beta 6 model.

It appears that the value of "AY^2" for Channel 1 is repeated for Channel 2 even though "AY" is different.

I highlighted this for U3U4, but the same is true for U4U5 and U5U6.

I also see that "Iyy Self" increased for Channel 1 of U3U4 which has the deteriorated web.

FROM: Srujana Thogaru DATE: 9/13/2010 12:43:46 PM Eastern Daylight Time

Fixed for 6.2 beta build 7

Workaround:

Code corrected to report correct AY^2 value for channel 2 and note has been added to VirtisTrussCommandLanguage.pdf (6.19.2), to explain the increase in the Iyy self for rolled sections i.e

6. Component self section properties for deteriorated rolled sections are recalculated using approximated dimensions.

This may result in slightly higher section properties than the original non-deteriorated rolled section whose properties

are based on entries on the Beam Shapes-Properties Tab.

FROM: Gale Barnhill DATE: 10/13/2010 4:40:41 PM Eastern Daylight Time

I've reviewed this issue in 6.2.0 release version and am satisfied with the resolution.

Issue ID: 9660

Subject: Unable to compute floorbeam/floorsystem loads...

Folder: /Virtis/Support Center/Virtis

Primary Contact: Colgrove, George

4/19/2016 3:07:38 PM

HRS AASHTO

1618

### Complete Issue Information

|                               |                     |
|-------------------------------|---------------------|
| Submitted By: McDonagh, Derek | 3/1/2010 2:59:14 PM |
| Modified By: gcolgrove        | 7/7/2011 2:09:52 PM |
| Priority: High                |                     |
| Category: Support             |                     |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Derek McDonagh DATE: 3/1/2010 10:09:17 AM Eastern Standard Time

I have a Girder/Floorbeam/Truss bridge in which the girders and floorbeams rate ok. The truss appears to be entered correctly but produces an error message indicating that VIRTIS is unable to compute floorbeam and floorsystem loads. Haven;t seen this error message before. How do I fix this one?? I have attached a pdf of the error message as well as the xml file. Thanks for the help!!

FROM: George Colgrove DATE: 3/3/2010 9:15:20 AM Eastern Standard Time

I changed the tolerance for in to 0.000100 from 0.000010. The analysis then ran.

George

FROM: Derek McDonagh DATE: 3/4/2010 10:59:31 AM Eastern Standard Time

Hi George,

I changed the tolerance, but that didn't work. I still get the same error message. Any other ideas??

Derek

FROM: George Colgrove DATE: 7/7/2011 6:34:26 AM Eastern Daylight Time

Looking deeper in this issue, there is a few tolerance issues that is preventing the bridge to run.

4/19/2016 3:07:38 PM

HRS AASHTO

1619

Complete Issue Information

1. The three spans are entered as 10.708333, 10.333333 and 10.708000 in the stringer definition.
  2. Total length as entered is 31.749666.
  3. The length of the stringers are entered as 10.749660 - short of what was entered.
  4. The x-coord for the lower nodes in the truss definition are entered as 10.70833, 21.04166 and 31.75 - does not line up with what was entered for girder spans.
  5. The length of truss in the superstructure definition is entered as 31.7499.
6. The distance from left edge to first stringer is 0.6116 and when added to the 8 stringer spaces of 1.9199 comes up short by 0.0006 ft.
7. The diaphragm location in the Structure Framing Plan Details are truncated.
- To first diaphragm it is 10.7083 rather than 10.708333 ft.
  - First diaphragm spacing is 10.3333 rather than 10.708333 ft.
  - Second spacing is 21.0416 rather than 21.041666
- I fixed the above data to comply (1-5) with the entered lengths in the stringer definition.
  - I fixed the data in the structure typical section so that the edge distance is 0.6119 rather than 0.6116 ft.
  - I fixed the diaphragm locations.

With the fixes, the entire structure ran in BRASS (VO6.0 and VO6.2). Every element produced ratings. The ratings from AASHTO engine (VO 6.3) produced similar ratings. This was a Data entry issue.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 9661                                           |
| Subject: Round computed modular ratio to nearest integer |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Kennelly, Krisha     |                     |
| Submitted By: Kennelly, Krisha        | 3/1/2010 3:58:35 PM |
| Modified By: hlee                     | 3/1/2010 9:49:00 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description                   |
|------|---------------------|-------------------------------|
|      |                     | Axle limit for BRASS LRFD.pdf |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 3/1/2010 10:58:56 AM Eastern Standard Time  
For concrete structures, Opis LRFD/LRFR engine should round computed values of n to the nearest integer as per LRFD Art. 5.7.1.

FROM: Krisha Kennelly DATE: 3/1/2010 12:40:42 PM Eastern Standard Time  
Code changed in abanspec and abaspecctrl.

|                                    |
|------------------------------------|
| Issue ID: 9664                     |
| Subject: Axle limit for BRASS LRFD |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Horton, Doug            | 3/3/2010 3:31:04 PM |

4/19/2016 3:07:38 PM

HRS AASHTO

1621



Complete Issue Information

|                       |                       |
|-----------------------|-----------------------|
| Modified By: hlee     | 10/15/2011 9:41:35 PM |
| Priority: High        |                       |
| Category: Bug - BRASS |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 06105 - 24-02-8874.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/3/2010 10:31:21 AM Eastern Standard Time  
 Submitted on behalf of Doug Horton, VDOT.

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====  
 From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]  
 Sent: Wednesday, March 03, 2010 9:50 AM  
 To: Duray, Jim  
 Subject: RE: LRFR and BRASS

It's supposed to be 80 now that we are not writing trucks to the BRASS vehicle library file. I'll check the export to see why this is happening.  
 Brian

-----  
 From: Duray, Jim [mailto:JDURAY@mbakercorp.com]  
 Sent: Tuesday, March 02, 2010 2:39 PM  
 To: Goodrich@BridgeTech-Laramie.com  
 Subject: FW: LRFR and BRASS

Complete Issue Information

Importance: Low

What is the axle limit for BRASS LRFD?

From: Horton, Douglas L., P.E. [mailto:Douglas.Horton@VDOT.Virginia.gov]  
Sent: Tuesday, March 02, 2010 4:36 PM  
To: Vannoy, Scott  
Cc: Duray, Jim; Mallard, Jonathan C., P.E.  
Subject: LRFR and BRASS  
Importance: Low

Scott,  
I know you said (or someone did) that BRASS now allows 80 axles. Is this for Non-standard gage?  
Please see the error message below from 6.1.

Is there a specific setting we need to add or change?

Doug L. Horton, P.E.  
Virginia Department of Transportation  
Structure and Bridge Division  
1401 E. Broad Street  
Richmond, Virginia 23219

mailto:Douglas.Horton@VDOT.Virginia.gov

=====

FROM: Brian Goodrich DATE: 4/17/2010 2:50:04 PM Mountain Daylight Time  
I corrected the maximum number of axles allowed for LRFD. The BRASS library-based maximum was being used instead of the command-based maximum. See BrassLrfdVehicleExport.cpp. Fixed for version 6.2.

FROM: Herman Lee DATE: 5/9/2010 1:21:21 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 9665<br>Subject: Haunch thickness error when calculating section properties. |
|----------------------------------------------------------------------------------------|

|                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Lee, Herman<br>Submitted By: Colgrove, George 3/3/2010 7:16:59 PM<br>Modified By: hlee 5/9/2010 5:29:54 PM<br>Priority: High<br>Category: Bug |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

4/19/2016 3:07:38 PM

HRS AASHTO

1623

Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MP119.28.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Colgrove DATE: 3/3/2010 2:19:24 PM Eastern Standard Time  
 I agree. I am more concerned we don't get G1=G5 and G2=G3=G4 than I am about exactly matching BRASS.

Did the user enter DF or are they calculated by BRASS/Virtis?

From: Kennelly, Krishna  
 Sent: Wednesday, March 03, 2010 10:16 AM  
 To: Colgrove, George  
 Cc: Duray, Jim  
 Subject: RE: Virtis LRFR engine

I suggest investigating the distribution factors to see why Opis doesn't produce the same RF for G1-G5 and G2-G3-G4

From: Bridgeware,  
 Sent: Wednesday, March 03, 2010 10:13 AM  
 To: Kennelly, Krishna  
 Cc: Duray, Jim  
 Subject: FW: Virtis LRFR engine

I know it is reasonable that the two engines would not produce the exact values. These are the section property from each engine:

Virtis LRFD:  
 NA From Bot of Beam = 35.25 (in)  
 NA From Top of Slab = 17.63 (in)  
 Moment of Inertia = 369834.88 (in^4)  
 Slab Top Section Modulus = 25690.91 (in^3)  
 Beam Top Section Modulus = 37934.90 (in^3)  
 Beam Bot Section Modulus = 10491.53 (in^3)

Complete Issue Information

BRASS LRFD:

Input Parameters:

$$I = 375759.938 \text{ in}^4$$

Section Moduli Summary: (Gross Cross Section)

| Location | c, in   | n     | S, in <sup>3</sup> |
|----------|---------|-------|--------------------|
| CSLB     | 17.858  | 0.812 | -25905.631         |
| CTOP     | 9.594   | N/A   | -39164.332         |
| CBOT     | -35.406 | N/A   | 10613.021          |

These are slight differences. The rating factors are also slightly difference (see below). Do you think the differences in the property sections could explain the differences in the rating factors?

George

From: Wampler, Danny  
Sent: Wednesday, March 03, 2010 9:00 AM  
To: Bridgeware,  
Subject: Virtis LRFR engine

I seem to have run into a problem with the Virtis LRFR engine. Below you will find rating results for a symmetrical cross section structure. You will notice that the RFs for the Brass LRFR or the Brass LFR engine gives ratings as expected. G1=G5, G2=G3=G4. The same is not true when the same file is run using the Virtis LRFR engine.

|              |               |
|--------------|---------------|
| Brass Engine | Virtis Engine |
| G1=1.382     | G1=1.375      |
| G2=1.030     | G2=1.102      |
| G3=1.030     | G3=1.102      |
| G4=1.030     | G4=1.087      |
| G5=1.382     | G5=1.392      |

Nothing in the files changed except the engine.  
What would be the reason for this?

I have also attached the .xml for your use if you need it. Thanks

Danny Wampler, PE  
Load Rating Engineer  
Production Management Division  
Structural Services

FROM: Herman Lee DATE: 3/4/2010 8:08:03 AM Eastern Standard Time  
George, could you attach the bridge XML file to this incident?

FROM: George Colgrove DATE: 3/4/2010 8:18:16 AM Eastern Standard Time  
The file is attached.

FROM: Herman Lee DATE: 4/18/2010 9:17:10 AM Eastern Daylight Time

4/19/2016 3:07:38 PM

HRS AASHTO

1625

Complete Issue Information

The difference in ratings between the two exterior girders and between the interior girders were caused by a defect in the determination of exterior or interior girder. There is no workaround for this defect in 6.1 Release.

Fixed in 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 1:29:28 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 9667                                          |
| Subject: Spec check for web with longitudinal stiffener |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 3/5/2010 7:04:05 PM  |
| Modified By: bgoodrich                | 5/18/2011 2:33:46 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Bug      |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/5/2010 2:04:57 PM Eastern Standard Time  
Submitted on behalf of Scott Cavanaugh, HNTB [SCavanaugh@HNTB.COM].

Complete Issue Information

The fascia girder has longitudinal stiffener along the whole length but BRASS LRFR Engine is checking 6.10.2.1.1 Web Without Longitudinal Stiffeners.

FROM: Brian Goodrich DATE: 4/18/2010 1:01:16 PM Mountain Daylight Time  
The requirements for checking if the section is compact are listed in Article 6.10.6.2.2, which include checking Article 6.10.2.1.1 even though a longitudinal stiffener is present. I suggest that a note be added to the output that indicates that this particular instance of the check is being done to check compactness. This should clarify why this check is performed. The check for Article 6.10.2.1.2 is done elsewhere.

I forwarded this issue to WYDOT for consideration with respect to the BRASS engine.

FROM: Brian Goodrich DATE: 5/18/2011 8:34:51 AM Mountain Daylight Time  
This issue was assigned to BRASS Problem Log 956.

FROM: Brian Goodrich DATE: 5/18/2011 8:35:20 AM Mountain Daylight Time  
The BRASS engine was revised to correct this issue. Fixed for BRASS-GIRDER(LRFD) Version 2.1.0. Fixed for Virtis 6.3.

|                                               |
|-----------------------------------------------|
| Issue ID: 9671                                |
| Subject: Superstructure Definition Won't Copy |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Armbrecht, Tim          | 3/11/2010 2:22:15 PM |
| Modified By: mordoobadi               | 6/18/2010 2:49:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ihnat, Joseph      | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Accepted |          |          |

Complete Issue Information

|        |
|--------|
| Closed |
|--------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Public No.065101 date<br>030310.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/11/2010 9:22:56 AM Eastern Standard Time  
Submitted on behalf of Tim Armbrecht, IL DOT:

=====

In the attached bridge model (BasculeSpstrDefCantCopy-v61(0160315).xml), the Superstructure Definition "S Bascule Leaf" cannot be copied.

Tim Souther, PE  
IDOT Local Bridge Unit

=====

FROM: Mehrdad Ordoobadi DATE: 5/17/2010 10:20:09 AM Eastern Daylight Time  
Reproducible in 6.2 Beta 1+.

FROM: Mehrdad Ordoobadi DATE: 5/18/2010 3:33:58 PM Eastern Daylight Time  
Fixed for Beta 2.

FROM: Tim Armbrecht DATE: 6/18/2010 10:15:29 AM Eastern Daylight Time  
Accepted.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 9685                                                |
| Subject: Questions on BRASS output related to Cracking Moment |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Goodrich, Brian         | 3/24/2010 9:05:15 PM |
| Modified By: hlee                     | 7/15/2010 4:45:04 PM |

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Support |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | LLDFLeverRuleWrong-v61<br>(0810040).xml |             |
|      | Memo Style.pdf                          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 3/24/2010 3:05:16 PM Mountain Daylight Time

Submitted for user:

We are using Virtis to rate NEBT Pre-stressed concrete beam, in the output file there are warnings as the following.

"PERFORMING BASIC MECHANICS OF MATERIALS - Cracking Moment of a Composite Section [per AASHTO LRFD Appendix 6.2]

Point of Interest : 104.00

Construction Stage: 2

\*\* WARNING: The section has already cracked due to the loads of the previous stage(s).  
Therefore, M<sub>cr</sub> was set to zero. The engineer should review carefully. "

4/19/2016 3:07:39 PM

HRS AASHTO

1629



Complete Issue Information

We went through the intermediate stress and calculations of VIRTIS run, find out the VIRTIS calculated crack beam top flange moment MAD is negative at the stage before concrete deck dead load is applied( meant section has no crack moment capacity left for other loads?). But we also found out the calculated stress of beam top flange for that stage is still under compression. We are not sure what the warning mean? And what we should look for the warning.

Thanks

Yihui Peter Wu, P.E. Ph.D.

Maguire Group Inc.  
225 Chapman St.  
Providence, RI 02905  
Tel. 401-272-6000 Ext. 260  
Fax. 401-272-9185  
ywu@Maguiregroup.com

FROM: Brian Goodrich DATE: 3/24/2010 3:41:34 PM Mountain Daylight Time  
The warning you are seeing is not typical. It means just what you wrote: "section has no crack moment capacity left for other loads."

We recently fixed an error in the BRASS engine's concrete module related to the cracking moment. I'd like to get your bridge, run it with the latest development version of BRASS, and check if the warning is still issued. Please send me your bridge XML file.

FROM: Herman Lee DATE: 3/25/2010 10:52:16 AM Eastern Daylight Time  
Request for information e-mail sent to user on 3/24/10.

FROM: Brian Goodrich DATE: 5/3/2010 10:18:52 AM Mountain Daylight Time  
I attached the XML file (Public No.065101 date 030310.xml) submitted by the user. I ran this file with the latest version of BRASS. There are no longer any crack control warnings in any of the intermediate output files. Fixed for version 6.2.

Issue ID: 9687  
Subject: Incorrect LL Dist. Calculation

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Armbrecht, Tim 3/25/2010 1:35:45 PM  
Modified By: xli 5/13/2011 2:55:27 PM  
Priority: High  
Category: Bug

4/19/2016 3:07:40 PM

HRS AASHTO

1630

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Bug      |
|                 | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | 62 Computed Stringer Reactions.png |             |
|      | no stage 2.png                     |             |
|      | 00118 - 34134044000B014 1.xml      |             |
|      | stringer stage 2.png               |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 3/25/2010 9:39:36 AM Eastern Daylight Time  
From my consultant (Souther):

Virtis is incorrectly calculating the 1-Lane LL Distribution factor for Shear at Supports for the attached bridge model (LLDFLeverRuleWrong-v61(0810040).xml). The subject Member is "B - 1st E Rdwy", which is the outermost roadway beam. The values are shown in the screen capture...(attached)

Notice that the 1-Lane Shear at Supports is greater than the Multi-Lane value, which is, of course, impossible. Hand calculations verify that the Multi-Lane value is correct.

As a side note, for rating of in-service bridges, the Shear and Moment LL distribution factors for outer roadway beams should always be based on the lever rule. This is in contrast to design of new superstructures, where the outer beam must be designed to at least the capacity of the interior beams, using the greater of S/5.5 or lever rule. When the superstructure is already in place, however, only the lever rule applies. For outer roadway beams, the Virtis Standard Distribution factor table should display the lever rule values for Shear, Shear at Supports and Moment.

FROM: Herman Lee DATE: 3/25/2010 9:50:00 AM Eastern Daylight Time  
Providing the option to select whether to use S/5.5 or lever rule for computing outer roadway beam's shear and moment LL distribution factors is an enhancement request.

4/19/2016 3:07:40 PM

HRS AASHTO

1631

Complete Issue Information

FROM: Xinmei Li DATE: 11/8/2010 2:41:26 PM Eastern Standard Time  
This is similar to incident 10041. Resolved for next release.

FROM: Jim Duray DATE: 2/28/2011 1:22:19 PM Eastern Standard Time  
Virtis crashes when I click the Compute button.

FROM: Srujana Thogaru DATE: 4/7/2011 6:43:57 PM Eastern Daylight Time  
Attached bridge has been tested using Beta 1 and found that the crash while using compute button for calculating Distribution factor has been fixed.

FROM: Bin Zhang DATE: 4/15/2011 1:38:39 PM Eastern Daylight Time  
Tested in 63Beta1, the DF computation has been fixed.

FROM: Tim Armbrecht DATE: 5/13/2011 9:50:09 AM Eastern Daylight Time  
Accepted.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 9712                                              |
| Subject: stringer not sending all DL reactions to floorbeam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 4/6/2010 9:50:56 PM  |
| Modified By: hlee                     | 4/7/2010 12:42:42 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:07:40 PM

HRS AASHTO

1632

Complete Issue Information

FROM: Beckie Curtis DATE: 4/6/2010 5:54:27 PM Eastern Daylight Time

In the attached structure, not all floorbeams are running. Looking at stringer unit 8, the DL for superimposed stage 1, haunch, and superimposed stage 2 are being calculated in the individual member alt, but that information isn't showing up in the computed stringer reactions.

FROM: Herman Lee DATE: 4/7/2010 6:56:16 AM Eastern Daylight Time

There's a defect in 6.1 for updating stringer DL reactions. As a result of this defect, the floorbeams that support those stringers cannot be analyzed.

This is a duplicate of Incident 8826 (Error preparing stringer dead load reactions for floorbeam). 8826 has been fixed and will be included in 6.2 Release. Attached is the Computed Stringer Reactions in 6.2 Alpha Build. A workaround is to override with user defined reactions in the Floorbeam Stringer Reactions window.

|                                                      |
|------------------------------------------------------|
| Issue ID: 9721                                       |
| Subject: permit loads for continuous structures, lfr |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Curtis, Beckie          | 4/12/2010 6:53:13 PM  |
| Modified By: hlee                     | 10/15/2011 9:42:40 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:07:40 PM

HRS AASHTO

1633

Complete Issue Information

|                 |                    |      |             |
|-----------------|--------------------|------|-------------|
| Lee, Herman     | New                | High | Bug         |
| Goodrich, Brian | Assigned           |      |             |
| Lee, Herman     | New                | High | Bug         |
| Goodrich, Brian | Assigned           |      |             |
|                 | Information Needed |      |             |
|                 | Assigned           |      |             |
|                 |                    |      | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 4/12/2010 2:54:55 PM Eastern Daylight Time  
6A.4.5.4.1 requires a .2klf lane load to be applied with the permit vehicle for negative moments and reactions of interior supports for continuous spans and also for long spans between 200 and 300-ft.

If the user adds the lane load, then it is accounted for. However, it also appears to be used in determining max positive moment which is not correct.

The lane load for the permit truck needs to be added by the user and is not automatically added by the analysis. I don't think it is obvious to the user what is happening.

FROM: Brian Goodrich DATE: 4/18/2010 2:05:25 PM Mountain Daylight Time  
With respect to BRASS, the limits on the long spans are not considered for permit loads. If a permit truck and lane are input, BRASS performs the analysis for all actions. I'll forward this to WYDOT.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 9722                                                             |
| Subject: legal loads for negative moment and reaction at interior supports |

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis             |
| Primary Contact: Goodrich, Brian                  |
| Submitted By: Curtis, Beckie 4/13/2010 2:54:03 PM |
| Modified By: hlee 10/15/2011 9:46:21 PM           |
| Priority: High                                    |
| Category: Bug - BRASS                             |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | br 709.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Beckie Curtis DATE: 4/13/2010 10:56:06 AM Eastern Daylight Time  
 Is there a workaround available to be able to use state specific legal loads according to 6A.4.4.2.1a, specifically with a lane load? I have tried but it doesn't seem to let me run a truck and lane load at the same time using legal load configuration, and I can't edit the AASHTO lane load configuration.

FROM: Herman Lee DATE: 4/13/2010 11:55:21 AM Eastern Daylight Time  
 I assume the question is for the BRASS LRFR Engine. The AASHTO LRFR Engine will use the entered lane load and combine with the truck load for analysis.

FROM: Beckie Curtis DATE: 4/13/2010 5:07:30 PM Eastern Daylight Time  
 Yes, the question was for a steel bridge and so Brass was being used. I don't have any continuous prestressed so I didn't check AASHTO LRFR.

FROM: Brian Goodrich DATE: 4/18/2010 2:35:15 PM Mountain Daylight Time  
 The lane-type legal loads are ignored if the spans are less than 200 ft. Please attach a screenshot of the error you are getting.

Complete Issue Information

FROM: Herman Lee DATE: 5/6/2010 4:49:39 PM Eastern Daylight Time  
Information Needed E-mail sent on 5/6/10.

FROM: Herman Lee DATE: 5/7/2010 3:37:57 PM Eastern Daylight Time  
Beckie Curtis e-mail to Brian Goodrich on 5/7/10.

=====  
This is for a continuous span, which is less than 200-ft but is still required to have the lane load.  
=====

Issue ID: 9739  
Subject: Zero rating / effective width

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Onysko, Jim 4/16/2010 7:47:12 PM  
Modified By: hlee 4/16/2010 9:13:25 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Onysko DATE: 4/16/2010 3:52:42 PM Eastern Daylight Time  
The fascial beams (G1 & G10) for the attached project are returning zero's for rating values and rating factors under LRFR. This appears to be related somehow to effective flange width. When the correct width (50") is either input or automatically computed by Virtis, the zero ratings are returned. By trial & error I have found that an effective width of 59.17" or greater will return "normal" rating results. Please

4/19/2016 3:07:41 PM

HRS AASHTO

1636

Complete Issue Information

help.

FROM: Herman Lee DATE: 4/16/2010 4:06:57 PM Eastern Daylight Time

When the effective flange width is 50", LRFD 6.10.7.3 failed in some analysis points. The flexural resistance at those points are zero. Please double check the input, especially the input loads, for the fascia beams.

|                                        |
|----------------------------------------|
| Issue ID: 9740                         |
| Subject: Zero rating / effective width |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Onysko, Jim             | 4/19/2010 1:46:19 PM |
| Modified By: hlee                     | 7/13/2010 6:59:38 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Goodrich, Brian | Information Needed |          | Support  |
|                 | Closed             |          |          |

4/19/2016 3:07:41 PM

HRS AASHTO

1637



Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 200153174_Error.docx |             |
|      | 200153174.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Onysko DATE: 4/19/2010 9:49:41 AM Eastern Daylight Time  
Please see below. Input double checked. Still zero results. Now what?

FROM: Jim Onysko DATE: 4/16/2010 3:52:42 PM Eastern Daylight Time  
The fascial beams (G1 & G10) for the attached project are returning zero's for rating values and rating factors under LRFR. This appears to be related somehow to effective flange width. When the correct width (50") is either input or automatically computed by Virtis, the zero ratings are returned. By trial & error I have found that an effective width of 59.17" or greater will return "normal" rating results. Please help.

FROM: Herman Lee DATE: 4/16/2010 4:06:57 PM Eastern Daylight Time  
When the effective flange width is 50", LRFD 6.10.7.3 failed in some analysis points. The flexural resistance at those points are zero. Please double check the input, especially the input loads, for the fascia beams.

FROM: Herman Lee DATE: 4/19/2010 9:54:13 AM Eastern Daylight Time  
We need more information on what you disagree with. Have you reviewed the BRASS output at the critical location? Do you agree with the failed LRFD 6.10.7.3 check when the effective flange width is 50"? If you disagree any of the checks or calculations, please attach the hand calculations for us to investigate. Thanks.

FROM: Herman Lee DATE: 7/7/2010 3:31:21 PM Eastern Daylight Time  
Information Needed E-mail sent on 7/7/10.

FROM: Jim Onysko DATE: 7/13/2010 1:45:01 PM Eastern Daylight Time  
This issue has been resolved, so you can close it. Thanks.

FROM: Herman Lee DATE: 7/13/2010 2:57:36 PM Eastern Daylight Time  
Status changed to Closed.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 9765                                                                           |
| Subject: Continuous Steel Plate Girder Bridge won't rate (unable to determine web depth) |

4/19/2016 3:07:41 PM

HRS AASHTO

1638

## Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Doerr, Gary             | 4/21/2010 2:40:52 PM  |
| Modified By: gdoerr                   | 4/27/2010 12:20:19 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Virtis_Truss.xml    |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Gary Doerr DATE: 4/21/2010 10:46:39 AM Eastern Daylight Time

This three span steel plate girder bridge will not rate. I've tried various tolerance changes to no avail. I've attached the error statements and the Bridge file. Gary

FROM: Herman Lee DATE: 4/23/2010 12:52:56 PM Eastern Daylight Time

Gary, I'm able to rate both G1 and G2 using the system default tolerance settings (0.001 for ft and 0.00001 for in). Please see whether these settings are acceptable and you are able to rate the girders with these settings.

FROM: Gary Doerr DATE: 4/27/2010 8:20:19 AM Eastern Daylight Time

Thank you Herman, that worked. I was taking the tolerance the opposite way and getting the errors. Thanks again,

Gary

4/19/2016 3:07:41 PM

HRS AASHTO

1639

Complete Issue Information

Issue ID: 9790  
Subject: Unable to generate symmetrical members with even option

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Lee, Herman 4/23/2010 6:19:20 PM  
Modified By: sthogaru 3/30/2011 8:32:52 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/23/2010 2:20:08 PM Eastern Daylight Time  
Submitted on behalf of John Wertan, TranSystems (jwwertan@transystems.com).

Received Bridgewater e-mail:

=====  
Hello,

4/19/2016 3:07:42 PM

HRS AASHTO

1640

Complete Issue Information

I'm trying to run a four span, 42 panel point truss on VIRTIS using the symmetry command. The data has been input for even symmetry with two roller supports (the first, second, and forth support are actually rollers and the third is pinned). When I try to verify the data I get two validation errors:

VALIDATION\_ERROR: Error generating symmetrical members...  
VALIDATION\_ERROR: Unable to generate symmetrical truss data...

However, if I change the symmetry to odd it works but the truss now differs from what I actually want to model. I've tried changing support conditions which hasn't helped and I've rechecked the coding to make sure the panel points and members are correct.

Could you please give me some guidance as to what these errors mean exactly and possible ways to alleviate the problem.

Thanks,

John W. Wertan  
=====

FROM: Herman Lee DATE: 4/26/2010 7:39:34 AM Eastern Daylight Time  
We investigated but unable to locate a solution in 6.1. The workaround in 6.1 is to model the whole truss.

FROM: Xinmei Li DATE: 11/8/2010 12:22:39 PM Eastern Standard Time  
When generating mirrored panel points M13 was missed. It was due to a code change for incident 8945.  
Resolved for the next release.

FROM: Srujana Thogaru DATE: 3/30/2011 4:22:38 PM Eastern Daylight Time  
Verified - Tested with 6.3 Alpha 6

Issue ID: 9802  
Subject: AASHTO Engine: Report shear ratings in Rating Summary.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lathia, Hasmukh  
Submitted By: Lee, Herman 4/26/2010 9:41:49 PM  
Modified By: hlee 7/26/2011 4:56:50 PM  
Priority: High  
Category: Enhancement

History

4/19/2016 3:07:42 PM

HRS AASHTO

1641

### Complete Issue Information

| Primary Contact    | Status    | Priority | Category    |
|--------------------|-----------|----------|-------------|
| Lathia, Hasmukh    | Suspended | High     | Enhancement |
| Lee, Herman        | New       | High     | Bug         |
| Ordoobadi, Mehrdad | Assigned  |          |             |
|                    | Resolved  |          |             |
|                    | Verified  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Virtis Std screen.png |             |
|      | 80023-B01-3.xml       |             |
|      | BRASS screen.png      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 4/26/2010 5:42:23 PM Eastern Daylight Time  
Submitted on behalf of Scott Cavanaugh, HNTB [SCavanaugh@HNTB.COM].

Currently, only critical and moment ratings are reported in Rating Summary.

FROM: Herman Lee DATE: 6/9/2011 10:02:55 AM Eastern Daylight Time  
As requested by the TAG (April 2011), change this request from Virtis Std Engine to AASHTO Engine.

FROM: Herman Lee DATE: 7/26/2011 12:50:22 PM Eastern Daylight Time  
This is the New Detailed LFR Report in the scheduled Virtis 6.4 release in 2012.

## Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 9831                                          |
| Subject: Shear at support reinforced beam in Virtis Std |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Curtis, Beckie          | 4/29/2010 3:15:57 PM |
| Modified By: bzhang                   | 5/12/2011 8:32:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Kennelly, Krishna | Assigned | High     | Bug      |
|                   | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 75.58NO.xml         |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Beckie Curtis DATE: 4/29/2010 11:33:42 AM Eastern Daylight Time  
See the attached screen shots. The Virtis Std dead load at support 0.0 seems to be zero. BRASS dead load at support doesn't have this problem. I ran HS-20 over interior beam.

FROM: Mehrdad Ordoobadi DATE: 4/6/2011 9:02:43 AM Eastern Daylight Time  
Fixed in 6.3 Beta 1.

FROM: Bin Zhang DATE: 5/12/2011 4:25:54 PM Eastern Daylight Time  
Verified in beta2 with dll updates by May 12th.  
And the AASHTO DL matched the BRASS for shear.

4/19/2016 3:07:42 PM

HRS AASHTO

1643

Complete Issue Information

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 9836                                                       |
| Subject: Fatal error while computing prestress losses in Virtis LRFR |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Lee, Herman             | 4/29/2010 5:44:41 PM  |
| Modified By: kkennelly                | 10/18/2010 1:19:01 AM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/29/2010 1:45:04 PM Eastern Daylight Time  
Submitted on behalf of Scott Cavanaugh, HNTB [SCavanaugh@HNTB.COM].

4/19/2016 3:07:42 PM

HRS AASHTO

1644

Complete Issue Information

Received Bridgeware e-mail:

=====  
Herman,  
Unfortunately I have looked through the entire model again and cannot find the cause of the problem.  
The error message I am getting is:

“Missing data in article 5.9.5.1 Total loss of prestress. Fatal error while computing prestress losses.”

I have tried inputting values in the few locations with missing info, but it has had no effect on the run.

Any insight would be greatly appreciated.

Thanks  
Scott

=====  
FROM: Krisha Kennelly DATE: 4/30/2010 11:46:09 AM Eastern Daylight Time  
I'm looking into this. Doesn't appear to be a missing input problem, suspect it is a source code problem.

FROM: Krisha Kennelly DATE: 6/23/2010 11:03:39 AM Eastern Daylight Time  
Programmer note: same as 9935. Need a tolerance when comparing spec check domain locations when setting stage tables.

FROM: Krisha Kennelly DATE: 10/17/2010 8:37:48 PM Eastern Daylight Time  
Attached bridge runs to completion in 6.2 release. The fix to 9935 fixed this problem but it was incorrectly not marked as resolved for 6.2.

Issue ID: 9848  
Subject: AASHTO Engine should determine single or multi lane loaded based on the superstructure definition.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 4/30/2010 7:03:53 PM  
Modified By: hlee 5/9/2010 5:02:03 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |

4/19/2016 3:07:43 PM

HRS AASHTO

1645



Complete Issue Information

|          |
|----------|
| Resolved |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | T0672.xml                |             |
|      | 7-13-2010 3-49-18 PM.png |             |
|      | VirtisSaveError.png      |             |
|      | A0181.xml                |             |
|      | VirtisSaveError2.png     |             |
|      | 7-13-2010 3-44-20 PM.png |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/30/2010 3:04:11 PM Eastern Daylight Time  
Submitted on behalf of Scott Cavanaugh, HNTB [SCavanaugh@HNTB.COM].

In 6.1, AASHTO Engine will always use multi lane distribution factors unless Single Lane Loaded is checked in the Vehicle properties window.

FROM: Herman Lee DATE: 5/2/2010 7:41:07 PM Eastern Daylight Time  
Fixed for the 6.2 Release.

FROM: Herman Lee DATE: 5/9/2010 1:02:03 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                     |
|-------------------------------------|
| Issue ID: 9860                      |
| Subject: Unable to Save Bridge Data |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                                     |                     |
|-------------------------------------|---------------------|
| Primary Contact: Ordoobadi, Mehrdad |                     |
| Submitted By: Koenig, David         | 5/3/2010 2:52:10 PM |
| Modified By: mordoobadi             | 6/8/2011 6:27:41 PM |
| Priority: High                      |                     |
| Category: Support                   |                     |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Koenig DATE: 5/3/2010 11:05:45 AM Eastern Daylight Time

Our raters have ran into this issue multiple times since converting to 6.1. Most commonly it occurs when the rater deletes a structure definition and copies a new one to replace it. The rater, then, cannot save. T0672 is an example. In another instance, the rater could not save after checking ignore shear. A0181 is an example. I have attached the xmls for these files along with some screen captures. Unfortunately, the xmls will probably not help. After exporting and importing both of these bridges I no longer have the problem. Thus, we may have a database problem. We did have difficulties converting over to 6.1. I wonder if Incident 9644 is related.

FROM: Mehrdad Ordoobadi DATE: 6/22/2010 9:26:18 AM Eastern Daylight Time

I tried to duplicate these issues in the current development version 6.2 but I am not able to reproduce these save issues. If you would like us to investigate these issues further, we would need to get a copy of your database.

FROM: Herman Lee DATE: 7/7/2010 3:33:52 PM Eastern Daylight Time

Information Needed E-mail sent on 7/7/10.

FROM: David Koenig DATE: 7/7/2010 4:45:10 PM Eastern Daylight Time

A copy of the database was sent to Mehrdad on June 22. On July 1, he indicated that he was having

4/19/2016 3:07:43 PM

HRS AASHTO

1647

## Complete Issue Information

some problems importing the database. Our IS person responded to the July 1 email asking Mehrdad to call him to discuss the import issue. If you are still having problems with the database that we sent, then please call Randy Rademan at (573) 522-3435. He does the Oracle setup of our database.

FROM: Mehrdad Ordoobadi DATE: 7/13/2010 11:52:09 AM Eastern Daylight Time  
Got another Oracle database export file from Randy and was able to import. Currently investigating the save issue.

FROM: Mehrdad Ordoobadi DATE: 7/13/2010 2:38:55 PM Eastern Daylight Time  
Using a copy of your production database I have not been able to reproduce the problem. If you are able to reproduce the issue, could you please provide step by step instructions on how to re-produce the problem.

FROM: Mehrdad Ordoobadi DATE: 7/13/2010 3:57:35 PM Eastern Daylight Time  
From: Ordoobadi, Mehrdad  
Sent: Tuesday, July 13, 2010 3:57 PM  
To: 'David.Koenig@modot.mo.gov'  
Cc: Randy.Rademan@modot.mo.gov; John.Gahagan@modot.mo.gov; Aaron.Kemna@modot.mo.gov; Chad.Daniel@modot.mo.gov; Duray, Jim  
Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority requires additional information.

Hello David,

I got the database from Randy. I used that database to try to reproduce the problem that you have reported in issue 9860 but I have not been able to reproduce the problem. If you are still able to reproduce the issue, could you please provide step by step instructions on how to re-produce the problem.

I have noticed a potential cause of the problem in the data in your database but unfortunately the same data did not cause save problem on our system . There are values in some fields in the database table `abw_conc_beam_def` that have many significant digits (see the screenshot attached), that the Virtis/Opis system may not be able to handle. This is consistent with your description of the problem that bridge save fails after the ignore shear is checked. But as I said before I cannot reproduce this issue on my system. This problem in data may or may not be the real cause of the problem, if we cannot reproduce the problem based on the detailed instructions that you will give us, I can provide a database script that will reduce the accuracy of (round) the double precision fields in table `abw_conc_beam_def`.

The field marked in the attached screenshot of data in Oracle database comes from the Member Alternative window (stored in KN/m): See attached.

I think the reason that we can't reproduce the problem may be that your Oracle database software is installed on an AIX server and we are trying it on Windows.

Thanks,  
Mehrdad

FROM: Aaron Kemna DATE: 7/15/2010 2:58:41 PM Eastern Daylight Time

4/19/2016 3:07:43 PM

HRS AASHTO

1648

Complete Issue Information

Yes, we are still getting the errors.

For T0672, delete structure definition 3, copy definition 1 to 3 and try to save. For A0181, just check ignore shear for any member alternative and try to save. Understand that these steps won't necessarily create the error for all structures, especially the ignore shear. One common thread seems to be that these files have multiple structure definitions.

FROM: Aaron Kemna DATE: 9/28/2010 2:15:42 PM Eastern Daylight Time

I found some additional information. For both bridges mentioned above (RC), changing one of these options in the Control Options will cause the saving error; LRFD Shear Computation Method, LRFR Shear Computation Method. Checking one of these options caused the error; Ignore design & legal load shear, Ignore permit load shear, Consider permit load tensile steel stress, LFD - Ignore shear. I then looked at two P/S girder bridges (A7623 & A7662) & got the saving error with the following options; LRFD Shear Computation Method, LRFR Shear Computation Method, Ignore design & legal load shear, Ignore permit load shear, Consider permit load tensile steel stress. I did not get the error when I checked the Consider legal load tensile steel stress which is not a RC option. Also, I did not get the error when I switched the LFD Shear Computation Method from Ignore to another option. For a steel bridge I did not find any issues with the control options. The P/S bridges are single structure definitions so the multiple definitions theory is busted other than these are the bridges where we have the copying and saving error.

FROM: Aaron Kemna DATE: 11/18/2010 3:06:28 PM Eastern Standard Time

We migrated our databases to 6.2. We are still getting the exact same saving errors. We need a solution.

FROM: Aaron Kemna DATE: 1/31/2011 3:47:34 PM Eastern Standard Time

We are no longer getting the saving error, but another problem is occurring. We recently updated our ODBC oracle software to the latest version (1020). This step was missed during previous version upgrades to Virtis. After the upgrade, the saving issue was fixed, but we are getting a large amount of Virtis crashes. I have another incident for the crashes.

FROM: Mehrdad Ordoobadi DATE: 2/16/2011 8:40:53 AM Eastern Standard Time

Issue 10343 is reported by Aaron Kemna related to the crashes after upgrading the ODBC driver.

FROM: Mehrdad Ordoobadi DATE: 2/16/2011 8:47:15 AM Eastern Standard Time

Marked resolved since the save errors do not happen any more.

|                                            |                     |
|--------------------------------------------|---------------------|
| Issue ID: 9886                             |                     |
| Subject: LRFR Condition and System Factors |                     |
| Folder: /Virtis/Support Center/Virtis      |                     |
| Primary Contact: Lee, Herman               |                     |
| Submitted By: Campisi, Paul                | 5/5/2010 4:00:29 PM |
| Modified By: pcampisi                      | 5/6/2010 9:06:50 PM |
| Priority: High                             |                     |
| Category: Support                          |                     |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | New      | High     | Support     |
|                 | Assigned |          | Third Party |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                   | Description                                     |
|------|---------------------------------------|-------------------------------------------------|
|      | 37C0074SSpanTabResultsApr_26_2010.doc | PS I 2'_3 Girder B Properties Virtis Output.doc |
|      | PS I 2'_3 Girder B Properties.pdf     |                                                 |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 5/5/2010 12:14:52 PM Eastern Daylight Time

How are the LRFR Condition and System Factors revised in Virtis? As an example, you want to change the Condition Factor for "Poor" from 0.85 to 0.95.

Paul Campisi  
New York State DOT  
Office of Structures  
Load Rating Unit

FROM: Herman Lee DATE: 5/5/2010 12:28:49 PM Eastern Daylight Time

The Condition Factor for each category (Good, Fair and Poor) cannot be changed by the user. When Poor is selected, Virtis will use 0.85 internally. System Factor is the same, the value for each category cannot be changed by the user.

Please let us know if you want to switch this to an enhancement request.

FROM: Paul Campisi DATE: 5/6/2010 5:06:50 PM Eastern Daylight Time

Yes. We would like to have the option of defining the values associated with the Condition and System Factor categories.

---

4/19/2016 3:07:44 PM

HRS AASHTO

1650

### Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 9888                                  |
| Subject: Brass Composite PS I girder properties |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Goodrich, Brian         | 5/5/2010 5:06:40 PM    |
| Modified By: hlee                     | 10/15/2011 10:38:15 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Support  |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 5/5/2010 11:07:35 AM Mountain Daylight Time  
E-mail submitted by Jim Randall via Brian:

Attached are copies of girder and composite girder brass properties and other associated hand calculation information. I am in a checking phase of the output for the simple span prestressed girder bridge. Shear and Concrete Tension appear to be controlling the rating. Dead load and Live Load moments appear close enough. I have not looked carefully at the details of the shear rating using hand calculations.

My current question concerns the composite section properties that have yellow background highlight ... and modification of the deck width adjusted by n for computation of area, moment of inertia and distance to centroid ... how can I see the details of these modifications and the basis in specification for this adjustment? N for the prestressed steel and concrete was input but the deck concrete and rebar n was not input and I assume this value was calculated by the analysis?

4/19/2016 3:07:44 PM

HRS AASHTO

1651

Complete Issue Information

I will not be in the office tomorrow but will check at home. Thanks Jim Randall

FROM: Brian Goodrich DATE: 5/5/2010 11:10:17 AM Mountain Daylight Time  
E-mail from Herman:

Jim,

I am forwarding your question to BridgeTech, they maintain the BRASS programs for Wyoming DOT.

Herman

FROM: Brian Goodrich DATE: 5/5/2010 11:11:04 AM Mountain Daylight Time  
BRASS doesn't have any details regarding the deck width adjustment by the modular ratio. This adjustment is between the modulus of elasticity of the beam and the modulus of elasticity of the deck. These values are taken directly from the input in Virtis and passed to BRASS on the PROPERTIES-PC1 command. The slab width becomes smaller for the calculations of area and moment of inertia.

FROM: Brian Goodrich DATE: 5/5/2010 11:10:41 AM Mountain Daylight Time  
E-mail from Jim Randall:

Thanks, I was hoping for an example of the programmer's example problem that shows how they designed the fortran program. I have some old Caltrans examples for their fortran Frame program. It looks like they are adjusting the deck using n to compensate for the different strength concrete? I was using the gross section properties not a transformed cross section in the hand calculations.

FROM: Brian Goodrich DATE: 5/5/2010 11:10:41 AM Mountain Daylight Time  
You are correct that BRASS is adjusting the deck width by n to compensate for the different concrete strength. These adjustments are only done to the deck width. Also, BRASS does not transform the prestressing strand for any of the calculations.

FROM: Brian Goodrich DATE: 5/7/2010 8:37:59 AM Mountain Daylight Time  
E-mail from Jim Randall:

Thanks, Brian! It turns out that during my checking of my input and results the reduced properties and Ultimate Shear are determining the rating for this prestressed I girder bridge. Jim Randall

|                                    |
|------------------------------------|
| Issue ID: 9892                     |
| Subject: Virtis LRFR: Permit types |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Goodrich, Brian         | 5/5/2010 6:37:08 PM |

4/19/2016 3:07:44 PM

HRS AASHTO

1652

Complete Issue Information

|                   |                      |
|-------------------|----------------------|
| Modified By: hlee | 7/14/2010 2:52:00 PM |
| Priority: High    |                      |
| Category: Support |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Item2.png           |             |
|      | Item2Page63.png     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 5/5/2010 12:37:09 PM Mountain Daylight Time  
E-mail submitted by Yihong Gao via Brian:

Brian,

4/19/2016 3:07:44 PM

HRS AASHTO

1653



## Complete Issue Information

For permit trucks using LRFR, the load factors are different for annual permits or single trip. Virtis has both tables in the factor list but where or how can we indicate the permit trucks for annual or single trip.

Thanks,

Yihong

FROM: Brian Goodrich DATE: 5/5/2010 12:38:58 PM Mountain Daylight Time  
On the Vehicles tab of the Analysis Settings window where you assign the rating vehicles to the Permit Load Rating category, click on the Advanced button. The Vehicle Properties window appears with fields for specifying the Fequency and Loading Condition of each permit vehicle.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 9918                                         |
| Subject: Clarification on truss deterioration modeling |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 5/7/2010 3:26:43 PM  |
| Modified By: xli                      | 6/16/2011 2:51:52 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/7/2010 11:29:18 AM Eastern Daylight Time  
From my consultant (Souther):

I would like a clarification on an element of the Truss Deterioration description in the Virtis Truss Command Language manual (Section 6.17.2 Deterioration).

4/19/2016 3:07:44 PM

HRS AASHTO

1654

## Complete Issue Information

The text below states, "<panel\_point\_name> = Enter Panel point name belong to <member\_name>". First, on its face, this doesn't make sense. Shouldn't it read, "...that belongs to truss member being described by <member name>" like it is under the "Angles" Deterioration Sub Command. This also goes for BottomFlangePlate, LeftWebPlate, RightWebPlate, WebPlate, RolledBeam & Channels Sub Commands.

### Sub Command TopFlangePlate

(<plate\_index><percent\_thickness><percent\_width><panel\_point\_name> <start\_distance><length>)\*

Description <plate\_index> = Starting 1 that is closest to the section.

<percent\_thickness> = Enter deteriorated % loss of thickness.

<percent\_width>= Enter deteriorated % loss of width.

<panel\_point\_name> = Enter Panel point name belong to <member\_name>

<start\_distance> = Enter start distance of deterioration.

<length>= Enter deterioration length

Notes:

1. This sub-command is optional.

2. All data entries are on the same line below sub-command name.

Example TopFlangePlate

1 12.0 0.0 L2 0.0 8.0

2 15.0 0.0 L2 0.0 8.0

Second, in the example given below, L2 is given as the panel point for U3L3. Is this correct? If so how do I know what panel point to enter for this item?

Full Example MemberOfInterest

L2L3

OverrideCapacity 1000.00 # 75.00

OverrideUnbracedLength 11.00 10.00

Deterioration

Channels

Left TopFlange 10.00 25.00 L2 1.75 5.0

Left Web 15.0 25.0 L2 1.55 3.0

L2L1

OverrideCapacity 888.00 # 75.00

OverrideUnbracedLength 11.00 10.00

Deterioration

Angles

TopLeft HorizontalLeg 12.5 26.0 L2 1.75 5.0

BottomRight VerticalLeg 10.0 25.0 L2 1.75 5.0

U3L3

OverrideCapacity 888.00 # 75.00

OverrideUnbracedLength 11.00 10.00

Deterioration

TopFlangePlate

1 12.0 0.0 L2 0.0 8.0

RolledBeam

TopFlange 10.0 25.0 L2 1.75 5.0

BottomFlange 10.0 25.0 L2 1.75 5.0

FROM: Herman Lee DATE: 5/7/2010 1:39:34 PM Eastern Daylight Time

4/19/2016 3:07:44 PM

HRS AASHTO

1655

Complete Issue Information

May, please update the Truss Command Language Manual.

FROM: Xinmei Li DATE: 11/8/2010 10:57:58 AM Eastern Standard Time  
Manual is updated for the next release.

FROM: Srujana Thogaru DATE: 4/13/2011 9:49:47 AM Eastern Daylight Time  
Has been updated for only topflangeplate please update for BottomFlangePlate, LeftWebPlate, RightWebPlate, WebPlate, RolledBeam & Channels Sub Commands.

FROM: Xinmei Li DATE: 4/13/2011 10:26:34 AM Eastern Daylight Time  
VirtisTrussCommandLanguage manual is updated for the next 6.3 Beta build.

FROM: Srujana Thogaru DATE: 4/13/2011 3:02:54 PM Eastern Daylight Time  
Verified that Manual updated for 6.3

FROM: Tim Armbrecht DATE: 5/12/2011 3:32:12 PM Eastern Daylight Time  
Item 1 – Under 6.2, the wording for Deterioration Sub Command TopFlangePlate for <panel\_point\_name> was, “Enter Panel point name belong to <member\_name>”. In 6.3 Beta 2 it is “Enter Panel point name belong to truss member being described by <member\_name>. The word “belong” should be changed to either, “belonging” or, “that belongs”.

Item 2 – <FIXED> Under 6.2, the example using Member U3L3 incorrectly specified L2 as the reference panel point. In 6.3 Beta2 is has been made correct, using panel point L3.

FROM: Xinmei Li DATE: 5/13/2011 9:13:06 PM Eastern Daylight Time  
Item 1 is resovled for next 6.3 Beta build.

FROM: Bin Zhang DATE: 5/16/2011 8:42:44 AM Eastern Daylight Time  
Page 58 needs to be updated.

FROM: Tim Armbrecht DATE: 6/13/2011 10:47:22 AM Eastern Daylight Time  
Item 1 is now fixed, but Tim Souther notes that the example for Item 2, which was previously fixed, doesn't appear to exist anymore in beta 3? He claims it should be between pages 62 & 63 but it is not. Could you please verify? Thanks.

FROM: Xinmei Li DATE: 6/13/2011 2:43:58 PM Eastern Daylight Time  
Item2, since we added new builtup section types to Version 6.3, item 2 now is on page 67.

FROM: Xinmei Li DATE: 6/13/2011 3:26:58 PM Eastern Daylight Time

FROM: Tim Armbrecht DATE: 6/14/2011 2:07:03 PM Eastern Daylight Time  
May, we're simply not seeing this is the 6.3 beta 3 version of the truss language document. It will be available in the next release?

FROM: Xinmei Li DATE: 6/15/2011 9:12:53 AM Eastern Daylight Time  
Yes, it will be available in the 6.3 release.

FROM: Xinmei Li DATE: 6/15/2011 10:17:14 AM Eastern Daylight Time

4/19/2016 3:07:44 PM

HRS AASHTO

1656

## Complete Issue Information

Attached is screen shot of item 2 in 6.3 Beta3 VirtisTrussCommandLanguage manual.

|                                    |
|------------------------------------|
| Issue ID: 9925                     |
| Subject: Issue with Steel Bridges? |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Haney, Tyler            | 5/10/2010 6:31:00 PM  |
| Modified By: hlee                     | 10/4/2010 12:01:35 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

## History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Support  |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 18386.xml           |             |
|      | 18260.xml           |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Brian Goodrich DATE: 5/10/2010 12:31:40 PM Mountain Daylight Time  
Submitted for Tyler Haney via BridgeWare:

I've recently run across some interesting things with Virtis when rating steel bridges. I've attached two bridges in question.

First of all, it seems Virtis isn't including the strength of the deck reinforcement in negative flexure. This

4/19/2016 3:07:45 PM

HRS AASHTO

1657

## Complete Issue Information

may have been excluded from the programs analysis due to its minimal influence upon the rating, about a .013 increase in this instance—determined by transforming deck steel into additional top flange thickness. I discovered this using bridge 18386... Since the bridge rating was failing in flexure over pier 2, I decided to see how the deck steel would influence the rating by changing the steel over the piers from #7 bars to #10 bars. The rating actually went down from 0.84 to around 0.7... I don't understand, other than increasing the dead load, why the rating would decrease. Inversely, if the bar size was decreased, say to a #3 bar, the rating slightly increased.

Second, and more importantly, I noticed when working with bridge 18260, that we received a rating of around 2.1 for inventory HS20 loading without including the longitudinal stiffeners. Once I added the longitudinal stiffeners, the rating dropped from the 2.1 to around 1.45. I don't understand why the rating would drop by strengthening a member.

The longitudinal stiffeners came up again when further checking bridge 18386. I ran an LRFR analysis so I could access the "Spec Check" (had to input shear stud tensile strength and force analysis to check only the tenth points to avoid some errors). Spec Check showed the model was not including longitudinal stiffeners in capacity analysis, even though they were included in the input.

I tried a work-around for this error by inputting a Point of Interest (POI) and using the options within the POI definition to force a longitudinal stiffener at the point controlling the rating. Once this stiffener was forced in, it appeared to only fix a portion of the checks and did not fully acknowledge the longitudinal stiffeners. It still seems to not consider the stiffener when computing It resulting in the statement below:

"AASHTO LRFD (6.10.11.1.3-1): \*\* NOTE: This article is Not Applicable because the nominal shear resistance was NOT determined using tension-field action of the web as specified in AASHTO LRFD 6.10.9.3.2."

However, according to the code, it appears that using the tension-field action is applicable for this case.

We input bridge 18386 into our MDX software and produced an inventory rating of 1.04 where the exterior girder controls in flexure over pier 2 compared to the Virtis rating of 0.847. Something isn't right and I don't know where else to look.

Have any suggestions or think I may have found some things?

Thanks for your help!,

Tyler Haney, P.E.  
Structural Engineer

FROM: Brian Goodrich DATE: 5/10/2010 4:36:46 PM Mountain Daylight Time  
I've reviewed your issues.

Issue 1: Bridge 18386: Changes in rating over pier

I wasn't able to duplicate the values you reported, but I was able to get a lower rating at the pier when increasing the bar size. I ran the HS-20 vehicle for the interior girder and got a rating of 1.06 with #7 bars and 1.02 with #10 bars. Increasing the bar size at the pier increases the moment of inertia. This

4/19/2016 3:07:45 PM

HRS AASHTO

1658

Complete Issue Information

draws more moment to the pier point of interest which affects the rating somewhat. In addition, the flexural capacity was reduced slightly for the point, due to a different bending capacity reduction factor (Rb from Eq. 10-103b). The Rb factor is dependent on a section modulus which is larger when #10 bars are used.

Issue 2: Bridge 18260: Difference in rating with and without longitudinal stiffeners

I'm able to duplicate this issue. When the longitudinal stiffener is present, BRASS does not perform a compact section analysis and the capacity is limited to the yield moment. When the longitudinal stiffener is excluded, BRASS calculates the capacity using Eq. 10-129c.

Issue 3: Bridge 18386: Longitudinal stiffeners not showing up in LRFR analysis

The longitudinal stiffener commands are generated in the BRASS data file and several of the points of interest I checked showed these stiffeners being present. Please expand your comments on this issue. Indicate the point of interest you are examining.

FROM: Herman Lee DATE: 8/10/2010 3:29:43 PM Eastern Daylight Time  
Information Needed E-mail sent on 8/10/10.

FROM: Herman Lee DATE: 9/10/2010 1:20:18 PM Eastern Daylight Time  
Information Needed E-mail sent on 9/10/10.

FROM: Herman Lee DATE: 10/4/2010 7:58:29 AM Eastern Daylight Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

Issue ID: 9944  
Subject: Rating List Error for LFR Batch Run

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Huang, George 5/11/2010 3:46:38 PM  
Modified By: hlee 6/9/2011 8:45:06 PM  
Priority: High  
Category: Maintenance

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |

4/19/2016 3:07:45 PM

HRS AASHTO

1659

### Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad | Suspended |      | Maintenance |
| Lee, Herman        | New       | High | Bug         |
|                    | Assigned  |      |             |
| Goodrich, Brian    |           |      |             |
|                    | Resolved  |      |             |
|                    |           |      | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 9994.png                  |             |
|      | 5-12-2010 12-26-51 PM.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 5/11/2010 11:52:48 AM Eastern Daylight Time  
Under the batch run, both inventory and operating ratings are listed in the summary table for all vehicles including those only required for inventory results. You may use the 50-3050K file.

FROM: Krisha Kennelly DATE: 5/13/2010 12:30:40 PM Eastern Daylight Time  
Can reproduce with Training Bridge 1.

Rate TB1 from the Bridge Explorer. On the analysis settings window, select HS20 in the Inv and Op categories. Add some other vehicles to the Operating category only. Rate bridge. Bridge Rating Results window shows Inventory values for some vehicles that were selected to be in only the Operating category. Not sure if this is a BRASS LFD problem or a results problem in Virtis.

FROM: Herman Lee DATE: 5/20/2010 10:12:45 AM Eastern Daylight Time  
I'm able to reproduce the problem using both BRASS LFD and Virtis LFD. The problem is also reproducible in 6.0 and 6.1.  
The UiBridgeRatingResultsDlg, UiStructureRatingResultsDlg and UiMemberRatingResultsDlg should check for the vehicle category before populating the results.

Complete Issue Information

FROM: Mehrdad Ordoobadi DATE: 5/20/2010 11:17:27 AM Eastern Daylight Time  
The UiBridgeRatingResultsDlg, UiStructureRatingResultsDlg and UiMemberRatingResultsDlg report the results that is populated by the analysis engine.  
The information about vehicle category is not readily available in the UiBridgeRatingResultsDlg, UiStructureRatingResultsDlg and UiMemberRatingResultsDlg windows.  
The best way to fix this issue is to change the engine code so that the unnecessary values are not populated.

FROM: Herman Lee DATE: 5/20/2010 1:33:28 PM Eastern Daylight Time  
I agree that the best way is to change the engine code so that the unnecessary values are not populated. This can only be done if Virtis passes the vehicle category information to the the engine. Currently, BRASS LFD and Virtis LFD perform both inventory and operating ratings for each vehicle.

Issues in Incident 9954 and 9984 are duplicate of this incident. Please test the scenarios described in those two incidents after this incident is resolved.

FROM: Jim Duray DATE: 6/1/2010 11:42:13 AM Eastern Daylight Time  
I changed the Category to Maintenance. The three windows that report ratings from the BE have been this way from the beginning. The windows are correctly implemented to display the results reported by the engines and should not be filtering results. Modification of BRASS and StdEngine is an enhancement. StdEngine was implemented "as is" so whatever we have to do to change it is either Maintenance or and Enhancement. The new AASHTO LRFR engine reports ratings as requested by the user.

FROM: Herman Lee DATE: 6/9/2011 4:41:12 PM Eastern Daylight Time  
Discarded (Overcome By Events) by TAG April 2011.

Issue ID: 9949  
Subject: Rating List Error for Steel Bridge with LRFR BRASS Engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Huang, George 5/11/2010 4:48:13 PM  
Modified By: bgoodrich 11/19/2010 3:30:08 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|



Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | beta test bridge.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 5/11/2010 12:53:41 PM Eastern Daylight Time  
This is still for 53-3050R. The Operating Limit State for HL 93 should be Strength I NOT Strength II. The Legal Limit State should be Service I NOT Service i and fatigue.

FROM: George Colgrove DATE: 5/12/2010 12:15:21 PM Eastern Daylight Time  
Is this based on the Table B6A-1 of the MBE? (or similar table in prior manual?) See page in Documents.

FROM: George Huang DATE: 5/12/2010 4:46:18 PM Eastern Daylight Time  
Oops. The load case for legal trucks was Right. Only the load case for HL 93 was wrong.

FROM: Krisha Kennelly DATE: 5/13/2010 12:34:32 PM Eastern Daylight Time  
I can reproduce this with Training Bridge 1. Rate G1 with the Default Design Load Rating template. See attached screenshot showing Strength II being considered for the operating rating.

FROM: Brian Goodrich DATE: 6/2/2010 2:37:22 PM Mountain Daylight Time  
BRASS LRFR has always used the Strength II limit state for the operating rating as this limit state has the same load factor. This issue has already been assigned to BRASS Problem Log 927.

FROM: Brian Goodrich DATE: 11/19/2010 8:13:08 AM Mountain Standard Time  
The BRASS limit states have been revised. The Strength II limit state no longer doubles as Strength I Operating. This issue has been fixed in BRASS-GIRDER(LRFD) 2.0.4 to be released at the beginning of 2011. Fixed for version 6.3.

|                                     |
|-------------------------------------|
| Issue ID: 9961                      |
| Subject: beta test of incident 8955 |

Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Lee, Herman                       |
| Submitted By: Curtis, Beckie 5/12/2010 12:56:54 PM |
| Modified By: hlee 5/29/2010 4:27:29 PM             |
| Priority: High                                     |
| Category: Support                                  |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 003450-memory problem.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Beckie Curtis DATE: 5/12/2010 9:03:51 AM Eastern Daylight Time  
 I tried to make a fake bridge to model the problem outside of what I had originally submitted. I made a span length of 30.001. From 0-30ft, the steel strength is 36ksi. From 30-ft to 30.001ft, the steel strength is 0.1ksi.  
 Looking at the detailed report, the detailed rating factor doesn't change from the 0ft to 30.001ft point, even though the steel strength is very different. The tolerance for ft is set to 0.001 in my configuration.

FROM: Herman Lee DATE: 5/19/2010 1:38:31 PM Eastern Daylight Time  
 The input format for span length in Virtis Std Engine is XXX.XX. The precision of the entered span length (30.001 ft) exceeds this input format. The export has been updated to check for this precision and warn the user for this limitation in 6.2 Release.

Please let us know if you want to change this to an enhancement request.

FROM: Herman Lee DATE: 5/19/2010 3:44:49 PM Eastern Daylight Time

Complete Issue Information

E-mail from Beckie Curtis on 5/19:

=====
As long as the issue isn't propagated into the AASHTO LFR I don't need an enhancement.
=====

FROM: George Colgrove DATE: 5/21/2010 10:51:25 AM Eastern Daylight Time
I think the portion of the girder from 30' to 30.001' is not recognized by the Virtis LFD engine. I am assuming this is OK.

LRFR seems to see the full length, but internally sees it as only 30'. The system should have a point at 30' and an end point at 30.001' theoretically. It only has a point at 30.001' with results suggesting that the material properties out to the end of the girder are for the first segment of the girder. I added a 30' POI and I got the same results. The 30' POI did not show up in the spec check. Should the software look at the 30' - 30.001' segment independently?

Issue ID: 9970
Subject: memory error on stringer floorbeam bridge

Folder: /Virtis/Support Center/Virtis
Primary Contact: Lee, Herman
Submitted By: Metcalf, William 5/12/2010 8:12:05 PM
Modified By: hlee 12/12/2010 6:31:39 PM
Priority: High
Category: Unknown

History

Table with 4 columns: Primary Contact, Status, Priority, Category

Contacts

Table with 4 columns: Name, Company, Email 1, Phone 1

Documents

Table with 3 columns: Name, Resource Identifier, Description

Tasks

Table with 3 columns: Name, Current State, Summary

Description

FROM: William Metcalf DATE: 5/12/2010 4:19:03 PM Eastern Daylight Time
The attached file can not even run through without the analysis crashing with the:

4/19/2016 3:07:46 PM

HRS AASHTO

1664

Complete Issue Information

Error performing virtual stringer analysis!  
Error loading BRASS DLL!  
(Error Code = 8) Not enough storage is available to process this command.

Error. This error was obviously annoying in the past when you would have to stop working once or twice a day to restart Virtis. But when it can't even get through the bridge at all even off a fresh power off -> restart of the computer it becomes significantly more of a problem.

FROM: Herman Lee DATE: 7/14/2010 11:04:09 AM Eastern Daylight Time  
Same issue in Incident 8877.

FROM: Herman Lee DATE: 12/12/2010 1:31:54 PM Eastern Standard Time  
The analysis has exceeded the 2 GB limit for each process on 32-bit Windows OS.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 9985                                                         |
| Subject: Virtis LFD Analysis Failure for Interior Girder of Double-Tee |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Kemna, Aaron            | 5/13/2010 6:27:51 PM |
| Modified By: hlee                     | 4/22/2011 4:21:32 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

4/19/2016 3:07:46 PM

HRS AASHTO

1665

Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
|                 | Assigned |      |             |
| Lee, Herman     |          |      |             |
| Goodrich, Brian | Assigned | High | Bug Support |
|                 | Resolved |      |             |
|                 | Closed   |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | STL5-RollBeamBridge.xml |             |
|      | Beam Properties.png     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 5/13/2010 2:34:34 PM Eastern Daylight Time  
 Both girders run fine with Brass LFD. Virtis LFD Analysis fails for G2 with the following pop-up.

Internal Errors (1) - Invalid index  
 Structural Analysis Errors (2410) - Input or computational error encountered.  
 Structural Analysis Errors (2305) - N.A. solution in a loop. No solution for M@xfy.  
 Structural Analysis Errors (2305) - N.A. solution in a loop. No solution for M@xfy.  
 (etc.)

FROM: Aaron Kemna DATE: 5/13/2010 4:35:09 PM Eastern Daylight Time  
 I attached a continuous double-tee with similar problem and really low rating.

FROM: George Colgrove DATE: 5/14/2010 7:40:01 AM Eastern Daylight Time  
 I dont know what or why, but there is a data problem in the bridge file. I ran the bridge and got the same results as above. When looking at the bridge file the data appears to be entered correctly, but there is a problem with G2. I copied the definition for G1 to G2 and recalced the distribution factors and made sure the correct beam section was placed properly. I made it the current and existing and reran the bridge and it worked. Find enclosed (A0160back).

Complete Issue Information

FROM: Jim Duray DATE: 5/24/2010 2:04:35 PM Eastern Daylight Time  
Herman - I think you should look at the export for BAR7. If you don't find anything unusual with the data can you give the BAR7 input file to Hasmukh to review.

FROM: Herman Lee DATE: 5/24/2010 2:11:39 PM Eastern Daylight Time  
Attached G1 and G2 Virtis Std Engine input and output files.  
G1 and G2 are similar except the flexural reinforcements. G2 output stopped just before the Rating Summary.

FROM: Hasmukh Lathia DATE: 5/25/2010 11:10:01 PM Eastern Daylight Time  
Herman - Can you tell how the export models a double tee beam as an I beam for a Virtis Std Engine analysis? G2 Analysis stops because it is unable to find a solution for the location of N.A. for calculating the moment capacity of the section when the stress in the bottom strand reaches 0.9Fy.

FROM: Herman Lee DATE: 5/26/2010 7:42:17 AM Eastern Daylight Time  
The following export message is in the log file:  
Warning - The tee beam (with two tees) in prestressed precast concrete beam span 1 will be exported as regular I beam with 0.01 in bottom flange thickness!

Attached (G2 PS Tee Beam.png) is the double tee beam used in G2.

Changed Folder to /Support Center/Virtis since this is an existing issue in the Release.

FROM: Hasmukh Lathia DATE: 5/26/2010 4:21:58 PM Eastern Daylight Time  
Even though there is not much difference in dimensions between of two I beams, both are very shallow Tee beams for which the calculations of moment capacity at xFy were never intended in BAR7. This appears to be a problem of convergence in finding a solution for neutral axis for the calculation of moment capacity at xFy. It will require further investigation and code changes to find a fix for this issue.

FROM: Herman Lee DATE: 5/26/2010 4:44:00 PM Eastern Daylight Time  
Tee beam is not one of the supported beam type in BAR7. Virtis Std Engine export converts the double tees into an equivalent I beam with 0.01" bottom flange thickness. The Virtis Std Engine needs to be enhanced to properly handle tee beam.

FROM: Herman Lee DATE: 4/22/2011 8:27:20 AM Eastern Daylight Time  
The reported issue has been resolved by the fix for Incident 10755. The fix for 10755 (for PS box beam) added refinements to the logic for the interaction in locating the neutral axis for the calculation of moment capacity at xFy.

Issue ID: 9986

Subject: How does BRASS LFD determine which steel rolled shape to use?

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Kemna, Aaron

5/13/2010 5:48:30 PM

Modified By: bgoodrich

11/22/2010 2:02:37 PM

4/19/2016 3:07:46 PM

HRS AASHTO

1667

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Support |

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Bug         |
|                  | Assigned  |          | Maintenance |
|                  | Suspended |          |             |
| Skow, Wayne      | Assigned  |          |             |
| Thogaru, Srujana | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 5/13/2010 1:49:17 PM Eastern Daylight Time  
Submitted on behalf of Aaron Kemna, Missouri DOT.

To reproduce the issue:

1. Rate G2 in the attached bridge with the "W 18x119" steel shape.
2. Rate G2 again with the "W 18x119 No Properties" steel shape.
3. The beam properties listed in the BRASS output files are different (see attached Beam Propertis.png file).

Looks like BRASS export uses the dimensions and some properties in the shape to determine which rolled shape to use in the BRASS library. How does BRASS export determine which steel rolled shape to use when there's no exact match in the BRASS library? Is the name of the selected shape listed in the output file?

4/19/2016 3:07:46 PM

HRS AASHTO

1668

Complete Issue Information

FROM: Brian Goodrich DATE: 11/19/2010 8:30:40 AM Mountain Standard Time  
A temporary BRASS sections library is generated each time a bridge is run from Virtis. Only the beam shapes for the member alternative being run are exported to this library. The BRASS LFD engine obtains section dimensions and properties from this file for the current analysis. If the area or moment of inertia is missing, BRASS uses the section dimensions to calculate these values.

FROM: Brian Goodrich DATE: 11/22/2010 7:02:15 AM Mountain Standard Time  
User accepted, so closed.

|                                         |
|-----------------------------------------|
| Issue ID: 9988                          |
| Subject: Reporting of tonnage for HL-93 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Curtis, Beckie          | 5/13/2010 6:57:08 PM |
| Modified By: hlee                     | 7/14/2010 2:44:42 PM |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 5/13/2010 3:03:05 PM Eastern Daylight Time  
Tonnage reported for HL-93 should be the rating factor multiplied by the HS-20 vehicle, regardless of the actual vehicle combination (truck+lane, tandem+lane, etc) per FHWA policy. I checked a steel bridge and Brass LRFR is not reporting this way, can't tell how Virtis LRFR is doing it because the numbers are off in beta 6.2 right now.

FROM: Beckie Curtis DATE: 5/13/2010 3:15:49 PM Eastern Daylight Time  
Checked Virtis LRFR for a prestressed beam and it was using the tandem weight for the tonnage if the tandem controls.

4/19/2016 3:07:47 PM

HRS AASHTO

1669



Complete Issue Information

FROM: George Colgrove DATE: 5/14/2010 6:08:36 AM Eastern Daylight Time  
Becky, What Bridge were you working with? I want to see if things are fixed.

Using a Development Build (05/14/10 - morning) and running Training Bridge 1 - I get the following:

Virtis:

INV RF = 0.477  
OPR RF = 0.618

HS-20 Tonnage = 36T

INV T = 0.477 \* 36T = 17.17T (Reported = 17.17T)  
OPR T = 0.618 \* 36T = 22.25T (Reported = 22.25T)

BRASS:

INV RF = 0.480  
OPR RF = 0.622

HS-20 Tonnage = 36T

INV T = 0.480 \* 36T = 17.28T (Reported = 17.27T)  
OPR T = 0.622 \* 36T = 22.39T (Reported = 22.39T)

FROM: Krisha Kennelly DATE: 5/14/2010 8:42:44 PM Eastern Daylight Time  
Virtis LRFR uses the weight of the controlling vehicle (eg, tandem) like BRASS LRFR does.

This is a support incident since it also applies to how we implemented concrete in 6.1.

FROM: Jim Duray DATE: 5/24/2010 2:11:03 PM Eastern Daylight Time  
I'm changing it to "Maintenance".

FROM: Krisha Kennelly DATE: 6/3/2010 11:12:10 AM Eastern Daylight Time  
Please revise all existing LRFR articles (including concrete) to retrieve the dVehicleWeight from

```
dVehicleWeight = RatingLoadFactors[k].VehicleWeight;
```

instead of

```
dVehicleWeight = memberActions.MomentZTruckLoad.GetValue(iForceUnitId);
```

Please track your time with a comment 'Maintenance'.

FROM: Srujana Thogaru DATE: 6/4/2010 8:26:02 AM Eastern Daylight Time  
Updated LRFR articles for 6.2 beta build 3

|                 |
|-----------------|
| Issue ID: 10023 |
|-----------------|

4/19/2016 3:07:47 PM

HRS AASHTO

1670

Complete Issue Information

Subject: Multiple Presence Factor error when running BRASS LRFR Permit Vehicles

Folder: /Virtis/Support Center/Virtis
Primary Contact: Goodrich, Brian
Submitted By: Cavanaugh, Scott 5/28/2010 4:39:35 PM
Modified By: hlee 10/15/2011 9:43:46 PM
Priority: High
Category: Bug - BRASS

History

Table with 4 columns: Primary Contact, Status, Priority, Category. Rows include Lee, Herman (Assigned, High, Unknown) and Goodrich, Brian (Bug, Bug - BRASS).

Contacts

Table with 4 columns: Name, Company, Email 1, Phone 1.

Documents

Table with 3 columns: Name, Resource Identifier, Description. Row: 016-1243.xml

Tasks

Table with 3 columns: Name, Current State, Summary.

Description

FROM: Herman Lee DATE: 5/28/2010 12:40:25 PM Eastern Daylight Time
Submitted on behalf of Scott Cavanaugh (HNTB).

Received Bridgeware e-mail:

=====
Herman,
I believe we discussed the Multiple Presence Factor issue that Ekin and I had discovered over the phone some time ago, but I thought I should send it via email for possible program revisions / updates. As far as I understand from your emails below, no program modifications or future enhancements are currently planned to address this issue. See the attached emails below.

In summary, the BRASS LRFR engine is not dividing the computed LL distribution factors by the MPF (1.2) when running a special permit vehicle. The Virtis LRFR engine appears to correctly divide the

4/19/2016 3:07:47 PM

HRS AASHTO

1671

Complete Issue Information

DF's by 1.2 for permit vehicles.

This was noticed when running a reinforced concrete slab structure. I've attached the .xml file for your reference.

Thanks  
Scott

From: Scott Cavanaugh  
Sent: Friday, April 30, 2010 10:02 AM  
To: Ekin Senturk  
Subject: RE: NJTA RC P/S Runs

Ekin,

Upon review of your plots and further investigation in Virtis, it looks like the BRASS engine does not divide by 1.2 (multiple presence factor), while the Virtis engine does divide by 1.2.

For example, I looked closely at 103.53 using both the Virtis and BRASS engines. As you pointed out, the Virtis RFs for OL1 through OL4 are higher than the corresponding LFR for the legal loads, which also does not make sense when looking at the trend for the steel structures. This is due to the Virtis engine dividing the DFs (which were manually input) by 1.2, hence reducing the amount of load supported by the member in question. The BRASS engine does not divide by 1.2. Note that the BRASS RF's for 103.53 are LESS THAN the legal load LFRs, which make sense when comparing 103.53 to all of the steel structures (which also use BRASS exclusively).

I have created a folder in the public drive at the following location and included a few files I used for comparison.

N:\Virtis Load Ratings\Report\Virtis Detailed Results - LRFR\OL1-4 DF Investigation

The OL1-OL4 log file was run using Virtis and shows explicit notes for vehicles OL1-OL4 stating:

- ...Processing vehicle OL1...
- Warning - Using single lane distribution factor for special (limited crossing) permit vehicle OL1!  
For the special (limited crossing) permit truck, the single lane distribution factors have been divided by 1.2 to remove the multiple presence factor.

No such notes are evident in the file for the legal loads, which makes sense since they are not input as permit loads.

You can also look at the other two files for DF output. The BRASS DF output can be found on page 112.

Per AASHTO LRFD 3.6.1.1.2, it states that for single lane DFs, methods used other than the lever rule and statical method, shall be divided by 1.2.

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, April 30, 2010 4:34 PM  
To: Scott Cavanaugh  
Subject: RE: Opus Superstructure Method of Solution

4/19/2016 3:07:47 PM

HRS AASHTO

1672

Complete Issue Information

Scott,

LRFR 6.4.5.4.2.2 specifies one lane distribution factor (without including multiple presence factor) should be used for special limited-crossing permit.

I submitted Incident 9848 (AASHTO Engine should determine single or multi lane loaded based on the superstructure definition) on your behalf for the single lane/multi lane problem we discussed over the phone.

Herman

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
Sent: Friday, April 30, 2010 12:02 PM  
To: Bridgeware,  
Subject: RE: Opis Superstructure Method of Solution

Herman,  
Here is the file for the T-beam structure with the DF discrepancy – dealing with the 1.2 multiple presence factor as we discussed.

Let me know what you conclude.

Thanks  
Scott

=====

FROM: Brian Goodrich DATE: 6/1/2010 10:03:17 AM Mountain Daylight Time  
The BRASS export must be revised to detect the special (limited crossing) permit vehicle. Then it must set the number of lanes loaded for that vehicle definition to one and multiply the scale factor for that vehicle definition by 1/1.2. This will affect all the distribution factors though.

FROM: Brian Goodrich DATE: 6/2/2010 11:06:24 AM Mountain Daylight Time  
I revised the BRASS export to detect the special (limited crossing) permit vehicle and set the number of lanes loaded for that vehicle definition to one and multiply the scale factor for that vehicle definition by 1/1.2.

FROM: Herman Lee DATE: 7/9/2010 8:17:02 AM Eastern Daylight Time  
Resolved for 6.2 Release.

|                                         |
|-----------------------------------------|
| Issue ID: 10025<br>Subject: BRASS Error |
|-----------------------------------------|

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Armbrecht, Tim          | 5/28/2010 6:50:35 PM  |
| Modified By: hlee                     | 10/15/2011 9:48:48 PM |

4/19/2016 3:07:47 PM

HRS AASHTO

1673

Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | influence line asserts.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/28/2010 2:51:02 PM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT:

Received E-mail:

=====  
Herman,

Cory reports that this file causes Virtis to crash when using the BRASS engine but works fine for the 6.2 AASHTO engine. Could you please enter this into VI for me for further investigation? Thanks,

Tim

From: Chamberlain, Cory E  
Sent: Friday, May 28, 2010 10:29 AM  
To: Armbrecht, Tim A  
Subject: BRASS Error

Tim,

Complete Issue Information

I can't seem to find the problem in the VIRTIS file that is causing BRASS to create a fatal flaw. The input file runs in the VIRTIS 6.2 VIRTIS engine. Can you forward this for review?

=====
FROM: Herman Lee DATE: 6/1/2010 11:32:01 AM Eastern Daylight Time
Error message when performing LRFR analysis for the "1- E Fascia" member. The start distance in one of the BRACING-SCHEDULE command is negative.

=====
Error No.: 1707
Type : Input Error
Location : Data File
\*\* ERROR: Parameter 3 on the BRACING-SCHEDULE command must be greater than zero.
=====

FROM: Brian Goodrich DATE: 6/1/2010 12:44:15 PM Mountain Daylight Time
The engines do not necessarily crash. The BRASS engine issues error messages and returns the focus to the Virtis GUI. Two different errors can occur here depending on the tolerance settings.

The bracing doesn't add up to exactly the span length for Span 2. Depending on the tolerance settings, the error shows up at the end of Span 2 or the start of Span 3 in the BRACING-SCHEDULE commands. This is a BRASS export issue that must be addressed.

Issue ID: 10030
Subject: Virtis Std Engine crashes for cross section based with varying eff flange width

Folder: /Virtis/Support Center/Virtis
Primary Contact: Lee, Herman
Submitted By: Kennelly, Krisha 6/1/2010 7:22:29 PM
Modified By: xli 3/28/2011 8:48:43 PM
Priority: High
Category: Bug

History

Table with 4 columns: Primary Contact, Status, Priority, Category

Contacts

Table with 4 columns: Name, Company, Email 1, Phone 1

Documents

Table with 3 columns: Name, Resource Identifier, Description

Complete Issue Information

---

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 6/1/2010 3:22:53 PM Eastern Daylight Time  
see bridge attached to 10029. run Virtis Std engine for HS20 rating for steel line structure def, builtupt member alt.

Export will crash.

FROM: Herman Lee DATE: 6/1/2010 3:27:10 PM Eastern Daylight Time  
Attached bridge file in 10029.

Tested the builtupt member alternative in the steel line superstructure definition with 6.2 Beta 2. The export doesn't crash, following are the export error messages.

```
=====
Error - Unknown exception when determining whether any additional dead load due to differences
between start and end tributary widths and/or start and end deck total thicknesses act on the girder!
Error - Unable to determine whether any additional dead load due to differences
between start and end tributary widths and/or start and end deck total thicknesses act on the girder!
Error - Unable to determine whether any user-defined dead load acts on the girder!
Error - Unable to generate Control and Criteria!
=====
```

FROM: Herman Lee DATE: 7/8/2010 8:51:07 AM Eastern Daylight Time  
Fixed a defect in looping the steel cross sections.  
Resolved for 6.3 Release.

FROM: Xinmei Li DATE: 3/28/2011 4:36:33 PM Eastern Daylight Time  
Verified with 6.3 Alpha 6, run Virtis Std engine for HS20 rating for steel line structure def, builtupt member alt, I got errors complains lateral support was not defined. After adding daphragms in bracing ranges the member alt can be analyzed fine.

|                                                  |
|--------------------------------------------------|
| Issue ID: 10039                                  |
| Subject: shear at user defined point of interest |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Curtis, Beckie          | 6/4/2010 9:03:02 PM |
| Modified By: hlee                     | 6/5/2010 9:48:45 PM |

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | LLDF_Calc_Error(0163240).xml |             |
|      | 10041.png                    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 6/4/2010 5:07:25 PM Eastern Daylight Time

We added a point of interest at stirrup spacing, and this led to different Brass and Virtis LRFR results. Shear controls at 10-ft with Brass, the Virtis controlling point is midspan flexure. I tried to see the Virtis shear spec check at the user defined point of interest, but it wasn't generating. I can see the Virtis shear at the 10th point, but not the 10-ft point.

FROM: Beckie Curtis DATE: 6/4/2010 5:16:43 PM Eastern Daylight Time

For a user defined point of interest, ignore shear is checked by default. To change it, you need to click override schedule, uncheck ignore shear, and then uncheck override schedule. This seems like the incorrect default - the point of interest should, by default, match the default of the beam and then be able to be changed by the user.

FROM: Herman Lee DATE: 6/5/2010 5:23:56 PM Eastern Daylight Time

This is a duplicate of Incident 9623. Virtis LRFR Engine should only use the shear information in the point of interest when Override schedule is checked. Incident 9623 has been resolved for the 6.2 Release.

I tested the attached bridge in 6.2 Beta 2 and confirmed the defect has been fixed. Below is a

4/19/2016 3:07:48 PM

HRS AASHTO

1677



Complete Issue Information

workaround copied from Incident 9623.

A work around is to:

1. Select the Override Schedule checkbox on the Shear tab on the POI window.
2. Unselect the 2 'Ignore shear' options for LRFR.
2. Select the Override Schedule checkbox again (so that the box is not checked.)
3. Lfr analysis will now include shear checks at the POI.

|                          |
|--------------------------|
| Issue ID: 10041          |
| Subject: LLDF Calc error |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Li, Xinmei           |                     |
| Submitted By: Kennelly, Krisha        | 6/9/2010 3:27:11 PM |
| Modified By: sthogaru                 | 4/4/2011 7:30:35 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 6/9/2010 11:27:28 AM Eastern Daylight Time  
 Submitted on behalf of Tim Ambrecht:

In the attached Virtis model (LLDF\_Calc\_Error(0163240).xml, v. 6.2 Beta 2), for the 1st W Int beam line, the calculated 1-Lane Shear at Supports value is incorrect since it's obviously impossible for it to be greater than the Multi-lane value. A hand calculation verifies that the multi-lane value is correct for both multi-lane and 1-lane. As far as I know this error has occurred since the beginning of Virtis.

FROM: Xinmei Li DATE: 11/8/2010 11:00:34 AM Eastern Standard Time  
 When calculating single lane shear DF, the second senerio didn't check if left wheel is more than 2'

4/19/2016 3:07:48 PM

HRS AASHTO

1678

Complete Issue Information

from the edge of the travel way.  
Resovled for next release.

FROM: Srujana Thogaru DATE: 4/4/2011 3:25:56 PM Eastern Daylight Time  
Tested and found to be fixed for 6.3

|                                                   |
|---------------------------------------------------|
| Issue ID: 10049                                   |
| Subject: Runs in Virtis Std Eng but not BRASS LFD |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 6/14/2010 6:06:00 PM |
| Modified By: tarmbrecht               | 7/19/2010 8:38:16 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:48 PM

HRS AASHTO

1679

Complete Issue Information

Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | V61 Error add CP to Built_Up.zip |             |
|      | V61 Add CP Error.JPG             |             |
|      | V61 Add CP Error 2.JPG           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 6/14/2010 2:08:27 PM Eastern Daylight Time  
From my consultant - note that this is 6.1, not related to beta testing. XML attached.

Tim,

The subject structure runs fine in BRASS LRFD and Virtis Std engine but will not complete in BRASS LFD.

I am attaching the .xml file for your use.

Cory

FROM: Herman Lee DATE: 6/14/2010 2:25:21 PM Eastern Daylight Time  
Duplicate of Incident 7643 (RC Fails - Change Point too Close to Node Point).

The nodes are too close problem has been fixed for the coming 6.2 release. The fix is included in the BRASS-GIRDER(STD) Engine 6.0.3 in Virtis 6.2 release.

FROM: Tim Armbrecht DATE: 7/19/2010 4:38:16 PM Eastern Daylight Time  
Appears to be fixed. Accepted.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 10055                                                                      |
| Subject: Virtis 6.1 crashes when try to add Cover Plate to Steel Built-Up member alt |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Barnhill, Gale          | 6/16/2010 6:27:33 PM |
| Modified By: gbarnhill                | 6/16/2010 7:17:10 PM |
| Priority: High                        |                      |

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BRASS LFD Help.png  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Gale Barnhill DATE: 6/16/2010 2:36:54 PM Eastern Daylight Time

I tried adding a Top (or Bottom) Cover Plate to the G1 MEMBER Alt Cross Section in the 3 Span Approach.... Structure Def.

I selected Bolted/Rivet Attachment, entered 0.8125 Hole Size and 2 for Number.

I did a New item, entered 1 for Relative Position, Material was selected, entered 15 for Width and 0.625 for Thickness.

When I clicked Apply, Virtis terminated.

I've included screen shots of the Runtime error and the following messages.

FROM: Joseph Ihnat DATE: 6/16/2010 2:41:17 PM Eastern Daylight Time

Duplicate of 9548. Fixed in version 6.2.

Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 10074                    |
| Subject: Shear Distribution Factor |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Cote, Matt              | 6/22/2010 1:51:24 PM |
| Modified By: hlee                     | 6/22/2010 4:04:34 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Matt Cote DATE: 6/22/2010 9:53:45 AM Eastern Daylight Time  
Does Virtis only use the moment ditribution factor to calculate load ratings? When I change the shear distribution factors the load ratings for shear do not change.

Does the deflection distribution factor need to be input?

FROM: Herman Lee DATE: 6/22/2010 12:00:19 PM Eastern Daylight Time  
The BRASS LFD engine only uses the moment distribution factor for load ratings. Please see attached BRASS LFD Engine Help for the Live Load Distribution window.

## Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 10083                                                |
| Subject: Floor Beams supported on main girder and substructure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 6/25/2010 1:42:54 PM |
| Modified By: hlee                     | 6/4/2012 8:08:05 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:07:49 PM

HRS AASHTO

1683

Complete Issue Information

Description

FROM: Beckie Curtis DATE: 6/25/2010 9:46:00 AM Eastern Daylight Time

I think this is an enhancement request, although if there is a work around it would be helpful.

We have some main girder/floorbeam structures. The abutments/piers are on a skew, but the floorbeams are perpendicular to the roadway. This causes some of the floorbeams to rest on both a support and the main girder. At the pier, the floorbeam may rest on both girders and the pier. I would like to be able to model these.

FROM: Herman Lee DATE: 6/25/2010 10:18:08 AM Eastern Daylight Time

The above girder/floorbeam configuration cannot be modeled in Virtis using floor system definition. An alternative is to model the girders and floorbeams individually in a floor line definition.

FROM: Herman Lee DATE: 6/4/2012 4:07:24 PM Eastern Daylight Time

Beta TAG May 2012 discussion:

10083 and 11104 should be combined.

|                                                 |
|-------------------------------------------------|
| Issue ID: 10086                                 |
| Subject: Section properties for riveted girder. |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Senturk, Ekin           | 6/25/2010 6:34:58 PM   |
| Modified By: hlee                     | 10/15/2011 10:34:13 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |

4/19/2016 3:07:50 PM

HRS AASHTO

1684

Complete Issue Information

|                 |          |      |  |             |
|-----------------|----------|------|--|-------------|
| Goodrich, Brian |          |      |  | Third Party |
| Lee, Herman     | Assigned | High |  | Bug         |
| Lathia, Hasmukh |          |      |  |             |
| Lee, Herman     | Resolved |      |  |             |
|                 | Verified |      |  |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Run-time error.png  |             |
|      | 00079 - 1410156.xml |             |
|      | G30.OUT             |             |
|      | G30.dat             |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/25/2010 2:35:16 PM Eastern Daylight Time  
 Submitted on behalf of Ekin Senturk, HNTB.

The elastic section properties reported in the output file and used in 6.4.2.1 flexural stress rating doesn't reflect the process described in the BRASS manual for riveted girder. The equivalent fillets are not included in the section properties calculations.

BRASS manual:

=====

The riveted girder is converted to an equivalent I-section with fillets as follows. The top flange width is set to twice the top horizontal leg length plus the web thickness. The top flange thickness is set to the top horizontal leg thickness. The top vertical legs are converted to equivalent top fillets with the same centroids. The bottom angles are converted similar to the top angles.

=====

BRASS output at mid span for the S12 - Interior Stringer:

=====

POINT OF INTEREST SUMMARY: Steel Section (Composite)

Point of Interest : 105.000  
 Construction Stage: 3



Complete Issue Information

SECTION DIMENSIONS: (in)

Section Depth = 73.8750  
 Slab Thickness = 7.0000      Slab Width (Effective) = 86.0000  
 Slab Clearance = 2.0000  
 Top Flange Thickness = 0.6250      Top Flange Width = 12.3750  
 Web Depth = 62.2500      Web Thickness = 0.3750  
 Bottom Flange Thickness = 0.6250      Bottom Flange Width = 12.3750  
 Bottom Clearance = 0.0000  
 Bottom Cover Plate Thickness = 1.3750      Bottom Cover Plate Width = 14.0000

MATERIAL STRENGTHS: (ksi)

Fy  
 Top Flange = 33.00  
 Web = 33.00  
 Bottom Flange = 33.00  
 Bottom Cover Plate = 33.00

f'c = 2.50

OTHER PARAMETERS:

Modular Ratio : n = 10.000

=====

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - Elastic Section Properties

Point of Interest : 105.00  
 Construction Stage: 3

\*\*\*\* Composite Elastic Section Properties \*\*\*\*  
(Positive Sense)

|                    | A, in <sup>2</sup> | y, in  | A*y, in <sup>3</sup> | d, in   | A*d <sup>2</sup> , in <sup>4</sup> | I, in <sup>4</sup> |
|--------------------|--------------------|--------|----------------------|---------|------------------------------------|--------------------|
| Slab (Transformed) | 60.200             | 70.375 | 4236.6               | 23.568  | 33439.1                            | 245.8              |
| Top Flange         | 7.734              | 64.562 | 499.4                | 17.756  | 2438.4                             | 0.3                |
| Web                | 23.344             | 33.125 | 773.3                | -13.682 | 4369.7                             | 7538.2             |
| Bot Flange         | 7.734              | 1.688  | 13.1                 | -45.119 | 15745.2                            | 0.3                |
| Bot Cover Plate    | 19.250             | 0.688  | 13.2                 | -46.119 | 40944.3                            | 3.0                |
| Sum                | 118.262            |        | 5535.5               |         | 96936.6                            | 7787.6             |

Elastic Analysis Summary:

N.A. = 46.807 in (from bottom)      Qx = 1418.8 in<sup>3</sup> [AASHTO LRFD (6.10.10.1.2)]  
 Dc = 17.443 in (from top)      Ix = 104724.2 in<sup>4</sup>      rx = 29.758 in  
 Area = 118.262 in<sup>2</sup>      Iy = 512.1 in<sup>4</sup>      ry = 2.970 in (steel section only)  
 n = 10.000

Effective Elastic Section Moduli Summary:

|            | c*, in | S, in <sup>3</sup> |
|------------|--------|--------------------|
| Slab       | 27.068 | 38688.8            |
| Top Flange | 18.068 | 5796.0             |

Complete Issue Information

Top Web 17.443 6003.7  
 Bot Web -44.807 2337.2  
 Bot Flange -45.432 2305.1  
 Bot Cover Plate -46.807 2237.4

=====

Issue ID: 10088  
 Subject: Error for Solid Box Beam Rating

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Lee, Herman 6/28/2010 5:46:17 PM  
 Modified By: hlathia 4/22/2011 3:42:47 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/28/2010 1:46:26 PM Eastern Daylight Time  
 Submitted on behalf of Shafiul Azam (sazam@mbakercorp.com), Michael Baker Jr., Inc.

Received e-mail:

=====

Herman,

Attached is a solid box beam rating file. I am getting the following error.

I have checked the input again and it seems the input is fine. I have even tried creating the file from scratch. But, I get the same error. Can you please help me with this error?

4/19/2016 3:07:50 PM

HRS AASHTO

1687

Complete Issue Information

Thanks  
Shafiul

=====

An alternative is to enter a void with a very small diameter or model the solid box beam as I beam.

FROM: Herman Lee DATE: 7/8/2010 8:49:39 AM Eastern Daylight Time  
Hasmukh, the solid box beam is exported as a plank beam. Please take a look at the attached input and output files. Thanks.

FROM: Hasumkh Lathia DATE: 7/9/2010 3:49:49 PM Eastern Daylight Time  
Inputting a value of top slab thickness (T3 dimension for a plank beam) seems to cause the error. What does the actual bridge consist of? A plank beam can be composite (with a value of T3 dimension greater than zero) or non-composite (T3=0). A bridge section showing the actual beam with dimensions will help to investigate this further. If the slab is composite with the solid beam, enter as such.

FROM: Hasumkh Lathia DATE: 7/9/2010 5:52:57 PM Eastern Daylight Time  
Looking at the debug output, it appears that the program is setting the value of T3 equal to the Slab Thickness which causes this error while calculating the moment capacity at xFy. It appears to be a bug in Virtis Std Engine which was not caught before. The slab thickness is also used in calculating the dead load acting on the beam, so entering a zero slab thickness and adjusting the DL1 input may be a workaround until a fix is made to the program.

FROM: Herman Lee DATE: 8/20/2010 10:27:34 AM Eastern Daylight Time  
Virtis user interface can only define PS I, Tee, Box (circular and rectangular void) and U shape beams. Plank beam is not supported. I have updated the export to check for plank beam and exist the analysis.

Resolved for 6.3 Release.

FROM: Xinmei Li DATE: 3/28/2011 4:50:57 PM Eastern Daylight Time  
Verified that the error message is provided when section is not supported, for 6.3 Alpha6.

FROM: Hasumkh Lathia DATE: 4/22/2011 11:42:47 AM Eastern Daylight Time  
The bug regarding setting T3 equal to Slab Thickness has been fixed. Also the fix made in Virtis Std Engine module PMCXFY for issues 9985 and 10755 will also prevent the error regarding rgw slotion for neutral axis going in a loop. This fix will be included in Virtis/Opis Release 6.4.

Issue ID: 10090  
Subject: RC T-Beam: Rebar Export Error

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krishna  
Submitted By: Onysko, Jim 6/30/2010 2:18:38 PM  
Modified By: hlee 7/6/2010 9:06:56 PM

4/19/2016 3:07:50 PM

HRS AASHTO

1688

### Complete Issue Information

|                                     |
|-------------------------------------|
| Priority: High<br>Category: Unknown |
|-------------------------------------|

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Thogaru, Srujana | Resolved           |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 00699 - SR_42__19_3.xml |             |
|      | Virtis_LRFR_Error.jpg   |             |
|      | Analysis_Settings.jpg   |             |
|      | Tandem_Load.jpg         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jim Onysko DATE: 6/30/2010 10:25:03 AM Eastern Daylight Time

I am trying to model and analyze a simple-span reinforced concrete t-beam structure in VIRTIS, but I'm running into error messages when I try to run the analysis. It appears that the errors have to do with the export of the reinforcement schedule. I have attached the VIRTIS file, as well as a pdf of plan drawings and sketches to illustrate the geometry and rebar layout.

For the interior beams, (Beam "B" in the model), I entered in the beam geometry and reinforcement exactly as shown on the plans. I did not click "fully developed" for the reinforcement, so the program should compute and account for the development length of the bars. However, the following error pops up when I try to run the analysis:

"Error converting Virtis/Opis R/C schedules to 'general' cross sections!"

4/19/2016 3:07:50 PM

HRS AASHTO

1689

### Complete Issue Information

How do I fix this and get the analysis to run? I'm thinking the program doesn't like how I defined the bent bars, maybe? However, there's no apparent way to model the "Type H" bars on the plans other than to use VIRTIS's Type 3 bars.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 10093                                              |
| Subject: Error performing VIRTIS LRFR specification checking |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Withers, Richard        | 6/30/2010 7:47:17 PM |
| Modified By: sthogaru                 | 7/26/2010 1:07:02 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Withers DATE: 6/30/2010 4:16:01 PM Eastern Daylight Time  
I get the following error when attempting to analyze a prestressed girder with the Virtis LRFR engine: "Error - performing LRFR specification checking!". The analysis runs fine when using the BRASS LRFR engine. I have attached a screen shot of the error and a xml export of the bridge. What does Virtis need that BRASS doesn't?

Thanks,

Richard Withers  
rwithers@mdot.state.ms.us

FROM: Herman Lee DATE: 7/6/2010 4:08:57 PM Eastern Daylight Time

4/19/2016 3:07:51 PM

HRS AASHTO

1690

Complete Issue Information

Richard, the only member that has Virtis LRFR selected as the LRFR Analysis Module is the member alternative for "Member 1" in "40' span #1". I'm able to complete the analysis using the "LRFR Design Load Rating" analysis template. Please provide us more information on reproducing the error message. Thanks.

FROM: Richard Withers DATE: 7/19/2010 1:05:13 PM Eastern Daylight Time  
I have narrowed it down to a Legal Load that is causing the error. It is defined on the Tandem tab of the Agency Standard Gage Vehicles in the Library Explorer. When I define the load on the Truck tab, the analysis runs correctly. Is this correct? (The Concrete Truck, HS-LONG, AND HS-SHORT loads are defined on the truck tab and run correctly with no error.) I have also attached a screen shot of the Analysis Settings window so you can see how the truck loads are applied in my rating.

Thanks,

Richard Withers

FROM: Srujana Thogaru DATE: 7/23/2010 8:56:05 AM Eastern Daylight Time  
Resolved for the 6.2 Release

|                                             |
|---------------------------------------------|
| Issue ID: 10095                             |
| Subject: Compatability with SQL Server 2008 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Doerr, Gary             | 7/1/2010 2:17:43 PM  |
| Modified By: mordoobadi               | 7/6/2010 12:29:19 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ihnat, Joseph      | Assigned |          | Support  |
| Ordoobadi, Mehrdad | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:51 PM

HRS AASHTO

1691

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gary Doerr DATE: 7/1/2010 10:20:02 AM Eastern Daylight Time  
our IT group is planning an upgrade to SQL Server 2008. How will that affect compatability with Virtis?

FROM: Mehrdad Ordoobadi DATE: 7/6/2010 7:44:23 AM Eastern Daylight Time  
Virtis/Opis 6.1 software does not officially support SQL Server 2008, it supports SQL Server 2005. This means that no testing has been performed on Virtis/Opis 6.1 with a SQL Server 2008 database and we will not be able to provide support if there is a compatibility issue. So we recommend that you wait until the release of the next version of Virtis/Opis software (version 6.2) to upgrade the Virtis/Opis database SQL Server software. Virtis/Opis 6.2 is scheduled to be released in August 2010.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10115                                      |
| Subject: Distribution Factor Analysis Deck thickness |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Barreda, Jesus          | 7/14/2010 3:14:18 PM |
| Modified By: hlee                     | 7/14/2010 4:07:18 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | CA_LRFD.xml         |             |
|      | CALRFD_Beta4.doc    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jesus Barreda DATE: 7/14/2010 11:18:48 AM Eastern Daylight Time

I have a pre-stressed box beam. I am trying to determine the adequacy of a superstructure for a non-standard gage vehicle. It does not allow me to finish the analysis, the display error says "deck thickness must be greater than zero for analysis to run!" javascript: \_\_doPostBack('ctl00 \$Main\$tabStrip','Workaround')

I do not have a deck since is a non-composite box beam. What should I do?

FROM: Herman Lee DATE: 7/14/2010 11:23:39 AM Eastern Daylight Time

The deck is required in the generation of the 3D FE model during the Distribution Factor Analysis. The deck is always included in the model regardless of whether the beams are composite with deck. Please check the FE model section properties and results to see whether the workaround is acceptable.

Incident 8845 (NSG will not run on Adjacent PS Box bridge with no deck.) is the enhancement request for this issue.



### Complete Issue Information

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 10133                                                                            |
| Subject: BRASS LRFR uses incorrect vehicle weight for Lane Type Legal Load Rating capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Huang, George           | 7/19/2010 1:27:32 PM |
| Modified By: ghuang                   | 6/30/2011 6:33:59 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description     |
|------|---------------------|-----------------|
|      | Doc1.pdf            |                 |
|      | shearNearEnd.xml    | Bridge XML file |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 7/19/2010 9:28:06 AM Eastern Daylight Time  
Submitted as part of beta testing for Virtis 6.2:

From issue 10094:

FROM: George Huang DATE: 7/13/2010 1:26:35 PM Eastern Daylight Time  
The lane type legal load rating factors from Virtis is quit different from Brass. The definations of the weight are also different, 40 tons used for Virtis while 30 tones used for Brass, which may need to be revised.

FROM: George Huang DATE: 7/13/2010 1:28:36 PM Eastern Daylight Time  
See the attached file "CALRFD\_Brta4.doc" for the built 4 results.

4/19/2016 3:07:51 PM

HRS AASHTO

1694

Complete Issue Information

FROM: Beckie Curtis DATE: 7/14/2010 4:58:28 PM Eastern Daylight Time  
George has a point about the tonnage for Brass vs Virtis.

For the legal lane load, the truck is the 3-3, multiplied by 0.75 - in the analysis. I would imagine this should be reported in tonnage based on the 3-3 without the 0.75 reduction (similar to the tandem load in HL-93 being reported as the HS-20 truck).

The Virtis LRFR engine reports based off of the 3-3.

FROM: Krisha Kennelly DATE: 7/19/2010 9:47:14 AM Eastern Daylight Time  
Virtis LRFR is using 80 kips as the vehicle weight when computing the lane type legal load capacity as per MBE C6A.4.4.2.1a.

BRASS LRFR is using 60 kips as the vehicle weight.

FROM: Brian Goodrich DATE: 7/23/2010 8:05:15 AM Mountain Daylight Time  
With respect to BRASS, this issue is the same as Incident 9988, which was assigned to BRASS Problem Log 970. BRASS internally calculates the truck weight as the sum of the axle weights. We have to add a parameter to BRASS for passing in the truck weight input in Virtis.

FROM: Brian Goodrich DATE: 5/18/2011 8:39:20 AM Mountain Daylight Time  
In BRASS-GIRDER(LRFD), the TRUCK-SPECIAL-WEIGHT command was added for overriding vehicle weight. The export must be updated to generate this command.

FROM: Brian Goodrich DATE: 5/18/2011 8:45:10 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 98.

FROM: Brian Goodrich DATE: 6/16/2011 9:32:57 AM Mountain Daylight Time  
In the database, the "Lane-Type Legal Load" axle weights are input as 75% of the Type 3-3 axles weights, which results in a vehicle weight of 60 kips. However, this vehicle weight needs to be exported as  $60/0.75=80$  kips. The regular legal vehicles should not be adjusted. So how does one determine if a particular vehicle weight should be adjusted for the 75%?

FROM: Brian Goodrich DATE: 6/16/2011 11:13:04 AM Mountain Daylight Time  
From Krisha:

"We apply the vehicle loads like they are defined in the UI to get the force effects and then when we compute the tonnage capacity for the vehicle we check to see if the vehicle name is "Lane-Type Legal" and then we use the 80 kips for it to compute the tonnage capacity. So it is hard-coded inside the engine."

FROM: Brian Goodrich DATE: 6/16/2011 11:42:12 AM Mountain Daylight Time  
I revised the BRASS export to generate the new TRUCK-SPECIAL-WEIGHT command with the adjusted vehicle weight for the "Lane-Type Legal" loads. Fixed for Virtis/Opis 6.3.

FROM: George Huang DATE: 6/30/2011 2:33:59 PM Eastern Daylight Time  
I am unable to verify it since I don't have the latest BRASS engine.

Issue ID: 10145

Subject: VIRTIS LRFR Steel Plate Girder Shear Rating at End Region

4/19/2016 3:07:52 PM

HRS AASHTO

1695

Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Goodrich, Brian 7/23/2010 1:55:40 PM |
| Modified By: bgoodrich 5/18/2011 2:44:19 PM        |
| Priority: High                                     |
| Category: Bug - BRASS                              |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |
| Ihnat, Joseph   |          |          | Bug      |
| Trees, Geoffrey | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name     | Resource Identifier | Description |
|----------|---------------------|-------------|
| TMP3.jpg |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 7/23/2010 7:56:29 AM Mountain Daylight Time  
 Issue submitted for David Wolfe via Bridgeware:

Bridgeware – The BRASS LRFR engine seems to treat the end 5% of a span as an end panel regardless of the stiffener arrangement. Attached is one of the training bridges with additional girderline members made by copying the original with the only modification being POI's added at 4.999% and 5.001% of Span 1. The copy of the girderline with the POI at 4.999% of Span 1 rates very low in shear, whereas the girder line with the POI at 5.001% of Span 1 rates the same as the original girder in flexure.

Is the 5% location threshold supported by code? Or is this a programming convenience?

4/19/2016 3:07:52 PM

HRS AASHTO

1696

Complete Issue Information

I am running VIRTIS 6.1.

Respectfully - DW

FROM: Brian Goodrich DATE: 7/23/2010 8:02:38 AM Mountain Daylight Time  
The BRASS LRFD/LRFR engine treats the end 5% of a girder as an end panel. This was coded into BRASS prior to implementing transverse stiffener schedules. This limit should be replaced with logic to determine the end panel based on transverse stiffener schedule input.

WYDOT assigned this issue to Problem Log 779.

FROM: Brian Goodrich DATE: 5/18/2011 8:46:20 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 54.

|                                                |
|------------------------------------------------|
| Issue ID: 10147                                |
| Subject: Floor Truss - Truss Member Properties |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Trees, Geoffrey      |                      |
| Submitted By: Jones, Daniel           | 7/23/2010 2:44:48 PM |
| Modified By: xli                      | 3/28/2011 9:01:48 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 7/23/2010 11:05:19 AM Eastern Daylight Time  
1. Truss Member Properties: When you add a member, the default for k is the Pinned boundary

4/19/2016 3:07:52 PM

HRS AASHTO

1697

Complete Issue Information

conditions, when change to other boundary condition k does not change. Have to go to user defined then to bolted, riveted etc. before it loads the correct k value.

2. Truss Member Properties: When you duplicate a member and then change the connected joints, the Z & Y axis unbraced lengths do not change. Either have to enter manually or create using new button. Reference screen shot (TMP3). Is the unbraced length an effective length or just actual length?

Thanks,  
Daniel

FROM: Herman Lee DATE: 7/26/2010 9:31:05 AM Eastern Daylight Time

1. This is a defect in the 6.1 Release.

2. The unbraced length is an effective length which may be different than the actual length between the two panel points. The Z and Y axis unbraced lengths will only be set with the actual length the first time you select the two panel points. Changing the panel points afterward will not reset the unbraced lengths since the window doesn't know whether you have entered your own values.

I changed the Folder for the incident to /Support Center/Virtis since both are existing issues in the 6.1 Release.

FROM: Geoffrey Trees DATE: 9/21/2010 9:14:32 AM Eastern Daylight Time

1. Fixed for 6.3 Release.

FROM: Xinmei Li DATE: 3/28/2011 4:57:39 PM Eastern Daylight Time

#1 is fixed. Verified for 6.3 Alpha6.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 10152                                     |
| Subject: Floor Truss - Stringer Dead Load Reactions |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Trees, Geoffrey      |                       |
| Submitted By: Jones, Daniel           | 7/23/2010 9:06:31 PM  |
| Modified By: rfulton                  | 10/18/2010 9:17:45 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

Complete Issue Information

| Information Needed |           |      |                |
|--------------------|-----------|------|----------------|
| Lee, Herman        |           |      |                |
| Duray, Jim         | New       | High | Unknown        |
| Lee, Herman        | Assigned  |      |                |
|                    |           |      | Change Request |
|                    | Suspended |      | Enhancement    |
| Trees, Geoffrey    | Resolved  |      |                |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | FTBeta.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Daniel Jones DATE: 7/23/2010 5:19:17 PM Eastern Daylight Time  
 The report generated (FE Model for Stage 1) from floor trusses created unequal stringer dead load reactions (Node 8 = 13.334 kips; Nodes 4 & 6 = 13.4 kips). This is a symmetrical model with loads distributed by tributary area.

FROM: Herman Lee DATE: 7/24/2010 12:15:08 AM Eastern Daylight Time  
 Daniel, please attach the bridge to this incident for our investigation. Thanks.

FROM: Daniel Jones DATE: 7/26/2010 12:18:27 PM Eastern Daylight Time  
 I am using Floorbeam1 (FT1) for comparison.

FROM: Jim Duray DATE: 8/3/2010 1:54:31 PM Eastern Daylight Time  
 The stringer reactions are computed by BRASS. Check the BRASS output files for the appropriate stringers to verify the stringer DL reactions.

FROM: Daniel Jones DATE: 8/3/2010 5:47:15 PM Eastern Daylight Time  
 When I look at the BRASS output for Stringer 1 & 2, I come up with 13.4 kips; however, for Stringer 3 I get 13.3 kips. The difference is in the Haunch + Diaphragm Dead Load. One shows 0.3 kips and 0.2 kips.

Thanks,  
 Daniel

Complete Issue Information

FROM: Herman Lee DATE: 8/11/2010 2:16:10 PM Eastern Daylight Time  
The exported diaphragm point load in Unit2 Stringer3 is 0.125 kip. The exported diaphragm point load in Unit2 Stringer1 and Unit2 Stringer2 is 0.187 kip, which should be 0.125 kip based on the inputs in the S10 stringer group definition.

This is an existing issue in 6.1 Release. I'm changing the Folder to /Support Center/Virtis.

FROM: Brian Goodrich DATE: 8/20/2010 9:57:23 AM Mountain Daylight Time  
For Stringer 3, the FlrSystemStringerMbrPtr->GetCountGroupDefDiaphragmList() returns 6 diaphragms. However, for Stringer 1 and Stringer 2, the FlrSystemStringerMbrPtr->GetCountGroupDefDiaphragmList() returns 9 diaphragms. Half the weight of each diaphragm is applied to the stringer, which is why 0.1875 kips (0.125/2 \* 3) is calculated. Why are 9 diaphragms being returned for the first 2 stringers? The input has three diaphragms per bay and there are four bays. Could there be a problem a problem with retrieving the diaphragms?

FROM: Herman Lee DATE: 8/20/2010 1:43:08 PM Eastern Daylight Time  
There are bad diaphragm data in the S10 stringer group definition. The abw\_fsyz\_strgrp\_diaph table has 9 rows of diaphragm data for Stringer 1. When I use the Diaphragm Wizard to recreate those diaphragm inputs, the number of diaphragms is correctly set to 6. I tested the Diaphragm Wizard and Copy Bay To but unable to reproduce those bad data.

Joe, please see whether you are able to reproduce the issue. The GetCountGroupDefDiaphragmList is in BrassBracingScheduleCmd line 769.

FROM: Geoffrey Trees DATE: 9/21/2010 9:21:50 AM Eastern Daylight Time  
Daniel, I was not able to reproduce this error and I cannot find the cause. Have you been able to reproduce this error? I will need to know the steps to be able to reproduce this error if you are able to provide them.

FROM: Daniel Jones DATE: 10/18/2010 5:17:45 PM Eastern Daylight Time  
I tried reproducing the error but was unable as well. I am not sure what caused the problem.

|                                            |
|--------------------------------------------|
| Issue ID: 10155                            |
| Subject: Floor Truss - Boundary Conditions |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Trees, Geoffrey      |                       |
| Submitted By: Jones, Daniel           | 7/26/2010 6:17:43 PM  |
| Modified By: hlee                     | 8/14/2012 10:02:36 AM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

4/19/2016 3:07:53 PM

HRS AASHTO

1700

Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Mathcad - Cross_Section.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 7/26/2010 2:28:43 PM Eastern Daylight Time  
The Boundary Conditions for the floor truss need to be reviewed. From a GT Strudl model it looks as if the software is setup to use a Pinned-Pinned-Pinned-Pinned boundary condition for the floor truss. I believe it should be Pinned-Roller-Roller-Roller.

Thanks,  
Daniel

FROM: Daniel Jones DATE: 7/29/2010 12:57:36 PM Eastern Daylight Time  
The model boundary conditions are wrong. Virtis has all 4 corners of the truss pinned. It should be one corner pinned (preferably a corner that has a diagonal framing into it) and the other three corners should be rollers (i.e. support in the y only). There are 3 reasons for this:  
1. The floor truss was designed this way.  
2. The current model is very unconservative for the Top and Bottom chords. The top chord will go into tension and the bottom chord will go into compression. In addition the forces in the chords will be very small as the supports are applying a force in the opposite direction of the forces actually in the chord cancelling them out.  
3. This is not realistic. For a built up section (like the example bridge used for verification) the angles that connect to the girder will deform relieving this force. For welded girders, the web deflects and relieves this force.

FROM: Herman Lee DATE: 8/12/2010 9:52:54 AM Eastern Daylight Time  
The Truss Floorbeam Mockups reviewed by the TAG specified that "All girder to truss floorbeam panel points are assumed to be pinned".

This is an existing issue in 6.1 Release. I'm changing the Folder to /Support Center/Virtis.

FROM: Herman Lee DATE: 8/20/2010 9:41:07 AM Eastern Daylight Time  
Floor truss was an enhancement in the 6.1 Release. The support conditions are hard coded as pinned based on what was specified in the Truss Floorbeam Mockups. Since floor truss has been released,

4/19/2016 3:07:53 PM

HRS AASHTO

1701



Complete Issue Information

changing the hard coded support conditions in 6.2 to what described above will affect floor trusses modeled in 6.1.

Below are the options we provided to the Task Force for consideration:

- 1. Do nothing.
- 2. Change the hard coded support conditions in 6.2 to what is described in the incident assuming this feature has not been used since 6.1 only supports rolled and built up sections for floor truss.
- 3. Change the hard coded support conditions in 6.2 to what is described in the incident and send out a technical note with 6.2 or after 6.2 is released.
- 4. 1, 2, or 3 and provide a new window for floor truss to enter support conditions in 6.3. Migration from 6.2 to 6.3 will populate all supports as pinned.

FROM: Herman Lee DATE: 8/20/2010 10:36:12 AM Eastern Daylight Time  
Task Force e-mail on 8/20:

The Task Force would like to move with #4 and #1 - do nothing for 6.2 but work on the user interface for 6.3.

FROM: Bin Zhang DATE: 1/25/2011 10:05:06 AM Eastern Standard Time

The floor truss boundary conditions were modified from "all pinned supports" to "one pinned and 3 roller supports", but are still of hard code. The virtis version 6.3 will have this modification.

FROM: Herman Lee DATE: 6/9/2011 4:51:56 PM Eastern Daylight Time  
This is in the 6.4 Work Plan.

FROM: Herman Lee DATE: 8/14/2012 5:55:04 AM Eastern Daylight Time  
Added a new window for floor truss support conditions in 6.4 release.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 10156                                                   |
| Subject: Floor Truss - Review Section Properties of Truss Members |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Jones, Daniel           | 7/26/2010 6:29:40 PM |
| Modified By: sthogaru                 | 4/13/2011 6:59:14 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status             | Priority | Category      |
|-----------------|--------------------|----------|---------------|
| Duray, Jim      | New                | High     | Unknown       |
| Lee, Herman     | Assigned           |          | Bug           |
|                 | Resolved           |          | Support       |
| Li, Xinmei      | Information Needed |          |               |
|                 | Assigned           |          | Enhance BRASS |
|                 | Suspended          |          |               |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | GIRDER ERROR.gif         |             |
|      | FTBeta.xml               |             |
|      | 10162.pdf                |             |
|      | 00028 - FTGirderBeta.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Daniel Jones DATE: 7/26/2010 2:32:41 PM Eastern Daylight Time  
I believe the section properties for the truss members needs to be reviewed.

Thanks,  
Daniel

FROM: Daniel Jones DATE: 7/29/2010 12:54:19 PM Eastern Daylight Time  
With the exception of Gross Area, the section property calculations are wrong. The Virtis calculation for the net area (or effective gross area) could not be duplicated, but it is obvious that the program is not using the Area of holes input in the built up section description. Also Iy is calculating the distance (in the Ad2 portion of the Iy calculation) from the bottom of the angle to the centroid of the component vs. the distance for the centroid of the built up section to the centroid of the component. Iz is using the Iy centroid instead of the Iz centroid. (Note: the nomenclature Iy is actually Ix and Iz is Iy. This is why

4/19/2016 3:07:53 PM

HRS AASHTO

1703

## Complete Issue Information

we are recommending a reference to the Global system coordinates). If lx & ly are wrong then the radius of gyration is wrong.

FROM: Herman Lee DATE: 8/30/2010 9:23:10 AM Eastern Daylight Time  
May, after back-to-back angle is implemented, please use the bridge in 10162 to verify the reported section properties.

FROM: Daniel Jones DATE: 9/7/2010 5:04:49 PM Eastern Daylight Time  
Here are some concerns we have.

1. Need something telling the user to fill out either Number of holes, diameter of holes or Eff area, not both.  
This should at a minimum be in the help files. A warning when you exit the tab would be better. If you have staggered holes, Virtis will not calculate the effective area properly and I am assuming this is why this is here.  
It is a good feature to allow the user to override but It is not a good idea to input both as virtis uses its calculation as a default.
2. Virtis uses the wrong axis orientation for the angles and it is messing up the section property calculations.
3. When I reverse the angles (see pdf file) Iz matches exactly to the above calculations but Iy is off slightly and needs to be checked.
4. Virtis uses gross area for tension and does not check for the area change due to holes. Supposed to deduct area of holes beyond 15% of the gross area.

Thanks,  
Daniel

FROM: Herman Lee DATE: 9/16/2010 1:24:41 PM Eastern Daylight Time  
The file attached by the user is not back-to-back angle.  
Changed Folder to /Support Center/Virtis.

FROM: Geoffrey Trees DATE: 9/16/2010 4:42:05 PM Eastern Daylight Time  
It appears that there is a bug when reading the values from the shape. The horizontal leg is using the opposite leg values to make the section calculations. Selecting the vertical leg gives the correct answer. See attached excel file.

FROM: Herman Lee DATE: 9/17/2010 8:04:39 AM Eastern Daylight Time  
#1 - When both are entered, Virtis uses the one with larger area of deduction (Number of holes x Hole size or Effective area). A warning message should be added during analysis.

#2 is fixed for the 6.3 release.

FROM: Geoffrey Trees DATE: 9/20/2010 3:30:27 PM Eastern Daylight Time  
#1 - Warning messages have been added during analysis. Fixed for the 6.3 release.

FROM: Herman Lee DATE: 9/20/2010 3:43:16 PM Eastern Daylight Time  
May, please investigate #4.

4/19/2016 3:07:53 PM

HRS AASHTO

1704

Complete Issue Information

FROM: Xinmei Li DATE: 11/8/2010 2:52:54 PM Eastern Standard Time  
#4 Currently Virtis uses the same gross area for both compression and tension. Considering area of holes beyond 15% of the gross area for tension could be an enhancement.

FROM: Xinmei Li DATE: 3/28/2011 5:03:54 PM Eastern Daylight Time  
Verified for 6.3 Alpha 6.  
1, warning message is provided when both Number of holes+Hole size and Effective area are entered.

FROM: Srujana Thogaru DATE: 4/13/2011 10:17:41 AM Eastern Daylight Time  
Tested and found to be fixed for 6.3

|                                                   |
|---------------------------------------------------|
| Issue ID: 10162                                   |
| Subject: Floor Truss - Girders (Will not Analyze) |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Jones, Daniel           | 7/29/2010 1:29:41 PM  |
| Modified By: hlee                     | 11/10/2010 9:51:22 PM |
| Priority: High                        |                       |
| Category: Enhance BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 7/29/2010 9:35:05 AM Eastern Daylight Time  
Virtis is not able to run the main girders because it can not get the dead loads from the floor trusses.

Thanks,  
Daniel

4/19/2016 3:07:53 PM

HRS AASHTO

1705

Complete Issue Information

FROM: Herman Lee DATE: 8/11/2010 3:44:22 PM Eastern Daylight Time  
Back-to-back angle is not a supported cross section for floor truss. This cross section is in version 6.3 work plan. The analysis needs to provide better feedback to the user.

This is an existing issue in 6.1 Release. I'm changing the Folder to /Support Center/Virtis.

FROM: Herman Lee DATE: 8/20/2010 10:02:25 AM Eastern Daylight Time  
The Dummy angle used at the bottom of the built up section doesn't have any dimensions and properties entered. The error message "Truss element cross section steel shape area is not entered!" does provide accurate feedback to the user.

FROM: Daniel Jones DATE: 10/29/2010 4:29:58 PM Eastern Daylight Time  
Received a new error as seen under file "10162".

FROM: Herman Lee DATE: 10/29/2010 4:34:47 PM Eastern Daylight Time  
Please attach the modified bridge xml file. Thanks.

FROM: Herman Lee DATE: 11/1/2010 9:50:14 AM Eastern Daylight Time  
May, please try to reproduce the error and identify the 155 concentrated loads (Deck + Diaphragms + Stringer+Floorbeam Loads).

FROM: Xinmei Li DATE: 11/1/2010 5:13:45 PM Eastern Daylight Time  
I'm not able to reproduce exact the same error. But I can't analyze either. It fails when computing dead load for the last floorbeam, cannot find intersection with girder.

FROM: Xinmei Li DATE: 11/3/2010 9:44:51 AM Eastern Daylight Time  
By adjusting the tolerance from 0.00001 to 0.0001, I can reproduce the error, but number of loads is 104 instead of 155.  
In this 104 concentrated loads, 51 loads are from floorbeam selfweight, the rest are girder diaphragms and stringer diaphragms deadload.

FROM: Xinmei Li DATE: 11/10/2010 2:21:09 PM Eastern Standard Time  
I'm able to reproduce 155 concentrated loads with 6.2 release version. Since the maxium number of concentrated loads BRASS can analyze is 70, this could be an enhancement.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 10180                                           |
| Subject: Analysis of long spans in Virtis Standard Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Waheed, Amjad           | 8/4/2010 6:27:26 PM  |
| Modified By: hlee                     | 8/10/2010 7:09:10 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Lee, Herman      | New      | High     | Unknown     |
| Colgrove, George | Assigned |          | Support     |
| Goodrich, Brian  |          |          | Third Party |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 08049-VI10182.xlsx   |             |
|      | 08049E.xml           |             |
|      | 08049OP-Rat-COMP.xls |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/4/2010 2:30:09 PM Eastern Daylight Time  
How Virtis handles long spans (spans greater than 200 ft.). AASHTO MBE has a special requirement to load long spans. Are those requirements are being used at Inventory, Operating and Legal Load analysis levels?

thanks,

FROM: Amjad Waheed DATE: 8/4/2010 2:57:05 PM Eastern Daylight Time  
Please ignore as it has already been added.

FROM: Herman Lee DATE: 8/10/2010 2:58:47 PM Eastern Daylight Time  
Duplicate of Incident 9965.

Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 10182                            |
| Subject: BRASS Rating vs Virtis Std Engine |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Horton, Doug            | 8/5/2010 12:22:09 PM   |
| Modified By: hlee                     | 10/15/2011 10:34:57 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Unknown     |
|                 |          |          | Third Party |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 01218.xml           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Doug Horton DATE: 8/5/2010 8:40:49 AM Eastern Daylight Time  
 One of our users was working on a small structure with heavy deterioration. The ratings were performed using LRFR and LFR. The differences in the LRFR ratings appeared acceptable, however there was a vast difference in the LFR ratings considering the deterioration (Ratings w/o deterioration were almost identical). In reviewing the two runs, the section properties and moments are very close and are obviously not an issue. The projecting compression flange fails to meet specs in BRASS. The file is attached, as is a spreadsheet showing the Operating rating factors at various levels of deterioration. The inspection report shows a 65.8% loss in top and bottom thickness. The exported file uses 40%.  
 I do not know what I am missing as I have reviewed the output several times. I feel there is a little value or values that need to be tweaked.

4/19/2016 3:07:54 PM

HRS AASHTO

1708

Complete Issue Information

Please let me know what I have overlooked.  
Doug Horton

FROM: George Colgrove DATE: 8/24/2010 6:14:21 AM Eastern Daylight Time  
I concur the differences in Virtis LRFD and BRASS LRFD are OK

Ratios from BRASS values to Virtis Values:

|       |                | Ext Bm w/ Deterioration | Int1 Bm w/ Deterioration | Int2 Bm w/ Deterioration | Int3 Bm w/ Deterioration |
|-------|----------------|-------------------------|--------------------------|--------------------------|--------------------------|
| 0.926 | HL93 Axle Load | 0.846                   | 0.914                    | 0.926                    |                          |
| 0.926 | HL93 Axle Load | 0.848                   | 0.913                    | 0.925                    |                          |
| 0.927 | HL93 Tandem    | 0.841                   | 0.913                    | 0.927                    |                          |
| 0.922 | HL93 Tandem    | 0.846                   | 0.91                     | 0.925                    |                          |
| 0.926 | 3 Axle Load    | 0.844                   | 0.91                     | 0.921                    |                          |
| 0.921 | 3-3 Axle Load  | 0.843                   | 0.908                    | 0.921                    |                          |
| 0.92  | 3S2 Axle Load  | 0.848                   | 0.911                    | 0.924                    |                          |
| 0.924 |                |                         |                          |                          |                          |

What can be said is what is causing the differences is consistent.

More over the controlling ratings were located exactly in the same place and for the most part with the same limit state.

For LDF and ASD there was a different story.

In my findings, Virtis ASD correlates with BRASS ASD and Virtis LFD fairly well in limit state as well as ratings. Virtis ASD and LFD both correlated well with each other in location as well. These values however did not correlate with LRFR.

BRASS LFD did not correlate at all with BRASS ASD or Virtis ASD or LFD - much more so with the two interior girders.

BRASS ASD, Virtis ASD and LFD did correlate fairly well with LRFR for the interior girders, whereas the exterior girder rated much higher in these three than it did with LRFR.

I would say the exterior girder differential has to do with the differences in how an exterior girder is designed between ASD/LFD and LRFD. LRFD is far more conservative on the exterior girders.

4/19/2016 3:07:54 PM

HRS AASHTO

1709



Complete Issue Information

relates to the plate thicknesses for the girder section. These values are properly being used throughout the output.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 10184                                                    |
| Subject: Error determining if prestressed beam is spread/adjacent! |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Pichura, Mike           | 8/9/2010 6:51:40 PM    |
| Modified By: hlee                     | 10/15/2011 10:37:38 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/9/2010 2:52:11 PM Eastern Daylight Time  
Submitted on behalf of Mike Pichura (MPichura@mbakercorp.com), Michael Baker Jr., Inc.

To reproduce the error message, rate G3 with the LRFR Design Load Rating template.

```
=====
Error generating LRFD control commands!
02:50:13 PM - Line 153 in source file .\BrassLrfdControl.cpp.
```

```
Error determining if prestressed beam is spread/adjacent! Adjacent beams not defined.
02:50:13 PM - Line 617 in source file .\BrassLrfdControl.cpp.
```

```
Error generating DIST-CONTROL-LL command!
02:50:13 PM - Line 616 in source file .\BrassLrfdControl.cpp.
=====
```

Complete Issue Information

FROM: Brian Goodrich DATE: 8/18/2010 9:36:40 AM Mountain Daylight Time  
 In order for the export to determine if a P/S beam is spread or adjacent, the beam on either side of the beam in question must be assigned in the Beam Shape column on the Span Detail tab of the Beam Details form. However, for your structure, the G3 member is a P/S box while the G4 member is an R/C tee. The export is not handling the mixed beam type case. I need to discuss this with the development team and determine a solution. The only workaround at this point would be to use a girderline structure definition for each girder in your system.

FROM: Brian Goodrich DATE: 8/20/2010 1:58:14 PM Mountain Daylight Time  
 Asked Jim Duray for his input.

|                                       |
|---------------------------------------|
| Issue ID: 10186                       |
| Subject: SQL Server 2005 Installation |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Horton, Doug            | 8/10/2010 3:58:11 PM |
| Modified By: tthompson                | 8/12/2010 4:45:31 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

4/19/2016 3:07:54 PM

HRS AASHTO

1711

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Doug Horton DATE: 8/10/2010 12:02:41 PM Eastern Daylight Time

This issue is related to incidents 9293 and 9907. SQL Server fails to install correctly due to MSXML 6.0 SP2 having been installed. The problem is exactly as noted in the release notes.

Unfortunately the "fix" is no longer available as Microsoft has withdrawn the clean-up utility.

I did not see a useable fix on Microsoft. Has any research been done on this problem other than the fixes performed by Joe?

FROM: Joseph Ihnat DATE: 8/10/2010 2:06:34 PM Eastern Daylight Time

Going forward this isn't an issue in version 6.2 using SQL Server 2008.

Only one user has reported this problem recently. I happened to have a copy of the CleanUp Utility so i sent it to them.

FROM: Todd Thompson DATE: 8/12/2010 12:45:31 PM Eastern Daylight Time

I had the problem installing it on another user's laptop prior to the UG meeting. So this cleanup utility may need to remain on the install DVD so users have access to it.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 10192                                                          |
| Subject: Bar Mark Type 2 bars are generated with incorrect total lengths |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Lee, Herman             | 8/12/2010 4:52:25 PM |
| Modified By: kkennelly                | 8/16/2010 7:30:44 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:07:54 PM

HRS AASHTO

1712

Complete Issue Information

|                   |          |      |         |
|-------------------|----------|------|---------|
| Kennelly, Krishna | Assigned | High | Unknown |
|                   | Resolved |      | Support |
| Lee, Herman       | New      | High | Unknown |
|                   | Assigned |      |         |
|                   | Resolved |      | Bug     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | 00026 - Skewed_Truss.xml          |             |
|      | Framing Plan.png                  |             |
|      | 00026 - Skewed_Truss Modified.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/12/2010 12:52:30 PM Eastern Daylight Time  
Submitted on behalf of Tim Armbrrecht, IL DOT.

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====  
From: Souther, Timothy E  
Sent: Thursday, August 12, 2010 11:42 AM  
To: Armbrrecht, Tim A  
Subject: Virtis 6.2 Beta5 - Bar Mark Type 2 Bug

Reinforcement bars set up under Bar Mark Definitions as "Type 2" bars are generated w/incorrect total lengths. These bars are described & detailed as indicated here:

When called for use in a Member Alternative the total length is indicated as being the "B" length only (42.5' here), not including the additional lengths, as follows...

Note that "Straight Length" for the Type 2 bar G1 is displayed as 42.5'. The total straight length, including the x-coordinate of the bent portions (assuming a 45 deg. Bend\*), is actually 46.871'. For bars G2, G3 & G4, which are Type 3, the total length, including the bent and end portions, is included in the straight length. This is also borne out in the schematic view of the reinforcement.

Complete Issue Information

\*Unlike for Type 3 bars, there is no input for the bend angle. It seems like this is necessary information for Virtis to be able to use the angled portion for shear analysis.

It seems that the only way to get a Type 2 bar to display properly, both in the Girder Profile table and the schematic, is to locate the bar according to the point of the bend. This, however, is not consistent with the way Type 3 or other type bars are located, which is from the beginning of the bar. None of this is described in the Help.

A further and more critical issue that is occurring is that (again, unlike w/Type 3 bars) the angled portion of the Type 2 bars are not included in the shear resistance for the beam. This can be verified by describing the Type 2 bar as an equivalent Type 3 bar (which is also the workaround) and as a Straight or Type 1 bar and observing the results.

I have also included the v. 6.2 Beta5 export file for the subject bridge model (Bar Mark Type 2 Bug - 0640009 (6.2 Beta5).xml).

Tim Souther, PE  
%IDOT Local Bridge Unit

=====

FROM: Krisha Kennelly DATE: 8/16/2010 3:12:19 PM Eastern Daylight Time  
Please refer to the help topic for locating the reinforcement bars in the Girder Profile: Reinforcement window. I've attached that topic to this incident.

It has sketches showing how to define the location of the bars.

also, the sloped portions of bars are not included in the shear capacity. The Opis LRFD Superstructure Method of Solution manual explains this in the Assumptions and Limitations.

Issue ID: 10195  
Subject: Truss module - Skewed Trusses Crashing Program

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Campisi, Paul 8/13/2010 1:51:13 PM  
Modified By: hlee 8/19/2010 9:28:27 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:07:55 PM

HRS AASHTO

1714

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sd_55116190.xml     |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Paul Campisi DATE: 8/13/2010 10:00:59 AM Eastern Daylight Time

Skewed trusses with stringer-floorbeam flooring systems are causing Virtis to crash. There is no reason why this should occur since the BRASS engine can analyze skewed floor systems. This is not related to the problem the BRASS engine has analyzing the short stringer in a skewed bay (Incident 9061). The attached file ("Skewed Truss") does not have any short stringers but still crashes. When I remove the stringer framing in the end bays the truss module does not crash. I made a Superstructure Definition in the attached file that works with no end bay stringer framing. It looks like the problem is when Virtis attempts to calculate the framing loads at the end of the truss with two floorbeams framing into the bearing. We have numerous skewed trusses in NYS we need the truss module to have the ability to analyze skewed trusses.

Paul Campisi  
NYSDOT  
Load Rating Unit

FROM: Herman Lee DATE: 8/19/2010 11:19:53 AM Eastern Daylight Time

I tested both the Left Truss and Right Truss in the Skewed Truss (Not Working) superstructure definition with the default system tolerances (0.001 for ft and 0.00001 for in).

### Issues during analysis:

Left Truss -> ###Warning - Couldn't find panel point at floorbeam location 154.375000 ft.

Right Truss -> ###Warning - Couldn't find panel point at floorbeam location 0.001252 ft.

I adjusted the inputs based on the attached framing plan (Framing Plan.png). The modified skewed truss is attached (00026 - Skewed\_Truss Modified.xml).

### Issues during analysis:

Left Truss -> ???Error - Couldn't compute average dead load due to stringer unit 8!

Right Truss -> ???Error - Couldn't compute average dead load due to stringer unit 1!

When two floorbeams are at the same location on the truss, there is a defect in 6.1 in applying the stringer unit load as a point load at that location.

Fixed for 6.2 Beta 6.

|                 |
|-----------------|
| Issue ID: 10198 |
|-----------------|

4/19/2016 3:07:55 PM

HRS AASHTO

1715

Complete Issue Information

Subject: Negative transverse stiffener spacing not being used correctly

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Kennelly, Krisha 8/16/2010 5:33:08 PM  
 Modified By: hlee 10/15/2011 9:42:09 PM  
 Priority: High  
 Category: Bug - BRASS

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
| Lee, Herman        | Resolved |          |          |
|                    | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Pollack R.R. Overpass.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Krisha Kennelly DATE: 8/16/2010 1:35:44 PM Eastern Daylight Time  
 From VI10175. Found during 6.2 beta testing.

run BRASS LRFR for G2 of attached bridge (from 10175). Shear capacity at end of beam is being calculated using 58" stiffener spacing. It should be using 29".

user has entered the last stiffener as a spacing of -29" with a start distance of 68' from support 4. that results in the stiffener being located 29" from the last support.

FROM: Brian Goodrich DATE: 8/20/2010 11:36:42 AM Mountain Daylight Time  
 I determined why the last stiffener is not being considered. For negative spacings, the input geometry is converted such that the original end location becomes the start and original start location becomes the end. The export then put the first stiffener at the end of the first spacing. This was corrected by

Complete Issue Information

changing the start distance to one spacing left of the original end location. Stiffeners are now placed correctly. In addition to the transverse stiffener schedules, I revised the stirrup and bracing schedules accordingly.

FROM: Brian Goodrich DATE: 9/7/2010 3:37:44 PM Mountain Daylight Time  
Resolved. Fixed for 6.2 beta 6.

FROM: Krisha Kennelly DATE: 9/9/2010 1:25:38 PM Eastern Daylight Time  
correction to Brian's note above: corrected for beta7

Tested in beta 6 with updates. Stiffener spacing is now 29" at end of beam.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10231                                      |
| Subject: Unable to determine location of the girder. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 8/31/2010 4:25:17 PM |
| Modified By: xli                      | 3/29/2011 7:33:30 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/31/2010 12:25:37 PM Eastern Daylight Time  
Submitted on behalf of Matt Hamby (mhamby@sdrengineering.com), SDR Engineering Consultants.

Received Bridgewater e-mail:

4/19/2016 3:07:55 PM

HRS AASHTO

1717



Complete Issue Information

=====

For the Pollack bridge: if I change the "Framing Plan Detail" from "along the support" to "perpendicular to support" it will analyze, but it's a flared bridge and it would be better if I could keep it as "along the support".

=====

To reproduce, run Girder 10 with the Virtis LRFR Engine.

Developer Notes:  
bPerpendicular in CSCSuperPSGirderElement::GetBeamInformation FindGirderBay needs to be determined using IsParallelSystem.

FROM: Herman Lee DATE: 12/12/2010 2:30:49 PM Eastern Standard Time  
Fixed for 6.3 Release.

FROM: Xinmei Li DATE: 3/29/2011 3:21:51 PM Eastern Daylight Time  
Verified fixed for 6.3 Alpha 6. Ran G10 with Virtis LRFR, analysis was completed successfully.

|                                            |
|--------------------------------------------|
| Issue ID: 10232                            |
| Subject: Unable to set PS beam dimensions. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Lee, Herman             | 8/31/2010 4:45:41 PM |
| Modified By: sthogaru                 | 4/8/2011 2:41:55 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description     |
|------|----------------------------|-----------------|
|      | BRASS-Sections_VI10233.zip |                 |
|      | 68050159.dat               | BRASS Data File |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 8/31/2010 12:46:13 PM Eastern Daylight Time  
 Submitted on behalf of Matt Hamby (mhamby@sdrengineering.com), SDR Engineering Consultants.

Received Bridgeware e-mail:

```
=====
For the Little Creek: I have a slightly weird section that is basically a square girder 457mmx457mm. For
G1 (Exterior Girder) I tried modifying an AASHTO girder to this size and the analysis will not work, but if
I put in a typical AASHTO section for the girder the analysis works fine. I also tried the same thing for a
box girder (G1, box) and I get the same error message. I know from other bridges I can modify a
section in the library, but for this one it seems it will not let me.
=====
```

To reproduce, run G1 Exterior Girder with the Virtis LRFR Engine.

Developer Notes:

Below are two validations in PSBeamWideCrossSectionProperties SetDimensions. Are the validations required for ComputeCoordinates?

```
if (ComparisonFunctions.IsGreaterThanOrEqualTo(dWebThk + (2 * dTopHaunch2Width),
dTopFlgWidth, 0.00001) ||
    ComparisonFunctions.IsGreaterThanOrEqualTo(dWebThk, dBotFlgWidth, 0.00001))
{
    // web is equal to or wider than the flange
    return false;
}

if (ComparisonFunctions.IsGreaterThanOrEqualTo(dTopFlgThk + dBotFlgThk + dTopHaunchHeight +
dTopHaunch2Height + dBotHaunchHeight, dBeamHeight, 0.00001))
{
    // no web
    return false;
}
```

Complete Issue Information

FROM: Xinmei Li DATE: 10/4/2010 11:47:07 AM Eastern Daylight Time  
 Removed the validations, bug is fixed for next release.

FROM: Herman Lee DATE: 10/4/2010 5:15:19 PM Eastern Daylight Time  
 Resolved for 6.3 release.

FROM: Srujana Thogaru DATE: 4/8/2011 10:40:42 AM Eastern Daylight Time  
 Tested and found the error has been resolved for 6.3

Issue ID: 10233  
 Subject: Zero ratings after importing BRASS files

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Li, Xinmei  
 Submitted By: Johnson, Daniel 9/2/2010 2:41:01 PM  
 Modified By: hlee 8/23/2012 3:24:34 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | Assigned           | High     | Unknown  |
| Goodrich, Brian | Information Needed |          |          |
|                 | Assigned           |          |          |
| Li, Xinmei      | Information Needed |          | Bug      |
|                 | Assigned           |          |          |
|                 | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

4/19/2016 3:07:56 PM

HRS AASHTO

1720

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 9/2/2010 8:42:10 AM Mountain Daylight Time  
Submitted via BridgeWare:

Hello Sir or Madam,

I have a question regarding a problem we are having after importing BRASS 5.8.9 files into Virtis 6.1. I should note first that we are using BRASS Library Utility Version 2.0.4 to convert our old BRASS 5.8.9 .LBY files to .BLS and .BLV files as used in the more current versions of BRASS. After using the Virtis 6.1 BRASS Import tool we attempt to run an analysis on the imported bridge with 4 different truck types (South Dakota Type 3, Type 3S2, Type 3-2 and HS 20-44). Once we run the analysis the output data within Virtis 6.1 reports that all operating and inventory level factors are 0.0.

I tried but could not attach the database, as it is too large.

Please note two things:

- 1) These files, which we are trying to import into Virtis 6.1, work and give accurate results when using BRASS 5.8.9 software.
- 2) We ran numerous BRASS 5.8.9 files through the BRASS Import tool in Virtis 6.0 and never had this problem.

Any help would be greatly appreciated. Please let me know if you need any further information.

Best Regards,

Daniel K. Johnson, P.E.  
Johnson Engineering Company  
1800 Broadway Avenue  
P.O. Box 672  
Yankton, SD 57078  
Phone: (605) 665-5571  
Fax: (605) 665-8243

FROM: Brian Goodrich DATE: 9/2/2010 8:46:06 AM Mountain Daylight Time  
Please send me one of the BRASS data files that you are importing that gives the zero ratings when running it within Virtis. I'll perform the import and try to duplicate the issue.

FROM: Brian Goodrich DATE: 9/7/2010 3:36:36 PM Mountain Daylight Time  
E-mail from user:

Brian,

4/19/2016 3:07:56 PM

HRS AASHTO

1721

Complete Issue Information

Attached is an example of a .dat BRASS file which we get 0.0 operating and inventory rating results on after importing the file into Virtis 6.1. This file can be used with the library files I sent you before to mimic our issue.

Thank you,

Daniel K. Johnson, P.E.  
Johnson Engineering Company  
1800 Broadway Avenue  
P.O. Box 672  
Yankton, SD 57078  
Phone: (605) 665-5571  
Fax: (605) 665-8243

FROM: Brian Goodrich DATE: 9/17/2010 11:10:17 AM Mountain Daylight Time  
The plastic section moduli for the X and Y axes are switched, which is causing the zero ratings. The original .BLS file looks correct, so I suspect the BRASS import utility is switching the values. I'll need to get the BRASS import utility source code to verify this.

FROM: Xinmei Li DATE: 4/3/2012 10:11:44 AM Eastern Daylight Time  
Please send me the original .BLS so that I can do further investigation.

FROM: Herman Lee DATE: 4/12/2012 3:08:02 PM Eastern Daylight Time  
Attached BLS file from Brian Goodrich.

FROM: Herman Lee DATE: 8/23/2012 9:45:23 AM Eastern Daylight Time  
The plastic section moduli for the X and Y axes are switched in the BRASS import utility. Fixed for the 6.4 Release.

Issue ID: 10236  
Subject: Runs fine in BRASS, not in AASHTO Engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Colgrove, George  
Submitted By: Armbrecht, Tim 9/2/2010 7:08:59 PM  
Modified By: hlee 7/7/2011 2:55:54 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:07:56 PM

HRS AASHTO

1722

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Lee, Herman      | New      | High | Unknown |
|                  | Resolved |      | Support |
| Kennelly, Krisha | Assigned | High | Bug     |
| Ihnat, Joseph    |          |      |         |
| Kennelly, Krisha | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | 00049 -<br>Ouachita_River_Concrete.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 9/2/2010 3:11:58 PM Eastern Daylight Time

This appears to be a 6.1 problem. My consultant (Chamberlain) was trying to model this PPC I-beam structure in Virtis. Was able to get LRFR results in BRASS, but hung up with the AASHTO Engine. File attached.

FROM: Herman Lee DATE: 9/2/2010 3:16:31 PM Eastern Daylight Time

AASHTO LRFR Engine complains the following when I tried to rate the beams in the attached bridge. After making Span 3 strand layout inputs the same as Span 1, I'm able to complete the rating.

Error - Harped strand configuration is specified but no strands are harped in Span 3!

FROM: Tim Armbrecht DATE: 9/2/2010 4:29:23 PM Eastern Daylight Time

Accepted.

FROM: Tim Armbrecht DATE: 9/15/2010 3:58:17 PM Eastern Daylight Time

Need to resubmit this - just got this from my consultant:

Tim,

I revised the file for the draped strands, however VIRTIS for LFD and LRFR is yielding a low result for a serviceability condition that BRASS is not indicating. The revised file is attached.

Cory

4/19/2016 3:07:56 PM

HRS AASHTO

1723

Complete Issue Information

FROM: George Colgrove DATE: 9/16/2010 7:57:58 AM Eastern Daylight Time  
This is still true for VO6.2 Beta 7.

- 1. This is only true for Inventory Ratings for Virtis LRFR
- 2. This is only true for the Axle Load for LFR

In Virtis, the controlling articles is with 6.4.2.1 - MCE-LRFR. The Controlling rating was 0.197 for Service III at the top of the girder

6 Load and Resistance Factor Rating  
 6.4 Load Rating Procedures  
 6.4.2 General Load-Rating Equation  
 6.4.2.1 Design Load Rating Prestress Service III Tensile Stress  
 (AASHTO Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges, First Edition - 2003, 2005 Interims)

The location is at 0.75 ft - BRASS does not produce a POI at 0.75 - when I put a POI at 0.75 ft from support 2, it simply makes a POI at 0.00 ft at support 2. BRASS is not doing many Service III calculations other than Determination of Section Moduli. BRASS is not seeming to be calculating the effects of the negative flexure over the pier where the rating factors based on the negative moment effects in the reinforcing steel over the support.

FROM: George Colgrove DATE: 7/7/2011 10:11:09 AM Eastern Daylight Time  
Running a straight rating for both BRASS (VO6.1) and AASHTO (VO 6.3) provides very similar rating results. The rating factors for VIRTIS (VO 6.1) (pre-AASHTO engine) provided similar operating ratings, but the inventory ratings were very low. VO 6.1 and VO 6.2 produced similar results. The problem appears to be fixed under VO 6.3

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 10237                                                                       |
| Subject: Virtis LRFR freezes and shuts down when it starts Computing Prestress Losses |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Lee, Herman             | 9/3/2010 2:06:53 PM  |
| Modified By: kkennelly                | 3/26/2011 5:20:06 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:07:57 PM

HRS AASHTO

1724

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/3/2010 10:07:20 AM Eastern Daylight Time  
 Submitted on behalf of Matt Hamby (mhamby@sdrengineering.com), SDR Engineering Consultants.

Received Bridgeware e-mail:

=====

Hello,

I have a file, see attached, that will analyze with BRASS LRFR but not Virtis LRFR. When I try Virtis LRFR it freezes and shuts down when it starts "Computing Prestress Losses". Any thoughts?

Thanks for your help,

Matt Hamby, E.I.  
 SDR Engineering Consultants, Inc.  
 2260 Wednesday Street Suite 500  
 Tallahassee, FL 32308

=====

Use G2 in SPANS 11 & 12 to reproduce the crash.

FROM: Herman Lee DATE: 9/3/2010 4:19:32 PM Eastern Daylight Time  
 Matt requested to be notified if there's a workaround.

FROM: Krisha Kennelly DATE: 9/7/2010 3:20:23 PM Eastern Daylight Time  
 I'm looking into this, can't find a workaround yet.

FROM: Krisha Kennelly DATE: 9/8/2010 1:08:37 PM Eastern Daylight Time  
 email with workaround sent to Matt:

Sent: Wed 9/8/2010 1:08 PM

Hi Matt,

The crash is due to an error creating an output file when Virtis LRFR is run. Member G2 in the structure def "SPANS 11 & 12 = SPANS 13 & 14: Type BT-72 Continuous" is crashing. As a workaround, I shortened the structure def name to "SPANS 11 & 12 = SPANS 13 & 14: Type BT-72" and was then able to run Virtis LRFR to completion.



Complete Issue Information

We'll look into fixing this problem for the next release (Version 6.3).

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

Joe - please add some code to check that the path length is not too long in line 7172 of ScSuperStructure .cpp. Other calls to File::Open() in AbaSpecCtrl may need similar length checks on the path name.

FROM: Joseph Ihnat DATE: 11/30/2010 8:00:40 AM Eastern Standard Time  
I've added code to squeeze out the underscores from our folder names, which should reduce the overall path lengths.  
Krisha, if more checking is required, assign this back to the original developer(s).

FROM: Krisha Kennelly DATE: 3/26/2011 1:18:49 PM Eastern Daylight Time  
Path lengths have been reduced in the code. G2 to now runs to completion.

Also, warning messages are issued when the path & file exceeds Microsoft allowables and the program no longer freezes.

|                                                   |
|---------------------------------------------------|
| Issue ID: 10238                                   |
| Subject: Wearing Surface Load Factor or Load Case |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Goodrich, Brian      |                     |
| Submitted By: Kemna, Aaron            | 9/3/2010 5:14:25 PM |
| Modified By: akemna                   | 7/2/2012 6:51:58 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          |             |
|                 | Information Needed |          |             |
|                 | Assigned           |          | Enhancement |
|                 | Suspended          |          |             |

4/19/2016 3:07:57 PM

HRS AASHTO

1726

### Complete Issue Information

|               |          |      |     |
|---------------|----------|------|-----|
| Ihnat, Joseph | Assigned | High | Bug |
|               | Resolved |      |     |
|               | Verified |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                   | Description |
|------|-------------------------------------------------------|-------------|
|      | Geometry.xlsx                                         |             |
|      | RE_Problems with Skewed<br>End Panel Truss System.pdf |             |
|      | 63-110-168.xml                                        |             |
|      | Stringer Bays 2, 3, 4.png                             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 9/3/2010 1:32:23 PM Eastern Daylight Time

Currently Brass will automatically set the load factor ( $\gamma = 1.5$ ) for wearing surface entered in the structure typical section. The MBE allows a  $\gamma$  value of 1.25 to be used for field measured wearing surface. Thus, I believe, Brass should be using the load case assigned to the wearing surface. That way the wearing surface load case can be set to DC or DW depending on which load factor is appropriate. I understand that a member load could be added to get around the issue, but I believe that is a poor solution.

FROM: Herman Lee DATE: 9/3/2010 2:34:30 PM Eastern Daylight Time

Brian, is this an enhancement request?

FROM: Brian Goodrich DATE: 9/7/2010 4:10:56 PM Mountain Daylight Time

The BRASS export uses the factors that have been specified by the user. If none are specified, the factors default to those specified in the System Defaults window. I checked the factors library and found that 1.5 is the LRFR default for the DW load case. Please let me know if this addresses your issue.

FROM: Aaron Kemna DATE: 9/8/2010 9:10:02 AM Eastern Daylight Time

Changing the DW load factor could work for some bridges, but would not work for bridges that had a wearing surface and utilities for example. The MBE allows the 1.25 load factor for wearing surface only. The simplest solution is to define the wearing surface as a DC or DW load type depending on the user's situation (field measured or approximated, respectively). Technically the load type is DW. Again,

4/19/2016 3:07:57 PM

HRS AASHTO

1727

Complete Issue Information

a member load could be set up to use the DC load type to get what the user wants, but it seems silly when we have a tab set up for wearing surface specifically (girder system). I guess I would classify this as an enhancement request for Brass or Virtis. Another solution, would be to add a drop down in Virtis that specifies if the wearing surface is field measured or not. Then the engine could use the appropriate load factor according to the MBE, Table 6A.4.2.2-1.

FROM: Brian Goodrich DATE: 9/8/2010 10:34:50 AM Mountain Daylight Time  
Thank you for the clarification. This would be an enhancement to create another DW load factor for the utilities separate from the wearing surface. I will forward this issue to WYDOT for the BRASS side of things.

FROM: Aaron Kemna DATE: 9/17/2010 10:31:44 AM Eastern Daylight Time  
Is Virtis planning to address this issue? I understand there are workarounds, but technically the DW factor is being reduced.

FROM: Todd Thompson DATE: 9/17/2010 11:40:06 AM Eastern Daylight Time  
I've tried the workaround by creating 2 different LRFR Libraries - the only difference is the DW factor. And then I have to select which library I want to select.

This should be resolved via maintenance since this is in the current AASHTO Spec supported for Virtis and the MBE Spec.

FROM: Herman Lee DATE: 6/9/2011 5:03:50 PM Eastern Daylight Time  
This is in the 6.4 Work Plan for the AASHTO LRFR Engine.

FROM: Aaron Kemna DATE: 7/2/2012 2:51:58 PM Eastern Daylight Time  
Accepted for Virtis 6.4 Beta 2.

|                                              |
|----------------------------------------------|
| Issue ID: 10243                              |
| Subject: Skewed floor system schematic issue |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Johnson, Daniel         | 9/8/2010 2:49:05 PM  |
| Modified By: sthogaru                 | 4/12/2011 9:49:56 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | sd_50308100.xml            |             |
|      | 50308100_ext_VIRTISLRFR_p  |             |
|      | ermits.pdf                 |             |
|      | not_Int_Girder.OUT         |             |
|      | sd_permits_trucks.xml      |             |
|      | Virtis LRFR.png            |             |
|      | Int_Girder.dat             |             |
|      | not_Int_Girder.dat         |             |
|      | Int_Girder.OUT             |             |
|      | 50308100_extgirder_BRASSLR |             |
|      | FR_Permits.pdf             |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/8/2010 10:49:11 AM Eastern Daylight Time  
 Submitted on behalf of Daniel Johnson (dkjjec@iw.net), Johnson Engineering Company.

Received Bridgeware support e-mail (RE\_ Problems with Skewed End Panel Truss System.pdf):

=====

I am having trouble performing analysis on a Truss System superstructure with skewed end panels. The two end panels are skewed -41.0 degrees. The end panels are arranged as shown in the picture below. This configuration results in two stringers which are very short where the two floorbeams intersect at the main members as shown in sketch below. The two short stringers are 0.15 feet and 0.95 feet long. When running the Stringer Unit Layout Wizard and getting to the Live Load Distribution Factors calculation portion of the Wizard I receive an error when I get to the stringer with a length of 0.95 feet which reads "End Distance is 0.0000000 ft. Stringer Definition length is 0.9453000 ft. Do you want to change the length?" with YES and NO as selectable choices. I receive a similar error when I arrive at the 0.15 feet long stringer for calculation of Live Load Distribution Factors within the Wizard module. Then when I try to move on to the next girder I am prompted that "Data in the grids has changed! Do you want to save this data before switching to another stringer?" YES/NO. It then tells me that the end distance is different than the stringer definition length and doesn't let me move on to the next stringer. The Stringer Unit Layout Wizard seems to work well for all of the other stringers in the bridge configuration.

One last point to make on this issue is that when I view the schematic drawing on the Framing Plan Detail the two short stringers mentioned above do not appear correctly. The 0.95 ft stringer looks too short and the 0.15 ft stringer looks way to long and actually appears to carryover beyond the limits of the bridge. This is shown in the drawing below.

Complete Issue Information

I did see Issue 9061 on the technical support website. In this issue it is stated that smaller girders may result in problems when running analysis with Virtis 6.0. However, we are currently running Virtis 6.1. It did mention that changes would be made in Virtis 6.1 for this issue.

=====

Reply e-mail:

=====

Daniel,

The entered end panel stringer lengths are close to those I computed in Geometry.xlsx file. For the schematic issue, I suspect there's a defect in handling the negative "Left edge of deck to first stringer" input. I have entered the schematic issue on your behalf as Incident 10243 in Virtis/Opis Support Center for further investigation.

Below are two additional input issues:

- For interior panels stringer profile, the Start Distance should be 0 and the Length should be 14.8333. (see attached Stringer Bays 2, 3, 4.png).
- For the right end panel (Unit 5), the stringer definition assignments for stringer 1 to 19 should be from Stringer a to Stringer s since it is opposite to those in Unit 1.

In 6.1, the defect described in Incident 10195 will cause an incorrect stringer unit load applied to the truss. Incident 10195 has been resolved for the coming 6.2 release in this month. A workaround in version 6.1 is to model the truss as truss line.

Herman

=====

FROM: Joseph Ihnat DATE: 10/14/2010 12:35:42 PM Eastern Daylight Time  
Schematic fixed for version 6.3

FROM: Srujana Thogaru DATE: 4/12/2011 5:30:10 PM Eastern Daylight Time  
tested and found to be fixed for 6.3

|                                                          |
|----------------------------------------------------------|
| Issue ID: 10244                                          |
| Subject: PSC - LRFR - Permit Trucks - Rating Differences |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Thompson, Todd          | 9/8/2010 6:15:33 PM    |
| Modified By: hlee                     | 10/15/2011 10:36:42 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

4/19/2016 3:07:58 PM

HRS AASHTO

1730

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 9/8/2010 2:26:38 PM Eastern Daylight Time

As I'm concluding my testing - I have a newer 3 span Prestressed Girder Bridge that BRASS and VIRTIS agrees very well for HL-93 and Legal trucks. But for my NYSDOT Permit Truck, I get differences of up 27%.

The P-15 permit truck agrees ok between the two products.

My Control Options say to use 1/10 points and User-Defined Control Points (of which I have not described any).

Yet BRASS LRFR gives me ratings at points other than 1/10 points and I'm sure this is the root cause of the large rating differences. (9.1% of span 2)

I've attached my permit trucks, my bridge XML and my results between BRASS and VIRTIS. I just ran out of time to dig deep enough to figure out what the difference is for this bridge. (Only bridge that is PSC that I've had a chance to test in 6.2 so far)

The Single Trip, Mixed have results around 11% difference.

Unlimited have results around 27 to 29% difference

Single Trip, Escorted have results around 23 to 27% difference.

FROM: Herman Lee DATE: 9/10/2010 11:14:12 AM Eastern Daylight Time

BRASS LRFR controlling limit state is:

SERVICE I Concrete Stress Minimum Effects DL + PS + LL Bottom of Beam

LRFD 5.9.4 Concrete Stresses (ksi) : DL + PS + LL

Virtis LRFR controlling limit state is:

STRENGTH II-Concrete Flexure

MBE 6.4.2.1 Concrete Flexure

4/19/2016 3:07:58 PM

HRS AASHTO

1731

## Complete Issue Information

Virtis LRFR evaluates LRFD 5.9.4 for design ratio only, not rating factor. MBE 6.6.4.2.2 (Service limit state for legal and permit load rating) doesn't specify to rate for the stresses in LRFD 5.9.4. That is the reason why Virtis LRFR doesn't rate for the stresses.

The controlling rating for Virtis LRFR is flexure at pier 1 for Strength II. RF is 1.737 (Single Trip, Escorted). The BRASS Output at the 200 point Strength II flexure RF is 1.752. The flexure rating factors are comparable between the two engines.

Todd, please let us know of your opinion.

FROM: Todd Thompson DATE: 9/13/2010 1:05:12 PM Eastern Daylight Time  
The 2003 AASHTO LRFR Spec (with 2005 interims) for 6.6.4.2.2 is for Steel Girder Bridges, not Prestressed Girders.

This release of Virtis doesn't include the newer MBE spec.

So between a possibly wrong Spec Reference and the reference for Steel Girder bridges for PS has me confused a bit.

Looking for some guidance here as to either correct Spec Reference or correct Spec. I will otherwise try to pursue this in more depth also.

FROM: Todd Thompson DATE: 9/13/2010 1:20:06 PM Eastern Daylight Time  
Also - what about the Control Options stating to only check at 1/10 SP Points but yet BRASS is giving me a controlling rating point at 9.1% of the Span. Appears the control option isn't controlling.

FROM: Krisha Kennelly DATE: 9/13/2010 1:32:00 PM Eastern Daylight Time  
The correct article is 6.5.4.2.2. from the MCE 2003

I haven't looked into it but is the 9.1% due to the modeling method being used for BRASS? CL of simple span bearing or CL of final supports?

FROM: Krisha Kennelly DATE: 9/13/2010 1:50:03 PM Eastern Daylight Time  
If you run with the BRASS PS modeling method set to 'Centerline of final supports' you'll get results at tenth points.

FROM: Todd Thompson DATE: 9/13/2010 2:36:38 PM Eastern Daylight Time  
Ok - that explains the 1/10 point problem.

And 6.5.4.2.2 (MCE 2003) is optional for Service I Limit State for Permit loads - so that is why Virtis does not do this check?

FROM: Krisha Kennelly DATE: 9/13/2010 3:06:43 PM Eastern Daylight Time  
Have you checked the control option to include this check? 'Consider permit load tensile steel stress'

FROM: Todd Thompson DATE: 9/14/2010 9:33:21 AM Eastern Daylight Time  
I tried checking that option and Strength II still controls with VIRTIS.  
And BRASS always considered this - regardless of whether the control option is checked or not.

I'll try to dig into it deeper but appears this control option doesn't work correctly for permit loads?

4/19/2016 3:07:58 PM

HRS AASHTO

1732

Complete Issue Information

FROM: Todd Thompson DATE: 9/15/2010 1:06:03 PM Eastern Daylight Time  
Beta 7 (and Virtis 6.1)

Control Option - Consider permit load tensile steel stress

When checked YES - BRASS has this  
MAP-SPEC-CHECK SE, 3, P, CS1, YES  
MAP-SPEC-CHECK SE, 3, P, CS2, YES  
MAP-SPEC-CHECK SE, 3, P, CS3, YES

When not checked - BRASS has this  
MAP-SPEC-CHECK SE, 3, P, CS1, NO  
MAP-SPEC-CHECK SE, 3, P, CS2, NO  
MAP-SPEC-CHECK SE, 3, P, CS3, NO

So the proper data is getting to BRASS-LRFR.

After reviewing the BRASS output - the BRASS-LRFR output is the same (minus the MAP-SPEC-CHECK as shown above). Appears the either BRASS-LRFR does not use this:  
MAP-SPEC-CHECK SE, 3, P, CS1, YES  
MAP-SPEC-CHECK SE, 3, P, CS2, YES  
MAP-SPEC-CHECK SE, 3, P, CS3, YES

Or I'm not sure.

I've attached the input and output from BRASS-LRFR  
those that precede with NOT are tied together (do not consider permit load tensile steel stress)  
and the regular ones are tied together. (consider permit load tensile steel stress)

This issue should not hold up 6.2 since it existed in 6.1

FROM: Herman Lee DATE: 9/15/2010 2:49:39 PM Eastern Daylight Time  
For Virtis LRFR, when the "Consider permit load tensile steel stress" option is checked, LRFR spec article 6.5.4.2.2.2 will be evaluated (see attached Virtis LRFR.png).

For BRASS LRFR, I'm able to reproduce what Todd described on 9/15.

Note that the controlling limit state for BRASS LRFR is:  
SERVICE I Concrete Stress Minimum Effects DL + PS + LL Bottom of Beam  
LRFD 5.9.4 Concrete Stresses (ksi) : DL + PS + LL

FROM: Brian Goodrich DATE: 11/22/2010 7:03:36 AM Mountain Standard Time  
We are investigating this issue with respect to the BRASS engine.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 10247<br>Subject: truss model with skewed floorbeams        |
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Lee, Herman |

4/19/2016 3:07:58 PM

HRS AASHTO

1733



### Complete Issue Information

|                           |                     |
|---------------------------|---------------------|
| Submitted By: Baumann, Ed | 9/9/2010 2:59:02 PM |
| Modified By: hlee         | 9/9/2010 4:18:07 PM |
| Priority: High            |                     |
| Category: Support         |                     |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1512017.xml         |             |
|      | Exterior_Beam.OUT   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Ed Baumann DATE: 9/9/2010 11:05:34 AM Eastern Daylight Time

The attached bdd file is of a through truss-floorbeam-stringer system. The existing interior floorbeams should be skewed with respect to the trusses, but in the model they are square. How do we make the interior floorbeams skewed?

FROM: Herman Lee DATE: 9/9/2010 12:14:43 PM Eastern Daylight Time

Skewed interior floorbeam is not supported in truss system superstructure definition. An alternative is to model using truss line superstructure definition.

Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 10250                              |
| Subject: Virtis crashes when running PS Beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Grunau, Andrea          | 9/10/2010 2:14:13 PM |
| Modified By: agrunau                  | 9/13/2010 2:48:03 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Andrea Grunau DATE: 9/10/2010 10:19:24 AM Eastern Daylight Time  
When I try to analyze the structure the program crashes and exits. I went into the output file and there is an error that states "\*\*\*\*\* INPUT ERROR 1 \*\*\*\*\* STRAND TYPE MUST BE SPECIFIED AS L OR S". It seems like the input at this point is not correct as it is shifting numbers over to different columns. Am I neglecting to put in some information or putting in too much?

FROM: Herman Lee DATE: 9/10/2010 10:28:30 AM Eastern Daylight Time  
The f'c and f'ci for both PS beams should be based on ksi. After f'c and f'ci are corrected, you need to reselect the PS concrete material in the Stress Limits window so the stresses are recomputed.

Complete Issue Information

Note that analyzing this bridge in the coming 6.2 release will not cause Virtis to crash and exist. The analysis will exit with an error message for that command line.

|                                                |
|------------------------------------------------|
| Issue ID: 10252                                |
| Subject: Positive Moment Capacity of PS I-Beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Grunau, Andrea          | 9/13/2010 2:48:08 PM |
| Modified By: hlee                     | 9/13/2010 4:41:59 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:07:58 PM

HRS AASHTO

1736

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1512017.xml         |             |
|      | 63-110-160.xml      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Andrea Grunau DATE: 9/13/2010 10:52:30 AM Eastern Daylight Time

I am rating a recently built 4 span Prestressed Concrete I-Beam structure. The rating is coming up less than 1.0 for inventory for a few standards vehicles. I looked into the output and saw that the program is calculating a low positive moment capacity at 1.33' from the end of the span which corresponds to the centerline of bearing. The structure is simply supported and continuous for live load. I have input the reinforcement for the continuity diaphragm and also checked the box to ignore the positive moment at the supports. It seems like that is what the rating factor is being calculated with at 1.33'.

FROM: Herman Lee DATE: 9/13/2010 12:24:55 PM Eastern Daylight Time

As mentioned in the Engine Help for the Virtis Std Engine, "Ignore positive moment at supports in ratings" are not used by the Virtis Std Engine.

Please note that the Special Consultant License Option only allows us to provide limited support for installation. The primary support channel for consultant is through the sponsoring agency of your license.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 10255                                                     |
| Subject: Unable to compute truss member length along stringer unit. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Johnson, Daniel         | 9/17/2010 5:57:37 PM |
| Modified By: hlee                     | 10/3/2010 8:08:30 PM |
| Priority: High                        |                      |

4/19/2016 3:07:59 PM

HRS AASHTO

1737

Complete Issue Information

Category: Support

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 00029 - Bridge_12.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/17/2010 1:58:04 PM Eastern Daylight Time  
Submitted on behalf of Daniel Johnson (dkjjec@iw.net), Johnson Engineering Company.

Received Bridgeware support e-mail:

=====  
Herman,

I completed the suggested task. The bridge still doesn't run a successful analysis on the truss. I have attached the updated file. Any further assistance would be appreciated. I should mention that I did still get an error when changing Stringer Unit 5 Stringer 1 to a 'Stringer a' type Virtis reports an error which states 'End Distance is 0 ft. Beam Length is 0 ft. Do you want to change the length?' with Yes/No selectable choices. This also occurs when changing Stringer Unit 5 Stringer 2 to a 'Stringer b' type, except the only difference in the pop up window is that the Beam Length is reported as 1 ft.

Thanks again,

Daniel K. Johnson, P.E.  
Johnson Engineering Company

=====

Developer Note:

4/19/2016 3:07:59 PM

HRS AASHTO

1738

Complete Issue Information

Virtis asserts when DoTrussRefLinePtr->FindIntersection in CDoTfsFloorSystemStructDef::ComputeTrussMbrLengthAlongUnit.

FROM: Krisha Kennelly DATE: 9/28/2010 12:37:56 PM Eastern Daylight Time  
A workaround is to change the Span Length from 59.3333' to 59.333333' on the Structure Definition window. Truss 1 will then analyze.

With the skews and the trailing digits of the data, the program is having difficulty finding the interesction of the last floorbeam and the truss.

Developer Note:  
ComputeSkewAtDistance(dDistFromLeftEnd + dUnitLength, ...) is unable to find the skew of the last floorbeam.  
Last support is at 59.3333 (based on user input), program internally computes dUnitLength as 7.416667' which results in last floorbeam being a little past the last support.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 10256                                                               |
| Subject: Last support not being recognized in PS girder by AASHTO LRFR engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 9/22/2010 2:08:21 PM |
| Modified By: sthogaru                 | 4/8/2011 1:14:15 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 9/22/2010 10:08:51 AM Eastern Daylight Time

4/19/2016 3:07:59 PM

HRS AASHTO

1739

Complete Issue Information

Submitted on behalf of Jordan Pitt, LPA via email:

Herman,

Please see the attached Bridge file. We are having problems with Girders G1, G2, G7, G8, and G9 running for the 3-span superstructure with skewed supports #2 and 3. The analysis stops while performing the specification checks around point 109-ft. We have reviewed the file but can't seem to figure out why some girders are running and others are not. Could you take a look and let me know what you find?

Thanks,  
-Jordan

Jordan Pitt  
THE LPA GROUP INC.  
Engineers-Architects-Planners  
A Unit of Michael Baker Corporation  
703.639.1694 office  
wjpitt@lpagroup.com

FROM: Krishna Kennelly DATE: 9/22/2010 10:12:18 AM Eastern Daylight Time  
reply sent via email:

Hi Jordan,

Herman asked me to look into your problem. For these girders, Virtis is not recognizing the last support due to an internal tolerance problem.

A workaround for your problem is to change the length of the Haunch Profile range to the following values:

G1 150.95942  
G2 150.5772  
G7 148.666  
G8 148.2836  
G9 147.9014

With these values and the System Default tolerances delivered with Virtis, I'm able to run these girders.

I've entered this problem as Issue #10256 on the Virtis/Opis Technical Support website. We'll look into fixing it for the next release, Version 6.3.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

FROM: Krishna Kennelly DATE: 10/17/2010 9:23:14 PM Eastern Daylight Time  
Fixed for version 6.3. Tested G1, 2, 7, 8 and 9 in attached bridge. all ran to completion. also tested g1 in bid10 to make sure nothing broken.

4/19/2016 3:07:59 PM

HRS AASHTO

1740

Complete Issue Information

FROM: Srujana Thogaru DATE: 4/8/2011 9:02:20 AM Eastern Daylight Time  
Tested and found error was fixed for 6.3. Analysis completes without workoround.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10257                                        |
| Subject: Different Number of Girders w/ Multiple Spans |

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis          |
| Primary Contact: Lee, Herman                   |
| Submitted By: Heller, Dan 9/22/2010 5:40:06 PM |
| Modified By: hlee 9/23/2010 4:49:39 PM         |
| Priority: High                                 |
| Category: Support                              |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dan Heller DATE: 9/22/2010 1:45:08 PM Eastern Daylight Time

As a background, we are new to Virtis and trying to do some sample bridges to get familiar with the software.

Our sample bridge consists of 3 spans type V AASHTO girders. Spans of 55', 130', and 55'. Spans 1 & 3 have 13 girder lines while span 2 has 20 girder lines. When defining the "Girder System Superstructure Definition" how do we change the number of girders for each span?

FROM: Herman Lee DATE: 9/22/2010 4:23:55 PM Eastern Daylight Time

If you have 3 simply supported spans, you need to have 3 superstructures in Virtis. If the first and the third spans have the same configuration, you need 2 different superstructure definitions. The first and

4/19/2016 3:07:59 PM

HRS AASHTO

1741



Complete Issue Information

third superstructures use the first superstructure definition (13 girders). The second superstructure uses the second superstructure definition (20 girders).

If you have 3 simply supported spans and the deck make continuous for live load, Virtis doesn't support having different number of girders in different spans.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 10258                                                     |
| Subject: RC LFR Bridge Run in BRASS Engine But Not in Virtis Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Huang, George           | 9/23/2010 8:28:26 PM |
| Modified By: xli                      | 6/30/2011 6:07:35 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status        | Priority | Category |
|-----------------|---------------|----------|----------|
| Duray, Jim      | New           | High     | Unknown  |
| Li, Xinmei      | Assigned      |          |          |
| Huang, George   |               |          |          |
| Li, Xinmei      | Resolved      |          | Support  |
|                 | Assigned      |          |          |
|                 | Investigation |          |          |
|                 | Resolved      |          |          |

### Complete Issue Information

|             |                              |      |                |
|-------------|------------------------------|------|----------------|
|             |                              |      | Bug            |
| Lee, Herman | Verified<br>New<br>Duplicate | High | Unknown<br>Bug |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | Floor_Beam_Error.jpg<br>00877 - 11766.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 9/23/2010 4:38:53 PM Eastern Daylight Time

This is a RC slab bridge with using RC T-Beam function. The modle is working with BRASS LFR Engine but fails to export to Virtis LFR engine. The bridge model file, "Caltrans\_10C0163.xml", and log file "11ft\_RC\_slab.log" are attached.

FROM: Jim Duray DATE: 9/23/2010 4:51:56 PM Eastern Daylight Time

This is a problem in StdEngine export.

May - please try to run this in 6.2 beta 7 and 6.1.

FROM: Xinmei Li DATE: 10/4/2010 10:19:30 AM Eastern Daylight Time

I am able to reproduce this export error with 6.2 beta7.

Since the bridge is 6.2, I can't test with 6.1.

George, if you have 6.1 version of this bridge please attach it so that I can test if this is an old problem.

Thanks. If you don't have it you can just assign it back to Jim.

FROM: George Huang DATE: 10/4/2010 10:51:59 AM Eastern Daylight Time

Hi Xinmei, the 6.1 version file (00879-10C0163.xml) is attached.

FROM: Xinmei Li DATE: 10/6/2010 1:40:01 PM Eastern Daylight Time

I tested with 6.1. The section properties of T beam is not exported correctly. This was a bug, fixed in 6.2.

The section properties entered in this girder is not supported by std engine. The web thickness is too big, change it from 132" to anything less than 100" the analysis will run with no problem.

FROM: Krisha Kennelly DATE: 10/7/2010 8:41:30 AM Eastern Daylight Time

4/19/2016 3:08:00 PM

HRS AASHTO

1743



Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Withers, Richard        | 9/27/2010 7:26:28 PM |
| Modified By: rwithers                 | 9/28/2010 1:34:45 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          | Support  |
|                 | Duplicate          |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00628 - 08C0255.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Richard Withers DATE: 9/27/2010 3:44:19 PM Eastern Daylight Time

When loadrating a floorbeam in a truss/floorbeam/stringer system, I received a notification telling me an error ocured while the program was generating stringer deadload reactions. Two things:

1. I am using a generic rail. After I ran the initial rating (which ran without error) and was reviewing the BRASS output, I realized that I applied the rail in load case DC1. I went to the Structure Typical Section window and changed the load case for the rail to DC2. When I tried to rerun the load rating, I received the error.

2. This is a symmetrical, square (no skew) truss with 8 floorbeams. The error only occurs with floorbeams 1 - 3. Floorbeam 8, which is identical to floorbeam 1, runs without error. Floorbeams 4 -7, which are identical to floorbeams 2 & 3 also run without error.

So why do I get an error for floorbeam 1, 2 & 3 when I change the load case of the rail to DC2?

4/19/2016 3:08:00 PM

HRS AASHTO

1745

Complete Issue Information

I am doing a LFD rating using the HS-20 loading at both inventory and operating levels. I have attached a screen shot of the error along with an xml export of the bridge.

Thanks,

Richard Withers  
601-359-7200  
rwithers@mdot.state.ms.us

FROM: Herman Lee DATE: 9/28/2010 8:21:43 AM Eastern Daylight Time  
Richard, the error in preparing stringer dead load reactions is a duplicate of Incident 8826. The defect has been fixed and will be included in the 6.2 release. We are going to send out 6.2 DVD today. I tested your bridge for the scenario described above and confirmed the defect is fixed.

FROM: Richard Withers DATE: 9/28/2010 9:34:45 AM Eastern Daylight Time  
That's great news. I searched for similar incidents but I didn't see 8862. I see the work around and will use that until we get 6.2 installed.

Thanks,

Richard

|                                                 |
|-------------------------------------------------|
| Issue ID: 10260                                 |
| Subject: 2-span non-composite steel Rolled beam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Huang, George           | 9/27/2010 10:22:57 PM |
| Modified By: ghuang                   | 9/29/2010 5:05:09 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 9/27/2010 6:29:29 PM Eastern Daylight Time

This bridge was fine with BRASS LFD engine but not working with Virtis LFD Engine. Although 0.0 Shear LLDF was used for G1, it still doesn't work after change to 0.01. You may test G2 or G3 first. It looks like looking for composite information when exporting the section information. The file 00628-08C0255 is attached.

FROM: George Huang DATE: 9/27/2010 6:31:12 PM Eastern Daylight Time

Virtis 6.2 beta 7 has similar error messages.

FROM: Herman Lee DATE: 9/28/2010 8:48:08 AM Eastern Daylight Time

For G1, the error message is "Error - The Standard live load distribution factor per wheel for shear at supports is zero!". Please enter 0.01 for Shear at Supports LLDF instead of Shear LLDF.

For G1, G2 and G3, Virtis Std Engine requires lateral brace points for the girder to be entered. The lateral brace points can be either lateral support for top flange or diaphragm for bottom flange. Please see whether it is reasonable to model these along the girder or at supports. Thanks.

FROM: Herman Lee DATE: 9/28/2010 12:04:51 PM Eastern Daylight Time

Virtis Std Engine in 6.1 release will complain duplicate range for the girders. This defect has been fixed and will be included in the 6.2 release.

```

=====
DUPLICATE RANGE ENTERED FOR STEEL MEMBER PROPERTIES
PREVIOUS RANGE 19.50 EQUALS CURRENT RANGE 19.50 FOR SPAN 2

INPUT OR COMPUTATIONAL ERROR ENCOUNTERED.
=====

```

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 10261                                                  |
| Subject: VIRTIS 6.1 Concrete Superstructure Shear Override @ POI |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Goodrich, Brian         | 9/29/2010 3:09:14 PM  |
| Modified By: hlee                     | 10/15/2011 9:44:07 PM |
| Priority: High                        |                       |

### Complete Issue Information

Category: Bug - BRASS

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Goodrich, Brian | Assigned           |          | Support  |
|                 | Information Needed |          |          |
|                 | Closed             |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 9/29/2010 9:09:16 AM Mountain Daylight Time  
Submitted via BridgeWare for David Wolfe:

Bridgeware – The following is for BRASS LRFR engine.

For a concrete member LRFR rating, the Member Alternative Control Options check boxes for (i) "Ignore design & legal load shear" and (ii) "Ignore permit load shear" seem to work as expected.

For a shear override at a Point-of-Interest (POI) there are also check boxes under LRFR for (i) "Ignore design & legal load shear" and (ii) "Ignore permit load shear", which do not work as expected. These check boxes imply that they correspond to the override being performed at the POI, however, at the POI, the second check box ("Ignore permit load shear") does not seem to do anything and the first check box for ("Ignore design & legal load shear") seems to only function as an on/off switch for the combination of check boxes selected at the Member Alternative Control Options.

Respectfully - DW

FROM: Brian Goodrich DATE: 9/29/2010 9:16:09 AM Mountain Daylight Time  
The BRASS engine does not support the "Ignore design & legal load shear", "Ignore permit load shear", or "Consider permit load tensile steel stress" at the point-of-interest level. The BRASS-specific help must be revised to reflect this limitation.

4/19/2016 3:08:01 PM

HRS AASHTO

1748

Complete Issue Information

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 10265<br>Subject: Unable to generate BRASS LFD/ASD section library file! |
|------------------------------------------------------------------------------------|

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Campisi, Paul           | 10/5/2010 10:18:46 PM |
| Modified By: hlee                     | 1/4/2011 5:42:49 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 10/5/2010 6:24:03 PM Eastern Daylight Time  
One of our networked users is getting the following error when trying to rate a bridge.

“Unable to generate BRASS LFD/ASD section library file!  
Error generating BRASS cross section commands!  
Unable to open the requested file.”

Not sure why one user would get this error. He has rights to create and modify bridges. This error has been intermittent for several months, and apparently resolves itself after several hours to over a day.

Thanks

Paul Campisi  
NYSDOT  
Office of Structures

4/19/2016 3:08:01 PM

HRS AASHTO

1749



Complete Issue Information

FROM: Brian Goodrich DATE: 10/12/2010 6:46:55 AM Mountain Daylight Time  
I am not able to reproduce this issue. There are a few paths through the export that end with trying to generate the section library, so it would help to have the bridge XML file that is experiencing this problem. Please attach the XML file.

FROM: Herman Lee DATE: 12/3/2010 9:48:30 PM Eastern Standard Time  
Information Needed E-mail sent on 12/3/10.

FROM: Herman Lee DATE: 1/3/2011 3:08:40 PM Eastern Standard Time  
Information Needed E-mail sent on 1/3/11.

FROM: Herman Lee DATE: 1/4/2011 12:39:21 PM Eastern Standard Time  
E-mail from Paul Campisi on 1/4/11:

=====  
Our Information Technology personnel fixed the issue. You can close the ticket.

Thanks  
Paul

=====

|                               |
|-------------------------------|
| Issue ID: 10268               |
| Subject: Permit Truck Scaling |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Levan, Amy              | 10/6/2010 1:41:25 PM  |
| Modified By: hlee                     | 10/7/2010 12:48:14 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Goodrich, Brian | Information Needed |          |          |
| Lee, Herman     | Resolved           |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Error Message.bmp           |             |
|      | 00137 - 50150051000B020.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amy Levan DATE: 10/6/2010 9:48:27 AM Eastern Daylight Time

I have imported .xml files from version 6.1 into version 6.2 to verify results of 6.2. I recieved the same ratings for design and legal loads, however, my permit trucks are rating 1.52 times higher in version 6.2 than in 6.1.

I compared BRASS LRFR input, and it appears the trucks are being scaled by 0.8333. If I go into Analysis Settings: Vehicles, on the Advanced Tab, the scale factor is listed as 1.0. I have to change this to 1.2 to get the BRASS LRFR input to list the scale as 1.0. Why?

This does not fully correct the problem either. After changing the scale factor to 1.2 so that the input reads 1.0, the ratings are 1.27 times higher than version 6.1 ratings.

FROM: Herman Lee DATE: 10/7/2010 8:21:07 AM Eastern Daylight Time

Please attach the bridge XML file to this incident and specify the Frequency and Loading Condition you selected in the Advanced Vehicle Properties window for the permit truck.

FROM: Herman Lee DATE: 10/7/2010 8:45:02 AM Eastern Daylight Time

E-mail from Amy Levan:

=====

Thanks for your attention, but I solved the problem yesterday. The wrong frequency had been chosen.

Amy R. Levan, P.E.

Greenman-Pedersen, Inc.

=====

|                                                  |
|--------------------------------------------------|
| Issue ID: 10269                                  |
| Subject: System errors running Virtis Std Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Curtis, Beckie          | 10/7/2010 2:49:05 PM |
| Modified By: hlee                     | 5/22/2011 2:08:02 PM |
| Priority: High                        |                      |

Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Lee, Herman     | New                | High     | Unknown     |
| Li, Xinmei      | Assigned           |          | Support     |
|                 | Information Needed |          |             |
|                 | Assigned           |          |             |
| Lathia, Hasmukh |                    |          |             |
| Li, Xinmei      | Information Needed |          |             |
|                 | Suspended          |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | G2-Plate_Girder.OUT     |             |
|      | A2419N.xml              |             |
|      | 10272_G2-Plate_Girder_A |             |
|      | (x=0,Span4).out         |             |
|      | G2-Plate_Girder.dat     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Beckie Curtis DATE: 10/7/2010 10:58:11 AM Eastern Daylight Time  
 A consultant came across this error on two separate bridges (See attached screenshot) using the Virtis LFD Standard Engine. For the submitted .xml, run Spans 1 or 3 - Beam A. Beam B & Beam D both run fine and Beam A runs fine using BRASS engine.

FROM: Herman Lee DATE: 10/7/2010 11:24:20 AM Eastern Daylight Time  
 Below is copied from the analysis log file.

```
=====
Warning - The precision of the entered span length exceeds the fixed length data field allocated!
Warning - The entered span length will be adjusted!
Span Length 1: 80.37
```

Complete Issue Information

=====

The adjusted span length should be 80.38 since the entered span length is 80.375. This defect has been fixed for the 6.3 Release.

A workaround is to enter the span length as 80.375001 so it will be rounded up to 80.38.

FROM: Srujana Thogaru DATE: 3/31/2011 4:43:44 PM Eastern Daylight Time  
Verified and found to be fixed for 6.3

|                                                   |
|---------------------------------------------------|
| Issue ID: 10272                                   |
| Subject: Virtis LFD Cb calculation - Steel Bridge |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Kemna, Aaron            | 10/22/2010 8:19:16 PM |
| Modified By: hlee                     | 6/9/2011 9:15:17 PM   |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 10/22/2010 4:35:31 PM Eastern Daylight Time  
 I could not replicate Virtis's Cb values for partially braced members using the moment envelopes. Does Virtis use corresponding loading at the brace points? For more detail, I have a bridge with flexure problems at Bent 4 of a 4-span bridge. The unbraced length to the right is 25'. The left brace point is at Bent 4. The right braced point is at midspan. The left braced point is in a non-composite region. The right braced point is in the composite region. I am assuming Virtis uses stresses to calculate Cb since the section changes? Using the Moment envelopes, I get a Cb value of around 1.9 or 1.99 (G2)

4/19/2016 3:08:02 PM

HRS AASHTO

1753

## Complete Issue Information

depending on some load factor assumptions for the HS20 Lane Load. Virtis LFD is maxed out at 2.3. I found similar issues with other trucks, but I think I matched the HS20 Truck Load. I have attached the bridge if you need it. Note that 6.2 matches 6.1.

FROM: Xinmei Li DATE: 11/1/2010 10:21:47 AM Eastern Daylight Time  
Do you mean Virtis LFD or LRFD?

FROM: Aaron Kemna DATE: 11/2/2010 1:23:54 PM Eastern Daylight Time  
Virtis LFD. If you could tell me what Virtis is doing to get the Cb value at the 4.0 point for G2 and a HS20 Lane Load, that might clear up the issue. What's the M1, M2, f1 or f2 values for the Cb calculation?

I get from Virtis LFD.

|               |              |               |
|---------------|--------------|---------------|
| @ 4.0         | @ 4.5        |               |
| MDL1 = -250.6 | MDL1 = 172.2 |               |
| MDL2 = -91.5  | MDL2 = 87.7  |               |
| MLL = -272.8  | MLL = -75.2  |               |
| M2 = 1037     | M1 = 175     |               |
| f2 = 38.9     | f1 = 8.5     | ==> Cb = 1.99 |

The above stresses are calculated for the bottom flange from factored loads. Full load factors were used for the MDL values at 4.5 which could be unconservative.

FROM: Xinmei Li DATE: 11/3/2010 9:23:39 AM Eastern Daylight Time  
Hasmukh, can you take a look?

FROM: Herman Lee DATE: 11/4/2010 5:47:22 PM Eastern Daylight Time  
Attached Virtis Std Engine G2 input and output files.

FROM: Hasmukh Lathia DATE: 11/5/2010 4:24:23 PM Eastern Daylight Time  
Virtis Std Engine uses the equation  $C_b = 1.75 + 1.05(M1/M2) + 0.3(M1/M2)^2$  where M1 and M2 are factored moments at brace points. These factored moments M1 and M2 are derived from the maximum unfactored DL1, DL2 and LL+I moments at braced points. These moments are not simultaneously occurring moments. The unfactored DL1, DL2 and LL+I moments as well as factored M1 and M2 moments are printed in the detailed output. The program does not use any factored stresses.

For section at 0.0 in Span 4, using M1 = -355.6 and M2 = 841.8 in the above equation, I get Cb = 2.246 which is the same as 2.25 reported by Virtis Std Engine. If you provide the calculations for the Cb value of 1.99 you are getting, I can check this further.

FROM: Aaron Kemna DATE: 11/9/2010 10:01:42 AM Eastern Standard Time  
The values I used are shown above. The first three values are service loads. M1 & M2 are factored using 1.3 for dead loads and 2.17 for live loads. M1 sign was changed to accommodate the Cb calculation. I also give the factored stress values. 1.99 was obtained by replacing M1 & M2 with f1 & f2, respectively. If you use M1 & M2, Cb is 1.94. M1 is the max factored load at Bent 4. You can't use a different load because that's the load that the section will be checked against. M2 was calculated by using the largest negative live load at the midspan of span 4. This will create the smallest Cb value. Some additional modifications to the load factors could be made at this location because of the change in sign, but I wanted to keep it simple. All of these loads are pulled directly from Virtis. I can't replicate your loads. Could give me a breakdown of your M1 & M2 loads. Note that I am checking the HS20

4/19/2016 3:08:02 PM

HRS AASHTO

1754

Complete Issue Information

Lane loading only.

Plus, I could not open your .OUT file. Is there a way in Virtis to get the Cb calculations?

FROM: Hasmukh Lathia DATE: 11/9/2010 1:44:39 PM Eastern Standard Time

As I stated earlier, Virtis Std Engine uses the equation  $C_b = 1.75 + 1.05(M1/M2) + 0.3(M1/M2)^2$  limited to a value of 2.3, where M1 and M2 are the maximum (not simultaneous) moments at brace points. For Service Load method, these M1 and M2 are unfactored moments and hence the ratio of M1/M2 could be different. This may result in different values of Cb between Service Load and Strength Design methods. Virtis Std Engine uses the value of Cb calculated based on factored moments for both the Service Load and Strength Design methods (this is perhaps a shortcoming of Virtis Std Engine). You cannot use factored stresses for Cb calculations (that is not how it is specified in Table 10.32.1A)

Virtis Std Engine reports the values of M1, M2 and Cb (and some more intermediate results) when the user specifies the OUTPUT option A. If you want to see these detailed output values, double click on the G2-Plate\_Girder.OUT file attached under the Documents tab in this incident.

FROM: Aaron Kemna DATE: 11/10/2010 4:23:47 PM Eastern Standard Time

I figured out how to get the "Detailed Rating Report". I thought "detailed output" was the most detail so thanks for pointing that out. So this is where I stand. For my case the factored moment at 4.0 is -1037 k-ft (I think it is obvious that this value must be used for M2 since this creates the highest stress on the bottom flange which is unsupported). The factored moment at 4.5 using the smallest live load value is 175 k-ft. The service loads used to get these values are provided above. Thus, the Cb value should be 1.94 with M1/M2 = 0.1688. I mentioned using factored stresses earlier because another program does exactly this when there is a section change along the unbraced length. I know this is not in AASHTO, but it does make some sense. The M1 & M2 values that Virtis is using seem to be incorrect, at least for this loading case. I do agree that Virtis should use different M1 & M2 values for ASD or service checks.

FROM: Hasmukh Lathia DATE: 11/12/2010 8:10:13 AM Eastern Standard Time

Using factored stresses for a composite-noncomposite range does make sense, but it is not in the specs. I agree that for the Service Load method the program should use the unfactored moments for the M1/M2 ratio. If Virtis Std Engine needs to be changed, this should be approved by the Task Force.

FROM: Herman Lee DATE: 11/18/2010 7:19:03 AM Eastern Standard Time

Hasmukh, please confirm the M1 and M2 values used by the Virtis Std Engine.

FROM: Hasmukh Lathia DATE: 11/20/2010 7:49:18 AM Eastern Standard Time

I stand corrected. After a review of the source code, it is determined that Virtis Std Engine uses the corresponding moments at brace points for the calculation of Cb and not the maximum values as stated earlier. The factored moments M1 and M2 in the calculation of Cb are based on the following moments occurring concurrently at brace points for a live load position causing the maximum negative moment at x=0 in span 4.

BRACE POINT MOMENTS (UNFACTORED)

| DL1M1  | DL2M1 | DL1M2 | DL2M2 | PLMX1 | NLMX1  | PLMX2 | NLMX2 |
|--------|-------|-------|-------|-------|--------|-------|-------|
| -250.6 | -91.5 | 172.2 | 87.7  | 41.2  | -272.8 | 20.6  | 232.6 |

| BRACE POINTS |    | UNBRACED | BRACE POINT MOMENTS (FACTORED) |    |
|--------------|----|----------|--------------------------------|----|
| X1           | X2 | LENGTH   | M1                             | M2 |

Complete Issue Information

196.00 221.00 300.00 -355.6 841.8

FROM: Aaron Kemna DATE: 12/1/2010 11:30:01 AM Eastern Standard Time  
I can't verify the corresponding moments, but they seem reasonable.

Based off the values you give (unfactored), the appropriate M1 and M2 values should be as follows.

$$M1 = 1.3*(-250.6 - 91.5)+2.17*(-272.8) = -1037 \text{ k-ft} \rightarrow \text{Bent 4 (Analysis point)}$$

$$M2 = 1.3*(172.2 + 87.7)+2.17*(20.6) = 383 \text{ k-ft}$$

You are showing the minimum negative moment at X1 and the maximum moment at X2. I believe this is only applicable for the top flange check at X2 or midspan and thus inaccurate since the top flange is fully braced. For the bottom flange check, we would want to find the maximum negative moment which creates compression in the bottom flange and the corresponding moments at the brace points. With this in mind for the Cb calculation, M1/M2 = 0.37 & Cb = 2.18. The resulting value is not far off, but it could make a big difference for other cases. I would like to make sure that Virtis LFD is doing this properly.

FROM: Hasmukh Lathia DATE: 12/3/2010 1:36:14 AM Eastern Standard Time

As far as I can see Virtis Std Engine is calculating M1 and M2 properly. Since Brace Point moments are not reported in regular detailed output, I just turned the debug output to show these values. I have attached the detailed output for analysis point at Bent 4. I have defined the debug output for brace point moments at the top of the output. Have a look at CASE 2 - NEGATIVE LL+I MOMENT - CORRESPONDING SHEAR. See if this helps.

FROM: Aaron Kemna DATE: 12/17/2010 2:29:02 PM Eastern Standard Time

OK, here is what I am seeing. M1 was calculated from DL1M1, DL2M1 & PLMX1. M2 is calculated from DL1M2, DL2M2 & NLMX2. I would think M2 should be using PLMX2 (Moment at X2 corresponding to PLMX1). Thus, M1 = -355 & M2 = 382.6 & Cb = 2.3. The moment to be resisted with this Cb value would be -355 k-ft. I believe Case 2 is calculated correctly (I originally mixed NLMX1 & PLMX2 above. I was assuming incorrectly which values were corresponding). Is it the intent of Virtis to mix NL with PL to create the smallest Cb value? Is Virtis arbitrarily applying the lowest Cb value calculated between the Cases, independent of the loading that is being checked? Case 1 is not corresponding loads, but is using corresponding loads as an envelope (My best guess?).

FROM: Hasmukh Lathia DATE: 12/20/2010 9:00:12 AM Eastern Standard Time

I agree that for Case 1 M2 should be using PLMX2. This needs to be looked at for future correction to Virtis Std Engine. Virtis Std Engine is calculating Cb for each case and using it for calculating moment strength that is to be used to calculate the moment rating for that case.

FROM: Aaron Kemna DATE: 12/20/2010 2:03:53 PM Eastern Standard Time

If the corresponding loading issue above is fixed, I would consider this issue resolved.

FROM: Herman Lee DATE: 12/23/2010 8:51:49 AM Eastern Standard Time

We have notified PennDOT of this issue.

FROM: Herman Lee DATE: 6/9/2011 5:07:00 PM Eastern Daylight Time

To be discussed in June TF Meeting Agenda Item 7.b.ii.

Issue ID: 10278

Subject: Virtis 6.1 returns ratings of zero

4/19/2016 3:08:02 PM

HRS AASHTO

1756

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Horton, Doug            | 11/1/2010 9:10:15 PM |
| Modified By: b Zhang                  | 6/7/2011 3:50:32 PM  |
| Priority: High                        |                      |
| Category: Support                     |                      |

## History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
|                  | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Thogaru, Srujana | Resolved           |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Steel 6.1.xml       |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Doug Horton DATE: 11/1/2010 5:16:38 PM Eastern Daylight Time

We have a file that always returns zero values when run in LRFR. The structure is continuous for live load.

The BRASS output contains rating non-zero rating values, but they are not being shown in Virtis as having been received.

We have looked at the file in depth, but were unable to find the error. The file is attached.

Any assistance in finding what we are missing would be greatly appreciated.

4/19/2016 3:08:02 PM

HRS AASHTO

1757



Complete Issue Information

FROM: Herman Lee DATE: 11/2/2010 7:36:57 AM Eastern Daylight Time

Doug, I don't see any file attached in this incident. Please attach the bridge XML file again. Thanks.

FROM: Herman Lee DATE: 11/8/2010 4:19:00 PM Eastern Standard Time

I reviewed the G2 girder. The controlling limit state is flexure at the pier locations. The bridge is a multi-span deck make continuous for live load PS structure but there's no continuity diaphragms entered at the pier. Please double check the plans to see whether there's mild steel specified at the pier locations.

FROM: Doug Horton DATE: 11/30/2010 3:53:28 PM Eastern Standard Time

An updated file which contains the steel in the continuity diaphragm is attached. I have also attached a file that shows the ratings obtained from both BRASS and VIRTIS. As noted before, the BRASS ratings ignoring the positive moments at the supports provides values while all results are zero when considering the positive moments. The Virtis 6.1 Engine provides the same ratings considering the positive moments and not considering them. LFD ratings were also run for the structure and, although low, values were generated. Exporting and running the same structure in Virtis 6.2 provided zero results with BRASS and incomplete results using Virtis. We do not see what we missed with BRASS in 6.1, but feel certain something is missing.

Thanks for your continued assistance!

FROM: Herman Lee DATE: 12/1/2010 1:27:05 PM Eastern Standard Time

I took a closer look at the Virtis model and nothing jumps out. Since the controlling limit state is flexure at the pier location, my suggestion is to double check the deck reinforcements input. If this checked out ok, could you send us the plans for confirming the model?

FROM: Doug Horton DATE: 6/1/2011 11:52:48 AM Eastern Daylight Time

Sorry for the delay in response. The pertinent plan sheet files are attached in the zip file. I tried sending it by regular email, but it is too large (3Mb). If you do not get them because of the size, please let me know.

The consultant is still having issues with getting a reasonable and acceptable rating.

FROM: Bin Zhang DATE: 6/6/2011 9:15:42 AM Eastern Daylight Time

1. The deck reinforcements don't reflect what the plan specified (sheet 27 and 32).
2. Modeling of mild reinforcement steel in prestress beam is not currently supported. This is a planned enhancement in next year 6.4 release.

Issue ID: 10280

Subject: Rounding issue with Roadway Width

Folder: /Virtis/Support Center/Virtis

Primary Contact: Thogaru, Srujana

Submitted By: Kemna, Aaron

11/2/2010 5:25:04 PM

Modified By: akemna

8/3/2011 3:11:27 PM

Priority: High

Category: Bug

4/19/2016 3:08:02 PM

HRS AASHTO

1758

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 11/2/2010 1:39:25 PM Eastern Daylight Time

Due to rounding issues, the number of lanes considered for a bridge may be incorrect. I have a bridge that is entered with an out - out width of 38.6666'. The barrier curbs are 16" wide. I used the compute button to calculate the roadway width. The resulting roadway width was shown as -18.000000' and +18'. When I calculated the distribution factors, the ML Deflection DF was calculated assuming 2-lanes. There should be three lanes. When I entered the roadway width by hand, the correct value was calculated. I only checked the distribution factors so I don't know how widespread the problem is. The number of lanes should follow the tolerance limits set. My bridge is attached.

FROM: Herman Lee DATE: 12/12/2010 11:40:57 AM Eastern Standard Time

Aaron, below details our investigation of the problem you submitted. We are not able to reproduce the problem. Please attach the bridge, specify which Compute button or analysis engine you used and the tolerance settings in your database for us to investigate further. Thanks.

Modified TrainingBridge1 in the sample database for the following:

1. Parapet width = 16"
2. Skew = 0
3. Girder spacing = 12'
4. Left edge of deck to superstructure definition reference line = 19.3333'
5. Right edge of deck to superstructure definition reference line = 19.3333'
6. Left overhang = 1.3333'

Compute from Typical Section for the Standard LL Distribution Factor:

1 Lane = 0.5 wheels and Multi-Lane = 1.35 wheels  
Multi-Lane factor is based on 3 lanes.

4/19/2016 3:08:02 PM

HRS AASHTO

1759

Complete Issue Information

Compute from Typical Section for the LRFD LL Distribution Factor:  
1 Lane = 0.3 Lanes and Multi-Lane = 0.6375 Lanes

View Calcs for the LRFD LL Distribution Factor shows 3 lanes:

=====  
Compute Deflection Distribution Factors  
(Article 2.5.2.6.2)  
-----

Input:  
Number lanes = 3      1 Lane MPF = 1.20  
Number beams = 4     2 Lane MPF = 1.00  
                  3 Lane MPF = 0.85  
                  >3 Lane MPF = 0.65

One Design Lane Loaded:  
DF = 1.0/Number beams \* MPF = 1.0/4 \* 1.20 = 0.300 Lanes

Two or More Design Lanes Loaded:  
DF = Number lanes/Number beams \* MPF = 3/4 \* 0.85 = 0.637 Lanes  
=====

Perform BRASS LRFR analysis and DST output file shows 3 lanes:

=====  
PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS  
Method: AASHTO LRFD C2.5.2.6.2  
Deflection in All Beams

Input Parameters:  
NI = 3    Nb = 4.00

Distribution Factors Summary:  
g(1) = 1 / Nb = 0.250    m = 1.20  
g(M) = NI / Nb = 0.750    m = 0.85

mg(1) = 0.300  
mg(M) = 0.638  
=====

FROM: Aaron Kemna DATE: 12/14/2010 11:49:31 AM Eastern Standard Time  
Sorry, I must have forgot to attach the file. I looked at this again and the issue is not exactly what I thought. The file I attached was created in 6.1. I decided to add the LRFR information for 6.2. When I clicked on the LRFR distribution factor compute button, the deflection distribution factor was computed based off of two lanes. By looking at the Lane Position data it appears that I have exactly a 36' roadway width (previously calculated with button). If I click the compute button here and then re-calculate the distribution factors, I get the correct values. I don't see why we would need to use this workaround to get the correct number of lanes to be analyzed for the distribution factors.

FROM: Herman Lee DATE: 12/15/2010 1:27:15 PM Eastern Standard Time

4/19/2016 3:08:02 PM

HRS AASHTO

1760

Complete Issue Information

I'm able to reproduce the problem with the attached bridge. Both the Std and LRFD Live Load Distribution Compute buttons have the same defect. The defect in LRFD Live Load Distribution Compute button has been fixed.

FROM: Srujana Thogaru DATE: 3/31/2011 10:51:49 AM Eastern Daylight Time  
Defect in STD Live Load Distribution Compute button has been fixed for 6.3.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 10281                                                          |
| Subject: Specialized Hauling Vehicles are not being addressed by Virtis. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Kemna, Aaron            | 11/2/2010 5:43:47 PM  |
| Modified By: akemna                   | 11/18/2010 7:34:47 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 11/2/2010 2:04:58 PM Eastern Daylight Time  
These vehicles are in the MBE and can be an important part of a DOT's posting procedures for LRFR. The MBE has load factors, truck descriptions and a notional load to cover all axle configurations. These trucks would need there own classification when setting up the analysis. I would classify this as a maintenance issue.

FROM: Herman Lee DATE: 11/2/2010 3:05:43 PM Eastern Daylight Time  
Update LRFR to MBE 1st Edition 2008 is an enhancement for the 6.3 Release. The legal load rating tree in the Analysis Settings window with be separated into Routine vehicles and Specialized Hauling vehicles in 6.3.

4/19/2016 3:08:03 PM

HRS AASHTO

1761

## Complete Issue Information

Issue ID: 10282

Subject: Virtis LRFR Engine - Higher tensile stress limits at intermediate bents for P/S structures

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Kemna, Aaron

11/2/2010 6:06:44 PM

Modified By: akemna

8/3/2011 3:16:36 PM

Priority: High

Category: Maintenance

### History

| Primary Contact  | Status                | Priority | Category    |
|------------------|-----------------------|----------|-------------|
| Lee, Herman      | New                   | High     | Unknown     |
| Kennelly, Krisha | Assigned<br>Duplicate |          | Maintenance |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:03 PM

HRS AASHTO

1762

## Complete Issue Information

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | BRASS_RC_Prob<br>(1010031).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 11/2/2010 2:29:01 PM Eastern Daylight Time

AASHTO 5.14.1.4.6 states that a different tensile limit should be used at the top of prestressed girders at interior bents for simple span girders made continuous for live load. The temporary stress limit with  $f'_{ci}$  replaced with  $f'_c$ , or  $0.24 \cdot \text{SQRT}(f'_c)$  should be used instead of the  $0.19f'_c$  used to check tensile limits near mid-span. The Service III load combination should be used to calculate the stress at these points. I would classify this issue as maintenance.

FROM: Jeff Ruby DATE: 11/8/2010 11:30:30 AM Eastern Standard Time

I was about to add an incident for this very "problem". Here is my take:

AASHTO 5.14.1.4.6 mentions the table, which the standard engine is using ( $0.0948 \cdot \text{SQRT}(F'_c)$ ).

In order to use  $0.24 \cdot \text{SQRT}(f'_c)$  mild reinforcing steel (or P\*S strands) would need to be present in the top of the P\*S beam. (This would be useful for the stress calculations at release and transportation as well.) Virtis/Opis has no way of inputting this steel at this time. So it would be hard to implement.

But, AASHTO 5.14.1.4.6 states:

Alternatively, the top of the precast girders at interior supports may be designed as reinforced concrete members at the strength limit state. In this case, the stress limits for the service limit state shall not apply to this region of the precast girder.

I vote for this option. We need a control option to Ignore Beam Stresses Near Interior Supports, if the designer so desires, when the slab is designed for the strength moment over the pier.

It may also be an enhancement to provide the ability to enter mild reinforcing in the top of the P\*S beam definition as well.

FROM: Jeff Ruby DATE: 11/8/2010 11:36:25 AM Eastern Standard Time

Additionally,

BRASS already has this option. See the attached screen shot.

FROM: Krisha Kennelly DATE: 11/16/2010 2:14:21 PM Eastern Standard Time

duplicate of 10295. please see that incident for more discussion.

4/19/2016 3:08:03 PM

HRS AASHTO

1763

Complete Issue Information

FROM: Krishna Kennelly DATE: 2/22/2011 1:59:56 PM Eastern Standard Time  
10295 is being addressed for 6.3 release.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10283                                       |
| Subject: BRASS Limitations Causing Misleading Results |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Armbrecht, Tim          | 11/3/2010 1:46:01 PM  |
| Modified By: bgoodrich                | 11/19/2010 3:08:59 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 11/3/2010 9:48:45 AM Eastern Daylight Time  
From one of my consultants (Souther):

BRASS generates misleading results for the attached Virtis model (BRASS\_RC\_Prob(1010031).xml) of a 2-span continuous RC-slab. I believe this may be from internal limitations. It appears that, as modeled, the analysis only go to .415 of Span 2. Since the controlling point is at .6 of Span 2 (Inv RF = 0.965), Virtis erroneously reports .4 of Span 1 as the critical section with Inv RF = 1.032. When the POI's are limited, the analysis returns the correct RF's. When the Virtis Standard Engine is utilized, Virtis reports correct results when the same explicit POI's are specified.

4/19/2016 3:08:03 PM

HRS AASHTO

1764

## Complete Issue Information

Please verify that this is a limitation of BRASS?

FROM: Brian Goodrich DATE: 11/5/2010 8:38:42 AM Mountain Daylight Time  
I was able to duplicate the error. This is an error within BRASS, not a limitation. I will forward this to WYDOT.

FROM: Brian Goodrich DATE: 11/19/2010 8:00:58 AM Mountain Standard Time  
WYDOT assigned this issue to BRASS Problem Log 1030. BRASS has been corrected to address the missing points of interest. This issue has been fixed in BRASS-GIRDER(STD) 6.0.4 to be released at the beginning of 2011. Fixed for version 6.3.

|                                |
|--------------------------------|
| Issue ID: 10284                |
| Subject: LRFR - System Factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Thompson, Todd          | 11/8/2010 7:51:07 PM |
| Modified By: mordoobadi               | 5/11/2011 6:58:20 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          | Support  |
|                    | Resolved |          |          |
|                    | Accepted |          |          |
|                    | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:08:03 PM

HRS AASHTO

1765



Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 11/8/2010 2:52:32 PM Eastern Standard Time

For the majority of my bridges, the Data Field LRFR - System Factors is blank (or NULL). Is there a way to populate them in bulk so I don't have to open up 1200 bridges and go to each member to set these values?

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 8:51:03 AM Eastern Standard Time

Todd, There is no way to do this from the user interface. If you tell me what you would like them be to defaulted to I will prepare a SQL script that your DBA could run against your database.

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 9:14:24 AM Eastern Standard Time

Here are the scripts that you need to run to set the LRFR System Factor to "All Other Girder/Slab Bridges" if they are null.

```
UPDATE ABW_BEAM_DEF SET LRFR_SYSTEM_FACTOR_TYPE = 46206 WHERE LRFR_SYSTEM_FACTOR_TYPE IS NULL;
```

```
UPDATE ABW_DETAILED_TRUSS_DEF SET LRFR_SYSTEM_FACTOR_TYPE = 46206 WHERE LRFR_SYSTEM_FACTOR_TYPE IS NULL;
```

Please ask your database administrator to run these scripts to default the empty values to "All Other Girder/Slab Bridges".

FROM: Todd Thompson DATE: 5/11/2011 2:39:37 PM Eastern Daylight Time

This did work and can be closed.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10286                                        |
| Subject: Exterior Timber Girder Not Analyzing Properly |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Jones, Daniel           | 11/9/2010 5:25:54 PM |
| Modified By: rfulton                  | 5/12/2011 3:28:56 PM |
| Priority: High                        |                      |
| Category: Bug - Madero                |                      |

History

4/19/2016 3:08:04 PM

HRS AASHTO

1766

Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 |          |          | Bug      |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | vics_NSG.xml        |             |
|      | sd_20100171.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 11/9/2010 12:34:07 PM Eastern Standard Time  
 The far right exterior timber girder is not calculating the correct rating values. No error is ever indicated when one runs the analysis. The output file indicates there are problems with this girder. I have attached the Virtis model and a screen shot of the error.

I am not sure what is causing the problem.

Thanks,  
 Daniel Jones

FROM: Brian Goodrich DATE: 11/10/2010 7:21:22 AM Mountain Standard Time  
 I tracked the error down to the Madero engine. The girder spacing was incorrectly assigned to the G12 girder. I corrected this error and G12 now gives the same results as G1.

4/19/2016 3:08:04 PM

HRS AASHTO

1767

### Complete Issue Information

A new Madero engine must be sent to the users to address this issue.

FROM: Srujana Thogaru DATE: 4/8/2011 11:09:31 AM Eastern Daylight Time  
Attached bridge is tested using 6.3 Beta 1 and found the same error as attached with the incident while analyzing G12 .

FROM: Srujana Thogaru DATE: 5/2/2011 11:29:34 AM Eastern Daylight Time  
Tested with latest Madero dll and found that the error has been fixed for 6.3.

FROM: Daniel Jones DATE: 5/12/2011 11:28:56 AM Eastern Daylight Time  
Tested under 6.3 Beta 2 and worked.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10287                                       |
| Subject: NSG Fails to run for PS Girder System Bridge |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 11/9/2010 9:41:01 PM |
| Modified By: hlee                     | 5/11/2011 6:19:35 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 11/9/2010 4:45:26 PM Eastern Standard Time  
I can't seem to get a PS Girder System to generate the FE model for doing a NSG Analysis.

I can get Normal analysis to work and generate correct results. The system will also generate the LRFR DF's ok. But it fails to run the NSG Analysis.

4/19/2016 3:08:05 PM

HRS AASHTO

1768

Complete Issue Information

Message received -

Unable to generate model.

03:44:31 PM - Line 1823 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to generate girder system finite element model.

03:44:31 PM - Line 576 in source file .\AbxVirtisDistFactModelGen.cpp.

Unable to generate model.

03:44:31 PM - Line 1700 in source file .\AbxVirtisDistFactModelGen.cpp.

Unable to generate model.

03:44:31 PM - Line 3221 in source file .\AbxVirtisDistFactModelGen.cpp.

Non-standard gage analysis failed!

03:44:57 PM - Line 15826 in source file .\UiAnalysisProgressDlg.cpp.

FROM: Herman Lee DATE: 11/10/2010 3:39:18 PM Eastern Standard Time

This is caused by a defect in building the finite element model.

A workaround in 6.2 is to combine the three haunch profile ranges into one, with length equals to 229'.

FROM: Herman Lee DATE: 11/10/2010 4:47:50 PM Eastern Standard Time

This defect has been fixed. The fix will be included in the 6.3 Release.

Resolved for 6.3 Release.

FROM: George Colgrove DATE: 4/11/2011 9:12:31 AM Eastern Daylight Time

I checked this with Example 7 using the enclosed NSG truck and the rating (LFD) ran.

I also checked it with the enclosed bridge and ti ran.

FROM: George Colgrove DATE: 4/18/2011 7:52:19 AM Eastern Daylight Time

The enclosed bridge and NSG truck (LRFR) are no longer working

Info - Analyzing Int Girder with AASHTO LRFR Engine...

Info - Capacities determined using AASHTO LRFR Specifications 5th Edition, 2010 Interims

Info - Ratings determined using AASHTO MBE Specifications 2nd Edition

Info - Use Creep indicator set to true for at least one span. Therefore creep will be considered in all spans.

Info - Beam curing method is not set! Beam curing method will be set to Steam as default!

Info - Deck curing method is not set! Deck curing method will be set to Moist as default!

Error - The following times must be entered since Creep is being considered:

--Age at deck placement

--Final age

Error - The following times must be entered since Creep is being considered:

--Age at deck placement

--Final age

Error - The following times must be entered since Creep is being considered:

--Age at deck placement

4/19/2016 3:08:05 PM

HRS AASHTO

1769

Complete Issue Information

--Final age

Error - Analysis failed!

I entered 60 days for Age at deck placement and 75 years x 365 days for Final age. The analysis runs however the software only produces zero ratings

Back to LFD NSG rating:

Info - Performing LFR specification checking...

Building Spec Check Domain objects.

Ext Girder - Stage 1

Ext Girder - Stage 2

Ext Girder - Stage 3

Performing Specification Check.

- STAGE 1

- Location - 0.0000 (ft)

- Location - 2.2344 (ft)

[ . . . ]

- Location - 226.7656 (ft)

- Location - 229.0000 (ft)

- STAGE 2

- Location - 0.0000 (ft)

- Location - 2.2344 (ft)

[ . . . ]

- Location - 226.7656 (ft)

- Location - 229.0000 (ft)

- STAGE 3

- Location - 0.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 2.2344 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 7.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 15.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 22.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 29.8750 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 30.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 37.1667 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 37.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

- Location - 44.6250 (ft)

## Complete Issue Information

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 45.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 52.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 60.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 67.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 72.7656 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 74.3333 (ft)  
- Location - 75.0000 (ft)  
- Location - 75.6667 (ft)  
- Location - 77.2344 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 82.9000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 90.8000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 98.7000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 106.3750 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 106.6000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 114.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 122.4000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 122.6250 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 130.3000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 138.2000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 146.1000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 151.7656 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 153.3333 (ft)  
- Location - 154.0000 (ft)  
- Location - 154.6667 (ft)  
- Location - 156.2344 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 161.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 169.0000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 176.5000 (ft)

A fatal error encountered while processing article "9.17 - Flexural Strength"

Complete Issue Information

- Location - 184.0000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 184.3750 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 191.5000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 191.8333 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 199.0000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 199.1250 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 206.5000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 214.0000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 221.5000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 226.7656 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
- Location - 229.0000 (ft)  
A fatal error encountered while processing article "9.17 - Flexural Strength"  
Fatal error occurred while processing specification checks.  
Error - Error performing LFR specification checking!

Error - Analysis failed!

FROM: George Colgrove DATE: 4/18/2011 12:43:46 PM Eastern Daylight Time

FROM Herman (Mon 4/18/2011 12:38 PM):

George,

BRASS is used in the bridge attached to this incident. Testing should be performed using the BRASS engine to confirm the fix in the NSG analysis. This incident has nothing to do with AASHTO LRFR Engine analysis for individual girder or NSG analysis using the AASHTO LFD Engine. Please change this incident back to resolved and submit a new incident in Beta Testing.

Herman

FROM: Bin Zhang DATE: 4/18/2011 9:22:36 AM Eastern Daylight Time  
Verified using BRASS in VO63 beta1

FROM: Todd Thompson DATE: 5/11/2011 2:18:07 PM Eastern Daylight Time  
Builds the FE model and does the NSG analysis without crashing or producing error messages.  
Tested in Beta 2.

|                 |
|-----------------|
| Issue ID: 10288 |
|-----------------|

4/19/2016 3:08:05 PM

HRS AASHTO

1772

Complete Issue Information

Subject: Longitudinal reinforcing is controlling in 6.2

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Armbrecht, Tim 11/10/2010 1:46:06 PM  
 Modified By: hlee 11/10/2010 6:59:37 PM  
 Priority: High  
 Category: Support

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Goodrich, Brian | Assigned           | High     | Support     |
|                 | Information Needed |          |             |
|                 | Assigned           |          | Third Party |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | RC Slab Top Rebar Info.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/10/2010 8:46:34 AM Eastern Standard Time  
 Submitted on behalf of Tim Armbrecht, IL DOT:

Received E-mail:

=====

Tim,

This was kicked back by design for a change in the long. Bars from #6 to #7. In Version 6.1 the LRFR RF was .99. Rhett looked through my file yesterday and tried to run it in 6.2 with some minor changes.

4/19/2016 3:08:05 PM

HRS AASHTO

1773



Complete Issue Information

Now the LRFR RF is like 0.6 and keeps stating the longitudinal reinforcing is controlling. I can change the longitudinal reinforcing with little or no effect on the rating. Just doing a LRFD spec check it says stress in the concrete is controlling with a low rating factor. When Mike tried to convert it to LARS the longitudinal reinforcing did not transfer over. Can you have the VIRTIS people look at this file? I have been reviewing it for hours and cannot find anything, but still not ruling out user error. LFD rating factors look fine.

=====

FROM: Herman Lee DATE: 11/10/2010 1:11:47 PM Eastern Standard Time  
 Longitudinal reinforcement rating is a new feature in the BRASS LRFR engine in Virtis 6.2. If you would like to compare the rating with 6.1, please select the "Ignore long. reinf. in rating" control option in the Member Alternative window. If you would like to check the longitudinal reinforcement rating, please refer to the spec check for 5.8.3.5 at the controlling location in the BRASS output file or the Intermediate output file.

|                                    |
|------------------------------------|
| Issue ID: 10289                    |
| Subject: Doubly reinforced section |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Hart, Sean              | 11/12/2010 5:25:09 PM  |
| Modified By: hlee                     | 10/15/2011 10:36:57 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/12/2010 12:26:29 PM Eastern Standard Time  
 Submitted on behalf of Sean Hart, Michael Baker Jr., Inc.

4/19/2016 3:08:06 PM

HRS AASHTO

1774

Complete Issue Information

For a RC slab section, the BRASS LFD Engine takes into account of the reinforcement steels in the compression block but it's not considering the section as doubly reinforced section when computing the moment strength.

Reference: "Reinforced Concrete: A Fundamental Approach" By Edward G. Nawy

FROM: Brian Goodrich DATE: 11/17/2010 11:14:05 AM Mountain Standard Time  
The BRASS engine does consider compression reinforcement in calculating the moment capacity. Turning on the intermediate output for the point of interest in question should show this. For example, the following section of the BRASS intermediate output shows the R5 layer (compression steel) contributing to the moment capacity:

PERFORMING AASHTO STANDARD SPECIFICATION CHECKS - 8.16.3 Flexure  
Point of Interest : 104.00  
Construction Stage: 1

POSITIVE Flexural Resistance:

\*\* Analyzed as a RECTANGULAR Section \*\*

| Layer | Area, in^2 | Stress, ksi | Force, kips | Lever-Arm, in | Moment i, in-k |
|-------|------------|-------------|-------------|---------------|----------------|
| CTF   | 139.249    | -0.85*f'c   | -473.446    | 1.308         | 619.410        |
| R5    | 0.660      | -9.930      | -6.554      | 0.275         | 1.804          |
| R1    | 8.000      | 60.000      | 480.000     | -27.225       | 13067.853      |
| Sum   |            |             | 0.000       |               | 13689.067      |

Flexural Resistance Summary:

beta 1 = 0.850  
c = 2.275 in                      f'c = 4.000 ksi (flange)  
a = 1.934 in (from top)  
Mn = 13689.067 in-k  
= 1140.756 ft-k

If you are not receiving output similar to this, please submit the bridge XML file in question and indicate the structure definition, member, member alt, and point of interest. Also, include a hand calculation illustrating the moment calculation and how it differs from the BRASS results.

FROM: Herman Lee DATE: 12/3/2010 9:48:45 PM Eastern Standard Time  
Information Needed E-mail sent on 12/3/10.

FROM: Sean Hart DATE: 12/9/2010 9:21:14 AM Eastern Standard Time

There is a slight difference in the rating factors for two cases:  
1. Simple Span RC Slab with bottom rebar entered (main reinforcement) and  
2. Simple Span RC Slab with both bottom & top rebar entered (top rebar is temp/shrinkage rebar).

It appears that the BRASS engine is treating the section with bottom and top reinforcement (case 2) as a singly reinforced concrete member. I think it should treat the section as either:

1. a singly reinforced member ignoring the top bars OR

Complete Issue Information

2. analyzing the section as a doubly reinforced member.

I've verified the calculations BRASS is doing and it treats the section as singly reinforced for Case 2 above (top & btm rebar input). I've attached a PDF of the rating factor difference, the calcs from the BRASS engine and the doubly reinforced equations from the BAR7 manual.

Please let me know if you have any more questions.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 10290                                                            |
| Subject: BRASS in VIRTIS 6.2 is having a problem with SERVICE III ratings. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Colgrove, George     |                       |
| Submitted By: Colgrove, George        | 11/12/2010 7:29:09 PM |
| Modified By: gcolgrove                | 7/6/2011 6:34:44 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Lee, Herman      | New      | High     | Bug - BRASS |
| Colgrove, George | Resolved |          | Support     |
|                  | Verified |          |             |
|                  | Closed   |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Robertson 62.xml    |             |
|      | Robertson 60.xml    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Colgrove DATE: 11/12/2010 2:32:16 PM Eastern Standard Time

4/19/2016 3:08:06 PM

HRS AASHTO

1776



Complete Issue Information

Design Ratio ( N/A ) ( N/A ) ( N/A ) ( N/A ) ( N/A ) ( N/A )  
 Rating Factor ( 2.43 ) ( N/A ) ( N/A ) ( N/A ) ( N/A ) ( N/A )

-----  
 VERSION 6.0  
 -----

SERVICE LIMIT STATE SUMMARY:

Point of Interest : 105.000  
 Construction Stage: 2  
 Live Load Combo : 9 - TRK\_TYPE\_~79 (TRK)

AASHTO Reference: LRFD 5.9.4 Concrete Stresses (ksi) : DL + PS + LL

=====

| Limit State:      | SERVICE I (Compression) |           |            |           |           |         |
|-------------------|-------------------------|-----------|------------|-----------|-----------|---------|
|                   | (max)                   |           |            | (min)     |           |         |
| Effects:          | (Bot Bm.)               | (Top Bm.) | (Slab)     | (Bot Bm.) | (Top Bm.) | (Slab)  |
| Element:          | (Bot Bm.)               | (Top Bm.) | (Slab)     | (Bot Bm.) | (Top Bm.) | (Slab)  |
| Resistance        | -4.800                  | -4.800    | -2.400     | 0.000     | 0.000     | 0.000   |
| Dead Load Effect  | -1.405                  | -0.816    | -0.021     | 0.000     | 0.000     | 0.000   |
| Live Load Effect  | 0.000                   | 0.000     | 0.000      | 0.000     | 0.000     | 0.000   |
| Total Load Effect | -1.405                  | -0.816    | -0.021     | 0.000     | 0.000     | 0.000   |
| Resistance - Dead | -3.395                  | -3.984    | -2.379     | 0.000     | 0.000     | 0.000   |
| Design Ratio      | ( 3.42 )                | ( 5.88 )  | ( 115.80 ) | ( N/A )   | ( N/A )   | ( N/A ) |
| Rating Factor     | ( N/A )                 | ( N/A )   | ( N/A )    | ( N/A )   | ( N/A )   | ( N/A ) |

AASHTO Reference: LRFD 5.9.4 Concrete Stresses (ksi) : DL + PS + LL

=====

| Limit State:      | SERVICE III (Tension) |           |        |           |           |        |
|-------------------|-----------------------|-----------|--------|-----------|-----------|--------|
|                   | (max)                 |           |        | (min)     |           |        |
| Effects:          | (Bot Bm.)             | (Top Bm.) | (Slab) | (Bot Bm.) | (Top Bm.) | (Slab) |
| Element:          | (Bot Bm.)             | (Top Bm.) | (Slab) | (Bot Bm.) | (Top Bm.) | (Slab) |
| Resistance        | 0.537                 | 0.537     | 0.000  | 0.000     | 0.000     | 0.000  |
| Dead Load Effect  | -1.405                | -0.816    | -0.021 | 0.000     | 0.000     | 0.000  |
| Live Load Effect  | 0.798                 | -0.322    | -0.452 | 0.000     | 0.000     | 0.000  |
| Total Load Effect | -0.607                | -1.138    | -0.472 | 0.000     | 0.000     | 0.000  |
| Resistance - Dead | 1.942                 | 1.353     | 0.021  | 0.000     | 0.000     | 0.000  |
| Design Ratio      | N/A                   | N/A       | N/A    | N/A       | N/A       | N/A    |
| Rating Factor     | 2.43                  | N/A       | N/A    | N/A       | N/A       | N/A    |

Complete Issue Information

FROM: George Colgrove DATE: 11/16/2010 9:19:06 AM Eastern Standard Time  
After looking into this more, we found the following:

In Version 6.0 the legal load tension steel stress was considered in the rating analysis. In Version 6.2 there is an option to turn this consideration off. When migrating the bridge from 6.0 to 6.2, the setting is not preserved. So the subsequent rating will ignore this effect.

The solution is to check the box for "Consider legal load tensile concrete stress" in the member alternative description - Control Options tab. Then run the analysis again. Both versions should provide the same results.

FROM: George Colgrove DATE: 4/29/2011 2:32:37 PM Eastern Daylight Time  
In VO63 - both files import the same way.

Issue ID: 10292  
Subject: Analysis fails in AASHTO Engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Armbrecht, Tim 11/15/2010 5:36:00 PM  
Modified By: hlee 8/7/2012 3:00:01 PM  
Priority: High  
Category: Bug

History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
|                   | Assigned |          |          |
| Kennelly, Krishna |          |          | Bug      |
| Duray, Jim        |          |          |          |
| Kennelly, Krishna |          |          |          |
| Duray, Jim        | Resolved |          |          |
| Kennelly, Krishna | Assigned |          |          |
| Thogaru, Srujana  | Resolved |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 037-0176.xml        |             |
|      | 10293.png           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 11/15/2010 12:38:18 PM Eastern Standard Time  
From my consultant (Souther):

I made some modifications and it runs in BRASS LRFR (Inv/Opr RF's = 0.955/1.104), but it will not run in Virtis LRFR. It terminates w/the following error message...

Building Spec Check Domain objects.

54" PS I-beam - Stage 1

Error populating the cross section data! Analysis aborted!

Error - Error performing LRFR specification checking!

Error - Analysis failed!

I can't find anything obviously wrong in the input. I also tried the "Ignore long. reinf. in rating" under Control Options, but it made no difference.

FROM: Herman Lee DATE: 11/16/2010 7:48:22 AM Eastern Standard Time

I'm able to reproduce the problem after I modified the tolerance to 0.01' and 0.125" to match Illinois DOT tolerance settings.

The workaround for this problem in 6.2 is to increase the precision of the entered distribution factor ranges. Please either click the Compute button to recompute the factors or modify the entered DF ranges as described below.

- LRFD Deflection DF: Change the length from 471.666 to 471.6666

- LRFD Moment DF: Change the length of the last range from 72.299377 to 72.299977

- LRFD Shear DF: Only one range (471.6666) is needed since the DFs are the same for all the ranges

### Developer Notes:

Development build asserts in CSCSuperPSGirderElement::SetLrfrProperties.

```
fr = m_pSingleMomentFactorRangeSet->MoveRange(dLocation, m_iLengthUnitId, iLeftRightFlag);
```

FROM: Tim Armbrecht DATE: 11/16/2010 3:39:25 PM Eastern Standard Time

Herman, my consultant reports that neither method of the proposed workaround works - he still gets the same termination message.

4/19/2016 3:08:06 PM

HRS AASHTO

1780

Complete Issue Information

FROM: Krisha Kennelly DATE: 11/16/2010 4:11:40 PM Eastern Standard Time  
I'm looknig into this.

FROM: Herman Lee DATE: 11/16/2010 5:35:44 PM Eastern Standard Time  
Another option is to remove all the LRFD distribution factor ranges (moment, shear and deflection) in the window so the engine will compute the factors during the analysis.

FROM: Krisha Kennelly DATE: 11/17/2010 2:37:08 PM Eastern Standard Time  
The workaround Herman suggested yesterday (removing the distribution factor ragnes from the UI) does work. I was also able to get G1 to run by changing the last moment range length from 72.299377 to 72.30.

FROM: Krisha Kennelly DATE: 11/17/2010 3:00:29 PM Eastern Standard Time  
Jim - I think we need to add user tolerances to the MoveRange() functions.

FROM: Jim Duray DATE: 3/25/2011 9:42:59 AM Eastern Daylight Time  
I regenerated the DF and was able to run G1 to completion. I agree using tolerances would be good to do. Where did the 72.299377 come from - user input or did we compute it?

FROM: Jim Duray DATE: 3/25/2011 12:11:12 PM Eastern Daylight Time  
Fixed for Alpha 6.

FROM: Tim Armbrecht DATE: 5/12/2011 4:27:43 PM Eastern Daylight Time  
From my consultant (Souther):

This file with LLDF for LRFR recomputed in v. 6.2 has the following problems after import into v. 6.3 Beta 2:

1. Won't run under AASHTO LRFR engine using the v. 6.2 generated LLDF. Termination w/message, "Error performing LRFR specification checking." (Note: It did run under the Virtis LRFR engine with the generated LLDF.)
2. Won't compute new LLDF. An error message states, "can't compute contraflexure ranges..."
3. Will do LRFR analysis when the LLDF entries are all blanked out. (Note: It also runs under v. 6.2 when LLDF are blanked.)

FROM: Srujana Thogaru DATE: 8/29/2011 1:08:50 PM Eastern Daylight Time  
Fixed for 6.3 release. Please see the attached document for results.

Issue ID: 10293

Subject: Problems wth ignore long reinf toggle & temporary stress check

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

11/15/2010 8:53:42 PM

Modified By: hlee

11/17/2010 9:02:21 PM

Priority: High

4/19/2016 3:08:07 PM

HRS AASHTO

1781



## Complete Issue Information

Category: Support

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 |           |          | Maintenance |
|                 | Resolved  |          |             |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 11/15/2010 3:57:41 PM Eastern Standard Time  
From my consultant (Chamberlain):

I went back and looked at the toggle "ignore longitudinal reinforcing" and it does in fact increase the rating factor so that item does not control the rating. The question we need to ask Baker is what does it specifically ignore? When this toggle is selected does it ignore both 5.8.3.5-1 and 5.8.3.5-2 in LRFD. The online help states "This input field is available only for a steel member alternative" but we really need to what to toggle impacts for PPC I beams. If the toggle does ignore both 5.8.3.5-1 and 5.8.3.5-2 in LRFD is that something IDOT wants to be ignoring? On this example, the rating factor goes from around 1.3 by ignoring the steel to about 0.6 if it is not ignored. It appears 5.8.3.5-2 may be being applied to both ends of the beams with wet concrete stresses, which the BM does not currently address. The BM just states 5.8.3.5-2 need only be checked at the abutments, but it is possible that this check may be controlling at the piers during Stage II (wet concrete stresses).

On this same file, VIRTIS standard engine is yielding very low inventory rating results, but BRASS is not. How is VIRTIS (both std engine and BRASS) handling the temporary stresses? Is VIRTIS checking the temporary stresses vs the "in areas other than the precompressed tensile zone and without bonded reinforcement" section of table 5.9.4.1.2-1. This limits the temporary stress to 0.2ksi, but IDOT uses the capacity located just below that one in the table. Should we just bump up the temporary stresses in the stress table. Is the "temporary stress check" new is 6.2. I don't recall this being a problem before.

FROM: Herman Lee DATE: 11/15/2010 4:45:53 PM Eastern Standard Time

4/19/2016 3:08:07 PM

HRS AASHTO

1782

Complete Issue Information

Copied from the Member Alternative Description: Control Options topic in Virtis/Opis Help:

Ignore long. reinf. in rating

This input field is available only for a prestressed or reinforced concrete member alternative.

On the other hand, the "Ignore long. reinforcement in negative moment capacity" option is available only for a steel member alternative.

For the Virtis LRFR Engine, the "Ignore long. reinf. in rating" option is not used by the engine.

FROM: Brian Goodrich DATE: 11/17/2010 11:41:25 AM Mountain Standard Time

For the BRASS LRFR engine, the "Ignore long. reinf. in rating" option will ignore both AASHTO LRFD 5.8.3.5-1 and 5.8.3.5-2 . AASHTO LRFD 5.8.3.5-2 is checked when the POI is within the critical shear distance at simple-support ends of the superstructure.

BRASS checks stresses on the non-composite composite section at each POI based on the stress limits assigned on the Beam Details window. These stress limits have been available in LRFR since it was implemented in Virtis.

FROM: Krisha Kennelly DATE: 11/17/2010 2:49:32 PM Eastern Standard Time

The Virtis LRFR engine uses the allowable stresses entered on the Stress Limits window.

The Virtis LRFR engine does not produce a rating factor for the temporary stress condition. The low rating factor for this bridge is attached, it is from the final loading condition using Table 5.9.4.2.2-1.

I think this issue is related to 10295. I don't see that anything changed in the source code from 6.1 to 6.2 so I don't know why this is coming up now.

FROM: Herman Lee DATE: 11/17/2010 3:53:31 PM Eastern Standard Time

Please let us know if you would like us to investigate further.

Issue ID: 10299  
Subject: Geometric Properties calcs for PS I-Beam Wide Flange with Radius Fillet

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Kemna, Aaron 11/18/2010 8:48:19 PM  
Modified By: hlee 12/12/2013 8:58:55 PM  
Priority: High  
Category: Maintenance

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:08:07 PM

HRS AASHTO

1783

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | compare typical interior.png |             |
|      | 00244 - 82182192000S120.xml  |             |
|      | control options.png          |             |
|      | compare fascia.png           |             |
|      | fascia beam.png              |             |
|      | beam j.png                   |             |
|      | interior with conduits.png   |             |
|      | typical interior.png         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 11/18/2010 4:05:02 PM Eastern Standard Time

The properties are not calculated correctly when you use the compute button on the properties tab (Prestress Beam Shapes --> I Beams - Wide Flange - Radius Fillet is checked). For analysis, this is not a problem since BRASS and Virtis calculate their own properties which are more accurate than the properties tab. It appears that Virtis calculates the same properties as the compute button would do when calculating the distribution factors. Virtis is not pulling the values from the properties tab, just using the same values as the compute button would give. This will not create huge changes in the distribution factors so I don't know if this was done for simplification or if it is an oversight. In any case, I think Virtis should be taking the fillets into account when calculating the properties in the properties tab and for distribution factor calculations.

FROM: Aaron Kemna DATE: 11/18/2010 4:05:42 PM Eastern Standard Time

I am attaching a bridge for your quick reference.

FROM: Herman Lee DATE: 11/19/2010 7:53:13 AM Eastern Standard Time

I looked at the code for the Std Live Load Distribution Factors computation. The computation uses the Ixx and St Venant Torsional Constant entered for the PS Beam Shape. To modify the computation to use the coordinate based section properties, which are used during the spec checking, will be an enhancement. I agree that consolidate existing properties computations is a crucial enhancement for the system.

FROM: Herman Lee DATE: 6/9/2011 5:15:52 PM Eastern Daylight Time

As requested by the TAG (April 2011), change Category to Maintenance.

4/19/2016 3:08:07 PM

HRS AASHTO

1784

Complete Issue Information

FROM: Aaron Kemna DATE: 12/12/2013 3:50:36 PM Eastern Standard Time

I looked at P/S Girder with fillets and the properties are calculated correctly in the properties tab and the same numbers are used in the analysis and the distribution factor calculations. Accepted for 6.5.1 Beta 1.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10300                                      |
| Subject: dv changes between interior and fascia beam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Curtis, Beckie          | 11/19/2010 4:10:26 PM |
| Modified By: hlee                     | 11/23/2010 6:34:49 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |
|                  |          |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Beckie Curtis DATE: 11/19/2010 11:18:18 AM Eastern Standard Time

In the attached model, the fascia beam is controlling in shear. The beams are the same int vs ext, but Virtis LRFR appears to be using a different dv for the interior and fascia beams. BRASS LRFR does not change the dv.

4/19/2016 3:08:07 PM

HRS AASHTO

1785

Complete Issue Information

FROM: Krisha Kennelly DATE: 11/22/2010 10:07:17 AM Eastern Standard Time  
I'm not sure exactly what beams you are comparing so I've attached screen shots for "Beam J", "Interior w/ conduits", "Typical Interior" and "Fascia" beam.

The dv is computed as a function of the strength of the section (Mn) which is varying between these beams due to the differing effective slab widths. It seems to be working properly. The Virtis LRFR engine computes the flexural resistance at the support and then computes the dv value. Shear is then checked at points dv and away from the support.

I don't think the BRASS LRFR engine does that. The user is responsible for creating a point of interest at the dv location. It will not automatically create the point at dv like the Virtis LRFR engine does.

FROM: Beckie Curtis DATE: 11/22/2010 11:14:18 AM Eastern Standard Time  
The POI that I was looking at was at 30% (the controlling point in Virtis LRFR). I was comparing the beam called Fascia and Typical Interior. At these POI (Brass and Virtis both have calculations at this point) the value dv changes for Virtis LRFR significantly for the fascia beam vs the interior beam. Looking at detailed output for Brass this doesn't happen. The rating values are drastically different for BRASS and Virtis.

FROM: Krisha Kennelly DATE: 11/22/2010 3:11:44 PM Eastern Standard Time  
attached compare fascia.png, compare typical interior.png and control options.png

FROM: Krisha Kennelly DATE: 11/22/2010 3:42:14 PM Eastern Standard Time  
Looks like a -4" has been entered for the outside haunch thickness on the Haunch Profile window for the Fascia beam. The Virtis LRFR engine averages the Y1 and Y2 to produce an embedded haunch of -2". The BRASS LRFR engine considers the haunch to be 0". This difference causes the flexural capacity and the dv values to differ between the 2 engines.

If I revise the Y2 value to 0", I get comparable ratings between BRASS LRFR and Virtis LRFR for the Fascia Beam:

Virtis controlling RF = 1.45 at midspan due to flexure.

BRASS RF = 1.51 at midspan due to flexure

Virtis LRFR in Version 6.1 did not support embedded haunches but Version 6.2 does.

|                                       |                       |
|---------------------------------------|-----------------------|
| Issue ID: 10301                       |                       |
| Subject: Negative Region Only Trucks  |                       |
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Prince, Bob             | 11/20/2010 4:50:01 PM |
| Modified By: hlee                     | 11/22/2010 5:21:39 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | B02-50051.xml         |             |
|      | Rigid Factor Spec.png |             |
|      | Table 4 6 2 2 1 1.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bob Prince DATE: 11/20/2010 11:54:28 AM Eastern Standard Time

According to the MBE, permit trucks require a lane load with the truck when the span length is over 200 ft. or for negative moment regions. I do not see anywhere where you can choose a truck to only be evaluated in the negative moment region, is this correct? If so it would be a useful option to add.

FROM: Herman Lee DATE: 11/21/2010 7:18:09 AM Eastern Standard Time

For the BRASS LRFR Engine, please see Incident 9721 for more information.

The Virtis LRFR Engine will take into account the lane load defined in the vehicle when the span length is over 200 ft.

FROM: Herman Lee DATE: 11/22/2010 11:29:42 AM Eastern Standard Time

What stated above for the Virtis LRFR Engine is incorrect. For the Virtis LRFR Engine, this permit truck requirement will be implemented in the coming 6.3 release.

### Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 10303                                                |
| Subject: Difference in BRASS/Virtis Std. engine results (LRFR) |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Curtis, Beckie          | 11/23/2010 4:02:07 PM |
| Modified By: kkennelly                | 11/29/2010 2:30:36 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Beckie Curtis DATE: 11/23/2010 11:10:10 AM Eastern Standard Time

I ran HL-93 loading for the fascia beam and got very different results between BRASS engine and Virtis Std. engine (0.88 inventory rating factor in BRASS and 2.22 in Virtis). The interior beam rating factors were similar. It seems as though the two engines are calculating the live load distribution factors differently for the fascia beams.

FROM: Krisha Kennelly DATE: 11/23/2010 1:52:01 PM Eastern Standard Time

BRASS is computing the distribution factor using the Rigid Deck Override method specified in AASHTO LRFD Art. 4.6.2.2.2d.

The Virtis LRFR engine (and the UI) are not considering this article for this superstructure type. As per AASHTO LRFD Table 4.6.2.2.1-1, a prestressed concrete box beam is Superstructure Type 'b'. As per the highlighted commentary to 4.6.2.2.2d, the rigid deck method is to be applied to superstructure types

4/19/2016 3:08:08 PM

HRS AASHTO

1788

Complete Issue Information

'a', 'e' and 'k'.

Referenced portions of the spec are attached.

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 10304                                                                        |
| Subject: Virtis Std Engine - remove Strand Grid requirement for P and cgs strand entry |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Kennelly, Krisha        | 11/23/2010 5:21:43 PM |
| Modified By: hlee                     | 11/23/2010 6:30:36 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 11/23/2010 12:22:13 PM Eastern Standard Time  
Submitted on behalf of George Huang via email:

4/19/2016 3:08:08 PM

HRS AASHTO

1789



Complete Issue Information

The another difference between two engines is that Virtis LFR engine requires "Strand Grid" to be specified in "Beam Shapes", even only the "P and CGS" option is used in "Strand Layout", while BRASS engine does not require "strand grid" information if "P and CGS" option is used.

FROM: Krisha Kennelly DATE: 11/23/2010 12:23:07 PM Eastern Standard Time  
For P and CGS description, Virtis Std Engine requires the input of the vertical distance to the first row of strand in the "PRESTRESSING AND ECCENTRICITY" command. I don't know the reason behind. This could be entered as an enhancement request for the Std Engine.

=====  
DIST TO FIRST ROW  
Enter the C.G. of the bottom most row of strands measured from the bottom of the beam in inches.  
Leave this blank if the strand pattern is entered.  
=====

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10305                                        |
| Subject: Getting Error message on continuous structure |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Thompson, Todd          | 11/23/2010 6:34:25 PM |
| Modified By: kkennelly                | 6/16/2011 2:51:59 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
|                  | Assigned |      |         |
| Kennelly, Krisha |          |      | Bug     |
| Lee, Herman      | New      | High | Unknown |
| Kennelly, Krisha | Resolved |      | Support |
|                  | Closed   |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 10306 Wide Flange.png   |             |
|      | LRFR_09_18.xml          |             |
|      | 10306 Narrow Flange.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 11/23/2010 1:37:59 PM Eastern Standard Time

#### 6.2 Production Release

I have a 3 Span (160:200:160) rolled girder bridge and when I do either a Virtis LRFR rating or run the Shear Stud Wizard I get an error message (although both operations appear to run to completion and correctly).

I'll attach my screenshot of the error and my bridge.xml file.

Appears to be a tolerance issue ? But I have the tolerance fairly large.

FROM: Herman Lee DATE: 11/24/2010 6:42:21 AM Eastern Standard Time

I'm able to reproduce the problem.

#### Developer Notes:

Development asserts in CSCSuperSteelGirderElement::PopulateRebarOverThePier.

```
fatMoment = m_arrayFatigueLLMomentAtPiers.GetAt(iPierNumber - 1);
```

FROM: Krisha Kennelly DATE: 11/24/2010 9:33:10 AM Eastern Standard Time

These warning messages can be ignored.

The code is trying to find the slab reinforcement over the pier so that Article 6.10.10.3 can be evaluated. The user has not entered slab rebar and there is a slight glitch in the code that is causing this message to be thrown.

4/19/2016 3:08:08 PM

HRS AASHTO

1791

## Complete Issue Information

Developer note: the assert mentioned by Herman is not related to this issue. that assert is being thrown in the 6.3 development code which is in a state of flux :)

Revise flow in CSCSuperSteelGirderElement::PopulateRebarOverThePier() so this message is not thrown for schedule based members.

FROM: Krisha Kennelly DATE: 1/17/2011 10:45:16 AM Eastern Standard Time  
erroneous warning message has been removed for 6.3

FROM: Srujana Thogaru DATE: 3/31/2011 3:42:08 PM Eastern Daylight Time  
Tested and found that the warning message has been removed for 6.3.

FROM: Todd Thompson DATE: 5/11/2011 2:29:27 PM Eastern Daylight Time  
I imported the attached xml into 6.3 Beta 2 and attempted to run an HL-93 VIRTIS LRFR run and it fails to run to completion - below is the log ---

Info - Analyzing Int Girder with AASHTO LRFR Engine...

Info - Capacities determined using AASHTO LRFR Specifications 5th Edition

Info - Ratings determined using AASHTO MBE Specifications 2nd Edition

Info - Generating Stage 1 Span Model...

Info - Finished generating Stage 1 Span Model...

Info - Generating Stage 2 Span Model...

Info - Finished generating Stage 2 Span Model...

Info - Generating Stage 3 Span Model...

Info - Finished generating Stage 3 Span Model...

Info - Generating load cases for all models...

Info - Finished generating load cases for all models...

Info - Performing 2D analysis for Stage 1 Span Model...

Initiating finite element analysis...

FEA - Building model...

FEA - Creating nodes...

FEA - Creating elements...

FEA - Creating constraints...

FEA - Adding load cases...

Verifying finite element model...

Performing linear solution...

Successful finite element analysis.

Info - Finished 2D analysis for Stage 1 Span Model...

Info - Performing 2D analysis for Stage 2 Span Model...

Initiating finite element analysis...

FEA - Building model...

FEA - Creating nodes...

FEA - Creating elements...

FEA - Creating constraints...

FEA - Adding load cases...

Verifying finite element model...

Performing linear solution...

Successful finite element analysis.

Info - Finished 2D analysis for Stage 2 Span Model...

4/19/2016 3:08:08 PM

HRS AASHTO

1792

## Complete Issue Information

Info - Performing 2D analysis for Stage 3 Span Model...

Initiating finite element analysis...

FEA - Building model...

FEA - Creating nodes...

FEA - Creating elements...

FEA - Creating constraints...

FEA - Adding load cases...

Verifying finite element model...

Performing linear solution...

Successful finite element analysis.

Info - Finished 2D analysis for Stage 3 Span Model...

Info - Traffic direction: Both

Info - Generating influence lines for Stage 3 Span Model...

Generating Moment influence lines...

Generating Shear influence lines...

Generating Reaction influence lines...

Generating Displacement influence lines...

Generating Rotation influence lines...

Info - Finished generating influence lines for Stage 3 Span Model...

Info - Computing contraflexure ranges for Stage 3 Span Model...

Initiating finite element analysis...

FEA - Building model...

FEA - Creating nodes...

FEA - Creating elements...

FEA - Creating constraints...

FEA - Adding load cases...

Verifying finite element model...

Performing linear solution...

Successful finite element analysis.

Info - Finished computing contraflexure ranges for Stage 3 Span Model...

Info - Processing live load distribution factor ranges for Stage 3 Span Model...

Info - User-defined LRFD live load distribution factors will be used.

Warning - Reaction Distribution Factors are averaged from the Shear Distribution Factors!

Info - Finished processing live load distribution factor ranges for Stage 3 Span Model...

Info - Loading influence lines with selected vehicles for Stage 3 Span Model...

Processing vehicle HL-93 (US)...

Info - Finished loading influence lines with selected vehicles for Stage 3 Span Model...

Info - Populating all stages superstructure member results...

Info - Finished populating all stages superstructure member results...

Info - Initializing LRFR specification checking...

Info - Performing LRFR specification checking...

Building Spec Check Domain objects.

Int Girder - Stage 1

Int Girder - Stage 2

Int Girder - Stage 3

Error - Unable to perform analysis!

Error - Analysis failed!

FROM: Krisha Kennelly DATE: 6/16/2011 10:40:54 AM Eastern Daylight Time

4/19/2016 3:08:08 PM

HRS AASHTO

1793

### Complete Issue Information

I re-ran this in 6.3 beta 3 with update 3 and it runs ok. Update 3 should be posted sometime today.

|                                                    |
|----------------------------------------------------|
| Issue ID: 10306                                    |
| Subject: PC/PS Bridge Error for LRFR Virtis Engine |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Huang, George           | 11/23/2010 9:56:24 PM |
| Modified By: kkennelly                | 11/29/2010 4:20:30 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 11/23/2010 5:14:40 PM Eastern Standard Time  
The LRFR model works with LRFR BRASS Engine (but ignoring and modifying some structure information). How the model doesn't run with Virtis LRFR Engine. The error message is "specification checking errors". The bridge file "LRFR\_09\_18.xml" is attached. This is our first time use LRFR Engine for PS concrete. Please let me if you have any suggestion for the modeling. Thanks.

FROM: Krisha Kennelly DATE: 11/24/2010 9:59:10 AM Eastern Standard Time  
This bridge is using a "Wide Top Flange" PS I beam. The Virtis LRFR engine validates some of the beam dimensions to ensure that the user has in fact entered data to describe a Wide Top Flange I beam. The data entered for this bridge has "0" entered for one of the top flange haunches. This results in the shape actually being a "Narrow Top Flange" I beam. If you enter the beam as a Narrow Top Flange and use this beam shape in the Beam Details window, the Virtis LRFR engine will run to completion.

I've attached some screen shots showing these windows.

4/19/2016 3:08:09 PM

HRS AASHTO

1794

Complete Issue Information

FROM: George Huang DATE: 11/29/2010 10:55:25 AM Eastern Standard Time  
Thanks Krisha.

Issue ID: 10307  
Subject: RC Slab without Shear reinforcement, 5.8.3.5 uses  $f_y=0$ , should use  $f_y$  of longitudinal reinf, not shear reinf.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Mlynarski, Mark  
Submitted By: Ruby, Jeff 11/24/2010 2:31:02 PM  
Modified By: jruby 4/12/2011 6:09:54 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Mlynarski, Mark | Assigned |          | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:08:09 PM

HRS AASHTO

1795

## Complete Issue Information

6.2\_release\_RC\_Slab\_5.8.3.  
5\_issue.xml  
VI-10307-ScreenShot-  
Revised.jpg

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 11/24/2010 9:51:57 AM Eastern Standard Time

When you run a opis/virtis standard engine run for LRFD on a Reinf. Conc. Slab bridge without shear reinforcing defined, the spec check article for 5.8.3.5 uses the fy for the reinforcing steel for the "Left" term when it should be using the fy for the longitudinal reinforcing which is defined.

Bridge is attached. I used POI 29.16667 on Member Alt. "Interior 1' Strip" on Member '2 1/2" clear to Top Steel'. The screen shot shows the "left" term is zero, when there is clearly As at this location. fy should be 60 not 0.

FROM: Mark Mlynarski DATE: 11/24/2010 10:58:13 AM Eastern Standard Time

I've llooked into this article and found that the fy being used is for the shear reinforcement (which in this case is zero).

The code will be changed to use the fy for the longitudinal reinforcement.

FROM: Mark Mlynarski DATE: 3/30/2011 2:38:44 PM Eastern Daylight Time

I've llooked into this article and found that the fy being used is for the shear reinforcement (which in this case is zero).

The code will be changed to use the fy for the longitudinal reinforcement.

FROM: Mark Mlynarski DATE: 3/30/2011 10:04:16 AM Eastern Daylight Time

Several modules were changed to correct the issue for RC. This issue did not show up before or P/S concrete since we don't define Longit. steel for P/S.

The As used needs to come from the tension region only and since different rebars can have different fy values, the calculation for As\*fy needs to be done at a point that we know of the mild steel longit reinf in the tension section of the girder. The calculation of As\*fy was already being performed in the intermediate results, but not stored. Changes were made to the following classes to store and use the As\*fy results.

ALRFD\_Results.cs

ALRFD\_5E\_05\_07\_03\_02.cs

ALRFD\_5E\_05\_07\_03\_02\_PS.cs

ALRFD\_5E\_05\_08\_03\_05.cs

ALRFD\_4E\_05\_07\_03\_02.cs

ALRFD\_4E\_05\_07\_03\_02\_PS.cs

ALRFD\_4E\_05\_08\_03\_05.cs

The final results for the attached example (comparable to 6.2\_release\_ScreenShot\_002.jpg) are in an attaced file (VI-10307-ScreenShot-Revised.jpg).

FROM: Jeff Ruby DATE: 4/12/2011 2:09:54 PM Eastern Daylight Time

4/19/2016 3:08:09 PM

HRS AASHTO

1796

## Complete Issue Information

Accepted Version 6.3 Beta 1

|                                                      |
|------------------------------------------------------|
| Issue ID: 10310                                      |
| Subject: Virtis error while saving revised data file |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ordoobadi, Mehrdad   |                        |
| Submitted By: Waheed, Amjad           | 11/24/2010 10:45:00 PM |
| Modified By: hlee                     | 5/3/2012 5:05:01 PM    |
| Priority: High                        |                        |
| Category: Support                     |                        |

## History

| Primary Contact    | Status            | Priority | Category |
|--------------------|-------------------|----------|----------|
| Lee, Herman        | New               | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned          |          |          |
|                    | Closed - Inactive |          |          |
|                    | Closed            |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Amjad Waheed DATE: 11/24/2010 5:54:26 PM Eastern Standard Time

We have started seeing the following error while updating the data on some of the bridges in Virtis. This error happens on some bridge records only and we do not know what triggers it. The data does not get saved. Please analyze the error and provide us the insight/tricks.

Here is the Debug error message:

Unable to save Bridge data!

4/19/2016 3:08:09 PM

HRS AASHTO

1797



Complete Issue Information

02:39:07 PM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 27).

02:39:00 PM - Line 448 in source file .\DmBridgeCache.cpp.

Unable edit and update recordset.

02:39:00 PM - Line 664 in source file .\DmOverflow.cpp.

The update or delete operation did not affect any rows.

Here is the detail error message:

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmBridge (SaveOrder object 27).

Unable edit and update recordset.

The update or delete operation did not affect any rows.

FROM: David Koenig DATE: 11/30/2010 4:02:29 PM Eastern Standard Time

We have had similar issues with saving updated bridge files at MoDOT. We submitted Incident 9860, which has not been addressed at this point. You may want to read this incident to see what we have been able to track down to see if you were doing similar things to the bridges that you were updating. Also, are you using an Oracle setup and are your servers AIX. They seem to think that the AIX servers may have something to do with it.

FROM: Amjad Waheed DATE: 12/6/2010 10:46:16 AM Eastern Standard Time

Our database servers run on IBM AIX 5.3 (UNIX).

FROM: Mehrdad Ordoobadi DATE: 2/1/2011 9:00:58 AM Eastern Standard Time

Amjad,

As you know the MoDOT had reported problems when saving bridges similar to what you reported in VI 10310. They have recently upgraded their ODBC drivers (" ODBC oracle software to the latest version (1020)") and realized that the save issue have been resolved. However, after the upgrade they have noticed sporadic crashes while opening bridges in the Virtis/Opis application.

Please note that although Oracle is a supported database for the Virtis/Opis application, no testing has been performed using an Oracle database that is hosted on a UNIX machine. The Virtis/Opis software tests (Alpha, Beta, and Acceptance) are performed on Windows environments, that is both the Virtis/Opis application and the database servers are on Windows machines.

In order for us to be able to help you with this issue we were wondering if you could try to upgrade the ODBC driver to the latest version on only ONE test machine to see if this upgrade helps with the save issue and also to see if this upgrade causes other issues like the crashes that MoDOT is experiencing.

Regards,  
Mehrdad Ordoobadi

4/19/2016 3:08:09 PM

HRS AASHTO

1798

Complete Issue Information

FROM: Herman Lee DATE: 5/3/2012 1:03:08 PM Eastern Daylight Time  
Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                              |
|----------------------------------------------|
| Issue ID: 10311                              |
| Subject: Can not empty Deleted Bridge folder |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ordoobadi, Mehrdad   |                        |
| Submitted By: Waheed, Amjad           | 11/24/2010 11:01:01 PM |
| Modified By: hlee                     | 7/5/2011 2:19:48 PM    |
| Priority: High                        |                        |
| Category: Unknown                     |                        |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Closed             |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 11/24/2010 6:05:48 PM Eastern Standard Time  
I logged in with the administrator prelividges in Virtis and tried to empty "Deleted" but was unsuccessful. However, the original creator of that bridge record was able to delete using his own account. I was thinking as an administrator, I should be able to perform the above function but I could not. Do I need to make any changes in the roles?

FROM: Mehrdad Ordoobadi DATE: 1/31/2011 3:15:44 PM Eastern Standard Time

4/19/2016 3:08:09 PM

HRS AASHTO

1799

Complete Issue Information

What errors do you get?

FROM: Herman Lee DATE: 5/7/2011 8:09:15 AM Eastern Daylight Time  
Information Needed E-mail sent on 5/7/11.

FROM: Herman Lee DATE: 6/10/2011 7:47:46 AM Eastern Daylight Time  
Information Needed E-mail sent on 6/10/11.

FROM: Herman Lee DATE: 7/5/2011 10:15:59 AM Eastern Daylight Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 10314                                         |
| Subject: Shear Calculation for RC Tee beam (ASD Method) |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Nakrani, Navnit         | 11/30/2010 10:14:31 PM |
| Modified By: hlee                     | 12/8/2010 1:37:00 PM   |
| Priority: High                        |                        |
| Category: Support                     |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:08:10 PM

HRS AASHTO

1800

## Complete Issue Information

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | Shear Calculation at 0.0L.pdf |             |
|      | Sand_Creek.xml                |             |
|      | non-standard_gage.xml         |             |
|      | Sand_Creek_2.xml              |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 11/30/2010 5:38:54 PM Eastern Standard Time

Hi,

This is Balaji and I'm working on the load rating of Reinforced Concrete Tee Beams, based on ASD & LFD method. The rating summary shows that the controlling rating is shear at  $0.10 \times \text{Length of the span}$ . The main longitudinal bars of the Tee beams are inclined at about 3' on either ends.

I have defined the longitudinal bars as such in Virtis 6.2. The shear was calculated without considering the inclined longitudinal bars.

Is it any way that we could make Virtis to consider the inclined longitudinal bars for shear calculation?

Also I was wondering how Virtis does the shear calculation. It calculates concrete shear based on the equation

$$V_c = 0.95 \cdot (f'_c)^{0.5} = 0.95 \cdot (2000)^{0.5} = 42.5 \text{ psi (Matches with Virtis output)}$$

But for stirrup rebar calculation it combines dead load with the truck.

For First Interior Beam B1 at Location 0.0

The dead load shear = 20.4 Kips

Live Load shear for HS 20 Vehicle = 26.3 kips (after including Live load distribution factor & Impact)

Is that for design shear (V) does it combining both the dead load and live load shear?

Design Shear (V) = 20.4 + 26.3 = 46.7 Kips (combining dead load + live load shear)

$$\text{Design shear stress } v = V / (b \cdot d) \\ = (46.7 \cdot 1000) / (15'' \cdot 30'')$$

$$v = 103.77 \text{ psi}$$

$$\text{Stirrup rebar VS} = \frac{(v - V_c) \cdot b \cdot \text{spacing}}{\text{Area of stirrups}}$$

$$\text{Area of stirrups (Av)} = 0.44 \text{ in}^2$$

4/19/2016 3:08:10 PM

HRS AASHTO

1801



Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 01031 - 11521.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Colgrove DATE: 12/1/2010 1:31:24 PM Eastern Standard Time

If someone wanted to model a bridge with a steel plate deck over tightly spaced girders (see attached bridge - without a number) they can still rate the bridge with standard live loads.

However, rating with a NSG truck you get the following: The NSG truck is included in the Documents tab.

Unable to generate model.  
01:30:54 PM - Line 1823 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to generate girder system finite element model.  
01:30:54 PM - Line 576 in source file .\AbxVirtisDistFactModelGen.cpp.

Unable to generate model.  
01:30:54 PM - Line 1700 in source file .\AbxVirtisDistFactModelGen.cpp.

Unable to generate model.  
01:30:54 PM - Line 3221 in source file .\AbxVirtisDistFactModelGen.cpp.

-----  
Non-standard gage analysis failed!  
01:46:21 PM - Line 15826 in source file .\UiAnalysisProgressDlg.cpp.

-----  
Retrieving engine specific settings for controlling output and model generation...  
Maximum number of nodes for in-memory storage of results reset to 2000.  
Generating advanced analysis finite element models...  
Generating 3D finite element model for superstructure...  
Generating beam elements for the girders/stringers...  
Generating 2D finite element models for each girder/stringer...  
Deck material must be defined for analysis to run!

Analysis failed!

4/19/2016 3:08:10 PM

HRS AASHTO

1803

Complete Issue Information

-----

So I recreated the bridge model, but instead of a steel plate bridge, I put in a concrete deck. (see Sand\_Creek\_2) Everything else was the same. The bridge ran through a rating without a problem.

The last error on the list above was "Deck material must be defined for analysis to run!". I think the way a steel plate deck is defined (i.e. Generic) is not being registered correctly.

FROM: Herman Lee DATE: 12/1/2010 2:04:28 PM Eastern Standard Time  
 This is an enhancement request for supporting modeling of generic deck in NSG Analysis.

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 10316                                                                             |
| Subject: Incorrect Live Load reactions when rating a floorbeam in a Girder/Floorbeam system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Withers, Richard        | 12/2/2010 3:50:02 PM  |
| Modified By: hlee                     | 10/15/2011 9:40:15 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Lee, Herman     | New      | High     | Unknown            |
| Goodrich, Brian | Assigned |          | Bug<br>Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Richard Withers DATE: 12/2/2010 11:00:25 AM Eastern Standard Time

I am having 2 issues when attempting to perform a LFD load rating of a floorbeam in a girder/floorbeam system. I am using the HS 20-44 live load.

1. BRASS is calculating an incorrect live load reaction for the HS 20-44 live load. Hand calculations and the old BARS program show that the unfactored live load moment with a 1.3 impact factor should be about 370 kip-ft. BRASS is returning it as 231 kip-ft. This is with a wheel factor of 1.0.

2. No matter what wheel factor is input in the Floorbeam Member Alternative window, BRASS uses a wheel factor of 1.0.

This is the first girder/floorbeam system I have modeled in VIRTIS and I may be doing something wrong. I have looked over the input, and it appears correct to me. I have attached and .xml export of the bridge. The floorbeam in question is under Superstructure Definition 121'-9" Span #8, Floorbeam Member Floorbeam2, Floorbeam Member Alternative Floorbeam 2.

Thanks,  
Richard Withers

FROM: Brian Goodrich DATE: 12/7/2010 12:32:58 PM Mountain Standard Time

I turned on the floorbeam intermediate output control for the BRASS LFD engine in the Analysis Settings window. This produces a list of truck positions on the floorbeam. Only one truck is positioned on the floorbeam. The travelway width is 23.833 feet, however, the traffic lane width assigned to the trucks is 11.917 feet. When two of the trucks are positioned on the floorbeam, the width is  $11.917 * 2 = 23.834$  feet, which is 0.001 feet wider than the travelway width. This is why only one truck was positioned on the floorbeam. The export must be revised to correct this issue.

FROM: Richard Withers DATE: 12/10/2010 10:52:50 AM Eastern Standard Time

I modified the travelway width so that the floorbeam now has two trucks on it. That has fixed issue number 1. What about the wheel factor issue?

Thanks,  
Richard Withers

Issue ID: 10318

Subject: BRASS producing zero ratings when Virtis is producing ratings

Folder: /Virtis/Support Center/Virtis

Primary Contact: Skow, Wayne

Submitted By: Colgrove, George

12/6/2010 4:04:49 PM

Modified By: gcolgrove

7/6/2011 6:52:30 PM

Priority: High

Category: Bug

4/19/2016 3:08:10 PM

HRS AASHTO

1805



Complete Issue Information

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Colgrove DATE: 12/6/2010 11:07:02 AM Eastern Standard Time

The enclosed bridge provides ratings from Virtis. BRASS however, provides nothing but zeros. The rating is failing under shear at the start end of the girder. Below is the dialog Farid Tadros and I had in trying to figure out what was going on. I feel the bridge model meets AASHTO. Not sure why it is not giving rating factors in BRASS.

V V [ START MESSAGES] V V-----

From: Tadros, Farid  
Sent: Monday, November 22, 2010 3:27 PM

We are in New York City DOT-Bridges got Evaluation Version (S.O. No.: 120203) of the Virtis software. When we tried to rate a bridge we got an error message as below:

“Unable to convert steel beam to BRASS cross sections!  
Error generating BRASS cross section commands!  
  Unable to get cross section dimensions!  
  Invalid or unsupported cross section!  
Error filling BRASS cross section!  
Error retrieving data for generated cross section at 1996.66 in  
Unable to DoSteelFlangePlateRangeSetPtr->MoveDistance in FillCrossSectionData!  
Error getting flange plate from steel flange plate ranges to left of 1996.655034321 in!  
Current tolerance for in is 0.000010000”

Attached XML file, please advice.

V V [ NEXT MESSAGE] V V-----

Complete Issue Information

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Monday, November 22, 2010 4:45 PM

Please change your tolerance for small measurements from 0.00001 to 0.001. That problem will go away. The issue is that you have a very complex framing and the tolerance with locating the points is very low.

Go to the Configuration Browser and select the System Defaults at the bottom of the tree. Then Open the Tolerance tab. For 'in' please enter 0.001000.

After that you are still getting an error:

Error generating LRFD schedule commands!  
Unable to create BRASS transverse stiffener group!  
Error generating STIF-TRAN-SCHEDULE or STIF-TRAN-GROUP commands!  
Unable to retrieve transverse stiffener geometry!  
Error generating STIF-TRAN-SCHEDULE or STIF-TRAN-GROUP commands!  
The transverse stiffener width must be specified (Name: FASCIA GIRDER CONNECTION PLATE)!  
Error generating STIF-TRAN-SCHEDULE or STIF-TRAN-GROUP commands!  
Error generating LRFD control commands!  
All support skews are not equal. Therefore, the skew angle must be overridden on the Structure Definition engine properties.  
The distribution factor schedule may also be overridden.  
Error generating DIST-CONTROL-LL command!

The issue is with the transverse stiffeners. Please look at your definition for the group.

V V [ NEXT MESSAGE] V V-----

From: Tadros, Farid  
Sent: Monday, November 22, 2010 5:55 PM

Thank you very much, I changed the tolerance and it went through and I fixed the stiffeners error (I added gaps (0.0) around the stiffeners). I run the G1 and it went through fine but I got the Inventory and operating load rating equal zero, still there is something wrong. Attached XML file, please help me.

V V [ NEXT MESSAGE] V V-----

From: Tadros, Farid [mailto:ftadros@dot.nyc.gov]  
Sent: Tuesday, November 23, 2010 3:02 PM

I know that you are busy but I am trying to prepare a comparison between Virtis and the other load rating software we already have to submit this comparison to my agency before the evaluation version will be expired. In order to take the decision to buy the Virtis, please advice me about my problem (see below).

V V [ NEXT MESSAGE] V V-----

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Tuesday, November 23, 2010 3:24 PM

Complete Issue Information

I am trying to get my Version 6.1 back in running. I am running the bridge in 6.2 and am getting this error:

Error generating LRFD control commands!

All support skews are not equal. Therefore, the skew angle must be overridden on the Structure Definition engine properties.  
The distribution factor schedule may also be overridden.  
Error generating DIST-CONTROL-LL command!

Then I set the override in the structure definition dialog so that the override for skew is 0.

I then get these errors:

----- Contents of BRASS Error File -----

File: C:\AASHTOWARE\VirtisOpis62\2-24329-0x\SPAN2\_AND\_3\G1\PLATE\_GIRDER\_G1  
\BRASS\_LRFR\PLATE\_GIRDER\_G1.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\AASHTOWARE\VirtisOpis62\2-24329-0x\SPAN2\_AND\_3\G1\PLATE\_GIRDER\_G1  
\BRASS\_LRFR\PLATE\_GIRDER\_G1.DAT

-----  
Error No.: 1707

Type : Input Error

Location : Data File

\*\* ERROR: Parameter 3 on the BRACING-SCHEDULE command must be greater than zero.

-----  
Error No.: 1004

Type : Input Error

Location : Data File

\*\* ERROR: One or more input errors occurred. Please see the output file for detailed error description(s).

----- End of Contents of BRASS Error File -----

So I am trying to get version 6.1 back running so I can try it in there.

W [ NEXT MESSAGE] W-----

From: Tadros, Farid

Sent: Monday, November 29, 2010 11:38 AM

I am getting the B.M. and Shear values but I am still getting the load rating zero ton. So far, we are happy with the program and even we think to buy Opis also but we need to compare the result with what we have already to prepare report and make everybody feel more comfortable. I have very limited time for this evaluation version till 12-12 unless you can extend that for me. Please try to help me to find why this error happened and I am still getting zero rating.

4/19/2016 3:08:11 PM

HRS AASHTO

1808

Complete Issue Information

V V [ NEXT MESSAGE ] V V-----

From: Tadros, Farid  
Sent: Wednesday, December 01, 2010 2:35 PM

Please just let me know if you will replay to me or not, so I can stop trying or wait for your replay.

V V [ NEXT MESSAGE ] V V-----

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, December 03, 2010 2:38 PM

First, the live load distribution factor for shear is zero. I changed that to the same value calculated for moment.

Second, the top and bottom flange steel plates for the two ends are very thin. They need to be thickened to provide adequate results. (i.e. ratings over 0.00). A zero rating means that the rating was below zero

Third - for ASD I am getting these errors:

\*\*\*\* WARNING COMPRESSIVE FLANGE WIDTH OVER THICKNESS RATIO = 22.400  
MAXIMUM ALLOWABLE = 21.023

POINTNUMBER = 108  
\*\*\*\* WARNING COMPRESSIVE FLANGE WIDTH OVER THICKNESS RATIO = 22.400  
MAXIMUM ALLOWABLE = 21.700

POINTNUMBER = 108  
\*\*\*\* WARNING COMPRESSIVE FLANGE WIDTH OVER THICKNESS RATIO = 22.400  
MAXIMUM ALLOWABLE = 19.354

POINTNUMBER = 108  
\*\*\*\* WARNING COMPRESSIVE FLANGE WIDTH OVER THICKNESS RATIO = 22.400  
MAXIMUM ALLOWABLE = 19.909

POINTNUMBER = 108  
\*\*\*\* WARNING COMPRESSIVE FLANGE WIDTH OVER THICKNESS RATIO = 22.400  
MAXIMUM ALLOWABLE = 21.475

So I set the compression flange to a thickness of 1.5 in

Fourth - You also have overlapping issues with the placement of your stiffeners.

Fifth - The spacing of transverse stiffeners at each end did not meet AASHTO at the end of the beams.

\*\*\* WARNING \*\*\*  
TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK # 1 DOES NOT  
SATISFY CURRENT  
AASHTO CRITERIA. ENGINEER SHOULD REVIEW.  
\*\*\* WARNING \*\*\*

4/19/2016 3:08:11 PM

HRS AASHTO

1809

Complete Issue Information

TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK # 2 DOES NOT SATISFY CURRENT

AASHTO CRITERIA. ENGINEER SHOULD REVIEW.

\*\*\* WARNING \*\*\*

TRANSVERSE STIFFENER SPACING AT ANALYSIS POINT 100 FOR TRUCK # 3 DOES NOT SATISFY CURRENT

AASHTO CRITERIA. ENGINEER SHOULD REVIEW.

The depth of the girder is 23 inches. AASHTO STD 10.34.4.3 states that the first stiffener spacing needs to be 1.5D from the end - or at least 34.5 inches. This is true for both ends.

Lastly - There are problems with the stiffener locations. I fixed one beam and I finally got ratings.

You need to comb through the model and ensure the data entered is correct.

V V [ NEXT MESSAGE] V V-----

From: Tadros, Farid [mailto:ftadros@dot.nyc.gov]

Sent: Monday, December 06, 2010 10:17 AM

Thank you very much for your great help, actually I fixed most of the stuff you mentioned but I am still getting no rating. Would you please send me the revised XML file which u did it for one girder and got rating. Also last question, is there is any way to extend the time for this evaluation version.

V V [ NEXT MESSAGE] V V-----

I am a bit embarrassed. I had been running a Virtis Rating to get a good beam definition. I finally got ratings of nearly 1 or above 1 by changing plate thicknesses and adjusting the stiffeners and the other stuff listed below. (See girder 2) I forgot to change the engine back to BRASS. In BRASS, I am still getting zero ratings because of the end shear. I do not know why. The model meets AASHTO. I will post this as a bug. The model is included for your continued investigation.

- George

FROM: Herman Lee DATE: 12/6/2010 1:30:40 PM Eastern Standard Time

I'm able to reproduce the error message reported by Farid on 11/22 with the "PLATE GIRDER G1" member alternative.

Please modify or double check the following inputs:

1. In the Girder Profile's Top Flange and Bottom Flange, change the Length of the last range from 89.068959' to 89.068960'.
2. In the Deck Profile's Deck Concrete, change the Length of the last range from 21.463996' to 21.463997'.
3. In the Member Alternative's BRASS ASD Engine Properties, change the contraflexure point in Span 1 from 70% to ~46% and in Span 2 from 30% to ~25%.
4. The width of the fascia and interior transverse stiffeners are 0.00".
5. The Pedestrian load in G1 is 745 lb/ft.
6. The locations of the top flange and bottom flange thickness change.

4/19/2016 3:08:11 PM

HRS AASHTO

1810

Complete Issue Information

7. BRASS LRFR allows only one skew angle for the entire bridge. If the skew of one or more support lines is different, the user is required to override the skew angle in the Superstructure Definition BRASS LRFR Engine Properties or enter the distribution factors manually.

BRASS ASD/LFD/LRFR and Virtis ASD/LFD ratings are 0. Virtis LRFR ratings are negative.

FROM: Krisha Kennelly DATE: 12/8/2010 8:36:39 AM Eastern Standard Time  
Wayne - please investigate the negative ratings from Virtis LRFR. They should be zero not negative. Herman thinks you have to do 1 and 2 above to get G1 in the attached bridge to run. After you make the fix, attach this issue to 10108 so we can track all of the changes made for 6.3.

FROM: Wayne Skow DATE: 12/10/2010 3:01:55 PM Eastern Standard Time  
I ran the model on the current 6.3 development version and it ran OK. I got zero's in the grid as expected.

FROM: Srujana Thogaru DATE: 4/8/2011 9:16:28 AM Eastern Daylight Time  
Ran the attached bridge and found that the LRFR ratings to be zero. Fixed for 6.3

|                             |
|-----------------------------|
| Issue ID: 10319             |
| Subject: Virtis LFD crashes |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Horton, Doug            | 12/7/2010 3:08:59 PM |
| Modified By: hlee                     | 12/7/2010 6:29:46 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Doug Horton DATE: 12/7/2010 10:16:19 AM Eastern Standard Time

The attached file (same one we are getting zeros for BRASS LRFR) crashes when members G1 or G4 are rated using LFR. After searching Elsinore, there was some verbiage regarding this issue and it implied that the problem would not be corrected until version 6.3. It has been run in 6.1 and 6.2 with the same crash result after the file export completed information message.

Is there a work-around or will we just have to await version 6.3?

FROM: Herman Lee DATE: 12/7/2010 11:00:02 AM Eastern Standard Time

Plank beam (box beam with no void) entered in Virtis is not supported by the Virtis Std Engine.

A workaround is to enter a void with a very small diameter or model the solid box beam as I beam.

Issue ID: 10321

Subject: Changing one truck causes changes to output in another truck

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Colgrove, George 12/8/2010 6:28:27 PM

Modified By: bgoodrich 5/18/2011 2:11:43 PM

Priority: High

Category: Bug - BRASS

### History

4/19/2016 3:08:11 PM

HRS AASHTO

1812

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | timberdeck_24116133.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Colgrove DATE: 12/8/2010 1:29:27 PM Eastern Standard Time

The files enclosed are from the user. The supplied truck is a model of two trucks (90% of HL93) back to back with variable spacing.

1. Import the bridge file (aa.xml) and import the truck (H93neg.xml).
2. Open the Word Document and set up the Analysis Settings to agree with the screen shots.
3. Run the bridge rating. Check the output with what was depicted in the word document. Especially take note of the moment graph of the Lane-Type Legal Load (should be asymmetrical).
4. Then change the truck HL-93 - Negative Moments so the spacing range goes from (50ft to 100ft) to (2ft to 200ft).
5. Run the bridge.

You will find that the moment graphs become symmetric - unlike the original moment graph, (depicted in the word document) which was asymmetric. Should the original graph for the Lane-Type Legal Load been symmetric?

4/19/2016 3:08:11 PM

HRS AASHTO

1813



Complete Issue Information

FROM: Brian Goodrich DATE: 12/13/2010 9:24:50 AM Mountain Standard Time  
The BRASS engine only supports a variable rear axle spacing. The "HL-93 - Negative Moments" model will only use the mininum spacing for the other axle spacings. Regardless of this, adding the "HL-93 - Negative Moments" is causing different negative moment results at the interior piers: -439.0 ft-kips vs. -471.8 ft-kips. I confirmed this by running the scenarios George described. Running the Lane-Type Legal Load by itself gives the same results as when the "HL-93 - Negative Moments" vehicle was added. I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 5/18/2011 8:10:09 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 34.

FROM: Brian Goodrich DATE: 5/18/2011 8:13:30 AM Mountain Daylight Time  
The source of the asymmetry problem was identified to be the truck train storage arrays. The truck train array subscripts were revised to include the live load number, which keeps the actions and reactions separate when there is more than one truck train live load. Fixed for BRASS-GIRDER(LRFD) Version 2.1.0. Fixed for Virtis 6.3.

Issue ID: 10323  
Subject: 6.2 Timber Deck Rating - missing headers/footers on reports

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ihnat, Joseph  
Submitted By: Thompson, Todd 12/10/2010 7:05:14 PM  
Modified By: tthompson 5/11/2011 3:58:47 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 12/10/2010 2:06:44 PM Eastern Standard Time

4/19/2016 3:08:12 PM

HRS AASHTO

1814

Complete Issue Information

I noticed today that when I print a timber deck rating - there is no headers or footers identifying the structure number, dates, times, etc.

I attached an example.

FROM: Joseph Ihnat DATE: 12/10/2010 3:05:46 PM Eastern Standard Time  
Missing from a truss analysis too.

FROM: Joseph Ihnat DATE: 12/13/2010 2:52:10 PM Eastern Standard Time  
Fixed for version 6.3

FROM: Srujana Thogaru DATE: 3/31/2011 3:15:08 PM Eastern Daylight Time  
Verified and found to be fixed for 6.3

FROM: Todd Thompson DATE: 4/14/2011 2:35:55 PM Eastern Daylight Time  
Checked Truss Results and Headers/Footers are there in 6.3 Beta 1.

FROM: Todd Thompson DATE: 5/11/2011 11:58:47 AM Eastern Daylight Time  
Still good in 6.3 Beta 2 - can close this

Issue ID: 10324  
Subject: Incorrect Section in BRASS?

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 12/10/2010 9:51:46 PM  
Modified By: hlee 5/7/2011 1:16:10 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:08:12 PM

HRS AASHTO

1815

Complete Issue Information

|                 |                    |      |             |
|-----------------|--------------------|------|-------------|
| Goodrich, Brian | Assigned           |      |             |
| Lee, Herman     | New                | High | Unknown     |
| Goodrich, Brian | Assigned           |      |             |
|                 | Information Needed |      |             |
|                 | Assigned           |      | Third Party |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 12/10/2010 4:53:48 PM Eastern Standard Time  
 From my consultant (Souther):

In doing an LFD analysis for a 3-span continuous welded plate girder (file attached), BRASS is returning an incorrect cross-section at the first tenth point of Span 3. The flanges transition from 16" x 1.625" to 16" x 0.75" at 8.25' from Support #3, which is at .101331 of Span 3. In the BRASS output the section at .1 of Span 3 (0.10833' left of the transition point) is said to have 16" x 0.75" flanges, but should have 16" x 1.625" flanges. In the case of this structure the rating critical point is at this location for BRASS.

The Virtis LFD analysis appears to yield correct results.

FROM: Brian Goodrich DATE: 12/13/2010 8:23:56 AM Mountain Standard Time  
 The flange transition is too close to the existing tenth point to be added as a separate node point. The BRASS limit between node points is 0.12', but  $8.25' - 8.14167' = 0.10833'$ . This is a known issue with BRASS.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 10327                                                          |
| Subject: Shear method being used to analyze PS Box Girder "Brass Engine" |

### Complete Issue Information

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Kemna, Aaron            | 12/15/2010 5:21:36 PM  |
| Modified By: hlee                     | 10/15/2011 10:35:57 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

### History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Closed             |          |          |
|                    |                    |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 12/15/2010 12:24:17 PM Eastern Standard Time

I have an adjacent P/S Box Beam or P/S Voided Slab Beam bridge. The bridge was brought in 6.1 with "use current AASHTO" selected for the LFD shear method. We are currently using 6.2. I switched the method to "AASHTO 1979" and ran the bridge. I found out that the current AASHTO method was still being used. I clicked "ignore shear" and this option ran properly. I know that I was getting the 1979 AASHTO to work for other P/S I bridges. I found something odd with the BRASS Engine Help which stated

#### Shear Computation Method

BRASS LFD only supports the 'Ignore" and 'Use current AASHTO' options.

Only this was under the ASD heading which I did not think applied to P/S structures? Regardless, is there some reason why these girders are not analyzed with the 1979 AASHTO method? I attached a

4/19/2016 3:08:12 PM

HRS AASHTO

1817

Complete Issue Information

file.

FROM: Brian Goodrich DATE: 12/17/2010 8:26:34 AM Mountain Standard Time  
BRASS only exercises the 1979 Interim shear method for simple-span prestress structures made continuous for live load with mild reinforcement over the interior supports. This is the only reason I could find that would cause the results you're seeing. Are you running a seeing this only for a simple span?

FROM: Aaron Kemna DATE: 12/17/2010 3:47:00 PM Eastern Standard Time  
Now that you mention it, the bridges I was looking at are simple spans. I tested this on a P/S I simple span and got the same problem. I assume this is an oversight. The 1979 AASHTO Interim applies to both simple spans and continuous spans.

FROM: Aaron Kemna DATE: 12/17/2010 4:02:27 PM Eastern Standard Time  
Was it the intention of BRASS to only apply 1979 AASHTO to continuous spans? If so, why?

|                                                |
|------------------------------------------------|
| Issue ID: 10328                                |
| Subject: Saving Error Issue Member Alternative |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Kemna, Aaron            | 12/16/2010 3:23:15 PM |
| Modified By: hlee                     | 7/18/2011 8:30:56 PM  |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 12/16/2010 10:28:02 AM Eastern Standard Time  
This is most likely the same as incident 9860. We have a bridge where a user deleted a member

4/19/2016 3:08:12 PM

HRS AASHTO

1818

Complete Issue Information

alternative, tried to save, and could not. The error message and the bridge is attached. If the bridge is exported and imported we can no longer get the error. This is the first time that I know of where we got this error at the member alternative level.

FROM: Mehrdad Ordoobadi DATE: 1/31/2011 3:13:36 PM Eastern Standard Time  
Nothing was attached to this incident. Please provide the information.

FROM: Aaron Kemna DATE: 1/31/2011 3:48:34 PM Eastern Standard Time  
Go ahead and close this incident. See Incident 9860.

|                                                |
|------------------------------------------------|
| Issue ID: 10329                                |
| Subject: VIRTIS LRFR - fails to run completely |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Thompson, Todd          | 12/16/2010 4:54:02 PM |
| Modified By: hlee                     | 1/6/2011 3:59:13 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:08:12 PM

HRS AASHTO

1819

Complete Issue Information

|                 |           |      |                |
|-----------------|-----------|------|----------------|
|                 | Duplicate |      | Bug            |
| Lee, Herman     | New       | High | Unknown        |
| Goodrich, Brian | Assigned  |      |                |
|                 | Resolved  |      |                |
|                 |           |      | Bug - Export 1 |
|                 |           |      | Bug - BRASS    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | POICreateProb-1010160.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 12/16/2010 11:55:48 AM Eastern Standard Time

I have a 3 span cont steel girder structure, but I keep getting the following error message, even though the data appears to be correct.

Error getting cross section from steel cross section ranges to right of 246.0000000 ft!

Current tolerance for ft is 0.1000000.

10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to left of 246.0000000 ft!

Current tolerance for ft is 0.1000000.

10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to right of 246.0000000 ft!

Current tolerance for ft is 0.1000000.

10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to left of 246.0000000 ft!

Current tolerance for ft is 0.1000000.

10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to right of 108.0000000 ft!

Current tolerance for ft is 0.1000000.

10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Complete Issue Information

Error getting cross section from steel cross section ranges to left of 108.0000000 ft!  
Current tolerance for ft is 0.1000000.  
10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to right of 108.0000000 ft!  
Current tolerance for ft is 0.1000000.  
10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

Error getting cross section from steel cross section ranges to left of 108.0000000 ft!  
Current tolerance for ft is 0.1000000.  
10:53:25 AM - Line 276 in source file .\DoRangeSetCmdTarget.cpp.

FROM: Herman Lee DATE: 12/16/2010 11:58:47 AM Eastern Standard Time  
Duplicate of Incident 10305.

These error messages can be ignored.

From Incident 10305

=====  
The code is trying to find the slab reinforcement over the pier so that Article 6.10.10.3 can be evaluated. The user has not entered slab rebar and there is a slight glitch in the code that is causing this message to be thrown.  
=====

FROM: Todd Thompson DATE: 12/16/2010 2:23:57 PM Eastern Standard Time  
Ok - I thought it sounded familiar. Sorry.

FROM: Todd Thompson DATE: 1/5/2011 9:27:10 AM Eastern Standard Time  
I've added resteel in the deck but I still fail to get Virtis LRFR or OPIS LRFD to run. BRASS LRFR runs ok.  
There must be an additional item causing issues that I can't seem to track down..  
I added the xml for the bridg with resteel - sd\_48243210\_reva.xml

FROM: Herman Lee DATE: 1/5/2011 12:35:14 PM Eastern Standard Time  
I'm able to rate both G1 and G2 with the LRFR Design Load Rating template. Attached is the rating results.  
Todd, if you are able to reproduce the problem, this may become a tolerance setting issue.

FROM: Todd Thompson DATE: 1/6/2011 10:50:35 AM Eastern Standard Time  
Definitely appeared to be a tolerance issue.

Real difficulty is when one tries to enter the real dimensions for a bridge and then each bridge needs the tolerances tweaked to make them run but then you can't run a batch of structures that all work for a given tolerance. Guess I need to learn to tweak the input as I enter it so I can have the tolerances work for all the bridges.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 10331<br>Subject: Section Change Point Analysis - RC Structures |
|---------------------------------------------------------------------------|



Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis              |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Armbrecht, Tim 12/17/2010 2:07:05 PM |
| Modified By: hlee 10/15/2011 9:49:11 PM            |
| Priority: High                                     |
| Category: Bug - BRASS                              |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Resolved |          | Bug      |
|                 | Closed   |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 12/17/2010 9:08:32 AM Eastern Standard Time  
 From my consultant (Souther):

I had thought that Virtis was supposed to automatically create and analyze Points of Interest when, under Control Options, "Generate at section change points" was selected. In the attached export file, POICreateProb-1010160.xml, a 3-span continuous RC-slab, this does not seem to be happening. When there are no user specified POI's (see Member Alternative, "12" Int. Slab Strip (TEST)") the rating is controlled by flexure at .5 of Span 3 (Inv/Op RF's = 0.804/1.342). When the user specifies POI's at each location where the reinforcement changes (see Member Alternative, "12" Int. Slab Strip") the rating is controlled by flexure at .44 of Span 3 (Inv/Op RF's = 0.655/1.094), which is actually not one of the user specified POI's.

This behavior seems to be inconsistent with the way Virtis should be operating.

Complete Issue Information

FROM: Brian Goodrich DATE: 12/17/2010 8:52:54 AM Mountain Standard Time

I found an error in the BRASS export that is incorrectly changing the POI control option to only consider tenth points. I am working to address the error now.

FROM: Brian Goodrich DATE: 12/17/2010 11:06:41 AM Mountain Standard Time

The export now correctly checks for the POI at section change points, which affect the setting of the POI control option. Fixed for version 6.3.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10333                                       |
| Subject: Issue with Truss Symmetry command Odd option |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Zhang, Bin           |                       |
| Submitted By: Zhang, Bin              | 12/20/2010 2:28:30 PM |
| Modified By: sthogaru                 | 4/1/2011 2:17:48 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 12/20/2010 9:41:34 AM Eastern Standard Time

The Deck Truss Bridge using the truss command language failed to pass the truss validation. "Error generating symmetrical members..."The truss test example came from "Incident 8238, Continuous Truss from Gale Barnhill".

Several other bridges were tested using the Symmetry Odd command, sometimes it worked , and sometimes it failed . The Symmetry Odd command could not function well all the time.

4/19/2016 3:08:13 PM

HRS AASHTO

1823

Complete Issue Information

Investigation Results: There is a program bug in Truss Command Language when try to generate the truss bridge using the Symmetry Odd command. The 2nd panel points of the member pointed to NULL sometimes.

Solutions : Modified "NODE 2 of MEMBER" in "AbaTdTrussDef.cpp" when it is a Upper node.

Testing Results: The symmetry odd command succeeded in generating the geometry features of the "deck bridge", "through bridge" . Rating analysis also showed identical results with and without the symmetry command using the modified "AbaTdTrussDef.cpp".

FROM: Herman Lee DATE: 12/20/2010 9:57:32 AM Eastern Standard Time  
Fixed for 6.3 Release.

FROM: Srujana Thogaru DATE: 4/1/2011 10:14:12 AM Eastern Daylight Time  
Tested and found to be fixed for 6.3

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10335                                        |
| Subject: error in exterior girder- similar to vi 10286 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Jensen, Paul            | 12/20/2010 9:47:04 PM |
| Modified By: hlee                     | 1/10/2011 9:17:59 PM  |
| Priority: High                        |                       |
| Category: Bug - Madero                |                       |

History

| Primary Contact | Status    | Priority | Category     |
|-----------------|-----------|----------|--------------|
| Lee, Herman     | New       | High     | Unknown      |
| Goodrich, Brian | Assigned  |          |              |
|                 | Duplicate |          | Bug - Madero |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | HL93Ratings.png                     |             |
|      | PSIB_BRASS_LRFR_Error(006-0171).xml |             |
|      | 0060171-20101221-Virtis_Summary.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Jensen DATE: 12/20/2010 4:56:06 PM Eastern Standard Time  
this might be similar to the issue in VI 10286. The issue that we found is the distribution factors are not correct during computation. the factors are correct in the export. the perplexing item was the first exterior computed correct but the other was incorrect. all of the bridges analysed are symmetrict. attcheded file is not, but the first section alternative is.

FROM: Paul Jensen DATE: 12/20/2010 4:57:16 PM Eastern Standard Time  
the first output file is from g1 and the second is from g11-

FROM: Brian Goodrich DATE: 1/10/2011 11:47:20 AM Mountain Standard Time  
The source of this problem was addressed in VI 10286.

Issue ID: 10336

Subject: Runs in AASHTO Engine, not in BRASS

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Armbrecht, Tim

12/22/2010 2:17:16 PM

Modified By: hlee

2/8/2011 3:46:20 PM

4/19/2016 3:08:14 PM

HRS AASHTO

1825

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Colgrove, George | Assigned |          |          |
| Skow, Wayne      |          |          |          |
| Kennelly, Krisha |          |          |          |
|                  | Resolved |          |          |
| Skow, Wayne      |          |          | Bug      |
| Ihnat, Joseph    | Assigned |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 01039 - I-20__45_6.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 12/22/2010 9:20:42 AM Eastern Standard Time  
From my consultant (Souther):

I have attached the rating sheet showing the Virtis LRFR rating factors for this bridge. The Inventory factor is 0.955 based on flexure for the Truck Pair & Lane. I have been unable to get BRASS LRFR to run for this model. It gives me an error message stating, "Error getting LRFR system and condition factors! Error determining type of LRFR system factor!" I have been unable to find any reason that this error message should be generated. It is possible that if we can get this fixed the BRASS LRFR rating factor might be higher. The export file (PSIB\_BRASS\_LRFR\_Error(006-0171).xml) is attached.

FROM: Herman Lee DATE: 12/22/2010 9:42:24 AM Eastern Standard Time  
I'm not able to reproduce the error message using the BRASS LRFR engine. Attached is the HL93 ratings for the three members. Please give us more details on reproducing the problem. Thanks.

4/19/2016 3:08:14 PM

HRS AASHTO

1826

Complete Issue Information

FROM: Herman Lee DATE: 2/6/2011 2:59:00 PM Eastern Standard Time  
Information Needed E-mail sent on 2/6/11.

FROM: Tim Ambrecht DATE: 2/8/2011 9:14:51 AM Eastern Standard Time  
Herman, we can't reproduce it either. Please go ahead and close this incident. Thanks, Tim.

|                                              |
|----------------------------------------------|
| Issue ID: 10337                              |
| Subject: AASHTO LRFR Engine ratings are zero |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ilnat, Joseph        |                       |
| Submitted By: Withers, Richard        | 12/22/2010 5:18:00 PM |
| Modified By: gcolgrove                | 4/11/2011 11:55:45 AM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Richard Withers DATE: 12/22/2010 12:20:08 PM Eastern Standard Time  
 I have a 6 span continuous steel girder bridge that is fully composite. When I tried to run a LRFR analysis using the AASHTO engine, the analysis appears to run correctly and I get the confirmation in the analysis progress window that tells me the analysis is complete. However, when I go to get the results in the tabular report window, all the ratings are zero and the controlling location is 0% of the 1st span in flexure. When I open the VIRTIS LRFR Spec Check Results in the output, there are values in all of the tables. So it appears it ran the analysis and got results in the spec checker, but the results are not showing up in the tabular report window. The BRASS engine returns what appear to be reasonable results that show up correctly in the tabular report window.

## Complete Issue Information

There is one other issue that I have run into. Using the AASHTO engine, I can only analyze one member at a time. The system runs out of memory when attempt to analyze both member 1 and 2 in the same analysis event. I have to run one member, close VIRTIS, reopen it and then run the second member. Watching the memory usage while the analysis is running, it appears the system stops VIRTIS when it hits 1 GB of memory usage. Is there any way to increase this? The BRASS engine doesn't have any problem analyzing both members in the same analysis.

I have attached an .xml output of the bridge.

Thanks,  
Richard Withers

FROM: Wayne Skow DATE: 1/3/2011 2:56:56 PM Eastern Standard Time

The trouble is a result of no value specified for the "sustained modular ratio factor." The value needs to be defaulted in the controller.

FROM: Wayne Skow DATE: 1/4/2011 1:22:35 PM Eastern Standard Time

Default values have been added in v6.3 (2.0 for concrete on concrete and 3.0 for concrete on steel) when no sustained modular ratio factor is present along with an additional warning message. v6.2 already alerts the user to the fact that the sustained modular ratio factor has not been entered:

...

Info - Generating Stage 1 Model Span superstructure finite element model...

Warning - Sustained modular ratio factor is not entered on the Structural Typical Section window Deck (Cont'd) tab!

Sustained modular ratio factor of 3.0 will be used!

Info - Finished generating Stage 1 Model Span superstructure finite element model...

Info - Generating Stage 2 Model Span superstructure finite element model...

Warning - Sustained modular ratio factor is not entered on the Structural Typical Section window Deck (Cont'd) tab!

Sustained modular ratio factor of 3.0 will be used!

Info - Finished generating Stage 2 Model Span superstructure finite element model...

Info - Generating Stage 3 Model Span superstructure finite element model...

Warning - Sustained modular ratio factor is not entered on the Structural Typical Section window Deck (Cont'd) tab!

Sustained modular ratio factor of 3.0 will be used!

Info - Finished generating Stage 3 Model Span superstructure finite element model...

Info - Generating load cases for all models...

...

The factor is entered on the "Deck (Cont'd)" tab on the "SUPERSTRUCTURE DEFINITIONS-><superstructure name>->Structure Typical Section" dialog.

FROM: Richard Withers DATE: 1/4/2011 3:40:34 PM Eastern Standard Time

Ok, adding the sustained modular ratio factor solves the tabular report output issue. However, I still can't analyze both girders in the same analysis. Searching through the incidents on this website, incident #9970 says that there is a 2GB limit for a process on a 32-bit Windows OS. I am getting the error at 1GB of memory usage. I am running Windows XP 32-bit. How can I get Windows to allow VIRTIS to use the full 2 GB of memory?

4/19/2016 3:08:14 PM

HRS AASHTO

1828

Complete Issue Information

FROM: George Colgrove DATE: 4/11/2011 7:35:33 AM Eastern Daylight Time  
Verified - Memory issue not looked into.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 10338                                                           |
| Subject: VIRTIS LRFR - Get Large Neg RF on Simple Span in Negative Moment |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Thompson, Todd          | 12/27/2010 5:14:21 PM |
| Modified By: gcolgrove                | 5/19/2011 12:30:01 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Support  |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Incident_10338.jpg  |             |
|      | sd_52430330.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 12/27/2010 12:17:17 PM Eastern Standard Time  
I have a simple span steel girder bridge, that the Ext girder I get a very large Negative RF result in negative moment.

4/19/2016 3:08:14 PM

HRS AASHTO

1829



Complete Issue Information

It rates fine in BRASS LRFR and LF.

The bridge was designed for LRFD.

I can't seem to track down the problem. The interior girders rate ok for Virtis LRFR.

FROM: Wayne Skow DATE: 1/4/2011 1:22:37 PM Eastern Standard Time  
A concentrated moment has been entered in the Member Loads window for G1. The BRASS engines do not use concentrated loads but the AASHTO engine does. The Engine Related Help for the BRASS engines for this window mentions this and tells the user to entered 2 concentrated forces for a couple to address this. (See "Incident\_10338.jpg" on the Documents tab.)

FROM: Todd Thompson DATE: 5/11/2011 2:43:58 PM Eastern Daylight Time  
Can be closed.

FROM: George Colgrove DATE: 5/19/2011 8:32:05 AM Eastern Daylight Time  
Closed per Todd's request.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 10339                                                 |
| Subject: LRFR - Stinger, Floorbeam, Girder System - Enhancement |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Thompson, Todd          | 12/28/2010 2:46:03 PM |
| Modified By: hlee                     | 3/27/2015 6:52:31 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 12/28/2010 9:47:54 AM Eastern Standard Time

I thought all Steel would be ready for LRFR in 6.2, but I noticed that one can not compute LRFD/LRFR live load distribution factors for Stringer, Floor Beam, Girder Systems. And LRFR is not even an analysis option for these structure types.

I guess this needs to be added as an enhancement.

FROM: Herman Lee DATE: 3/27/2015 2:51:33 PM Eastern Daylight Time

This enhancement has been implemented in the 6.7 release.

Issue ID: 10343

Subject: Virtis Application Crash

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Kemna, Aaron

1/5/2011 2:34:33 PM

Modified By: hlee

7/5/2011 2:23:59 PM

Priority: High

Category: Unknown

### History

4/19/2016 3:08:15 PM

HRS AASHTO

1831

### Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Lee, Herman      | New      | High     | Unknown  |
|                  | Assigned |          | Support  |
| Skow, Wayne      |          |          | Unknown  |
| Kennelly, Krisha |          |          |          |
| Skow, Wayne      |          |          | Bug      |
|                  | Resolved |          |          |
|                  | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | sd_08068084_reva.xml         |             |
|      | chamberlaintrussanalysis.xls |             |
|      | 08068034.pdf                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 1/5/2011 9:41:04 AM Eastern Standard Time

I told George that I would try to keep a log of when Virtis crashes. I figured it would be easier to keep track of here.

1. I tried opening a bridge in Virtis and got the error. See the attachments. After starting Virtis again I had no problems opening the bridge.

FROM: Herman Lee DATE: 1/5/2011 12:35:19 PM Eastern Standard Time

An application typically crashes when it trys to perform an operation that violates the operating system constraints. If you recall the operations you performed within Virtis before opening that bridge, this may help us reproduce the crash and locate the source of the problem.

FROM: Aaron Kemna DATE: 1/19/2011 4:37:10 PM Eastern Standard Time

On three seperate occasions I just opened up Virtis for the first time that day and got the error with the first bridge I tried to open. Since then, Virtis was reinstalled and I have not replicated that scenario. I still get some crashes, though, but I have been testing Virtis with the LARS engine so it's hard to know

4/19/2016 3:08:15 PM

HRS AASHTO

1832

Complete Issue Information

what's causing the issues. I can make Virtis crash in some cases which is a direct result of running the LARS engine. I will try to report any further occurrences on my machine which does not have the LARS engine.

FROM: Aaron Kemna DATE: 1/31/2011 3:53:08 PM Eastern Standard Time  
See incident 9860. The crashes may be related to our recent upgrade of the ODBC drivers. The crashes are numerous and it is too difficult to keep track of my steps so to speak. Opening bridges seem to be the trigger in most cases.

FROM: Aaron Kemna DATE: 3/1/2011 10:03:29 AM Eastern Standard Time  
OK, I have some more information on this issue. We recently ran a test where we moved the Oracle Client from our network to the local drive. I did not get any system crashes like before. This may lead one to believe that we have issues with our network, but we did not get these crashes with the older version of Oracle. Our IS people think it's some sort of timing issue with the server, but that should not be the case because we have a large bandwidth. This computer speak is a little over my head so I hope this makes sense.

FROM: Herman Lee DATE: 5/7/2011 9:02:40 AM Eastern Daylight Time  
Thank you for the information. I'll keep this incident opened for another month or two. Please track the crashes here if it happens again. Thanks.

FROM: Herman Lee DATE: 7/5/2011 10:21:03 AM Eastern Daylight Time  
I changed the Status to Closed.  
Please let us know if you want to reopen this incident.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 10344                                             |
| Subject: How to Handle Tolerances and detailed span lengths |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Thompson, Todd          | 1/6/2011 6:49:49 PM  |
| Modified By: bzhang                   | 5/12/2011 9:00:32 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:08:15 PM

HRS AASHTO

1833

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/6/2011 1:54:40 PM Eastern Standard Time

I have a 4 Span Steel Girder Bridge with the following span lengths:

63'-10 13/16"

92'-1 7/17"

116' - 1 1/16"

91' - 9 3/16"

When I convert these to decimals, the values exceed what I can enter into Virtis, so I put in only what Virtis will allow... And then I attempt to tweak the rest of the girder details, etc within these tweaked span lengths, but no avail - the analysis always fails due to tolerance issues. I'm using the Sample DB values for Tolerances.

I've attached the plans for this 4 span girder unit. (The lengths are odd due to rebuilding a new superstructure on existing substructure - part of a Major 10 Span Reservoir crossing, where we salvaged the existing Main Span Truss Members).

For Example - G2 - I just plain attempted to force the girder to work by assuming only 1 section throughout the entire girder length.

For Example - G3 - I attempted to tweak every single dimension to fit within the accuracy of Virtis and the tolerances, but again I can't get it to work.

FROM: Todd Thompson DATE: 1/6/2011 1:59:13 PM Eastern Standard Time

I tend to get tolerance issues at each and every support -

Error getting cross section from steel cross section ranges to right of 272.1093730 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to left of 272.1093730 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to right of 272.1093730 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to left of 272.1093730 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to right of 156.0208320 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to left of 156.0208320 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to right of 156.0208320 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to left of 156.0208320 ft!

Current tolerance for ft is 0.0010000.

Error getting cross section from steel cross section ranges to right of 63.9010410 ft!

Current tolerance for ft is 0.0010000.

4/19/2016 3:08:15 PM

HRS AASHTO

1834

Complete Issue Information

Error getting cross section from steel cross section ranges to left of 63.9010410 ft!  
Current tolerance for ft is 0.0010000.  
Error getting cross section from steel cross section ranges to right of 63.9010410 ft!  
Current tolerance for ft is 0.0010000.  
Error getting cross section from steel cross section ranges to left of 63.9010410 ft!  
Current tolerance for ft is 0.0010000.

Looking for advice on how to enter my bridge, as close to the real dimensions as possible. I know that I could just drastically change the span lengths, but I prefer coding the bridges as close to plans as possible.

Having issues mostly with Virtis LRFR/OPIS LRFD but also with BRASS.

FROM: Herman Lee DATE: 1/7/2011 2:29:51 PM Eastern Standard Time  
Error message when analyzing G1 with the LRFR Design Load Rating template:

=====  
==

- Location - 213.9375 (ft)
- Location - 214.0651 (ft)
- Location - 214.0651 (ft)

Failed to perform element specification checks.  
Object reference not set to an instance of an object.  
at  
AbanSpec.Articles.AASHTO.LRFD.FourthEdition.I2008.ALRFDF\_4E\_2008I\_06\_10\_01\_07.  
DoSpecificationCheck(SpecUnits eUnits)  
at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain  
specCheckDomain, SpecUnits eUnits)  
at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain  
specCheckDomain, SpecUnits units)  
at CSCSuperStructure.DoSteelElementSpecCheck(CSCSuperStructure\* ,  
CSCSuperSteelGirderElement\* pElement, SpecificationChecker specChecker,  
Error - Error performing LRFR specification checking!

Error - Analysis failed!

=====  
==

FROM: David Koenig DATE: 1/7/2011 3:37:03 PM Eastern Standard Time  
Todd, I would suggest that you set your Virits tollerances to .01 feet and .1 inches. This is basically 1/8th of an inch. We had tolerance issues several years back. We adopted the practice of setting our tolerances to this level and then requiring entry to four decimal places. With this practice, we rarely have any issue that is related to tolerances.

FROM: Todd Thompson DATE: 1/10/2011 2:01:01 PM Eastern Standard Time  
I even set it at 1 ft and had tolerance error issues. I finally redid span lengths to nearest foot and modified the real dimensions of everything.

FROM: Wayne Skow DATE: 1/17/2011 7:07:24 AM Eastern Standard Time  
The LRFR problem noted by Herman when analyzing G1 is caused by the use of an incorrect tollerance value while preparing the data for the 2nd point @ 214.0651 (note, the model is generating 2

4/19/2016 3:08:15 PM

HRS AASHTO

1835

Complete Issue Information

pts @ 214.065102 and 214.06510299999). The standard ft tolerance is being used, a tolerance related to double precision round-off is needed. Fixed in version 6.3 in SCSuperStructure.cpp

FROM: Todd Thompson DATE: 5/11/2011 2:51:14 PM Eastern Daylight Time  
Appears to be fixed in 6.2 Beta 3 for the attached xml bridge. THis can be closed

FROM: Bin Zhang DATE: 5/12/2011 4:53:00 PM Eastern Daylight Time  
Verified in beta2 with dll updates by May 12th. I colsed this issue following the resuest of the submitter.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 10350                                                 |
| Subject: System Factor Applied Incorrectly - Virtis LRFR Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Kemna, Aaron            | 1/10/2011 6:59:19 PM |
| Modified By: sthogaru                 | 7/7/2011 1:10:45 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Thogaru, Srujana |          |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |
|                  | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 1/10/2011 2:10:51 PM Eastern Standard Time  
 The Virtis LRFR Engine is applying the system factor to the shear rating. This is incorrect. The system factor is always 1.0 for shear at the strength level (6A.4.2.4-1). I was looking at a P/S Concrete bridge.

FROM: Krisha Kennelly DATE: 1/11/2011 1:07:23 PM Eastern Standard Time  
 Srujana - please modify the ps and rc concrete shear rating articles.

Wayne - please modify the steel shear rating articles.

FROM: Wayne Skow DATE: 1/11/2011 1:17:38 PM Eastern Standard Time  
 The change has been made in ALRFR\_1E\_2005\_06\_04\_02\_01\_Steel\_Flexure\_Stress

FROM: Krisha Kennelly DATE: 1/13/2011 9:20:16 AM Eastern Standard Time  
 when this fix is completed, please attach this issue to issue 10108

FROM: Srujana Thogaru DATE: 1/18/2011 9:30:16 AM Eastern Standard Time  
 System factor (dPhiS) has been set 1.0 for ALRFR\_1E\_2005\_06\_04\_02\_01\_Concrete\_Shear article

FROM: George Colgrove DATE: 4/11/2011 7:09:55 AM Eastern Daylight Time  
 Verified fixed

FROM: Aaron Kemna DATE: 4/26/2011 4:49:00 PM Eastern Daylight Time  
 Verified in 6.3 Beta 1. Accepted

FROM: Srujana Thogaru DATE: 7/7/2011 9:10:59 AM Eastern Daylight Time  
 closed

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 10351                                                              |
| Subject: Truss - Stringer - Floorbeam System - Composite Floorbeams possible |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 1/10/2011 7:02:50 PM |
| Modified By: gcolgrove                | 5/19/2011 1:08:19 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:08:16 PM

HRS AASHTO

1837



### Complete Issue Information

|                 |          |      |         |
|-----------------|----------|------|---------|
| Lee, Herman     | New      | High | Unknown |
| Goodrich, Brian | New      | High | Unknown |
|                 | Assigned |      |         |
|                 | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description                |
|------|---------------------|----------------------------|
|      | 27857.xml           | Second Bridge XML          |
|      | 2682_0001.pdf       | Rating summmary comparison |
|      | 27857.xml           | Bridge XML                 |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/10/2011 2:16:17 PM Eastern Standard Time

I have a Truss that for the last two years we have been rehabbing and I'm trying to get this load rated.

It's a Truss, with Stringers on Floorbeams (2 or 3 span cont stringers on Floorbeams). Some of the floorbeams had the concrete deck extended down to the floorbeams to make those composite.

I can't figure out if there is a way make the floorbeams composite so the bridge will rate out ok. This was a consultant design in which we made some of the existing floorbeams composite so we didn't have to replace all of the floorbeams of the truss.

FROM: Herman Lee DATE: 1/10/2011 4:20:32 PM Eastern Standard Time

If you enter data in the Deck Profile window (Deck Concrete and Shear Connectors), the export will consider a composite slab for the floorbeam. Please note that the Deck Profile and Haunch Profile windows will only be available for a floorbeam definition when the stringers are framed into the floorbeams.

FROM: Todd Thompson DATE: 2/10/2011 3:43:42 PM Eastern Standard Time

Ok - I did not have the stringers framed into floorbeams since they physically sit on top of the floorbeams and don't frame in. But when I framed them in - then I could enter the deck area and I think it's working now. It just was not intuitive when the language said framed in.

FROM: Todd Thompson DATE: 2/14/2011 1:19:34 PM Eastern Standard Time

Can close this

4/19/2016 3:08:16 PM

HRS AASHTO

1838

Complete Issue Information

FROM: George Colgrove DATE: 5/19/2011 9:10:19 AM Eastern Daylight Time  
Set to close per Todd's request

|                               |
|-------------------------------|
| Issue ID: 10353               |
| Subject: Continuity diaphragm |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Befikadu, Elizabeth     | 1/12/2011 10:26:05 PM |
| Modified By: bgoodrich                | 1/26/2011 4:01:06 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 1/12/2011 3:26:40 PM Mountain Standard Time  
Submitted for Elizabeth Befikadu:

I am working on a pre-stressed beam made continuous for Live load. Under the continuity diaphragm window, when the ignore positive moment in rating is unchecked the rating values go higher. Where does Virtis use the reinforcements? Although I did not check the whole output the reinforcements are not added in the cross section.

FROM: Brian Goodrich DATE: 1/12/2011 3:29:24 PM Mountain Standard Time  
I took a look at your bridge and ran it with and without the "Ignore positive moment at supports in ratings" box checked. When checked, the critical ratings are 0.831 for inventory and 1.405 for operating. When unchecked the critical ratings are 0.830 for inventory and 1.386 for operating. The critical ratings are for shear although they are at different points. When the "Ignore positive moment at supports in ratings" box is unchecked, the positive moment reinforcement is included in the cross

4/19/2016 3:08:16 PM

HRS AASHTO

1839

Complete Issue Information

section, which slightly affects the shear capacity due to the change in the shear depth. What ratings are you getting with and without the box checked? I even turned off shear and the critical ratings were at the 306 point for both cases.

FROM: Brian Goodrich DATE: 1/13/2011 7:27:08 AM Mountain Standard Time  
E-mail from Elizabeth Befikadu:

Brian,

I have attached the rating summary sheet for member G2 and the XML file. In this case moment governs not shear. I run it for HL93 truck.

Thanks for your help

Elizabeth Befikadu

FROM: Brian Goodrich DATE: 1/26/2011 8:56:35 AM Mountain Standard Time

When the "Ignore positive moment at supports in ratings" box is unchecked, the reinforcement on the Continuity Diaphragm tab is exported to BRASS. For this particular structure, some of the reinforcement is located in the top of the beam. Therefore, when the negative moment resistance is determined, it has a higher value than the case when the "Ignore positive moment at supports in ratings" box is checked and no additional reinforcement is present. Note that the controlling ratings are for negative bending.

|                                    |
|------------------------------------|
| Issue ID: 10357                    |
| Subject: BARS import discrepancies |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Barreda, Jesus          | 1/14/2011 9:19:29 PM |
| Modified By: mkolis                   | 8/31/2012 1:04:29 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:16 PM

HRS AASHTO

1840

Complete Issue Information

Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | Deterioration Problem (v6.2)<br>(031-0001).xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 1/14/2011 4:20:32 PM Eastern Standard Time  
 Submitted on behalf of Jesus Barreda (BarredaJ@bceo.org), Butler County Engineer's Office.

=====  
 Attached there are a couple of files. I have attached the XML file, the BARS file, and the ratings. There are a couple of discrepancies like the strand pattern for example. The question was very general because this is not the only file that I have had problems with, so I thought maybe you would have a general answer, like if it is not recommended to imported specific types of bridges.

Let me know if you need more information.  
 =====

FROM: Xinmei Li DATE: 7/11/2011 10:33:55 AM Eastern Daylight Time  
 While importing the attached BARS file, there are two warning messages about the strand pattern. First, BARS strands were defined by areas, it was converted to # of strands during import. Second, the strand pattern is adjusted for harping.

For the second warning message, when importing BARS file, the Virtis import utility looks for harped strands by matching the CG of the strands defined in card 15. In the attached BARS file, section 01 and section 02 has strands at 5.2" and 5.156". Since they're not exactly match Virtis import can't recognize them as same strands.

Workaround is to change the first card15 for section 02 to the following so that the harp can be properly imported.

```
15093670S01 02          6000360 40 300 80 900 8026001M7.515 5.20
```

After the above change, strand pattern is correctly imported. The rating results screen shot is attached.

FROM: Xinmei Li DATE: 7/11/2011 1:47:44 PM Eastern Daylight Time  
 While investigating the strand pattern import I found out that the deck effective width was not correctly imported due to some other code change. Now it's resolved for 6.4.  
 The workaround for this issue is to go to the VirtisOpis Deck profile window, Deck concrete tab, enter end effective flange width manually after bridge is imported.

FROM: Matt Kolis DATE: 8/30/2012 2:33:34 PM Eastern Daylight Time  
 Virtis does not populate the end effective flange width fields. See attached image.

FROM: Xinmei Li DATE: 8/30/2012 3:40:02 PM Eastern Daylight Time

4/19/2016 3:08:16 PM

HRS AASHTO

1841

Complete Issue Information

Resolved.

FROM: Matt Kolis DATE: 8/31/2012 9:04:28 AM Eastern Daylight Time  
Verified in VO64, Beta 4.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10373                                      |
| Subject: Deterioration Problems with BRASS vs Virtis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Armbrecht, Tim          | 1/19/2011 5:43:55 PM |
| Modified By: hlee                     | 5/7/2011 12:24:40 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Closed             |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 1/19/2011 12:46:07 PM Eastern Standard Time  
From my consultant (Souther):

1. Rating factors vary widely between Virtis & BRASS engines for this simple-span steel girder. Inv/Opr Rating Factors: BRASS - 1.022/1.706 (Truck, Flexural - Steel Strength), Virtis – 1.377/2.294 (Lane, Critical - Overload Provisions). This is for Beam #3. (By-the-way, is there any way the word "Critical" could be left out of the Limit State for the Virtis engine analyses? It is included in every limit state name.

4/19/2016 3:08:16 PM

HRS AASHTO

1842

Complete Issue Information

e.g., The Limit State for this Member Alternative should only state, "Overload Provisions" w/o the word "Critical".)

2. The entry of 30% bottom flange deterioration 1 foot in length from support of a 45.58' simple-span rolled steel girder affects load rating at midspan but should not. This seems to only happen with BRASS.

Compare Beam #5 (deterioration) with Beam #3 (no deterioration). The controlling Inv/Op RF's for both are at .5 of the span but for #5 the RF's are 1.009/1.685 while for #3 they are 1.022/1.706. Since the deterioration is not at .5 of the span and the dead and live loads are the same for both beams the rating at the midspan should be the same, unaffected by deterioration at the beam end.

FROM: Herman Lee DATE: 1/19/2011 1:30:38 PM Eastern Standard Time  
For #1, please refer to the naming convention in the Rating Summary of the Virtis Std Engine output file. Since Virtis Std Engine also reports positive/negative moment ratings, the word "Critical" is used for identification in the Rating Summary.

FROM: Brian Goodrich DATE: 1/25/2011 1:49:57 AM Mountain Standard Time  
Regarding issue #1, BRASS does not allow girders with yield strengths below 33 ksi to be analyzed as compact sections. This may be why the BRASS rating is lower. You will need to compare the output between the two engines to determine the source of the difference.

Regarding issue #2, when deterioration is specified, the steel beam is exported as an equivalent plate girder. For an LFD analysis of a plate girder, BRASS recalculates section properties based on the dimensions, which are slightly lower than the properties for a rolled beam. This is the source of the slight difference in the ratings.

FROM: Herman Lee DATE: 3/26/2011 2:40:09 PM Eastern Daylight Time  
Tim, please see whetheryour consultant is satisfy with the above comments/clarifications. Thanks.

FROM: Tim Armbrecht DATE: 4/6/2011 2:58:17 PM Eastern Daylight Time  
Herman,

Here is the response. I think we're OK to close off this incident, but please take note of his comments on "critical" as well of his response to #2. I believe these are recommendations we should consider adopting at some point in development.

#1 –

Regarding...

... the explanation for the difference between BRASS & Virtis LFD, the analysis looks to be correct. I changed the steel to M183 and the ratings were very close to each other.

... the issue of including the word "CRITICAL": Since in the Load Factor Rating Summary report (see example below) the "Controls" column is by definition the critical limit state and that is the only Limit State listed, the word "CRITICAL" need not be attached to the listed limit state. It is redundant (CRITICAL could be substituted for "Controls" in the column heading) and takes up valuable space, requiring the table to be unnecessarily wider (same effect occurs when outputting fields as all caps).

Load Factor Rating Summary

| Rating    | Capacity        | Location        |                |      |  |  |
|-----------|-----------------|-----------------|----------------|------|--|--|
| Live Load | Factor Controls | (Ton) Span (ft) | Percent Impact | Lane |  |  |

4/19/2016 3:08:16 PM

HRS AASHTO

1843

Complete Issue Information

HS 20-44 Inventory 1.377 CRITICAL-OVERLOAD PROVISIONS 49.56 1 22.  
 79 50.0 As Requested As Requested  
 Operating 2.294 CRITICAL-OVERLOAD PROVISIONS 82.60 1 22.79 50.0  
 As Requested As Requested

#2 – It seems that only the regions where deterioration is defined should be converted to near equivalent plate girders and the remainder analyzed as the rolled section that it is. Somewhat related, I think we submitted a request for an enhancement that would allow both a plate girder and a rolled section to be defined within the same beam line. (This is sometimes detailed in bridges with hinges or with a haunched beam near interior supports.)

Tim Souther, PE  
 %IDOT Bridge Ratings Unit  
 (217) 785-2935  
 timothy.souther@illinois.gov

Issue ID: 10380  
 Subject: Straight line verification for truss command language

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Zhang, Bin  
 Submitted By: Zhang, Bin 1/20/2011 8:42:19 PM  
 Modified By: bzhang 2/8/2011 10:01:56 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Resolved | High     | New Feature |
| Zhang, Bin      |          |          | Enhancement |
|                 | Closed   |          |             |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 1/20/2011 3:43:58 PM Eastern Standard Time  
The truss can not pass the verification if the deck line panel points are not on a single straight line.

FROM: Herman Lee DATE: 1/20/2011 4:16:22 PM Eastern Standard Time  
Resolved for 6.3 Release.

|                                       |
|---------------------------------------|
| Issue ID: 10381                       |
| Subject: Support symmetry for Trusses |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Duray, Jim              | 1/21/2011 2:51:09 PM |
| Modified By: jduray                   | 1/21/2011 3:01:27 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |

4/19/2016 3:08:17 PM

HRS AASHTO

1845



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                      | Description |
|------|----------------------------------------------------------|-------------|
|      | Results compare between<br>VirtisOpis63 and StaadV8.docx |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jim Duray DATE: 1/21/2011 9:53:33 AM Eastern Standard Time

It was found while investigating deck-through trusses for AL DOT that the symmetry command always generates pinned supports. It would be useful to change this behavior by removing the generation of support conditions from the symmetry routine. The user should be able to define all of the support conditions and the symmetry command should not generate support conditions.

Issue ID: 10382

Subject: Deck-through truss model with beam elements

Complete Issue Information

|                                               |
|-----------------------------------------------|
| Folder: /Virtis/Support Center/Virtis         |
| Primary Contact: Duray, Jim                   |
| Submitted By: Duray, Jim 1/21/2011 3:02:46 PM |
| Modified By: jduray 1/21/2011 3:32:42 PM      |
| Priority: High                                |
| Category: Enhancement                         |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Zhang, Bin      | Assigned | High     | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Duray DATE: 1/21/2011 10:03:26 AM Eastern Standard Time  
 AL DOT requested we modify the truss model for deck through trusses to allow mid-height nodes on the verticals. This requires the use of beam elements instead of truss elements.

This work has been completed for the 6.3 release.

FROM: Bin Zhang DATE: 1/21/2011 10:12:51 AM Eastern Standard Time  
 The influence line calculation results were compared with Staad V8, the results are very close to each other and the relative difference is within 1%. Please read the attached document for details.

FROM: Jim Duray DATE: 1/21/2011 10:32:52 AM Eastern Standard Time  
 Fixed for 6.3 release, Alpha 1.

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 10383                                 |
| Subject: Deck-through truss model - no symmetry |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Duray, Jim              | 1/21/2011 3:05:22 PM |
| Modified By: bzhang                   | 6/15/2011 3:17:44 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Duray DATE: 1/21/2011 10:06:00 AM Eastern Standard Time  
The symmetry command does not work correctly for deck-through trusses.

FROM: Bin Zhang DATE: 1/21/2011 10:32:21 AM Eastern Standard Time  
The symmetry command used to work only for deck and through trusses. Now, the symmetry command for the deck-through trusses is completed. Testing results showed the new symmetry

Complete Issue Information

command succeeded in generating all the geometry features of the deck-through truss.

|                                                |
|------------------------------------------------|
| Issue ID: 10386                                |
| Subject: Error loading Virtis Std ASD/LFD DLL! |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Trees, Geoffrey      |                      |
| Submitted By: Curtis, Beckie          | 1/24/2011 8:30:56 PM |
| Modified By: gtrees                   | 4/6/2011 5:54:19 PM  |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Trees, Geoffrey | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |

4/19/2016 3:08:18 PM

HRS AASHTO

1849

Complete Issue Information

|                  |
|------------------|
| Not Reproducible |
|------------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | FlbmRunFails_(0810040)-v6.2.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Beckie Curtis DATE: 1/24/2011 3:49:49 PM Eastern Standard Time

We are having a strange error in our office. We have one laptop that is consistently getting the following error:

Error loading Virtis Std ASD/LFD DLL!  
(Error Code = 8) Not enough storage is available to process this command.

After opening Virtis, we can run any file(s) without problem. After importing (both single and batch) a file, we start getting the above error and cannot run any additional files. After closing Virtis and opening again we can then run the file we just imported. This happens every time we import a file using version 6.2, Virtis Std LFD engine. Only the one computer is having this problem.

The system info for this computer is:

```

OS Name      Microsoft Windows XP Professional
Version 5.1.2600 Service Pack 3 Build 2600
OS Manufacturer      Microsoft Corporation
System Name  X0591BCXQXG1
System Manufacturer  Dell Inc.
System Model  Latitude D630
System Type  X86-based PC
Processor    x86 Family 6 Model 15 Stepping 13 GenuineIntel ~1995 Mhz
BIOS Version/Date    Dell Inc. A12, 6/20/2008
SMBIOS Version      2.4
Windows Directory  C:\WINDOWS
System Directory    C:\WINDOWS\system32
Boot Device  \Device\HarddiskVolume2
Locale  United States
Hardware Abstraction Layer  Version = "5.1.2600.5512 (xpsp.080413-2111)"
User Name  SOM\davisk2
Time Zone  Eastern Standard Time
Total Physical Memory  2,048.00 MB

```

4/19/2016 3:08:18 PM

HRS AASHTO

1850

Complete Issue Information

Available Physical Memory 1.26 GB
Total Virtual Memory 2.00 GB
Available Virtual Memory 1.96 GB
Page File Space 5.82 GB
Page File C:\pagefile.sys

FROM: Herman Lee DATE: 1/25/2011 7:58:34 AM Eastern Standard Time
Beckie, please perform the following steps to see whether the problem is still there. Thanks.

- 1. Use Windows Disk Defragmenter to defragment the C drive.
2. Download Microsoft PageDefrag (http://technet.microsoft.com/en-us/sysinternals/bb897426) to defragment the virtual memory.

FROM: Herman Lee DATE: 1/25/2011 9:18:24 AM Eastern Standard Time
E-mail from Beckie Curtis:

He tried both items, and it didn't help.

FROM: Geoffrey Trees DATE: 1/25/2011 10:26:17 AM Eastern Standard Time

How large is the hard drive and how much free space is there on the disk?

FROM: Creightyn McMunn DATE: 1/28/2011 9:02:26 AM Eastern Standard Time
It's 74.4 GB total and 28.6 GB free space

FROM: Herman Lee DATE: 3/26/2011 2:46:11 PM Eastern Daylight Time
The analysis has exceeded the 2 GB limit for each process on 32-bit Windows OS.

Issue ID: 10392
Subject: Floor Line Superstructure Floorbeam Fails to Run in Virtis 6.2

Folder: /Virtis/Support Center/Virtis
Primary Contact: Goodrich, Brian
Submitted By: Armbrecht, Tim 1/25/2011 3:04:41 PM
Modified By: hlee 7/12/2012 7:06:19 PM
Priority: High
Category: Enhancement

History

Table with 4 columns: Primary Contact, Status, Priority, Category. Row 1: Lee, Herman, New, High, Unknown

4/19/2016 3:08:18 PM

HRS AASHTO

1851

Complete Issue Information

|                 |                    |      |         |
|-----------------|--------------------|------|---------|
| Goodrich, Brian | Assigned           |      |         |
| Lee, Herman     | New                | High | Unknown |
| Zhang, Bin      | Assigned           |      |         |
|                 | Accepted           |      |         |
|                 | Assigned           |      |         |
|                 | Information Needed |      |         |
|                 | Open               |      |         |
|                 |                    |      | Bug     |
|                 | Assigned           |      |         |
|                 | Resolved           |      |         |
|                 | Verified           |      |         |
|                 | Resolved           |      |         |
|                 | Verified           |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | summary.png                                  |             |
|      | sd_08068084_Truss_newest.xml                 |             |
|      | chamberlain_Truss_Schematic.pdf              |             |
|      | FeAnalysisLog.txt                            |             |
|      | sd_08068084_chamberlaintruss.xml             |             |
|      | Truss_properties.pdf                         |             |
|      | Chamberlain_Truss.pdf                        |             |
|      | Chamberlain Bridge Original Plans - 1924.pdf |             |
|      | M3-L4.png                                    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:08:18 PM

HRS AASHTO

1852

Complete Issue Information

FROM: Tim Armbrecht DATE: 1/25/2011 10:06:29 AM Eastern Standard Time  
From my consultant (Souther):

The attached export (FlbmRunFails\_(0810040)-v6.2.xml) contains a Floor Line Superstructure with a floorbeam that generates the following error:

Error generating LFD/ASD schedule commands!  
01:01:08 PM - Line 203 in source file .\BrassStdSchedules.cpp.

Unable to determine transverse stiffener groups at start and end of range!  
Possible cause: One or more stiffeners exist at the same location.  
01:01:08 PM - Line 1292 in source file .\EngineExport.cpp.

Error generating STIF-TRAN-SCHEDULE or STIF-TRAN-GROUP commands!  
01:01:08 PM - Line 609 in source file .\BrassStifTranScheduleGroupCmd.cpp.

No reason for the error has been discovered. Since I did have results recorded for the floorbeam when it was originally created in March 2010 under Virtis v. 6.1, the problem may be related to program modifications for v. 6.2.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Brian Goodrich DATE: 1/25/2011 3:49:47 PM Mountain Standard Time  
The BRASS export is trying to create a transverse stiffener schedule for spans 1 and 3. As part of another incident, the BRASS export was revised to create schedules for spans that don't have stiffeners. For these, the bearing stiffeners were used to populate the stiffener group. However, floorbeams do not have an input for bearing stiffeners. There is basically no way to populate the stiffener group when the span contains no stiffeners. The workaround is to add a stiffener range for spans 1 and 3.

FROM: Brian Goodrich DATE: 1/26/2011 10:43:51 AM Mountain Standard Time  
E-mail from Herman:

I reviewed the incident and concluded with the following two enhancement requests.

1. Enhance BRASS LFD Engine for handling the case that not all the spans have transverse stiffeners.  
And/or
2. Enhance Virtis for allowing input of bearing stiffeners for FS floor line and floor system superstructure definitions.

Herman

FROM: Brian Goodrich DATE: 1/26/2011 10:44:25 AM Mountain Standard Time  
BRASS LFD will run even if the stiffener schedules are missing for a span. We need to either 1) provide input for bearing stiffeners for a floorbeam and then require this input or 2) we revise the export to not generate transverse stiffener schedules for spans without transverse stiffeners. We had been

4/19/2016 3:08:18 PM

HRS AASHTO

1853



Complete Issue Information

doing option 2 for girders until users requested that we use the bearing stiffeners.

FROM: Brian Goodrich DATE: 1/26/2011 1:22:26 PM Mountain Standard Time  
E-mail from Herman:

Seems like we need special treatment for floorbeam. Anyway, it's up to WYDOT to decide whether to enhance BRASS export based on option 2 for floorbeam. Please log option 1 in the incident for Virtis enhancement.

FROM: Herman Lee DATE: 7/12/2012 3:02:16 PM Eastern Daylight Time  
Option 1: provide input for bearing stiffeners for a floorbeam  
Changed Category from Enhance BRASS to Enhancement.

|                                         |
|-----------------------------------------|
| Issue ID: 10395                         |
| Subject: Trusses, Symmetry and Counters |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Thompson, Todd          | 1/25/2011 3:59:11 PM |
| Modified By: tthompson                | 5/11/2011 6:32:48 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 1/25/2011 11:06:52 AM Eastern Standard Time  
I have a 336 Ft 18 Panel Truss, which I've attempted to code up as Symmetrical (EVEN).

I have 4 or 5 members that are (or I'm trying to consider) as Counters. Which would be Tension members only.

4/19/2016 3:08:18 PM

HRS AASHTO

1854

## Complete Issue Information

But when I do the analysis - what I've come across is that the symmetrical members are controlling in Compression.

And when I've reviewed the Truss schematic - the symmetrical members are NOT showing as being counters and I'm guessing the FE engine is not getting the information that they are Tension only members.

Looks like the work-around is to code all 18 panels and not just the first 9 and use the symmetry command when there are counters involved.

It is for Spans 8 & 9 Truss Spans --- the Chamberlain Truss member.

FROM: Todd Thompson DATE: 1/25/2011 11:25:51 AM Eastern Standard Time  
The attached Chamberlain truss fails to run when I code up all the counters.  
but when I had only coded some of the members - the FE does run - just doesn't do it symmetrically

FROM: Todd Thompson DATE: 1/25/2011 11:41:56 AM Eastern Standard Time  
I attached the FdAnalysisLog.txt file that was from the FE analysis failed to run.

FROM: Todd Thompson DATE: 1/25/2011 11:50:28 AM Eastern Standard Time  
maybe there are two different problems.  
(1) Counters don't appear to be reflected on the other half of truss when symmetry is used  
(2) When I attempt to mark as counters all the members that are Tension only - the FE analysis fails to run.

In the described Truss the following members are Tension Only.

L4-M5 (and it's symmetrical member)  
M5-U6 (and it's symmetrical member)  
L6-M7 (and it's symmetrical member)  
L8-M9 (and it's symmetrical member)  
L9-M9

FROM: Todd Thompson DATE: 1/25/2011 11:53:29 AM Eastern Standard Time  
I attached a line drawing of truss and the truss loads/stresses that were generated by one of our consultants who used SAP2000 to generate those loadings.

FROM: Todd Thompson DATE: 1/25/2011 2:29:49 PM Eastern Standard Time  
I coded the truss in it's entirety - without symmetry command.

I added L4-M5 and L4'-M5' as counters - runs ok  
I then added L6-M7 and L6'-M7' as counters - runs ok  
I then added L8-M9 and L8'-M9' as coutners - FE analysis fails  
I then removed L8-M9 and L8'-M9' as coutners and added M5-U6 and M5'-U6' as counters - runs ok

So it appears that adding the L8-M9 and L8'-M9' as counters causes the FE analysis to fail.

FROM: Bin Zhang DATE: 1/28/2011 4:35:28 PM Eastern Standard Time  
I just fixed the Truss Command, so it is able to generate the symmetrical counters now. You will have this feature in the upcoming virtis6.3.

I also have a couple questions for you:

4/19/2016 3:08:18 PM

HRS AASHTO

1855

## Complete Issue Information

1. Are the members that are marked as counters are actually counters? In my opinion, the member "M5-U6" and "L8-M9" may not be counters since they have double angle sections. Inappropriate assignments of counters may cause structure stability problem and then analysis abortion.
2. Regarding the "service load stress table for truss members" you sent as in the VI document, is the result for design truck, design lane or both? Is the distribution factor included in the result?  
Thanks!  
BTW, can you double check the member section property of the M3-L4? It's not consistent with the member section as marked in the "Elevation of Truss" figure.

Thank you!

FROM: Todd Thompson DATE: 2/1/2011 11:33:42 AM Eastern Standard Time

(1) Good question. The original analysis shows some of those members as Tension Members. The Consultant that analyzed this also considered some of those members as "inactive" in using SAP 2000. In fact in reviewing their work, they did a run with all members active and then some with these "counters" as inactive and somehow combined this to produce their rating values. If I make a run with all members active - some of these 'counters' fail in compression since they have little or no capacity in compression as the original analysis/design considered them to only carry tension. So I tried to take which members should be tension only and made them counters. This caused the FE analysis to fail. So a couple of members (L8-M9) are artificially high for compression so the analysis does not fail those members since I can't make them as tension only. I attached the original 1924 Truss plan with loadings from that design. (in 2009-2011, we replaced the floor systems for these trusses)

(2) Service Loads are truck and lane, which ever controlled. They are all single lane LL DF's, as there are side by side trusses, each carrying one traffic direction. Consultant considered the nearest wheel to be only 1 ft from the curb line. in computing the LL DF.

I believe the M3-L4 properties are correct - I attached calcs for this.

FROM: Todd Thompson DATE: 2/1/2011 11:39:07 AM Eastern Standard Time  
The 336Ft Truss = Spans 8 & 9 Truss Spans (Use)

I attached the latest and greatest coding up for this bridge and more specifically the 336 Ft Truss

FROM: Bin Zhang DATE: 2/8/2011 2:02:41 PM Eastern Standard Time

I am able to run the newly attached "sd\_08068084\_Truss\_newest.xml" successfully using virtis62 (Figure Summary)! I rated the "Span 8&9 Truss Spans (Use) – TRUSSES - Chamberlain" using HS20 rating vehicle. There are 4 counters in this analysis: L4-M5, L6-M7, L6'-M7', L4'-M5'. The non-linear solver worked fine for this truss. The virtis62 gave similar rating results to the results you attached in the table, mostly the relative difference is within 10%.

BTW, the newly attached XML corrected the section property assignment for member M3-L4. It was assigned as Section35 in the old XML file other than Section 33 (figure M3-L4).

The upcoming virtis63 is able to generate the symmetrical counters, and it will be released around this summer. Please feel free to let me know if you still have questions about this. Thanks!

FROM: Srujana Thogaru DATE: 4/12/2011 10:17:10 AM Eastern Daylight Time

4/19/2016 3:08:18 PM

HRS AASHTO

1856

Complete Issue Information

Tested and found to be fixed for 6.3

FROM: Todd Thompson DATE: 5/11/2011 2:32:27 PM Eastern Daylight Time  
6.3 Beta 2 - Schematic shows counters being symmetrical

FROM: Todd Thompson DATE: 5/11/2011 2:32:48 PM Eastern Daylight Time  
But due to a bug in Beta 2 - I can't analyze the truss yet.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 10405                                                                     |
| Subject: Timber bridge not running an LFR rating - does not report helpful message. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Colgrove, George        | 1/27/2011 3:33:40 PM |
| Modified By: gcolgrove                | 7/6/2011 6:21:16 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krisha   | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          | Bug      |
|                    | Verified |          |          |
|                    | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00039 - B005961.bbd |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: George Colgrove DATE: 1/27/2011 10:34:14 AM Eastern Standard Time

When running the enclosed bridge under a LFR rating batch, the bridge wont run and gives the error:

```

=====
Unable to create analysis module!
No rows returned from database when expecting one row.
=====

```

What is happening is that the bridge is a timber bridge and thus uses the Madero engine (ASD).

The error message gives the idea that the data entry was incorrect. I think the message should read something like

```

Unable to create analysis module!
LFD/LFR analysis selected. Engine requires ASD/ASR analysis.

```

Then the bridge should be skipped and the batch processing should continue.

This bridge does run from the BE under a ASD batch run.

FROM: George Colgrove DATE: 1/27/2011 10:51:48 AM Eastern Standard Time

FROM: Mehrdad Ordoobadi DATE: 1/31/2011 3:02:22 PM Eastern Standard Time  
Fixed.

FROM: George Colgrove DATE: 4/11/2011 6:55:59 AM Eastern Daylight Time  
Message has changed - verified.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 10412                                              |
| Subject: Floorbeam discrepancies when applying deterioration |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Goodrich, Brian      |                        |
| Submitted By: Armbrecht, Tim          | 1/31/2011 6:57:38 PM   |
| Modified By: hlee                     | 10/15/2011 10:34:38 PM |
| Priority: High                        |                        |
| Category: Third Party                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:08:19 PM

HRS AASHTO

1858

Complete Issue Information

|                  |                  |      |  |             |
|------------------|------------------|------|--|-------------|
| Goodrich, Brian  | Assigned         |      |  | Third Party |
| Lee, Herman      | New              | High |  | Unknown     |
| Li, Xinmei       | Assigned         |      |  | Bug         |
|                  | Investigation    |      |  |             |
| Kennelly, Krisha | Assigned         |      |  |             |
| Mlynarski, Mark  |                  |      |  |             |
|                  | Not Reproducible |      |  |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | Task 186 - Error Message.JPG |             |
|      | 00256 - 73173101000S091.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 1/31/2011 2:07:43 PM Eastern Standard Time  
 From my consultant (Shoup):

Attached is the Virtis model and the table of results (the ratings were done with FB77) for this floorbeam issue.

The issue that Tim Souther had, I also noticed. The check point issue that I have were that if the check points match a 10th point then the analysis would fail. I also notice that some check points were causing higher ratings then if the check points were not used (It looked like it was not checking the normal 10th points). I am assuming that this has been corrected with the POI issue that Tim Souther submitted.

4/19/2016 3:08:19 PM

HRS AASHTO

1859

## Complete Issue Information

I did some investigations about the ratings of the floorbeams and the differences between LFD and ASD (and spreadsheet calculations for ASD). The attached spreadsheet has the results of the ratings with different losses (of the floorbeams) and has a ratio for ASD to LFD for the Virtis ratings and ASD rating ratio for Virtis to independent spreadsheet results. I believe it is a capacity issue, but was not able to find the capacity calculations within VIRTIS to see where the issue is. On an independent check of the capacity I matched up with the no reduction case but when I started adding in the reductions the capacity from VIRTIS dropped more quickly than what I was calculating.

There also appears to be an issue with the deteriorations when you get to the 98% to 99% loss range (horizontal flange of the angle only). I did not look into this one because I was not sure if it may be related to the differences of the LFD and ASD with the deteriorations.

I also considered that this may be an issue with the members being built up and how VIRTIS exports it to the rating engines. The BRASS files only show top flange, web and bottom flange and not the actual built up section.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10428                                        |
| Subject: Error performing LRFR specification checking! |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Mlynarski, Mark      |                      |
| Submitted By: McMunn, Creightyn       | 2/7/2011 5:57:48 PM  |
| Modified By: cmcmunn                  | 9/10/2012 7:00:26 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Creightyn McMunn DATE: 2/7/2011 1:06:31 PM Eastern Standard Time

We can run the LRFR HL-93 for all of the girders, and the LRFR overload trucks (permit load rating

4/19/2016 3:08:19 PM

HRS AASHTO

1860

Complete Issue Information

using unlimited crossing, mixed with traffic and override factor checked) run for the exterior girders. However, for the interior girders we get an error message when trying to run the LRFR overload trucks – please see the attached screenshot.

FROM: Creightyn McMunn DATE: 2/16/2011 4:35:32 PM Eastern Standard Time  
Is there any update on this issue?

FROM: Xinmei Li DATE: 2/16/2011 4:48:09 PM Eastern Standard Time  
I used the attached bridge to do LRFR spec check with permit load, I'm able to reproduce the error you reported.

FROM: Wayne Skow DATE: 2/17/2011 9:04:50 AM Eastern Standard Time  
Article ALRFR\_1E\_06\_05\_04\_02\_02\_02 is crashing at line 452 when it goes to fetch the positive and negative cracked section properties of a PS cross-section. The table containing the properties (ALRFD\_Results.RCCrackedSectionPropertyTable) is populated by RCCrossSectionProperties and (it appears to me that it) may contain a varying number of records. ALRFR\_1E\_06\_05\_04\_02\_02\_02 is expecting two records (keys 0 and 1). In this particular instance, however, there appears to be only one record in the table.

FROM: Xinmei Li DATE: 2/18/2011 1:56:59 PM Eastern Standard Time  
Currently there is no workaround.

FROM: Krisha Kennelly DATE: 2/21/2011 10:39:58 AM Eastern Standard Time  
The program is unable to find the neutral axis location for the cracked section for the interior girders. The program performs an iterative procedure to find the cracked neutral axis and for some reason it cannot converge on a solution for the interior beams.

The workaround is to change the Y1 value on the Haunch Profile window from 2.0" to 2.01". This slight change allows the iteration to converge on a solution for the cracked neutral axis location.

We will continue investigating to fix the problem in the code.

FROM: Herman Lee DATE: 8/23/2012 9:46:37 AM Eastern Daylight Time  
The error message is not reproducible in version 6.4 Beta 4. I am able to complete the LRFR analysis for both the exterior and interior girders in the attached bridge.

|                                       |                       |
|---------------------------------------|-----------------------|
| Issue ID: 10435                       |                       |
| Subject: Timber Training Tutorial     |                       |
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ihnat, Joseph        |                       |
| Submitted By: Teal, Dean              | 2/8/2011 4:50:14 PM   |
| Modified By: jihnat                   | 1/10/2012 12:37:27 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |



## Complete Issue Information

### History

| Primary Contact                      | Status   | Priority | Category |
|--------------------------------------|----------|----------|----------|
| Lee, Herman                          | New      | High     | Unknown  |
|                                      | Assigned |          | Bug      |
| Kennelly, Krisha<br>Thogaru, Srujana | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                   | Description |
|------|---------------------------------------|-------------|
|      | TMBR1-<br>SingleSpanTimberExample.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/8/2011 11:50:54 AM Eastern Standard Time  
Timber Training Tutorial online

Inconsistent data between TMBR1 and TMBR2  
TMBR1, pg 13 has Nominal thick= 4.0 and Nominal width=2.0  
TMBR2, pg 2 has Nominal thick= 2.0 and Nominal width=4.0

FROM: Xinmei Li DATE: 1/9/2012 11:14:40 AM Eastern Standard Time  
Document "TMBR2 – Timber Deck Rating Example" is updated for 6.2 release.

Joe, please update the online document when you get a chance. Thanks.

FROM: Joseph Ihnat DATE: 1/10/2012 7:36:51 AM Eastern Standard Time  
The website is updated.

### Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 10436                     |
| Subject: Timber Tutorial Validation |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Teal, Dean              | 2/8/2011 5:00:39 PM  |
| Modified By: mkolis                   | 8/29/2012 8:08:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | Virtis LRFR Ext. Beam Error (082-0322).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/8/2011 12:02:44 PM Eastern Standard Time  
I am using Windows 7 if that makes any difference?

I entered the Timber tutorial from the available PDF

When I do a validation it gives the following message - everything works fine, but I get this message

\*\*\* ERROR VALIDATING \*\*\*

4/19/2016 3:08:20 PM

HRS AASHTO

1863

Complete Issue Information

Total Number of Messages: 12  
Number of Information Messages: 7  
Number of Warning Messages: 5  
Number of Error Messages: 0

\*\*\* ERROR VALIDATING \*\*\*

FROM: Krisha Kennelly DATE: 3/6/2012 9:52:49 AM Eastern Standard Time  
Srujana - please investigate. The validation when you save occurs in  
gui/abgbrdg/UiValidateComponentView. You can put breaks in there to find when the error is thrown.

FROM: Srujana Thogaru DATE: 3/21/2012 10:54:33 AM Eastern Daylight Time  
Error due to improper initialization of variables in abobrdg -> DoGirderMbrAlt.cpp validation function.

Fixed for 6.4 Release.

FROM: Matt Kolis DATE: 8/29/2012 4:08:50 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

|                                      |
|--------------------------------------|
| Issue ID: 10437                      |
| Subject: Virtis LRFR Ext. Beam Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Armbrecht, Tim          | 2/8/2011 5:09:05 PM  |
| Modified By: gcolgrove                | 5/19/2011 2:01:58 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:08:20 PM

HRS AASHTO

1864

## Complete Issue Information

### Description

FROM: Tim Armbrecht DATE: 2/8/2011 12:12:12 PM Eastern Standard Time  
From my consultant (Souther):

When attempting to run the Virtis LRFR (AASHTO) Engine analysis for Beam 1 - S Fascia, the following error is generated...

Failed to perform element specification checks.

Object reference not set to an instance of an object.

```
at
AbanSpec.Articles.AASHTO.LRFD.FourthEdition.I2008.ALRFD_4E_2008I_06_10_01_07.
DoSpecificationCheck(SpecUnits eUnits)
  at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits eUnits)
  at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits units)
  at CSCSuperStructure.DoSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperSteelGirderElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double,double>*
arrayLocations, CArray<double,double>* arraySpanLengths, CList<__int64,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64,__int64> \*\,CList<__int64,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64,__int64> \*\,CList<__int64,__int64> \> \> \*\,CList<CList<__int64,__int64>
\*\,CList<__int64,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoElementSpecCheck(CSCSuperStructure* ,
CSCSuperStructureGirderElement* pElement, SpecificationChecker specChecker, Int32 stage,
SpecUnits eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double,double>*
arrayLocations, CArray<double,double>* arraySpanLengths, CList<__int64,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64,__int64> \*\,CList<__int64,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64,__int64> \*\,CList<__int64,__int64> \> \> \*\,CList<CList<__int64,__int64>
\*\,CList<__int64,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecCheck, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoSpecificationCheck(CSCSuperStructure* , Int32 ISysUnits)
Error - Error performing LRFR specification checking!
```

Error - Analysis failed!

FROM: Srujana Thogaru DATE: 3/15/2011 1:38:09 PM Eastern Daylight Time  
Fixed for 6.3 Alpha Build 5

FROM: Tim Armbrecht DATE: 5/13/2011 9:53:00 AM Eastern Daylight Time  
Accepted.

4/19/2016 3:08:20 PM

HRS AASHTO

1865

Complete Issue Information

FROM: George Colgrove DATE: 5/19/2011 10:03:48 AM Eastern Daylight Time  
 Closed due to User Acceptance

|                                            |
|--------------------------------------------|
| Issue ID: 10438                            |
| Subject: Timber Tutorial Results Different |

|                                              |
|----------------------------------------------|
| Folder: /Virtis/Support Center/Virtis        |
| Primary Contact: Gyovai, Kane                |
| Submitted By: Teal, Dean 2/8/2011 5:02:48 PM |
| Modified By: hlee 6/3/2013 12:30:34 PM       |
| Priority: High                               |
| Category: Support                            |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          | Bug      |
|                 |          |          | Support  |
| Gyovai, Kane    |          |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 2/8/2011 12:15:32 PM Eastern Standard Time  
 Entered the timber tutorials (1 & 2)  
 The results are slightly higher (about 6%) than what's printed in the PDF's

FROM: Xinmei Li DATE: 1/9/2012 11:43:08 AM Eastern Standard Time  
 The timber tutorials (1 & 2) has not been updated since 6.0 release. So the rating results could be different than 6.2 release.  
 They may get updated when we have the next release.

4/19/2016 3:08:20 PM

HRS AASHTO

1866

## Complete Issue Information

Issue ID: 10443

Subject: Bridge That Ran In Version 6.1 Crashes In Version 6.2

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Campisi, Paul

2/9/2011 8:52:35 PM

Modified By: hlee

10/15/2011 9:33:14 PM

Priority: High

Category: Bug - BRASS

### History

| Primary Contact | Status   | Priority | Category                             |
|-----------------|----------|----------|--------------------------------------|
| Lee, Herman     | New      | High     | Unknown                              |
| Goodrich, Brian | Assigned |          | Bug - Export 1<br>Bug<br>Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

4/19/2016 3:08:20 PM

HRS AASHTO

1867

### Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 22896 - 5500129.xml |             |
|      | Test20C0018GH.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 2/9/2011 4:08:01 PM Eastern Standard Time

The attached Bridge, which ran in Version 6.1, now crashes in Version 6.2. It appears to be a problem with the diaphragms, as when I remove them the bridge runs. See "Span 1 NB" - G12 as an example. The error is listed below.

Error generating LFD/ASD schedule commands!

Error getting start distance and range for bracing schedule!

Error generating BRACING-SCHEDULE command!

Unable to determine span where range begins!

Error determining start distance and range!

FROM: Brian Goodrich DATE: 4/13/2011 1:03:22 PM Mountain Daylight Time

I confirmed this error with the BRASS export.

|                                |
|--------------------------------|
| Issue ID: 10446                |
| Subject: Output File For Truss |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 2/11/2011 5:23:54 PM |
| Modified By: ghuang                   | 2/14/2011 3:40:20 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

4/19/2016 3:08:21 PM

HRS AASHTO

1868

Complete Issue Information

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Lee, Herman        | New       | High     | Unknown  |
| Lee, Herman        | New       | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned  |          |          |
|                    | Resolved  |          |          |
|                    | Verified  |          |          |
|                    | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | 31877 -<br>Erie_Canal_Gusset_Check.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 2/11/2011 12:36:52 PM Eastern Standard Time  
 This is the first bridge we are trying to rate with Virtis and to compare the results from other software. However when we try to "View analysis output" for the Tuss model, we can only open the "Live Load Analysis Summary" and "Log File", and can not open any other files. It is important for us to view the other information to verify the results. Could you help us to access other output files? The bridge file (Test20C0018HG.xml) is attached. Thanks.

FROM: Herman Lee DATE: 2/11/2011 1:03:02 PM Eastern Standard Time  
 George, please try the following to see whether it fixes the problem.

- Internet Explorer needs to be the associated application for opening XML files on your computer.
- 1) Right-click on any XML file in Windows Explorer.
  - 2) Select Open With - Choose Program
  - 3) Select IE in the list, also check "Always use the selected program...", click OK.

FROM: Herman Lee DATE: 2/11/2011 4:49:35 PM Eastern Standard Time  
 E-mail from George Huang on 2/11/2011:

=====  
 Herman,  
 It works. Thank you.

4/19/2016 3:08:21 PM

HRS AASHTO

1869



Complete Issue Information

=====

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 10452                                                      |
| Subject: Truss Floor System Model Will Not Update Stringer Reactions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Campisi, Paul           | 2/14/2011 8:06:06 PM |
| Modified By: hlee                     | 6/7/2011 2:35:56 PM  |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 2/14/2011 3:33:52 PM Eastern Standard Time  
 For the attached model using the "148 foot span Warren Truss with Steel Grid Deck" Superstructure Definition, floorbeams 1 thru 4 will not analyzed. It appears to be a problem with the DC2 stringer reactions not updating. When I added a 4 inch wearing surface as a DC2 load, the floorbeams will no longer analyze. But the remaining floorbeams analyze. They should all run, as there is only one floorbeam definition for the bridge.

Additionally, the only way to get the new stringer reactions on the floorbeams that do run is to analyze the entire bridge from the Superstructure Definition workspace. If you change the wearing surface thickness, unless you run the bridge from the Superstructure Definition, the reactions do not update. Even if you have the "Automatically save the new computed stringer reactions" toggle activated under the preferences. If you run an individual floorbeam, the reactions do not update with a wearing surface change.

These problems appear to be tied to the addition of a wearing surface load.

Complete Issue Information

Paul Campisi  
NYSDOT

FROM: Paul Campisi DATE: 2/15/2011 10:00:16 AM Eastern Standard Time  
I have done some additional testing and found the following:

When the deck thickness is revised. The stringer reactions are not being updated when an individual floorbeam is analyzed. The rating does not change.

When a DC1 floorbeam member load is added. The stringer reactions are being updated when an individual floorbeam is analyzed and the rating changes.

When the bridge is run from the Bridge Explorer the stringer reactions are being updated and the rating revised.

FROM: Mehrdad Ordoobadi DATE: 5/23/2011 1:18:15 PM Eastern Daylight Time  
Changes made for VI 10686 appears to have fixed this issue. Fixed for 6.3 Beta 3.

FROM: George Colgrove DATE: 6/6/2011 2:45:02 PM Eastern Daylight Time  
Verified fixed for 6.3 Beta 3

Issue ID: 10453  
Subject: Truss - Member U3L4 Incorrect RF

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: Jones, Daniel 2/14/2011 9:49:21 PM  
Modified By: hlee 2/15/2011 8:33:06 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00859 - 09_0018.xml |             |
|      | 00805 - 29C0231.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Daniel Jones DATE: 2/14/2011 4:57:53 PM Eastern Standard Time

I found that Member U3L4 & its mirror (U3'L4') for any simple span truss does not calculate the Rating Factor correctly. I modeled a truss very similar to the TrussTrainingExample provided with the software. Both the training example and my model showed that the Factor ( $A1 = 1.30$ ) was not included in the calculation for the rating factor shown on the Rating Results Report.

Thanks,  
Daniel Jones

FROM: Bin Zhang DATE: 2/15/2011 9:31:46 AM Eastern Standard Time

For the member U3L4, the dead load will increase the member capacity. With this in mind, the dead load should be factored by 1.0 ( $A1=1.0$ ) other than 1.3

You can refer to VI#10070 for more information.

Thanks!

Issue ID: 10454

Subject: Shear Capacity for 3-Span PC/PS I-girder bridge at 0.9 of Span 1 and 0.1 of Span 2

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Huang, George

2/15/2011 1:59:11 PM

Modified By: hlee

5/7/2011 12:44:29 PM

Priority: High

Category: Unknown

4/19/2016 3:08:22 PM

HRS AASHTO

1872

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
| Thogaru, Srujana | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | VirtisLRFR_Run_Failure<br>(0820324).xml |             |
|      | VI 10457.pdf                            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 2/15/2011 8:59:51 AM Eastern Standard Time  
Submitted by George Huang via email on 2/2/11:

Hi Krisha,

Attached are the Virist models for two 3-span pc/ps bridges. There are shear capacity problems at 0.9 of span 1 (and 2) and 0.1 point of span 2 (and 3). Although these are 3-span bridges, there are couple different models we used to test to see if we can ignoring the rating at 0.1 and 0.9 point in original 3-span bridges, and use the 0.1 and .9 ratings from one or span models. Thanks for the help.  
(See attached file: 00859 - 09\_0018.xml)(See attached file: 00805 - 29C0231.xml)

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Phone: (916) 227-8769  
Fax: (916) 227-8357

4/19/2016 3:08:22 PM

HRS AASHTO

1873

Complete Issue Information

Phone call from George referenced shear article that contains  $V_i \cdot M_{cr} / M_{max}$ . For these points the  $M_{max}$  is small and that leads to a small  $V_i$ .

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 10457                                                           |
| Subject: AASHTO Engine run failure though successfully runs in BRASS LRFR |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Armbrecht, Tim          | 2/16/2011 3:38:39 PM |
| Modified By: sthogaru                 | 8/29/2011 5:07:25 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 2/16/2011 10:41:43 AM Eastern Standard Time

From my consultant (Souther):

RE: VirtisLRFR\_Run\_Failure(0820324).xml

Member 4 - 1st N Int-x in the reference Virtis 6.2 model will not run under the AASHTO LRFR engine although it does run successfully under BRASS LRFR. The run terminates with the following...

- Location - 741.4888 (ft)

Failed to perform element specification checks.

Object reference not set to an instance of an object.

at

AbanSpec.Articles.AASHTO.LRFD.FourthEdition.I2008.ALRFD\_4E\_2008I\_06\_10\_01\_07.

4/19/2016 3:08:22 PM

HRS AASHTO

1874

Complete Issue Information

```

DoSpecificationCheck(SpecUnits eUnits)
  at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits eUnits)
  at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits units)
  at CSCSuperStructure.DoSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperSteelGirderElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > > * sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \> \> \*\,CList<CList<__int64>,__int64>
\*\,CList<__int64>,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoElementSpecCheck(CSCSuperStructure* ,
CSCSuperStructureGirderElement* pElement, SpecificationChecker specChecker, Int32 stage,
SpecUnits eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > > * sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \> \> \*\,CList<CList<__int64>,__int64>
\*\,CList<__int64>,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecCheck, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoSpecificationCheck(CSCSuperStructure* , Int32 ISysUnits)
Error - Error performing LRFR specification checking!

```

Error - Analysis failed!

Note that the total length of the Member Alternative is 981.4417 feet. However, other members will run under Virtis LRFR, e.g., Member 2 - 1st S Int.

FROM: Srujana Thogaru DATE: 8/29/2011 11:15:03 AM Eastern Daylight Time  
Fixed for 6.3 release. Please see the attached document for results.

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 10459                                                                                        |
| Subject: Eccentric axial rating based on the secant equation is only applicable for compression member |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Huang, George           | 2/16/2011 8:35:56 PM |
| Modified By: mkolis                   | 8/30/2012 7:13:23 PM |

### Complete Issue Information

|                    |
|--------------------|
| Priority: Critical |
| Category: Bug      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 39072 - 3354640new_mo.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 2/16/2011 3:36:32 PM Eastern Standard Time  
Submitted on behalf of George Huang, Caltrans.

FROM: Bin Zhang DATE: 2/21/2011 9:24:14 AM Eastern Standard Time  
Virtis program used the secant equation to calculate the rating factor for tensile members with eccentricity. This is incorrect, the secant equation should be applied to compressive members only.

FROM: Bin Zhang DATE: 1/6/2012 2:14:46 PM Eastern Standard Time  
Fixed for VO64. The new program will use interaction rating for the tensile truss members with eccentricity.  
Member L1L2 in the attached document is a tensile member with eccentricity, it could be used for the testing purpose.

4/19/2016 3:08:22 PM

HRS AASHTO

1876

## Complete Issue Information

FROM: George Huang DATE: 6/8/2012 6:50:38 PM Eastern Daylight Time

I tried to use  $e=0.1$  for LOL1 element. The operating rating (HS20 truck) changes from 7.0 (for  $e=0$ ) to 5.2 ( $e=0.1$ ). I tried to use tension capacity of 630 kips and  $M_y=2902$  kips-in, but could not figure out why the reduction is so big. Which interaction equation and which bending capacity are used in Virtis? I attached the file I used (BR10-113GH.xml).

FROM: George Huang DATE: 6/8/2012 6:54:48 PM Eastern Daylight Time

I use Span 4 (Warren pony truss) - truss 1 in the analysis.

FROM: Bin Zhang DATE: 6/15/2012 1:15:36 PM Eastern Daylight Time

Please refer to Page 16 in the attached "Virtis Truss Method of Solution.PDF" for the interaction equation.

For the bending capacity, Virtis uses the following equation : " $M_u = M_p = F_y * S_{xx}$ ". For member LOL1,  $F_y = 4752$  kip / ft<sup>2</sup>, and  $S_{xx} = 0.0509$  ft<sup>3</sup>. So the  $M_u = M_p = 241.87$  kip-ft.

Below I listed the procedures that how does Virtis calculate the Opr rating factor of member LOL1 for the HS20 vehicle.

$A_s = 0.13$ ;  $P_{cr} = 515.98$ ;  $P_e = 4269.72$ ;  $P_y = 535.76$ ;  $P_1 = 143.66$ ;  $P_2 = 69.50$ ;  $M_2 = 0.58$ ;  
using 10-155

RF1 (rating factor) = 5.21;

using 10-156

RF2 (rating factor) = 5.50;

RF = smaller value between RF1 and RF2, so RF = 5.21 here. Please let me know if this does not answer your question.

FROM: George Huang DATE: 6/19/2012 5:14:51 PM Eastern Daylight Time

Bin, the interaction equations listed at page 16 of "Virtis Truss Method of Solution" are for compression only. The interaction equations with tensile axial force are not listed in the AASHTO Standard Specification, but in section 1.8 of "Guide Specifications for Strength Design of Truss Bridges, 1985. Let me know if you need this guide spec.

FROM: Bin Zhang DATE: 6/21/2012 10:49:58 AM Eastern Daylight Time

Proposed by Herman:

We proposed the following actions for Incident 10459. Please let us know your comments.

1. For tension member with eccentricity, analysis will issue warning message and use the concentric axial rating equation (not considering eccentricity).
2. Notify Paul Campisi of this modification to the analysis and see whether he agrees to the change.
3. Enter an enhancement request for using the interaction equations for tension member in the Guide Specs for Truss (Section 1.8) when eccentricity is entered for the member.

FROM: George Huang DATE: 6/26/2012 10:54:48 AM Eastern Daylight Time

It's fine with me.

FROM: Bin Zhang DATE: 7/3/2012 9:14:36 AM Eastern Daylight Time

It's been decided that:

1. For tension member with eccentricity, analysis will issue warning message and use the concentric axial rating equation (not considering eccentricity). Do this for 6.4 Beta 3.
2. Enter an enhancement request (could be a control option) for using the interaction equations for

4/19/2016 3:08:22 PM

HRS AASHTO

1877



Complete Issue Information

tension and compression members in the Guide Specs for Truss (Section 1.8) when eccentricity is entered for the member. The enhancement issue ID number is 11685.

FROM: Bin Zhang DATE: 7/3/2012 3:34:34 PM Eastern Daylight Time  
Fixed for VO64 beta3.

FROM: George Huang DATE: 8/10/2012 3:52:03 PM Eastern Daylight Time  
Verified in beta build 2.

FROM: Matt Kolis DATE: 8/30/2012 3:13:23 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 10477                                           |
| Subject: Truss Created With Metric Units Will Not Analyze |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Campisi, Paul           | 2/25/2011 9:59:26 PM |
| Modified By: jihnat                   | 9/26/2012 7:11:46 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Paul Campisi DATE: 2/25/2011 5:04:19 PM Eastern Standard Time  
The attached truss was built using Metric Units. Truss members were created using the "AngleBox", "ChannelBox" and "Builtup" member commands. Even though the truss verified, the analysis terminated with the following error:

Error performing finite element analysis...

4/19/2016 3:08:22 PM

HRS AASHTO

1878

Complete Issue Information

Error performing finite element analysis!

\*\*\*FEA ERROR - Modulus of elasticity for beam element 1 is 0..

When I re-created the members using the "NonDetailed" member command, the program ran and provided results.

The problem appears to be when the members include plates. I tested a ChannelBox without plates and it ran successfully.

See the attached model for the various test cases.

Paul Campisi  
NYSDOT  
Office of Structures

FROM: Xinmei Li DATE: 4/27/2011 1:47:38 PM Eastern Daylight Time  
The plate thickness was not parsed correctly. This is resolved for 6.4 release.

FROM: Xinmei Li DATE: 4/27/2011 3:54:04 PM Eastern Daylight Time

FROM: Paul Campisi DATE: 9/7/2012 1:41:08 PM Eastern Daylight Time  
I checked this truss and it does not run. The following error is reported for the truss 1.

???Error - Area for member LOU1 is less than or equal to zero!  
???Error - Unable to assign material properties for member LOU1.  
???Error - Member and material properties are required user input.

When you look at the sketches the plates are displayed as paper thin. Truss 2 runs as before.

Note: I had to remove the "Connection Welded 0.0" command from members "V1" and D1 as shown below for the truss to run. Otherwise the truss did not validate. This is a valid command which should not have to be removed.

Builtup = V1  
TopFlangePlate  
300 18 "Grade 50W"  
BottomFlangePlate  
300 18 "Grade 50W"  
WebPlate 375 12  
Connection Welded 0.0 <==== Have to remove to run

Builtup = D1  
TopFlangePlate  
400 22  
BottomFlangePlate  
400 22  
WebPlate 375 12  
Connection Welded 0.0 <==== Have to remove to run

Paul Campisi

4/19/2016 3:08:22 PM

HRS AASHTO

1879

Complete Issue Information

FROM: Herman Lee DATE: 9/7/2012 2:13:43 PM Eastern Daylight Time  
May, is the issue reported by Paul on 9/7 similar to the issue identified by Todd in 11903?

FROM: Xinmei Li DATE: 9/7/2012 2:19:28 PM Eastern Daylight Time  
There are two issues in this attached Truss,  
1, Truss 1 doesn't run  
2, Truss cross section sketch is not showing plate thickness.

FROM: Xinmei Li DATE: 9/7/2012 4:21:25 PM Eastern Daylight Time  
#1 is duplicate of V11903, is already resolved with new dll  
#2 is a bug, plate thickness is not set when it's entered by integer.

FROM: Xinmei Li DATE: 9/7/2012 5:48:11 PM Eastern Daylight Time  
#2 is resolved with new dll

FROM: Joseph Ihnat DATE: 9/26/2012 3:01:59 PM Eastern Daylight Time  
Verified in Beta 5/Acceptance Build both trusses run and plates in sketch have some thickness.

|                                        |
|----------------------------------------|
| Issue ID: 10483                        |
| Subject: Reinforced Concrete Box Beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Barreda, Jesus          | 2/28/2011 4:36:52 PM |
| Modified By: hlee                     | 2/28/2011 6:21:11 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:08:23 PM

HRS AASHTO

1880

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jesus Barreda DATE: 2/28/2011 11:43:12 AM Eastern Standard Time

I am working on a reinforced concrete box beams bridge, Virtis only gives the option for I and T Beams. Since the beam does not have a void, can I treat it as a "square I" beam? (the distribution factors should be changed for adequate factors since Virtis will provide distribution factors for an I beam)

Thanks

FROM: Herman Lee DATE: 2/28/2011 12:53:46 PM Eastern Standard Time

For rating purpose, this workaround might be ok.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 10491                                             |
| Subject: Problem with POI in Stringers (TFS superstructure) |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Issa, Moussa            | 2/28/2011 8:41:46 PM  |
| Modified By: hlee                     | 10/15/2011 9:32:19 PM |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

4/19/2016 3:08:23 PM

HRS AASHTO

1881

Complete Issue Information

| Primary Contact | Status    | Priority | Category                   |
|-----------------|-----------|----------|----------------------------|
| Goodrich, Brian | Assigned  | High     | Unknown                    |
| Lee, Herman     | Suspended | High     | Enhancement<br>Maintenance |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | TRUSS_Capacity.xlsx |             |
|      | ELoad.pdf           |             |
|      | Bridge.30C0016.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/28/2011 3:42:46 PM Eastern Standard Time  
Submitted on behalf of Moussa Issa, HBM Engineering Group.

Received e-mail:

=====  
Hello Jim,

I am currently running the rating for a Truss Floorbeam Stringer system with deteriorations on the stringers, floorbeams and the truss. In the floorbeams and stringers definition Control Options I selected "Generate POI at Section Change Points" and "...at user defined points". I ran the rating in Brass LFD with the engine property "Print actions at all node points" This should have given me the correct ratings for all of the members with deteriorations. I noticed however that some ratings were too high. I investigated it further and noticed in the Brass output files that the rating was only being calculated at 1/10th points. To correct this error I placed Analysis Location points at the beginning and end of each deterioration on all floorbeams and stringers. The floorbeam ratings gave expected results but the stringers ratings were higher. Looking into the output files again, the rating was being calculated only at tenth points before my specified analysis location, and all points after this location were ignored. (For example, 'Unit3 Stringer1 Det' only outputs rating at 100.0 and 100.19 (0.667') from the left end of the stringer and no other locations). I also noticed that sometimes it works and other times it does not. See some examples below. Is this a bug in the program or is there something that I am doing wrong? Please let me know ASAP.

The stringer in U3S1error.pdf has a POI at 0.667', this has the error.  
The stringer in U3S1working.pdf has a POI at 0.667' and 6', this does not have an error.  
The stringer in U13S4error.pdf has a POI at 14' and 14.667' and this has the error.

Complete Issue Information

I attached the model so that you can try and reproduce my problem. Just a note, we are using a modified version of Virtis that overwrites the straight line truss verification (fix in v6.3). If you have any questions please call me or Justin Brown  
 Have a nice day.

Thanks,

Moussa A. Issa, Ph.D., P.E., S.E.  
 Chief Structural Engineer  
 HBMENGINEERING GROUP, LLC  
 4415 West Harrison Street, Suite 231  
 Hillside, Illinois 60162

=====

FROM: Brian Goodrich DATE: 3/1/2011 11:45:11 AM Mountain Standard Time  
 This is a duplicate of Incident 10283. This issue has been fixed in BRASS-GIRDER(STD) 6.0.4, which is tentatively scheduled for release to Virtis users around June 2011.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 10503                                            |
| Subject: Eccentric Axial Rating for Truss Member in Virtis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 3/1/2011 10:30:30 PM |
| Modified By: hlee                     | 6/9/2011 9:25:37 PM  |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:08:23 PM

HRS AASHTO

1883

## Complete Issue Information

### Description

FROM: Herman Lee DATE: 3/1/2011 5:31:27 PM Eastern Standard Time  
Submitted on behalf of George Huang, Caltrans.

### Received e-mail:

=====  
Hi Dean,

Finally we tested the new function of "Eccentric Axial Rating" for truss member in Virtis. We analyzed a simple span truss using Virtis (see attached file "Bridge.30C0016.xml") and compared the results with our previous rating results. I discussed some of our findings with Herman Lee, and Herman created VI 10459 to correct one mistake where the secant formula was used for both compression and tension members, and should be for compression only. However the bigger issue here is that the rating equation used in Virtis based on AASHTO MBE is too conservative and even wrong in my judgment.

The controlling rating member is top cord U2U3 for this truss bridge. I attached the file "Truss\_Capacity.xlsx" to show the capacities from different equations for top cord U2U3.

Virtis calculates the capacity due to eccentricity by dividing  $0.85AP_{cr}$  with the  $\Delta_A$  from MBE Appendix 16A (eq. 16A-1, page 6-75). The operating capacity from Virtis is 182.6 Kips (Cell F23), the inventory rating is -0.029 (Cell 21) and operating rating is 0.48 (Cell 22). The different signs between inventory and operating ratings are due to different capacities using different  $P_u$  in  $\Delta_A$ .

The capacity equations used by Caltrans are based on P-M interaction (eq. 10-155) from AASHTO Standard specification, which are the same equations recommended in the "AASHTO Guide Specifications for Strength Method of Truss Bridges (Load Factor Design) 1985". Based on this equation, the capacity is 218.99 Kips (Cell J18), which is about 20% larger the operating capacity from Virtis. The inventory and operating ratings are 0.258(Cell 21) and 0.438(Cell 22).

The page 1 of file "ELoad.pdf" shows some background of Virtis and MBE equations. Eq. 1 is the basic equation from the basic beam theory. Eqs 2 and 3 are the equations used in Virtis. The rating equation used in Virtis is too conservative due to the following facts:

- 1)  $\sigma_{max}$  in Eq 1 is the maximum allowable stress not only due to the axial force, but also due to the bending moment. The stress,  $0.85 F_{cr}$ , is usually for axial load only. However Virtis is conservatively using this stress for the combined stress.
- 2) The capacity  $P$  in Eq 1 depends on the applied axial force  $P$ . The capacity calculation has to be based on the iterations of  $P$ . However the MBE equation used in Virtis, use the fixed and different combined factored dead load and live load for inventory and operating ratings to calculate different  $\Delta_A$  (Eq 3) and to get different capacities (Eq. 2). Due to the larger for  $F_u$ , the calculated capacity is smaller for Inventory rating than that for operating rating. That's why the rating factor for member U2U3 of the testing bridge is negative for inventory rating, while the rating factor for operating rating is positive. These capacities,  $P$ , will be too small for weak member since the  $P_u$  is much larger than  $P$ , and could be too large for some very strong member if  $P_u$  is much smaller than  $P$ . This is a wrong approach.
- 3) The secant equation (Eq 3) is based on the idealized pinned end conditions with no modification for  $L$ . However the member length " $L$ " in most equations in the Specifications can be modified as  $KL$  to consider the actual boundary condition, such as  $K=0.875$  is used for pinned ends in the calculation of

4/19/2016 3:08:23 PM

HRS AASHTO

1884

Complete Issue Information

Fcr.

The eccentric axial rating method used in Virtis is too conservative. With this approach, States may not be able to use Virtis to get reasonable ratings for truss members with eccentric axial loads. My recommendation is to use the beam-column equations 10-155 from AASHTO LFD Standard Specification. On page 2 of the file "ELoad.pdf", I showed an example for possible revised delta equation to replace the current equation. This equation is based on the assumption  $\mu = M_y$ , and iteration has to be used to calculate the correct Delta. If different  $\mu$  is used, the formula will be different.

Let me know if you need more information. Thanks.

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I

FROM: Herman Lee DATE: 6/9/2011 5:24:56 PM Eastern Daylight Time  
As requested by the TAG (April 2011), change Category to Maintenance.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 10531                                                         |
| Subject: BRASS does not rate the negative moment areas for the stringer |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Zhang, Bin              | 3/8/2011 5:37:43 PM  |
| Modified By: bzhang                   | 6/15/2011 3:14:45 PM |
| Priority: High                        |                      |
| Category: Enhance BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category      |
|-----------------|----------|----------|---------------|
| Lee, Herman     | New      | High     | Unknown       |
| Goodrich, Brian | Assigned |          |               |
|                 | Resolved |          | Enhance BRASS |
|                 | Closed   |          |               |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:24 PM

HRS AASHTO

1885



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 35 0121eh.xml       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 3/8/2011 12:48:04 PM Eastern Standard Time

For the bending moment rating in a stringer, BRASS does not rate the negative bending moment. For example, if I rated the middle point of a continuous stringer, BRASS did not calculate the rating factor at all. Then I picked another POI, BRASS could calculate the rating factor. But it only calculated the positive moment rating factor.

I used the BID 13 bridge for the test. The member I rated is "Unit1 Stringer1"->Alt1.

FROM: Herman Lee DATE: 3/9/2011 8:03:54 AM Eastern Standard Time

FROM: Brian Goodrich DATE: 5/23/2011 8:41:14 AM Mountain Daylight Time

BRASS LFD performs the flexure checks based on the STEEL-GIRDER-CONTROL command when points of interest are generated. This BRASS section type is determined based on the points of dead load contraflexure (see the stringer definition engine properties) and set for the various ranges along the beam. The "Member Alternative/Beam Definition Properties: Analysis" engine properties help topic describes this. BRASS only performs one flexure calculation per point of interest, i.e., it does not check both positive and negative flexure.

The new merged BRASS will perform checks for both positive and negative flexure.

FROM: Bin Zhang DATE: 6/15/2011 11:06:26 AM Eastern Daylight Time

thanks for the explanation

|                                          |
|------------------------------------------|
| Issue ID: 10541                          |
| Subject: Problem in Advanced LL DF input |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: vinayagamoorthy, vinacs | 3/9/2011 4:01:05 PM  |
| Modified By: ghuang                   | 7/22/2011 6:42:16 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

4/19/2016 3:08:24 PM

HRS AASHTO

1886

Complete Issue Information

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Duray, Jim       |          |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/9/2011 11:03:36 AM Eastern Standard Time  
Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received Bridgeware e-mail:

=====  
Hi

Attached is a bridge where Virtis Crashes after exporting the data to the Virtis analysis engine.

The girder that crashes is

G4 of "Span 1-3 (MDL 3 of 4)"

Could you please check and let us know what is wrong with the input that causes the crash?  
(See attached file: 35 0121eh.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
=====

The crash is caused by the live load distribution factor ranges. A workaround is to use the computed span lengths in the G4 Member window. The length of the DF range from support 1 will become 45.906542 ft and the length of the DF range from support 2 will become 99.796831 ft.

FROM: Srujana Thogaru DATE: 6/29/2011 10:02:47 AM Eastern Daylight Tim  
Tested with 6.3 Beta 4 updates and was found to be fixed due to other updates.

4/19/2016 3:08:24 PM

HRS AASHTO

1887

## Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 10545                                        |
| Subject: When no traffic data entered for LRFR ratings |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Metcalf, William        | 3/10/2011 4:41:51 PM |
| Modified By: kkennelly                | 3/10/2011 5:20:11 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: William Metcalf DATE: 3/10/2011 11:44:40 AM Eastern Standard Time  
When no traffic data entered for LRFR ratings the default load factor used is the least conservative (1.40). I would think that when no informations is entered we would want to default to the MOST conservative load factor (1.80).

Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 10590                     |
| Subject: Through truss capabilities |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Kendrick, Tom           | 3/24/2011 3:30:32 PM |
| Modified By: hlee                     | 7/5/2011 2:20:25 PM  |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          | Support  |
|                 | Closed             |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

4/19/2016 3:08:24 PM

HRS AASHTO

1889

## Complete Issue Information

### Description

FROM: Tom Kendrick DATE: 3/24/2011 11:35:57 AM Eastern Daylight Time

I have attached an image of a 1920 through truss that we have analyzed using STAAD.Pro. We now need to perform a bridge rating. The rating agency requires the use of Virtis, if Virtis has the capability to rate the bridge.

Can Virtis rate through truss structures similar to the one in the attached drawing?

FROM: Herman Lee DATE: 3/25/2011 7:40:42 AM Eastern Daylight Time

I don't see the drawing attached in this incident. Please attach the file again. Thanks.

FROM: Herman Lee DATE: 5/7/2011 8:18:00 AM Eastern Daylight Time

Information Needed E-mail sent on 5/7/11.

FROM: Herman Lee DATE: 6/10/2011 7:55:22 AM Eastern Daylight Time

Information Needed E-mail sent on 6/10/11.

FROM: Herman Lee DATE: 7/5/2011 10:20:21 AM Eastern Daylight Time

No response to Information Needed E-mail for two months. Status changed to Closed. Please let us know if you want to reopen this incident.

Issue ID: 10635

Subject: Virtis Std Engine Shear Diagram

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lathia, Hasmukh

Submitted By: Ordoobadi, Mehrdad 4/4/2011 12:08:18 PM

Modified By: gcolgrove 5/19/2011 1:45:26 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lathia, Hasmukh | New      | High     | Unknown  |
|                 | Resolved |          | Bug      |

4/19/2016 3:08:25 PM

HRS AASHTO

1890

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sd_50126165.xml     |             |
|      | NSG error-2.png     |             |
|      | NSG.png             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Mehrdad Ordoobadi DATE: 4/4/2011 8:08:47 AM Eastern Daylight Time

While investigating incident 9831 noticed that the end shears for a multi-span PS girder are inconsistent for DL1. This happens for bridge PCITrainingBridge5 member alternative ...StructureDefinition1/G2/MemberAlternative1(995). The shear diagram, Vrtis Std Input and output files are attached.

FROM: Hasmukh Lathia DATE: 4/19/2011 12:45:06 PM Eastern Daylight Time

It appears that DL1 shear at end of last span in a PS girder was reported correctly before implementation of BAR7 Revision149 that was added to Virtis Std Engine. DL1 shears in a continuous span PS girder are calculated based on a simple span configuration and are stored for analysis points corresponding to continuous span. BAR7 Revision149 changes to Virtis Std Engine were extensive. It will require further investigation to find a fix for this discrepancy.

FROM: Hasmukh Lathia DATE: 4/22/2011 8:14:30 AM Eastern Daylight Time

After investigating this issue further it was found that the end shears are calculated correctly and used appropriately for the calculations of shear ratings. The problem has been in reporting this value. This value is incorrectly reported only for a continuous span PS girder. A fix has been found and it will be included in Virtis/Opis Release 6.4.

Issue ID: 10636

Subject: Unable to do NSG analysis on a PS Girder System Bridge

Folder: /Virtis/Support Center/Virtis

4/19/2016 3:08:25 PM

HRS AASHTO

1891

### Complete Issue Information

|                              |                     |
|------------------------------|---------------------|
| Primary Contact: Zhang, Bin  |                     |
| Submitted By: Thompson, Todd | 4/4/2011 1:51:48 PM |
| Modified By: bzhang          | 4/4/2011 8:34:25 PM |
| Priority: High               |                     |
| Category: Bug                |                     |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          | Bug      |
| Duray, Jim      | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | IF.docx             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 4/4/2011 9:54:23 AM Eastern Daylight Time

I have a 3 span, 5 Girder System bridge defined but I can't get the NSG analysis to work. I've tried different NSG trucks, so it doesn't appear to be truck specific.

I keep getting the following error message:

Unable to generate model.

08:53:00 AM - Line 1823 in source file .\AbxVirtisDistFactEngine.cpp.

Unable to generate girder system finite element model.

08:53:00 AM - Line 576 in source file .\AbxVirtisDistFactModelGen.cpp.

Unable to generate model.

08:53:00 AM - Line 1700 in source file .\AbxVirtisDistFactModelGen.cpp.

4/19/2016 3:08:25 PM

HRS AASHTO

1892

Complete Issue Information

Unable to generate model.

08:53:00 AM - Line 3221 in source file .\AbxVirtisDistFactModelGen.cpp

FROM: Todd Thompson DATE: 4/4/2011 9:55:46 AM Eastern Daylight Time  
this might be the issue that I reported with VI 10287. If it is, go ahead and close this one.

FROM: Herman Lee DATE: 4/4/2011 10:34:10 AM Eastern Daylight Time  
Ben, please see whether this is a duplicate of Incident 10287.

FROM: Bin Zhang DATE: 4/4/2011 11:48:19 AM Eastern Daylight Time  
I tested the NSG rating under VO63 Alpha6, I can run the rating analysis successfully without any errors. So I think this problem has been fixed.  
I attached the related figures in the document.

FROM: Herman Lee DATE: 4/4/2011 3:17:45 PM Eastern Daylight Time  
Ben, please use 6.2 to reproduce the problem and see whether there's a workaround in 6.2.

FROM: Bin Zhang DATE: 4/4/2011 3:39:51 PM Eastern Daylight Time  
This is a duplicate of the incident 10287. And the error messages are exactly the same.  
A workaround in 6.2 is to combine the three haunch profile ranges into one, with length equals to 219.6666.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 10660                                               |
| Subject: Impact factor issue in the vehicle properties window |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Zhang, Bin              | 4/7/2011 6:30:30 PM  |
| Modified By: bzhang                   | 4/10/2011 3:30:30 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 4/7/2011 2:31:48 PM Eastern Daylight Time

This testing was conducted using the Truss 1 in BID19 bridge model.

1. I leave the impact factor (IF) blank and run AASHTO LFR (figure 1), I got the standard IF which is 1.21 (figure 2)

2. I changed the IF to be 0.5 in vehicle properties window (figure 3), I got the IF with a value of 1.50 While the correct IF should be  $1+0.21*0.5=1.105$  other than 1.50

AASHTO used override other than multiply to get the IF, it calculated the IF by using "1+user input".

You can refer to the figures in the document for details

FROM: Bin Zhang DATE: 4/7/2011 6:08:05 PM Eastern Daylight Time

This error only happened to the Truss and Floor Truss. Impact factor works well for girder in the BID1 bridge.

FROM: Jim Duray DATE: 4/8/2011 2:44:32 PM Eastern Daylight Time

The above applies to the reaction IF only.

Resolved for 6.3 Beta 1.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 10685                                                                    |
| Subject: BRASS LFD is not considering loads from the Member Loads window in Virtis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Kennelly, Krisha        | 4/12/2011 5:59:43 PM  |
| Modified By: hlee                     | 10/15/2011 9:33:46 PM |
| Priority: High                        |                       |

4/19/2016 3:08:25 PM

HRS AASHTO

1894

### Complete Issue Information

Category: Bug - BRASS

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 4/12/2011 2:00:27 PM Eastern Daylight Time  
BID5 in the sample database, also attached. The wearing surface and parapet loads entered in the Member Loads window are not being applied to the girder.

If I run BRASS LFD for HS20 rating and then delete the Uniform Member Loads, re-run BRASS LFD, I get the same rating factors.

FROM: Brian Goodrich DATE: 4/13/2011 1:26:04 PM Mountain Daylight Time  
I confirmed this error and it is in the BRASS export.

Complete Issue Information

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 10700                                                   |
| Subject: Exporting/importing analysis templates & system defaults |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Waheed, Amjad           | 4/12/2011 8:55:28 PM |
| Modified By: hlee                     | 7/17/2014 5:09:20 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 4/12/2011 4:58:49 PM Eastern Daylight Time

At this time, I do not know how to export or import analysis templates or system defaults, such as county names, Distrcits etc. We will like to export templates and defaults for consultants and non-DOT users.

FROM: Herman Lee DATE: 4/12/2011 5:05:09 PM Eastern Daylight Time

Exporting/Importing analysis templates and system defaults is a planned feature in the 6.4 release.

FROM: Herman Lee DATE: 7/17/2014 1:03:52 PM Eastern Daylight Time

Implemented in version 6.4.

Complete Issue Information

Issue ID: 10737  
Subject: Ratings for non controlling limit states are not shown

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Crudele, Brenda 4/13/2011 8:15:17 PM  
Modified By: hlee 5/7/2011 12:33:54 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Brenda Crudele DATE: 4/13/2011 4:24:52 PM Eastern Daylight Time

Only the controlling limit state for LRFR is shown. The ratings at all LRFR non-controlling limits states should be accessible somewhere.

FROM: Herman Lee DATE: 5/7/2011 8:35:13 AM Eastern Daylight Time

Switched Folder to /Support Center/Virtis.

|                               |
|-------------------------------|
| Issue ID: 10755               |
| Subject: Virtis Error Message |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lathia, Hasmukh      |                      |
| Submitted By: Benshoof, Rob           | 4/15/2011 4:40:28 PM |
| Modified By: gcolgrove                | 5/19/2011 1:45:54 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:08:26 PM

HRS AASHTO

1898

Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
| Lathia, Hasmukh | Assigned |      |             |
| Goodrich, Brian | New      | High | Unknown     |
|                 | Assigned |      | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | BID3_training_bridge_3.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mehrdad Ordoobadi DATE: 4/15/2011 12:41:01 PM Eastern Daylight Time  
 Submitted on behalf of Mr. Robert A Benshoof from Tennessee Department of Transportation  
 >>>>>>>>>>>>>>>>>>>

I am forwarding you an issue that one of our Engineers is having with Virtis. Can you look into this?  
 Thank you,

>>> Bryan Liner 4/13/2011 2:20 PM >>>  
 I am trying to rate a continuous PCBB in Vitris. The brass engine works fine and I get good ratings. The Virtis Standard engine however will not analyze the exterior beams but will analyze the interior beam.

There are no warnings or error messages when I save the bridge.

Attached is the xml file for the bridge and the error message I get when trying to use the Virtis Standard engine, Terry said this might be one to send to Micheal Baker to find out what is going on.

FROM: Herman Lee DATE: 4/15/2011 12:47:47 PM Eastern Daylight Time  
 Attached G1 and G2 Virtis Std Engine input and output files.

FROM: Hasmukh Lathia DATE: 4/16/2011 10:59:18 AM Eastern Daylight Time  
 The error message is generated whenever Virtis Std Engine cannot find a solution for the neutral axis while calculating the moment capacity of the section based on a specified stress level of prestressing steel. The error in this particular run is generated because of MFYIR and MFYOR STRESS LEVELS are specified as 0.999 and their combination with Effective Slab Width of 6.25 ft. This error can be

Complete Issue Information

neglected as the ratings based on prestressing steel tension would not govern. See the following note printed on the output.

NOTE: SINCE MFYIR STRESS LEVEL OR MFYOR STRESS LEVEL IS ENTERED AS 0.999 RATINGS BASED ON PRESTRESSING STEEL TENSION WOULD NOT GOVERN. IF RATINGS ARE TO BE CHECKED BASED ON PRESTRESSING STEEL TENSION, APPROPRIATE MFYIR AND MFYOR STRESS LEVELS SHOULD BE ENTERED.

I made some input modifications to check this. On one run I changed the input value of Effective Stalb Width to 6.50 ft for the exterior girder. On a second run I let the MFYIR and MFYOR STRESS LEVELs to default to 0.8 and 0.9 as specified in the AASHTO Maintenance Manual. In both of the runs the error messages are not generated. The input and output files for these additional runs are attached.

ASS does not calculate the moment capacity of the prestressed beam at specified level of prestressing steel tension.

The error reported by Virtis Std Engine for this particular run can be ignored.

FROM: Has Mukh Lathia DATE: 4/19/2011 1:03:04 PM Eastern Daylight Time  
This is similar to incident 9985 reported earlier. While investigating incident 9985, there were some refinements added to the logic for the interation of finding a solution for neutral axis for the calculation of moment capacity at xFy. When a test version with these revisions was run for the exterior girder, Virtis Std Engine was able to find the solution for neutral axis and moment capacity at xFy. Also, all existing input files ran successfully. This fix will be included in Virtis Release 6.4 as it is too late to be included with Release 6.3.

|                                  |
|----------------------------------|
| Issue ID: 10764                  |
| Subject: BRASS LFR and 10.48.8.3 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Skow, Wayne             | 4/19/2011 12:24:14 PM |
| Modified By: hlee                     | 5/7/2011 12:40:05 PM  |
| Priority: High                        |                       |
| Category: Bug - BRASS                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:08:27 PM

HRS AASHTO

1900

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 4/19/2011 8:29:33 AM Eastern Daylight Time  
When BID3 (TrainingBridge3), girder G1, is rated with LFR in BRASS, it gives a low shear rating value near the first support. The location is at the 10% point near the 1st support which is 168 inches in. There are transverse stiffeners on the girder the first is which is at 65 inches. The second stiffener is at 207 inches. Therefore, the rating point is in the 2nd shear panel.

BRASS is treating the point as the first shear panel and limiting the allowable shear to  $C^*V_p$  (eq 10-119) in article 10.48.8.3. A higher value is allowed in the second panel.

The bridge is attached.

FROM: Brian Goodrich DATE: 4/25/2011 10:59:29 AM Mountain Daylight Time  
I confirmed the error resides in the BRASS engine. I will forward this issue to WYDOT.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 10774                                                      |
| Subject: Error performing prestress loss LRFR specification checking |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Lee, Herman             | 4/20/2011 3:35:40 PM |

4/19/2016 3:08:27 PM

HRS AASHTO

1901



Complete Issue Information

|                  |                     |
|------------------|---------------------|
| Modified By: xli | 9/8/2011 7:05:12 PM |
| Priority: High   |                     |
| Category: Bug    |                     |

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lee, Herman      | New       | High     | Unknown     |
|                  | Suspended |          | Enhancement |
| Kennelly, Krisha | Assigned  |          |             |
|                  | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/20/2011 11:36:16 AM Eastern Daylight Time  
 Submitted on behalf of Sally Doles (sdoles@lonco.com), Lonco, Inc.

Received Bridgeware e-mail:

=====

We are working on a U Beam rating and are running into a problem with the effective flange width value. We are rating this bridge as LRFR but when an effective flange width, based on AASHTO 4.6.2.6.1, of 216" is entered into the deck profile, Virtis comes up with the following error:

A fatal error encountered while processing article "5.7.3.2 - Flexural Resistance (Prestressed Concrete)"

Fatal error occurred while computing Prestress Losses  
 Error performing prestress loss LRFR specification checking!

If a value of 110.25" is used for the effective flange width based on LFD, (but still using LRFR rating) then Virtis runs without any error and provides a rating.

We are not exactly sure why this certain error occurs when the effective flange width is changed. I have attached the file for this bridge, currently the values in the file are at 110.25" for the effective flange width. Please let us know why Virtis is not accepting the LRFR value for effective flange width and/or why it is producing this error.

4/19/2016 3:08:27 PM

HRS AASHTO

1902

Complete Issue Information

Thank you,

Sally D. Doles, P.E.  
Project Engineer  
LONCO, INC.  
1700 Broadway, Suite 1512  
Denver, CO 80290

=====

FROM: Mark Mlynarski DATE: 4/25/2011 10:48:29 AM Eastern Daylight Time  
This appears to be an issue with the cross section coordinates being set improperly when the effective slab width exceeds the overall width of the section. (see attached file 'VI-10774-ReviewOfUBeamProperties.pdf' )

FROM: Mark Mlynarski DATE: 5/4/2011 1:38:22 PM Eastern Daylight Time  
Tested after fix to 'PSBeamUCrossSectionProperties.cs' see attached pdf

FROM: Srujana Thogaru DATE: 5/18/2011 3:00:36 PM Eastern Daylight Time  
Fixed for 6.4 Release

FROM: Srujana Thogaru DATE: 9/7/2011 9:40:32 AM Eastern Daylight Time  
Fixed for 6.3 service Pack

FROM: Xinmei Li DATE: 9/8/2011 2:55:38 PM Eastern Daylight Time  
Verified fxd for 6.3 service Pack.  
Entered 216" as effective flange width, bridge can be rated with LRFR with no errors.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 10776                                                  |
| Subject: New Function for Different Vehicles Placed Side BY Side |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Huang, George           | 4/21/2011 4:12:56 PM |
| Modified By: hlee                     | 5/16/2014 7:46:18 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:27 PM

HRS AASHTO

1903

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 4/21/2011 12:14:15 PM Eastern Daylight Time

In the load factor rating analysis of permit vehicle in California, the HS20 live load has to be placed in the adjacent lane for widely spaced girder, floor beam and truss bridge. The available capacity for permit vehicle is determined by subtracting the structure capacity with dead load and HS20 demands. Ratings of five permit vehicles are required for every bridge. Currently Virtis doesn't have such live load placement function. By talking to other States, I learned that Ohio State requires legal trucks placed next to permit vehicle in urban area for permit rating, and New York State requires HS20 loads placed next to the permit vehicle. Also in LRFR ratings, a train of legal vehicles and other vehicles are required to be placed side by side over 200 ft as stated in VI 9965. I think probably many States have the need to place different vehicles side by side in rating analysis. Please add this function in AASHTO LFD engine as well as LRFD engine.

FROM: Krisha Kennelly DATE: 10/19/2011 10:50:54 AM Eastern Daylight Time

Note that Vi 9965 is for Load Factor or Allowable Stress Rating, it is not for LRFR as stated above. (MBE 6B.7.2)

FROM: Herman Lee DATE: 10/20/2011 3:52:11 PM Eastern Daylight Time

Related to Incident 9593.

FROM: Herman Lee DATE: 5/16/2014 3:45:11 PM Eastern Daylight Time

Adjacent vehicle rating implemented for the 6.6 release.

|                                                      |
|------------------------------------------------------|
| Issue ID: 10777                                      |
| Subject: Analysis of Combined Axial Load and Bending |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Lee, Herman          |

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Huang, George | 4/21/2011 4:26:40 PM |
| Modified By: hlee           | 6/4/2012 8:15:02 PM  |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
| Mlynarski, Mark  |          |          |          |
| Kennelly, Krisha |          | Critical |          |
|                  | Resolved |          |          |
|                  |          | Urgent   |          |
|                  | Resubmit |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | 15354.xml                          |             |
|      | VI-10793-For 3 circular void P.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 4/21/2011 12:27:30 PM Eastern Daylight Time  
In California, many old steel bridges were strengthened with adding post-tension cables to the steel girders. In order to correctly rate the bridge, the equations for combined axial load and bending in 10.54.2 of Standard Specification may have to be used. However the current AASHTO LFR engine doesn't have this function. Please add this function in Virtis.

FROM: Herman Lee DATE: 6/4/2012 4:11:15 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
Caltrans has 200 of these structures affected by this enhancement.

4/19/2016 3:08:27 PM

HRS AASHTO

1905

Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 10793                             |
| Subject: Incorrect bv used in 5.8.3.3 at dv |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Pichura, Mike           | 4/22/2011 9:32:14 PM |
| Modified By: hlee                     | 6/30/2011 9:56:16 PM |
| Priority: Urgent                      |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/22/2011 5:32:49 PM Eastern Daylight Time  
Submitted on behalf of Mike Pichura (MPichura@mbakercorp.com), Michael Baker Jr., Inc.

The width of the G1 PS 3-void box beam is 48" and the total width of the voids is 34". The bv listed in 5.8.3.3 and the beam capacity outputs are 36". 6.1 and 6.3 Beta 1 have the same problem. Looks like there's a defect in retrieving the correct void diameters.

FROM: Mark Mlynarski DATE: 4/26/2011 11:00:17 AM Eastern Daylight Time  
For 3 circular void P/S cross sections, it does not appear that the value for D1 is being set properly. D2

Complete Issue Information

is being set, but the value for D1 is not being set (or is set to 0.0). I verified this by stopping in the debugger in PSBeamBoxCircVoidCrossSectionProperties . The SetValue routine appears to be passing a value for D1=0.0 and D2=12 (Should be D1=12, D2=10).

This ultimately leads to an incorrect calculation of bv from the method 'ComputeMinWebThk' in PSBeamBoxCircVoidCrossSectionProperties.

(see attached).

The setting of the properties for this time of beam (particularly D1 and D2 should be investigated. Mark

FROM: Krisha Kennelly DATE: 5/30/2011 8:34:58 AM Eastern Daylight Time  
 Fixed for 6.3 beta 3. Tester verify by running AASHTO LRFD engine and checking bv in art. 5.8.3.3. test for attached 3 void beam and a 2 void beam.

will also be provided as a patch to version 6.2

FROM: Bin Zhang DATE: 6/6/2011 5:18:09 PM Eastern Daylight Time  
 Tested it in VO62 and VO 63, the bv value is 14in(48-34=14 in) , verified!

FROM: Herman Lee DATE: 6/30/2011 5:48:51 PM Eastern Daylight Time  
 Posted Technical Note 19 to Virtis/Opis Technical Support website.

Issue ID: 10802  
 Subject: NSG - "analyze" not greyed out in option menu

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Ihnat, Joseph  
 Submitted By: Armbrecht, Tim 4/27/2011 4:00:06 PM  
 Modified By: xli 9/8/2011 7:17:50 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                    | Description |
|------|------------------------------------------------------------------------|-------------|
|      | NSG Test Truck.xml                                                     |             |
|      | FW_ Virtis 6.3 Beta 1 - NSG Analysis Fails to Run & Crashes Virtis.pdf |             |
|      | NSG Run Failure (3-sp. WPG)-63B1.xml                                   |             |
|      | NSG Run Failure (3-sp. WPG)-62.xml                                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 4/27/2011 12:01:15 PM Eastern Daylight Time  
From my staff (Litchfield):

When running a NSG analysis, the analyze button is grayed out if you select a member. But if you right click on the member the analyze option is not grayed out and will cause an error or crash the program.

FROM: Joseph Ihnat DATE: 4/28/2011 1:12:43 PM Eastern Daylight Time  
Changed folder to Support Center. Probably always been like that.

FROM: Joseph Ihnat DATE: 6/9/2011 7:44:12 AM Eastern Daylight Time  
Fixed for 6.4

FROM: Joseph Ihnat DATE: 8/24/2011 2:01:01 PM Eastern Daylight Time  
Fixed for 6.3.1

FROM: Xinmei Li DATE: 9/8/2011 3:05:42 PM Eastern Daylight Time  
Verified fixed for 6.3.1

|                                                     |
|-----------------------------------------------------|
| Issue ID: 10811                                     |
| Subject: NSG Analysis Fails to Run & Crashes Virtis |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Armbrecht, Tim          | 4/29/2011 12:58:07 PM |

Complete Issue Information

|                   |                      |
|-------------------|----------------------|
| Modified By: hlee | 6/13/2011 7:37:09 PM |
| Priority: High    |                      |
| Category: Unknown |                      |

History

| Primary Contact | Status             | Priority | Category           |
|-----------------|--------------------|----------|--------------------|
| Lee, Herman     | New                | High     | Unknown            |
| Goodrich, Brian | Assigned           |          |                    |
|                 | Information Needed |          |                    |
|                 | Assigned           |          |                    |
|                 | Resolved           |          | Bug<br>Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | U-02-060 (1N7).xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 4/29/2011 8:58:15 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT.

Below is the e-mail without embedded graphics. Please see attached PDF file for the e-mail with embedded graphics.

=====

RE: Files - NSG Run Failure (3-sp. WPG)-62.xml; NSG Run Failure (3-sp. WPG)-63B1.xml; NSG Test Truck.xml.

The referenced Virtis model fails to run & error messages are produced when attempting to analyze it for a Non-standard gauge truck load. The run information and error messages are displayed below. Also, after the first attempt, if any changes are made to the NSG truck load, a subsequent attempt to run it crashes Virtis.

The same thing happens when attempting to run under v. 6.2, including the crash after modifying the NSG truck load.



Complete Issue Information

Tim Souther, PE  
%IDOT Bridge Ratings Unit

=====

NSG analysis requires user to specify the path for which the vehicle travels on the superstructure (Superstructure window Vehicle Path tab). That's why Virtis complained "No paths defined!" in the error message dialog. We will investigate the crash after modifying the NSG truck load.

FROM: Herman Lee DATE: 6/6/2011 10:51:17 AM Eastern Daylight Time  
The crash is not reproducible all the time with the same steps.

FROM: Herman Lee DATE: 6/10/2011 1:48:42 PM Eastern Daylight Time  
This issue is present in previous releases. Changed Folder to /Support Center/Virtis.

FROM: Tim Ambrecht DATE: 6/13/2011 10:45:13 AM Eastern Daylight Time  
Herman, this seems to work now, though Tim Souther notes that it took nearly 30 minutes to run. I'm OK with closing this issue.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 10826                                                           |
| Subject: Zero Ratings @ H/2 POI with MassDOT Standard ASD Rating Vehicles |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Cruz, Michael           | 5/5/2011 1:59:49 PM  |
| Modified By: bgoodrich                | 6/16/2011 7:11:48 PM |
| Priority: High                        |                      |
| Category: Bug - BRASS                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Michael Cruz DATE: 5/5/2011 10:27:29 AM Eastern Daylight Time

In November, 2010 we successfully rated (without any problems) a simple span, prestressed concrete stringer/girder bridge. We recently received MassDOT comments that our "H/2" POI values provided in our report and Virtis output do not match those shown when our Virtis file is re-run. I re-ran our file and found that this was now true, and not only do our "H/2" values show a ZERO rating with the MassDOT ASD vehicles, but that our governing value ratings show ZERO as well. All other POI's ("Harp Point" and ".45L") return the values we provided back in November, 2010. MassDOT Standard LFD truck analysis returns the same ratings as before for all POI including "H/2" and the governing values, so the problem is limited to the MassDOT ASD trucks for our "H/2" POI. I have gone through the file to find that any POI up to about 30+ ft into the beam will return ratings of ZERO. I have also determined that despite having our shear reinforcement input the exact same way as we did before, any runs performed now do not include "#428 Stirrup-Group" or "#497 Stirrup-Schedule" in the ASD Output. I believe the lack of shear reinforcing in the output is the reason we get ZERO ratings up until a certain distance into the beam; however, we have this information input now just as we did before when it did run just fine. To note, another similar bridge was analyzed around December, a simple span prestressed I-beam, and when I revisited that file, the same problem was found, despite previously submitting working rating reports. Any chance you have encountered this problem before? Thank you

FROM: Brian Goodrich DATE: 5/6/2011 10:44:24 AM Mountain Daylight Time

Please attach the MassDOT ASD vehicles XML file using the export utility in the Library Explorer.

FROM: Brian Goodrich DATE: 5/9/2011 10:12:22 AM Mountain Daylight Time

E-mail from Michael Cruz:

Please note that the MassDOT ASD vehicles is just a grouping of the AASHTO Standard H20, HS20, Type 3 and Type 3S2 trucks. We have attached an xml file containing these vehicles.

Michael A. Cruz

Senior Structural Engineer

FROM: Brian Goodrich DATE: 5/9/2011 10:42:48 AM Mountain Daylight Time

For the 6.1 release, the Control Options tab was added to the Member Alternative Description window. This tab contains the point of interest control (generation) options for the various analysis methods. These POI control options had been part of the BRASS engine properties in earlier versions but were removed from the engine properties for the 6.1 release. The export now picks up the POI control option from Virtis rather than the engine properties now. However, the prestressed concrete POI control options for ASD in Virtis are not exposed to the user. The reason for this is the rating specification only specifies an LFD rating for prestressed concrete. BRASS does not perform an ASD rating either. If a BRASS ASD analysis is selected, the BRASS export will generate the data file and run it with LFD anyway.

I recommend addressing this issue by obtaining the POI control options for LFD when ASD is selected only for prestressed concrete. The workaround is to rate the prestressed concrete bridges with LFD.

FROM: Brian Goodrich DATE: 5/18/2011 8:05:12 AM Mountain Daylight Time

This issue has been assigned to BRASS Incident 87.

FROM: Brian Goodrich DATE: 6/16/2011 1:11:04 PM Mountain Daylight Time

4/19/2016 3:08:28 PM

HRS AASHTO

1911

Complete Issue Information

I revised the ASD POI generation function to call the corresponding LFD function but only for prestressed concrete. Fixed for version 6.3.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 10835                                                    |
| Subject: VIRTIS 6.2 Effective Deck Width by Button for AASHTO Std. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Lee, Herman             | 5/9/2011 1:32:05 PM  |
| Modified By: mkolis                   | 8/29/2012 7:37:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Bug      |
|                 |          | Critical |          |
|                 |          | High     |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 5/9/2011 9:33:57 AM Eastern Daylight Time  
 Submitted on behalf of David Wolfe (DWolfe@moffatnichol.com), Moffatt & Nichol.

Received Bridgeware e-mail:

=====

Bridgeware – The calculation of Effective Deck Width at an exterior girder for the AASHTO Std. seems to have changed from VIRTIS 6.1 to 6.2. For the first default bridge "TrainingBridge1", if the Compute from Typical Section button is hit in 6.1 the Std. width for 9.5" deck structural thickness, the effective width is 108" (4'-3" overhang + 9.5"x6). In VIRTIS 6.2 the same button calculation is 107.75".

4/19/2016 3:08:29 PM

HRS AASHTO

1912

Complete Issue Information

Why would this change? The deviation in the 6.2 value is small, but will this be true in all cases?

It is noted that LRFD the 6.1 button gives 113.5" (108" +22"flange/4) and the 6.2 button gives the full tributary width of 129".

=====

The LRFD effective flange width used to be dependent on the slab thickness but with the 2008 interims of the AASHTO LRFD spec, the effective flange width is now just 1/2 the girder spacing. We moved to the 2008 interims for the 6.2 release.

For the Std effective flange width, looks like the computation also deducted half the web thickness.

May, please confirm your fix for Incident 9575.

FROM: Xinmei Li DATE: 6/27/2011 11:21:56 AM Eastern Daylight Time  
 The Std. width is a bug due to fix for 9575. It is resolved for 6.4.  
 The Lrfd width change is due to a code change made by Krishna on 4/3/2010 for the 2008 Interims AASHTO LRFD 4.6.2.6.1.

FROM: Matt Kolis DATE: 8/29/2012 3:37:00 PM Eastern Daylight Time  
 In VO 64, Beta 4, verified Effective Flange Width = 108".

Issue ID: 10869  
 Subject: Wrong controlling rating factor

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Skow, Wayne 5/17/2011 2:14:33 PM  
 Modified By: hlee 10/15/2011 10:37:49 PM  
 Priority: High  
 Category: Third Party

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | New      | High     | Unknown     |
|                 | Assigned |          | Third Party |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BWS.docx            |             |
|      | 10876.docx          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 5/17/2011 10:26:36 AM Eastern Daylight Time  
BRASS and AASHTO are producing different controlling rating factors for the attached bridge (structure def 1, G1) for the Lane/operating load case. It appears that BRASS is ignoring the shear RF at 102 of 1.3657 which is lower than it's reported controlling RF of 1.995 at 205.

Also, BRASS is reporting that interaction is not considered because the girder is hybrid at 102. This does not appear to be the case, however. Both flanges and the web are 36ksi at the 20% point of span 1.

|                                                 |
|-------------------------------------------------|
| Issue ID: 10876                                 |
| Subject: Enhancement request for System Factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Kemna, Aaron            | 5/17/2011 7:18:59 PM |
| Modified By: sthogaru                 | 7/5/2012 3:25:06 PM  |
| Priority: High                        |                      |

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Gao, Qiang      | Assigned           | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Not Reproducible   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | 29392.xml                                     |             |
|      | Insufficient Memory to Perform Spec Check.pdf |             |
|      | LRFR.png                                      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 5/17/2011 3:30:29 PM Eastern Daylight Time

I think the user needs to be able to manually override the system factor value, instead of just selecting cases from a pull-down. For instance, the user may consider three girder bridges to be non-redundant and wants to use a system factor less than 1.0. In order to do that, the user must select an option from the pull-down that will give them the correct value. The rating may be correct, but this can cause confusion an unnecessary additional work by users.

FROM: Xinmei Li DATE: 3/30/2012 2:21:42 PM Eastern Daylight Time

Resolved for next 6.4 Alpha build.

FROM: Matt Kolis DATE: 5/2/2012 11:17:27 AM Eastern Daylight Time

When using the Report Tool to create the BWS Report, consider adding a line to say "TRUE or FALSE" (in addition to a value) as to whether or not the System factor override box has been checked. See attached.

FROM: Srujana Thogaru DATE: 5/21/2012 5:50:39 PM Eastern Daylight Time

Report tool updated for 6.4 Beta 1

FROM: Aaron Kemna DATE: 6/28/2012 4:47:54 PM Eastern Daylight Time

Override is working properly for analysis (Virtis 6.4 Beta 2). I have a suggestion. When override button

4/19/2016 3:08:29 PM

HRS AASHTO

1915

Complete Issue Information

is not checked, can the value be shown greyed out equivalent to the selection. This would make it clear to the engineer what value the pull-down selection will implement. Plus, I can enter an override, uncheck the box, select a different choice and the old override value remains. I think this might mislead users. If you implement my suggestion, the value shown would always be used in the analysis.

|                                                    |
|----------------------------------------------------|
| Issue ID: 10899                                    |
| Subject: Insufficient Memory to Perform Spec Check |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Gao, Qiang           |                      |
| Submitted By: Pichura, Mike           | 5/22/2011 4:30:18 PM |
| Modified By: hlee                     | 7/5/2011 3:34:12 PM  |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/22/2011 12:30:41 PM Eastern Daylight Time  
Submitted on behalf of Mike Pichura, Michael Baker Jr., Inc.

Below is the e-mail without embedded graphics. Attached PDF file is the e-mail with embedded graphics.

=====

Herman,

Attached is the bridge that has the memory issue when doing the spec checks.

Just to remind you:

4/19/2016 3:08:30 PM

HRS AASHTO

1916

Complete Issue Information

- G1-G3 run without issue.
- G4-G5 produce the following error.

The only difference between the girders is the stiffener spacing. I deleted the stiffeners and tried running the G4 as you suggested. I also tried copying G3 to G4. G4 still produced the same error message.

Would you be able to find the cause or send an incident report?

Thanks for your help.

=====

Qiang, please investigate why the copied G3 member alternative in the G4 member produces the same error message. Thanks.

FROM: Qiang Gao DATE: 5/23/2011 2:13:19 PM Eastern Daylight Time  
I cannot reproduce the problem by running the LRFR analysis on virtis 6.2, virtis 6.3 beta 2.1 and my current development version. There is no any error message for both G3 and G4 members.

Mike, what size is your physical memory?

To determine whether it is due to "insufficient memory", please do the following test on your machine:

1. close other programs;
2. start Virtis; if it is running, restart it;
3. run analysis on G4; see whether it can run further than before;
4. if it remains the same as before; copy the G3 alternative to G4, and then save the bridge model.
5. resart (close it and start it again) virtis;
6. run analysis on the copied G3;

Thanks!

FROM: Bin Zhang DATE: 5/31/2011 1:15:35 PM Eastern Daylight Time  
I tested this bridge using LRFR template in beta 3, no error message has been detected. I attached the analysis progress in the document.  
Testing environment: WinXP OS with 2G RAM.

FROM: Herman Lee DATE: 6/10/2011 7:56:58 AM Eastern Daylight Time  
Information Needed E-mail sent on 6/10/11.

FROM: Herman Lee DATE: 7/5/2011 10:24:28 AM Eastern Daylight Time  
Information Needed E-mail sent on 7/5/11.

FROM: Herman Lee DATE: 7/5/2011 11:27:58 AM Eastern Daylight Time  
E-mail from Mike Pichura on 7/5/2011:

4/19/2016 3:08:30 PM

HRS AASHTO

1917



Complete Issue Information

=====  
 This bridge was reinputted and now runs properly.  
 =====

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 10912                                              |
| Subject: Concrete Tee Exterior Beam Distribution Factor is 0 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Doerr, Gary             | 5/25/2011 1:20:13 PM |
| Modified By: hlee                     | 5/25/2011 5:55:48 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0049071212.xml      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Gary Doerr DATE: 5/25/2011 9:25:03 AM Eastern Daylight Time  
 When trying to load rate this bridge the exterior beam distribution factor (LFD) comes up as 0. Other than entering the number by hand, why is this doing this? I've attached the file for your use. Gary

FROM: Herman Lee DATE: 5/25/2011 12:41:36 PM Eastern Daylight Time  
 Using 2' distance from edge of lane to wheel, the first wheel from the left edge of the lane is located to the right of G2. That's why the computed simple beam factors for G1 are zeros.

## Complete Issue Information

Issue ID: 10921

Subject: Missing Sx and Sy for truss member with eccentricity

Folder: /Virtis/Support Center/Virtis

Primary Contact: Zhang, Bin

Submitted By: Huang, George

5/31/2011 9:27:47 PM

Modified By: ghuang

6/26/2012 8:53:52 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Zhang, Bin      | Assigned | High     | Unknown  |
|                 | Resolved |          | Support  |
|                 | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Verified |          |          |

4/19/2016 3:08:30 PM

HRS AASHTO

1919

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 290049test.docx     |             |
|      | 29 0049TEST.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/31/2011 5:28:32 PM Eastern Daylight Time  
 Submitted on behalf of George Huang, Caltrans.

Part of the received e-mail on 5/31:

=====  
 For members with eccentricity, if Sx and Sy are not given, ratings for these members are zero listed in "Rating Results Report" (see the attached Rating Results Report.XML). However if you use "view analysis report", these zero ratings are simply ignored. My suggestion is giving user an ERROR MESSAGE, if Sx and Sy are missing for member with eccentricity.  
 =====

FROM: Bin Zhang DATE: 7/7/2011 10:49:21 AM Eastern Daylight Time  
 Agreed! A error message should pop out if section modulus sx or sy is missing for for member with eccentricity.

FROM: Bin Zhang DATE: 7/21/2011 1:46:34 PM Eastern Daylight Time  
 Fixed for VO6.4, an error message will pop out saying "Section Modulus (Sxx, Syy) must be defined with non zero values for truss members with eccentricity!"

FROM: Xinmei Li DATE: 9/8/2011 3:18:24 PM Eastern Daylight Time  
 I ran the attached bridge Truss1 with 6.3.1, not able to see any messages pop out other than the tolerance error.

FROM: Xinmei Li DATE: 9/9/2011 3:36:08 PM Eastern Daylight Time  
 The tolerance errors are caused by the 0 length haunch ranges in the stringers.  
 Retested the attached bridge Truss1, section3 and section4, removed Sx and Sy, the above error message pops up while doing AASHTO LFD rating..  
 Verified fixed for 6.3 service pack 1.

FROM: George Huang DATE: 9/15/2011 2:28:38 PM Eastern Daylight Time  
 The error message provided if Sx and Sy are missing for member with eccentricity. The case is closed.

FROM: George Huang DATE: 6/26/2012 4:53:52 PM Eastern Daylight Time

4/19/2016 3:08:30 PM

HRS AASHTO

1920

Complete Issue Information

Verified in Virtis 6.4 beta build 2.

|                                          |
|------------------------------------------|
| Issue ID: 10922                          |
| Subject: Stringer LLDF calculation issue |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Huang, George           | 5/31/2011 10:13:15 PM |
| Modified By: hlee                     | 6/11/2011 8:30:00 PM  |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Li, Xinmei      | Assigned | High     | Unknown  |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/31/2011 6:14:07 PM Eastern Daylight Time  
 Submitted on behalf of George Huang, Caltrans.

Part of the received e-mail on 5/31:

=====  
 The calculation for live load distribution factors of stringers may not be right. As shown in the file "290049test.docx", the LLDF for exterior stringers should be smaller than those for interior stringers. However the calculation from Virtis shows the opposite results.

Complete Issue Information

=====

FROM: Xinmei Li DATE: 6/9/2011 10:35:56 AM Eastern Daylight Time  
 For Interior stringer LLDF is calculated according to AASHTO Standard Specifications Article 3.23.2.2, table 3.23.1. Since there is one design traffic lane and  $S < 10'$ , LLDF is  $S/7.0 = 2.67/7 = 0.38$   
 Exterior stringer LLDF is calculated according to article 3.23.2.3.1.5, deck is supported by 9 stringers, more than 4,  $S/5.5 = 2.67/5 = 0.48545$ .

FROM: George Huang DATE: 6/10/2011 5:13:56 PM Eastern Daylight Time  
 I accept the explanation based on AASHTO Standard Specification, although the calculated LLDFs are unreasonable, especially for rating analysis.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 10930                                          |
| Subject: Advanced Distribution Factor Method in RC Slabs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jackson, Amanda         | 6/3/2011 1:54:05 PM  |
| Modified By: ajackson                 | 6/24/2011 1:42:33 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SLAB_ERROR.XML      |             |

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amanda Jackson DATE: 6/3/2011 10:04:00 AM Eastern Daylight Time  
 Whenever I use the Advanced Distribution Factor Method on slab bridges, I get the following error message from the Virtis Std Engine:

Internal Errors (1) - Invalid index  
 08:01:16 AM - Line 2473 in source file .\DoMemberResults.cpp.

Structural Analysis Errors (2410) - Input or computational error encountered.  
 08:01:16 AM - Line 2473 in source file .\DoMemberResults.cpp.

I've been entering slabs with multiple span lengths that aren't equal as tee beams to get around this, but I should be able to enter a slab using the Advanced Distribution Factor Method.

FROM: Herman Lee DATE: 6/3/2011 2:14:07 PM Eastern Daylight Time  
 Since Multi-Lane is selected for Live Load Lanes in the Superstructure Definition window, multi-lane advanced distribution factors are used. If you change Live Load Lanes to Single Lane, Virtis Std Engine will run to completion.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 10931                                       |
| Subject: Truss Builtup Top/Bottom Flange Not Optional |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 6/3/2011 6:05:26 PM  |
| Modified By: hlee                     | 6/16/2011 5:39:56 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Complete Issue Information

|             |                    |      |             |
|-------------|--------------------|------|-------------|
| Li, Xinmei  | Assigned           | High | Unknown     |
|             | Resolved           |      |             |
| Duray, Jim  | New                | High | Unknown     |
|             | Information Needed |      |             |
| Skow, Wayne | Assigned           |      |             |
|             | Information Needed |      |             |
| Duray, Jim  | Suspended          |      | Enhancement |
|             |                    |      | Maintenance |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/3/2011 2:06:57 PM Eastern Daylight Time  
 Submitted on behalf of Tim Armbrecht, IL DOT:

Below is the e-mail without embedded graphics. Attached PDF file is the e-mail with embedded graphics.

=====  
 From: Souther, Timothy E  
 Sent: Thursday, June 02, 2011 1:54 PM  
 To: Armbrecht, Tim A  
 Subject: Virtis 6.3 Beta 2.1 - Truss Builtup Top/Bottom Flange Not Optional

RE: CounterInCompression(0310001)6.2.xml in O:\Ratings\Unprotected\Virtis Documentation\Virtis 6.3 Beta Review\Beta 2 Exports.

This is a problem that has existed since the Virtis Truss module has been available. Many times in practice, Builtup type cross-sections do not have top or bottom flanges. This seems to be recognized in the Virtis Truss Command Language Manual\* as illustrated here...

\*The Virtis Truss Command Language Manual from v.6.2 is used here since it apparently was not included with v.6.3 Beta 2.1.

Complete Issue Information

However, when coding such cross-sections, if a top and bottom flange plate is not specified verification errors are produced and the truss analysis cannot be performed. In the Virtis Truss Command Language Manual descriptions for Builtup Section/TopFlangePlate & BottomFlangePlate, it is stated in point 4, "This sub-command is optional only if web plate and top angles exist." The issue may be tested by modifying any Builtup Section entry in the referenced Virtis model.

The program should be modified so that angles only (w/web plate or lacing) can be entered without having to do a Top/BottomFlangePlate entry.

Note: The current workaround is to enter very small values for plate width & thickness.

The referenced export file is from v. 6.2 but the issue is present in 6.3 Beta 2.1.

Tim Souther, PE  
%IDOT Bridge Ratings Unit

=====

FROM: Xinmei Li DATE: 6/16/2011 11:24:11 AM Eastern Daylight Time  
TopFlangePlate and BottomFlangePlate commands are optional only if web plate and top/bottom angles exist. This line can be found in Virtis Truss Command Language Manual pag26 and page27 (see attached screen shots).  
In attached bridge, the builtup section doesn't have web plate defined, so the TopFlangePlate and BottomFlangePlate commands are not optional. If you add webplate command and remove Lacing web, you can remove TopFlangePlate and BottomFlangePlate commands without getting any verification errors.

Issue ID: 10933  
Subject: Live Load Scale Factor not applied in rating

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Kemna, Aaron 6/7/2011 1:27:45 PM  
Modified By: hlee 6/5/2012 12:08:33 PM  
Priority: High  
Category: Maintenance

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10945.docx          |             |
|      | BWS.docx            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 6/7/2011 9:45:46 AM Eastern Daylight Time

Scale factor is not being applied to the ratings. Factor appears to be applied correctly to the analysis charts and live load actions. Log file echoes the factor as well. AASHTO LFD. I did not check LRFR.

FROM: Jim Duray DATE: 6/7/2011 10:57:18 AM Eastern Daylight Time

I ran PCITB1 with and wo a scale factor. The ratings differed as expected. What do you mean when you say "Scale factor is not being applied to the ratings"? The factor is applied to the LL. That carries through to the ratings.

FROM: Aaron Kemna DATE: 6/7/2011 11:54:40 AM Eastern Daylight Time

After further investigation, the rating factors are Ok, but the tonnage calculated is incorrect. For some of my trucks the scale factor is ignored. For others, the calculation is incorrect. I am looking at the rating results summary. I found the same issue in the speck check, too.

FROM: Aaron Kemna DATE: 6/14/2011 10:10:24 AM Eastern Daylight Time

I found the same or similar issues with the Virtis LFD engine. I did not check AASHTO LRFR. The tonnage calculated should be the RF multiplied by the tonnage of the truck. What may be happening is that AASHTO is increasing the tonnage of the truck by the scale factor and then multiplying it by the rating factor. That's not the correct use of the scale factor and does not match Brass. The scale factor should allow you to get rating levels that are something different than Inventory or Operating. This needs to be fixed in order for MoDOT to use the AASHTO engines.

FROM: Jim Duray DATE: 6/14/2011 1:12:28 PM Eastern Daylight Time

Please refer to the Help for the Analysis Settings window. The scale factor is used to modify the weight of the axle loads and lane load. The example given in the Help is an HS-20 vehicle can be scaled by 25% to make it an HS-25 vehicle. The resulting RF multiplied by the scaled weight of the vehicle is the rating in tons.

Using Virtis LFR - I copied the HS-20 vehicle and changed the loads (axle and lane) in the vehicle definition by multiplying by 2.0 and ran it - run 1. I then ran the HS-20 vehicle scaled by a factor of 2.0 (on the Analysis Settings window) - run 2. The rating factors and rating tonnage match as they should since it the the same vehicle.

We did the same using BRASS. According to BRASS run 1 has twice the rating tonnage as run 1. The same vehicle cannot have different rating tonnage. Scaling the vehicle doesn't change the capacity of the bridge.

For what trucks is the scale factor ignored?

4/19/2016 3:08:31 PM

HRS AASHTO

1926

Complete Issue Information

FROM: Jim Duray DATE: 6/14/2011 2:30:44 PM Eastern Daylight Time

FROM: Aaron Kemna DATE: 6/14/2011 4:22:05 PM Eastern Daylight Time  
Sorry, we have been using the BRASS scale factor for years to modify the operating rating to give us a posting tonnage. Since the report says Inventory or Operating, it makes sense that the tonnage would not change due to the scale factor. Personally, I think this makes the scale factor rather useless. I would think the HS25 case would be the only reason for this, and it's easier and less confusing to create an HS25 truck. We have a couple of trucks where we set the posting value to 86% of the Operating value. The scale factor is set to  $1/0.86 = 1.1628$ . BRASS, then gives us the correct rating factor and posting tonnage. I cannot think of a workaround that we can use for the AASHTO engines.

FROM: Tim Armbrecht DATE: 6/15/2011 9:39:56 AM Eastern Daylight Time  
I've had a chance to review this incident, and if the purpose of the scaling factor is as Jim describes, then it sounds like it is working properly. The tonnage for a HS-20 truck or HS-25 truck shouldn't change, because the capacity remains the same in both cases. I can see where the scaling factor (as Jim describes) would be useful to HS-25 states because a HS-20 (or HS-25) truck is hard to model, with its variable axle spacing, lane load and otherwise tricky application to the structure.

That being said, I think MoDOT's need is very important and shared by the load rating community. I can think of at least two other states (I believe NYSDOT is one of them) that use a posting level somewhere between Inventory and Operating, and IDOT is considering going that way in certain situations. I suspect that other states are thinking similarly. Therefore, I would ask Jim to change this to an enhancement, and develop the enhancement after July 1 for consideration by the TF ASAP, perhaps the meeting after the UG meeting. IDOT will take the lead in funding it.

My guess is that BRASS was thinking differently than how Jim describes, and I would suggest asking Brian G. for clarification?

Tim

FROM: Aaron Kemna DATE: 6/17/2011 9:12:31 AM Eastern Daylight Time  
Agree with Tim.

FROM: George Colgrove DATE: 6/28/2011 7:08:29 AM Eastern Daylight Time  
As per Tim Armbrecht and Aaron Kemna, this has been recategorized as an enhancement. I have set the status as suspended.

Issue ID: 10945  
Subject: Condition Factor Enhancement

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Silvis, Bryan 6/8/2011 5:22:06 PM  
Modified By: bsilvis 10/4/2012 5:25:19 PM  
Priority: High  
Category: Enhancement

4/19/2016 3:08:32 PM

HRS AASHTO

1927

Complete Issue Information

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Resolved |          |          |
|                 |          |          | Support  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Assigned |          |          |
|                 | On Hold  |          |          |
|                 | Assigned |          |          |
|                 |          |          | Unknown  |
|                 |          |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | BARS Truss Counter Diag Results (0310001).pdf |             |
|      | vi 10963 span 1 n truss .pdf                  |             |
|      | CounterInCompression (0310001)6.2.xml         |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:08:32 PM

HRS AASHTO

1928

Complete Issue Information

FROM: Krisha Kennelly DATE: 6/8/2011 1:22:41 PM Eastern Daylight Time  
Submitted on behalf of Bryan Silvis via email:

C6A.4.2.3 of the MBE states that the condition factor may be increased by 0.05 if section properties are obtained by actual field measurement of losses rather than by an estimated percentage of losses, but cannot exceed 1. The values in Table 6A.4.2.3-1 are hard-coded in Virtis based on the condition factor. Adding override ability or a check box would allow states the ability to apply the commentary. Due to the position in the load rating equation, the increase in rating would be greater than 5 percent.

FROM: Xinmei Li DATE: 3/30/2012 2:23:56 PM Eastern Daylight Time  
Resolved for next 6.4 Alpha build.

FROM: Matt Kolis DATE: 5/2/2012 11:14:32 AM Eastern Daylight Time  
When using the Report Tool to create the BWS Report, consider adding a line to say "TRUE or FALSE" as to whether or not the Field measured section properties box is checked. See attached.

Also, the drop-down box for Floorbeam and Stringer Member Definition: Factor Tabs are out of order. The order appears as: Fair, Good / Satisfactory, Poor. The order should be in descending order to match Steel, P/S, and RC alternatives: Good / Satisfactory, Fair, Poor.

FROM: Herman Lee DATE: 5/2/2012 1:16:24 PM Eastern Daylight Time  
May, please assign to Srujana for the Report Tool after you are done.

FROM: Xinmei Li DATE: 5/7/2012 10:41:37 AM Eastern Daylight Time  
The drop-down box for Floorbeam and Stringer Member Definition is resolved. Please test truss floor beam factor tab, too.

FROM: Srujana Thogaru DATE: 5/21/2012 5:51:50 PM Eastern Daylight Time  
Report tool updated for 6.4 Beta 1

Issue ID: 10963  
Subject: counter controls in compression

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Duray, Jim  
Submitted By: Armbrecht, Tim 6/10/2011 2:37:20 PM  
Modified By: plitchfield 11/15/2013 12:54:20 AM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | TRUSS SCHEMATIC.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 6/10/2011 10:38:55 AM Eastern Daylight Time

Please refer to incident 10860 for the XML file. For this structure, it appears that the counter controls in axial compression, which is a theoretical impossibility. Counters should not be in compression.

FROM: Tim Armbrecht DATE: 6/10/2011 10:56:11 AM Eastern Daylight Time

More info from Tim S.:

The operating rating for the subject truss is controlled by member L3U4, a counter, with the limit state being Axial Compression. By definition, a counter should never be in compression.

The referenced export file is from v. 6.2 but the issue is still present in 6.3 Beta 2.1.

I (Armbrecht) went ahead and attached the file he was using. Tim S. suspects that this issue was present in 6.2, so I went ahead and changed to support center.

FROM: Jim Duray DATE: 6/10/2011 11:24:37 AM Eastern Daylight Time

I don't see any counters in compression. See attached file - vi 10963 span 1 n truss .pdf.

None of the counters are in compression for DL + LL. Counters may not be in compression for DL or DL + LL. However, the LL effect may be compression as long as the sum of DL + LL does not result in tension.

FROM: Jim Duray DATE: 6/10/2011 4:09:08 PM Eastern Daylight Time

The LL causes compression in the counter but it is less than the tension in the counter due to DL. In other words the LL is reducing the tension in the counter caused by just the DL. So the rating is using the compression capacity in the rating equation. It therefore is reported as AXIAL-COMPRESSION.

$RF = (\text{Cap (compression)} - 1.0 * DL) / (\text{Imp} * DF * 2.171 * LL)$

$RF = (-39.71 - (1.0 * 30.02)) / (1.2615 * 0.7559 * 2.171 * -18.23) = 1.848$

FROM: Tim Armbrecht DATE: 6/13/2011 3:33:37 PM Eastern Daylight Time

Jim, I think we may be getting to the crux of the matter. We do not believe the counter member can have compressive capacity (-39.71) because it is a counter that is not designed to carry compression. We think that the capacity should be zero, not -39.71. The other issue is the fact that we do not believe

4/19/2016 3:08:32 PM

HRS AASHTO

1930

## Complete Issue Information

a counter should control (unless it is severely deteriorated), and it certainly should not control in compression, as the results are telling Tim S. for member U3L4 for the Operating Limit State ("Axial-compression").

I realize this isn't going to be resolved this week, so I'm OK with moving this to support and discussing further with the TF and TAG. Please include in future TF meeting agenda. Thanks.

FROM: George Colgrove DATE: 6/14/2011 7:09:53 AM Eastern Daylight Time

I tend to agree with Tim, but how do we rate this member? Looking at Jim's equation, if we have zero for capacity, the resulting rating will be even lower than 1.848. Then what do we call the controlling actions? If the member is in tension and the live load reduces that tension as Jim suggests, then the resulting reporting should still be AXIAL-TENSION – compression ratings in a counter should never be calculated as suggested by Tim. If the compressive force or "relief" zero's out the tension by either matching or exceeding the DL tension, then the rating should not be calculated for the member (i.e. a rating of 99) Otherwise, if there is a calculated net tension, then a tension rating should be calculated.

FROM: Tim Armbrecht DATE: 6/14/2011 9:11:33 AM Eastern Daylight Time

It shouldn't rate in compression - somehow this member needs to disappear in compression. I think it needs a little more thought which is why I think it needs to be researched more. Here are some more thoughts from Tim S. and I have also attached the file he references:

I've attached a copy of some of the AASHTO BARS output for the subject truss. (This output is for ASR but the principle is of course the same as for LFR.)

Of note, in AASHTO BARS compressive live load force is always taken as zero for the main diagonal since, in a countered panel, as the compressive force increases it would cause the rating factor to rise until it equals the dead load tension. At that point the diagonal, is considered ineffective (buckled) and the counter diagonal, by definition, takes the load in tension. Therefore, since only live load tension can cause a reduction in the rating factor for these diagonals, it is unnecessary and misleading to consider compressive capacity.

The fact that the Virtis Truss analysis results in different members controlling the inventory and operating ratings is further indication of a likely problem. In the AASHTO BARS analysis the member U1L1 controls the operating rating as it does for both the AASHTO BARS and Virtis Truss inventory ratings. This is the expected outcome. Though possible, it's not usual for a truss inventory and operating ratings to be controlled by different members.

Tim Souther, PE  
%IDOT Bridge Ratings Unit

FROM: Jim Duray DATE: 6/14/2011 2:33:01 PM Eastern Daylight Time

I suggest we do not rate the counter for LL compression. Based on the attached file it seems that is what BARS does. For the structural analysis the member is essentially removed from the model for the determination of axial force when the DL + LL results in compression.

FROM: Herman Lee DATE: 8/8/2011 8:51:14 AM Eastern Daylight Time

Related to Incident 11040. Use the bridge attached in 11040 for testing.

FROM: Jim Duray DATE: 8/9/2011 3:15:59 PM Eastern Daylight Time

Revised to not compute a compression capacity for counters and to not compute a rating factor for

4/19/2016 3:08:32 PM

HRS AASHTO

1931

Complete Issue Information

counters subjected to LL compression < DL tension. The analysis still allows for LL compression < DL tension so the total force in the counter is tension and still generates the load cases to include DL + LL.

FROM: Bin Zhang DATE: 8/10/2011 2:08:41 PM Eastern Daylight Time  
verified in vo63 with today's dll updates, now the program does not compute a compression capacity for counters and does not compute a rating factor for counters subjected to LL compression < DL tension.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 10967                                                         |
| Subject: Schematic shows left side of Truss only for Symmetrical Option |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Jones, Daniel           | 6/10/2011 4:10:06 PM |
| Modified By: hlee                     | 6/10/2011 5:47:50 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |
|                 | Closed |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 6/10/2011 12:16:52 PM Eastern Daylight Time  
The truss schematic only shows the left side of the truss until you go and open the truss input file. Once you hit OK or APPLY the entire schematic can be viewed. I have attached a model as an example.

Complete Issue Information

Thanks,  
Daniel

FROM: Jim Duray DATE: 6/10/2011 12:54:02 PM Eastern Daylight Time  
I changed this to a Support Center issue since I believe it has been this way for several releases. Actually, this is the intended behavior so I also changing the Category to Supoprt and the Status to Closed. The left half of the truss is defined in the command language so the schematic only draws that half until the truss is Verified. When the truss is verified (or analyzed) the symmetric half is generated. After that, the schematic draws the entire truss. If it is desired that the symmetric half be generated when drawing the schematic the category forthis incident should be change to Enhancement.

Issue ID: 10976  
Subject: Specify impact factor (percentage) for overweight permit analysis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Armbrecht, Tim 6/13/2011 7:38:08 PM  
Modified By: jduray 5/31/2012 1:21:46 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | Shear Calcs-SpecChk AASHTO (0380023).pdf  |             |
|      | RCT-cont_d_calc_prob-VI10986(0380023).xml |             |
|      | RCT-Shear At Support (0380023)-63B1.xml   |             |
|      | Shear Calcs-SpecChk BRASS (0380023).pdf   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/13/2011 3:38:45 PM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT. (Ref Incident 10820)

The impact factor calculated from the code can be scaled, but can't not be set to a specific percentage (10% of reduced speed restrictions). Many states have a "crawl" speed reduction (I = 0% - 10%) that they will want to apply. This option needs to be available for overweight permit analysis.

The impact specified in the Advanced Vehicle Properties window is a factor by which the standard impact factor is to be multiplied to obtain both live load and impact. The only way for using a specific impact (percentage) in the analysis is to select the constant impact override in the Member Alternative Impact window. This requires user to modify the bridge, which is a burden for overweight permit analysis.

FROM: Jim Duray DATE: 5/31/2012 9:15:42 AM Eastern Daylight Time  
This can be accomplished using General Preferences in 6.4. Changing status to Resolved.

|                                                   |
|---------------------------------------------------|
| Issue ID: 10986                                   |
| Subject: Computation of d value by AASHTO engines |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 6/15/2011 2:27:54 PM |
| Modified By: gcolgrove                | 7/7/2011 6:52:41 PM  |

### Complete Issue Information

|                   |
|-------------------|
| Priority: High    |
| Category: Unknown |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | On Hold   | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
|                 | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Verified  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | sd_07100328_Beta3.zip |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 6/15/2011 10:28:12 AM Eastern Daylight Time  
originally from beta testing of 6.3:

For the LFD analysis, "d" is said to be 15.48", while for the ASD analysis it is 21.30", which I believe to be the correct value.

email history shown below:

From: Kennelly, Krisha [mailto:KKENNELLY@mbakercorp.com]  
Sent: Tuesday, June 14, 2011 11:14 AM  
To: Armbrecht, Tim A  
Cc: Duray, Jim; Mlynarski, Mark  
Subject: Requesting guidance on issue 10952

Hi Tim,

We have some questions on how to proceed with one of the issues in this Issue.

4/19/2016 3:08:33 PM

HRS AASHTO

1935







## Complete Issue Information

email received from Brian Goodrich as to how BRASS LFD computes the d value:

RE: How does BRASS LFD compute the d value for t-beams with rebar near the top?  
Brian Goodrich [Goodrich@BridgeTech-Laramie.com]  
Wed 6/15/2011 10:28 AM

Krishna,

The BRASS export determines if a rebar row falls in the top or bottom half of the beam and then assigns a row number accordingly, bottom rebar is assigned to rows 1-3 and top rebar is assigned to rows 4-5. The shear depth is taken as the distance from the compression face to the centroid of the rebar on the tension side of the beam. The rebar near the compression block is ignored because it is on the compression side of the beam.

Brian

FROM: Tim Armbrecht DATE: 6/27/2011 12:02:29 PM Eastern Daylight Time  
Some more information concerning the "d" calculation from my consultant (Souther). This is going to be a major problem for us in shear until we get this resolved.

-----  
It turns out that the way the AASHTO engine computes "d" for concrete member shear analysis is more of a problem than I originally realized.

In evaluating the resolution of VI 10773 & 10952, the issue of the way that "d" is computed arose as a major issue in the rating of the model RC Tee-beam bridge being used for the evaluation. With the issues of analysis near the end support resolved, the controlling inventory rating factor for this HS20 bridge becomes 0.525 at .8 of Span 1, with the limit-state being shear occurring with a concurrent positive moment. Because this is a high negative moment region, the negative moment reinforcement has more than twice the area of positive moment reinforcement. And, because of the way "d" is calculated by the Virtis AASHTO engine, its location is only about 40% of that calculated for negative moment. This has a major effect on both  $V_c$  and  $V_s$ , greatly reducing both of them.

It must be emphasized that the current method of computing "d" is completely wrong, resulting in totally unreliable shear ratings. Until this is resolved, we will have to completely disregard shear in evaluating reinforced concrete and possibly even prestressed concrete.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Jim Duray DATE: 6/27/2011 12:35:28 PM Eastern Daylight Time  
I checked the code and found that in 6.2 we used the CG of the area of the reinforcement in tension. Several months ago we changed it to use the CG of the bar forces (tension only). The last iteration in the RC T-Beam Dist .000 R Bm Cap Ver.txt file shows the detailed calculations for the determination of the NA for flexure and the corresponding bar strain, stress and forces. The CG of the bar forces is 15.48 (which agrees with D in article 8.16.6.2.1 for location 0.0 as the depth) for MA 3 - Center-x. I believe the calculations are correct based on article 8.16.6.2.1 of the 17th edition of the standard spec.

4/19/2016 3:08:33 PM

HRS AASHTO

1939

Complete Issue Information

FROM: Jim Duray DATE: 6/29/2011 7:38:12 PM Eastern Daylight Time  
Tim requested we implement the BRASS method for determining D.

FROM: Jim Duray DATE: 6/29/2011 8:11:47 PM Eastern Daylight Time  
Resolved for Beta4 update 4.

Need to do regression testing for verification of this change.

FROM: Tim Armbrecht DATE: 7/6/2011 12:18:53 PM Eastern Daylight Time  
Accepted

FROM: George Colgrove DATE: 7/7/2011 2:39:01 PM Eastern Daylight Time  
d=21.30 inches @ 0.00 ft for Center - x girder. Verified

|                                             |
|---------------------------------------------|
| Issue ID: 10990                             |
| Subject: Floorbeam Stage 2 load application |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 6/16/2011 6:52:25 PM |
| Modified By: bzhang                   | 8/21/2012 6:12:46 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/16/2011 2:53:34 PM Eastern Daylight Time  
Below is copied from Incident 10975.

=====

Complete Issue Information

FROM: Todd Thompson DATE: 6/16/2011 10:42:19 AM Eastern Daylight Time

Beta 3 - Update 2

Checked results and final RF's agree pretty good

The symmetrical problem appears to be fixed, which helps produce the compareable results.

-- I still think the Stringer Composite Loads should be listed as a NonComposite Load - similar to the way the BRASS does it in 6.2. I think it will cause too much confusion having it listed as a composite load. Am glad the spec checker is considering it NonComposite. Just need to list it as a Non-Composite load under the DL Actions summary report.

And yes - Brass doesn't have symmetrical results with their impact values.

I am RESUBMITTING only to get the Stringer Composite Loads to be listed as Noncomposite Loads - similar to how Virtis 6.2 handles it with BRASS LF engine.

FROM: Herman Lee DATE: 6/16/2011 12:16:29 PM Eastern Daylight Time

For the exterior floorbeam FB 0 member alternative (FBA floorbeam definition), the Load Sequence selected in the BRASS LFD engine properties in FBA is "Computed based on loadings and composite regions.". Based on this selection, the BRASS LFD engine applies Stage 1 Stringer DL Reactions to floorbeam Stage 1 and Stage 2 Stringer DL Reactions to floorbeam Stage 2 when FB 0 is analyzed.

For the first interior floorbeam FB 1 member alternative (FBB FBC floorbeam definition), the Load Sequence selected in the BRASS LFD engine properties in FBB FBC is "1 stage - Non-composite steel girder bridge with one construction stage.". Based on this selection, the BRASS LFD engine applies both Stage 1 and Stage 2 Stringer DL Reactions to floorbeam Stage 1 when FB 1 is analyzed.

Stage 2 represents the application of sustained loads. The sections properties used in the Stage 2 FE model can be composite, non-composite or composite for some ranges and non-composite for other ranges. Since the Stage 2 Stringer DL Reactions is coming from the parapet loads on top of the composite stringer, I think it's appropriate for the AASHTO LFD engine to apply to floorbeam Stage 2. This application also matches the default Load Sequence "Computed based on loadings and composite regions." in the BRASS LFD engine properties.

Todd, please let us know your comments. Thanks.

FROM: Todd Thompson DATE: 6/16/2011 1:31:55 PM Eastern Daylight Time

(A) - The Interior FB is also Noncomposite and it should not have been marked depended upon loadings and composite regions (even though there are no composite regions and should behave non-composite).

(B) - I believe the spec checker is using the stringer loads (from composite action) correctly as non-composite for the floorbeams. This is most important item, I believe.

(C) - If my Floorbeam is Non-Composite, I don't think there should be any Composite Loads listed.

(C2) - If a floorbeam is composite, then I think everything is working like it should.

I guess if the consensus is that even if Floorbeam is NonComposite, that stringer composite loads should be listed under composite loads - then I guess I'll go along with that. But I personally think since the floorbeam is non-composite (in this case) - then only Non-Composite DL's should be listed.

=====



Complete Issue Information

The way that AASHTO LFR/ASR engine applies loads to stages is the same as the AASHTO LRFD/LRFR engine in previous release.

FROM: Todd Thompson DATE: 6/20/2011 10:36:18 AM Eastern Daylight Time  
I'm not sure how it can be the same as AASHTO LRFD/LRFR engine - since we can't do Stringer, Floorbeams with LRFD or LRFR. Or am I missing something?

FROM: Herman Lee DATE: 6/20/2011 7:06:56 PM Eastern Daylight Time  
Sorry, I should be more specific. The handling of stage 2 loads for non-composite girder is the same as what implemented in the AASHTO LRFD/LRFR engine in previous release.

FROM: Herman Lee DATE: 6/22/2011 12:10:54 AM Eastern Daylight Time  
Dean Teal's e-mail on 6/21:

=====  
=  
Todd,

This was discussed in great detail.

The TF consensus is to leave things as is for 6.3 due to the depth of testing that would be required. This will be addressed in 6.4 .

Dean  
=====

FROM: Herman Lee DATE: 7/2/2012 10:16:38 AM Eastern Daylight Time  
For noncomposite member, Stage 2 loads will be applied to the Stage 1 FE model. Implemented for 6.4 Beta 3.

FROM: Herman Lee DATE: 7/24/2012 10:36:41 AM Eastern Daylight Time  
For non-composite floorbeam that has previously accepted stage 2 stringer reactions, we need to cleanup those stage 2 reactions so they will not be double counted.

In order to deliver Beta 3 today and prepare for the user group meeting, we commented out the implementation in Beta 3.

FROM: Herman Lee DATE: 8/19/2012 12:36:24 AM Eastern Daylight Time  
Implemented code to cleanup previously accepted reactions. Resolved for 6.4 Acceptance Build.

FROM: Bin Zhang DATE: 8/21/2012 2:12:33 PM Eastern Daylight Time  
I verified the Implemented code to cleanup previously accepted reactions.

Issue ID: 10994

### Complete Issue Information

|                                      |
|--------------------------------------|
| Subject: Virtis LFD Moments too high |
|--------------------------------------|

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jackson, Amanda         | 6/17/2011 9:51:39 PM |
| Modified By: hlee                     | 9/7/2011 5:19:14 PM  |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 05836 - A6249.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 6/17/2011 5:57:34 PM Eastern Daylight Time

I've been working on a 3 span continuous reinforced concrete slab structure, and am getting a pretty decent difference in rating factors between the Virtis Std Engine and Brass. Using 2 other continuous beam programs, I am getting about the same Live Load moments for the HS 20-44 truck as I am getting with the Brass engine. The Virtis engine moments are quite a bit higher. Dead loads are pretty close for all of the programs and engines. The bridge is attached.

FROM: Bin Zhang DATE: 6/21/2011 9:21:13 AM Eastern Daylight Time

The different RF is due to the capacity. Virtis computed lower capacity than the BRASS and AASHTO, so it generated lower RF. BRASS and AASHTO computed comparable RF, so it's very likely that

4/19/2016 3:08:34 PM

HRS AASHTO

1943

Complete Issue Information

VIRTIS computed incorrect capacity.

Table 1 RF comparison between VIRTIS, BRASS and AASHTO

|                            | VO62 Virtis | VO62 BRASS | VO63 (beta4) AASHTO |
|----------------------------|-------------|------------|---------------------|
| LL Moment (Kip-ft) -Axle   | -21.6       | -21.51     | -21.26              |
| DL Moment (Kip-ft)         | -16.74      | -16.43     | -16.36              |
| Factored Capacity (Kip-ft) | -63.8       | -70.22     | -70.18              |
| Inv RF - Axle              | 0.897       | 1.046      | 1.06                |
| Opr RF - Axle              | 1.497       | 1.747      | 1.77                |

FROM: Amanda Jackson DATE: 7/1/2011 11:44:15 AM Eastern Daylight Time  
 Look at the 1 ft slab strip with cap (E) (C) Member alternative. I've attached a plotted comparison of the moments from Virtis, Brass, and the AASHTO engine in 6.3. The Virtis negative moments are quite a bit higher over the piers - not sure why.

I agree that the problem is probably more of a capacity calculation issue than a moment issue.

When I rate this member alternative with the AASHTO engine, I still get a difference in rating factors, but it's not quite as high:

|     | 6.2 Virtis | 6.2 Brass | 6.3 AASHTO |
|-----|------------|-----------|------------|
| RFi | 0.876      | 1.290     | 1.113      |
| RFo | 1.461      | 2.154     | 1.858      |

This might be because the locations of the controlling rating are slightly different (7.2 ft for Brass and 5.5 ft for AASHTO). The location of the Virtis controlling rating is way off from the other two (22.75 ft).

FROM: Herman Lee DATE: 9/7/2011 1:17:34 PM Eastern Daylight Time  
 Virtis/Opis Task Force and User Group decided not to deliver or maintain Virtis Std Engine in future releases.  
 Status changed from Assigned to Suspended.

Issue ID: 10995  
 Subject: BRASS detailed Rating Results Summary is not removing impact for given structure

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Kemna, Aaron 6/20/2011 8:26:24 PM  
 Modified By: hlee 4/12/2013 3:54:58 PM  
 Priority: High  
 Category: Bug - BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:08:34 PM

HRS AASHTO

1944

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | W107.87_S_App-Spans2-5.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 6/20/2011 4:35:44 PM Eastern Daylight Time

I have a structure where the rating results summary detailed table is giving the same ratings for "with impact" as that shown for "without impact". The values appear to be the "with impact" ratings. This bridge has 4 girderline structures. "Structure Definition 4" is the only structure experiencing this problem. Note that G1 has the impact override set to 0.0. The other girders will have the problem.

FROM: Brian Goodrich DATE: 6/21/2011 1:58:50 PM Mountain Daylight Time

Shear is controlling the rating for the structure. BRASS stores the live load actions with and without impact. The function that ratios the two actions is saying the live load shear associated with the rating is zero. Therefore, the impact is determined to be 1.0, which results in the same ratings with and without impact. I logged this issue as BRASS Incident 113.

FROM: Aaron Kemna DATE: 7/2/2012 2:54:04 PM Eastern Daylight Time

Verified Brass is doing this correctly now. 6.1.3

FROM: Herman Lee DATE: 4/12/2013 11:54:06 AM Eastern Daylight Time

Updated Status to Resolved per BridgeTech request.

Issue ID: 11005

Subject: Spec check error when App A6 option is checked

4/19/2016 3:08:34 PM

HRS AASHTO

1945

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Cavanaugh, Scott        | 6/23/2011 5:40:19 PM |
| Modified By: hlee                     | 6/29/2011 8:53:45 PM |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 29 0049TEST.xml     |             |
|      | 29_0049TEST.docx    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/23/2011 1:42:01 PM Eastern Daylight Time  
 Submitted on behalf of Scott Cavanaugh, HNTB:

Received Bridgewater Support e-mail:

=====

Herman,

I am working on debugging an xml file for a steel bridge with multi-stringers. The stringers are 6 span continuous, and my concern is with the varying rating results I am getting when comparing the Virtis and BRASS engines. See the results below for the controlling stringer S3S-2.

|        | VIRTIS   |         | BRASS    |          | NOTES                         |
|--------|----------|---------|----------|----------|-------------------------------|
| Member | IR       | OR      | IR       | OR       |                               |
| S3S-2  | 2.49(V)  | 3.23(V) | 0.62(M)  | 0.806(M) | Appendix A6 used              |
|        | 0.304(M) |         | 0.394(M) | 0.415(M) | 0.546(M) Appendix A6 not used |

4/19/2016 3:08:34 PM

HRS AASHTO

1946

Complete Issue Information

Could you please take a look at the recently forwarded .xml file (see previous email, filename W107.87\_S\_App-Spans2-5.xml) and let me know if you can see anything in the input file (or more likely control options?) that would be affecting the rating results in this way? When Appendix A6 is not used, the results are reasonably close. However, when Appendix A6 is selected, the controlling rating results are significantly different, and in the case of Virtis, shear controls and not flexure. Note that I am not making any changes to the rating file between runs, yet obtain these different results.

=====

In the VO62 Virtis LRFR spec check, Article 6.10.8.1.1 failed , while "6.10\_General\_Flexural\_Results" used A6 1.4 as governing article .  
It's a VO62 Virtis LRFR bug.

FROM: Wayne Skow DATE: 6/23/2011 2:27:01 PM Eastern Daylight Time  
This is caused by the controller not returning the proper signal when 6.10\_General\_Flexural\_Results's "IsMissing" function is examining whether A6.1.1 has run or not. The controller either needs to implement a reliable set of rules for testing the status of articles, or the set of articles for this situation needs to be reordered.

FROM: Krisha Kennelly DATE: 6/27/2011 2:33:39 PM Eastern Daylight Time  
as noted in my email, 6.10 General Flexural results should check if the result of the App A6 articles is null. If it is, data is missing.

even with this change the controlling moment capacity does not seem to be picked up by the flexure rating article.

FROM: Wayne Skow DATE: 6/28/2011 7:08:23 AM Eastern Daylight Time  
Fixed a problem in GenFlexResults to properly detect when the A6 articles have completed.

Fixed a problem with bad moment units in A6.1.1 (all versions except 4E2008) where the values were calc'd as K-in but saved as K-ft without being converted.

Fixed a problem in MBE 6A.4.3.1 steel flexure moments (1E and 2E) where RF was being miscalculated under certain conditions.

FROM: George Colgrove DATE: 6/29/2011 6:35:03 AM Eastern Daylight Time

| Member | VIRTIS  |         | BRASS   |          | NOTES            |
|--------|---------|---------|---------|----------|------------------|
|        | IR      | OR      | IR      | OR       |                  |
| S3S-2  | 0.56(M) | 0.73(M) | 0.62(M) | 0.806(M) | Appendix A6 used |

Verified

FROM: Herman Lee DATE: 6/29/2011 4:50:49 PM Eastern Daylight Time  
Resolved for 6.3 Release.

Issue ID: 11013

4/19/2016 3:08:34 PM

HRS AASHTO

1947

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Subject: Rating Summary of Truss      |                      |
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 6/29/2011 5:19:31 PM |
| Modified By: ghuang                   | 6/30/2011 3:37:00 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact | Status    | Priority | Category                     |
|-----------------|-----------|----------|------------------------------|
| Lee, Herman     | Suspended | High     | Enhancement<br>Enhance BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 6/29/2011 1:30:01 PM Eastern Daylight Time

This is a truss bridge with travel width of 19'-8". Currently it is a two-lane bridge. In the truss analysis, both one-lane and two-lane live load conditions are analyzed. However in the "rating results summary" only the results of one-lane condition are listed, which are not in control. The files for bridge model, 29\_0049TEST.xml, and results, 29\_0049TEST.docx, are attached.

FROM: Herman Lee DATE: 6/29/2011 2:10:48 PM Eastern Daylight Time

The "As Requested" loading type is one-lane condition (based on the travelway width) and with impact. That's why the "As Requested" Rating Results Summary lists the results for one-lane condition with impact. If you select "Detailed" in the Rating Results Summary, it will display all the one/multi lane and with/without impact combinations. Please let me know if this doesn't answer your question.

## Complete Issue Information

Issue ID: 11015

Subject: Implement MBE 6B.6.2.2 for floorbeam transverse live load analysis

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Huang, George

6/29/2011 11:05:18 PM

Modified By: hlee

11/21/2011 6:56:57 PM

Priority: High

Category: Enhance BRASS

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 6/29/2011 7:06:11 PM Eastern Daylight Time  
Submitted on behalf of George Huang, Caltrans.

Enhance floorbeam transverse live load analysis for specifying two traffic lanes for roadway width

4/19/2016 3:08:35 PM

HRS AASHTO

1949



Complete Issue Information

between 18 ft and 20 ft (MBE 6B.6.2.2).

FROM: Herman Lee DATE: 11/21/2011 1:20:39 PM Eastern Standard Time  
AASHTO Engine does support MBE 6B.6.2.2 for floorbeam transverse live load analysis.

Issue ID: 11022  
Subject: Floorbeam as Beam Elements Crashes

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Trees, Geoffrey 7/7/2011 5:16:35 PM  
Modified By: xli 8/30/2012 1:34:00 AM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |

4/19/2016 3:08:35 PM

HRS AASHTO

1950

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
|                  | Resolved |      | Bug     |
|                  | Verified |      |         |
| Thogaru, Srujana | New      | High | Unknown |
|                  | Assigned |      |         |
|                  | Resolved |      | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | PlateGirder Std Dist Factor.TXT |             |
|      | corrdeck.xml                    |             |
|      | LLDF Results.jpg                |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Geoffrey Trees DATE: 7/7/2011 1:17:11 PM Eastern Daylight Time

When I run the truss floorbeam in this example modeled as beam elements, it crashes. Herman thinks the problem may have to do with the function not handling the cantilever properly while being modeled as beam elements. See the attached bridge...

To Reproduce:

-Set the truss floorbeam to beam elements:

SuperStructDef -> GF -> Member Def -> Floorbeam Def -> FBTruss -> Truss Member Properties

-Run Floorbeam1 -> Alt -> Fb1

FROM: Herman Lee DATE: 8/30/2011 10:35:28 AM Eastern Daylight Time

"Model truss member as beam element" checkbox should be hidden when the superstructure definition doesn't have stringers.

Resolved for 6.4 Release.

FROM: Xinmei Li DATE: 8/29/2012 9:29:36 PM Eastern Daylight Time

Verified the fix in 6.4 Beta4.

4/19/2016 3:08:35 PM

HRS AASHTO

1951

Complete Issue Information

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11024                                                                         |
| Subject: Distribution factors are correct but numbers in "view calculations" are wrong. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Colgrove, George        | 7/8/2011 1:33:49 PM  |
| Modified By: hlee                     | 7/19/2011 3:01:04 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved | Bug      |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name                     | Resource Identifier | Description |
|--------------------------|---------------------|-------------|
| FlaredBeams(0500246).xml |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Colgrove DATE: 7/8/2011 9:46:09 AM Eastern Daylight Time

The enclosed bridge [corrdeck] has a corrugated deck. As such the distribution factors are based on lever rule.

The resulting LLDF in the dialog table are accurate. The result in the "view calculations" report are accurate. However the values used to calculate the LLDF are wrong.

Complete Issue Information

=====  
Simple Beam Distribution  
=====

Compute Simple Beam Deck Distribution Factors  
-----

DF = 1.62

Number Lanes Loaded = 1

Truck Wheel Positions from Left Edge of Deck

| Truck | Left Wheel<br>(ft) | Right Wheel<br>(ft) |
|-------|--------------------|---------------------|
| 1     | 3.75               | 9.75                |

DF = 1.73

Number Lanes Loaded = 2

Truck Wheel Positions from Left Edge of Deck

| Truck | Left Wheel<br>(ft) | Right Wheel<br>(ft)          |
|-------|--------------------|------------------------------|
| 1     | 3.75               | 9.75                         |
| 2     | 13.75              | 19.75 <----- Wrong locations |

should be:

|   |       |       |
|---|-------|-------|
| 2 | 15.75 | 21.75 |
|---|-------|-------|

FROM: Srujana Thogaru DATE: 7/19/2011 8:50:43 AM Eastern Daylight Time  
Fixed for 6.4 Alpha Build 1

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 11028<br>Subject: Flared beam differences between 6.3 AASHTO Engine and Virtis Std. Engine |
|------------------------------------------------------------------------------------------------------|

|                                                                       |
|-----------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Lee, Herman |
|-----------------------------------------------------------------------|

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Armbrecht, Tim | 7/14/2011 4:00:57 PM |
| Modified By: xli             | 9/8/2011 8:29:50 PM  |
| Priority: High               |                      |
| Category: Bug                |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | K0999.xml                |             |
|      | MyErrorHybridNegComp.gif |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 7/14/2011 12:04:20 PM Eastern Daylight Time  
From my consultant (Souther):

RE: file name - FlaredBeams(0500246).xml

LFD analysis of the flared beam (5A - 1st W Int-x) in the subject bridge model using the AASHTO Engine (6.3 Beta 5) generates significantly lower controlling rating factors at the second support than using the Virtis Standard Engine. The moments from Stage 2 DL and LL are close to each other. However the unfactored Stage 1 DL moments are significantly different with -2469.2 ft-kip for the AASHTO Engine and -1599.68 ft-kip for the Virtis Standard Engine. This extreme difference in Stage 1 DL accounts for the extreme difference in rating factors.

FROM: Herman Lee DATE: 8/30/2011 10:13:50 AM Eastern Daylight Time  
Fixed a defect in determining the deck load for flared beam.

4/19/2016 3:08:35 PM

HRS AASHTO

1954

Complete Issue Information

Resolved for 6.3 Service Pack and 6.4 Release.

FROM: Xinmei Li DATE: 9/8/2011 3:48:54 PM Eastern Daylight Time  
Verified fixed for 6.3 sp1. AASHTO engine LFD rating factor is 1.124 vs. std engine 1.251.

|                                                      |
|------------------------------------------------------|
| Issue ID: 11029                                      |
| Subject: My calculated incorrectly for Hybrid Girder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Kemna, Aaron            | 7/14/2011 8:08:39 PM |
| Modified By: bzhang                   | 8/28/2012 9:10:56 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 7/14/2011 4:18:43 PM Eastern Daylight Time  
 This is really an add on to Incident 10713. I found a case where the My is being calculated using the web capacity when it should be the flange capacity for a hybrid girder. This is a section in negative flexure with composite reinforcement. I don't think there is a case where the lower web strength should be used over the higher flange strength for hybrid girders. I'm attaching the bridge and an image of the spec check article. You only need to rate Structure Definition 3 - G2. Analysis point is at Bent 2.

AASHTO uses 87640 when it should be 119308 (tension flange).

FROM: Wayne Skow DATE: 7/28/2011 7:17:18 AM Eastern Daylight Time

4/19/2016 3:08:35 PM

HRS AASHTO

1955

Complete Issue Information

I agree. The effects due to lower web Fy are taken into account in other ways. For LFD, section 10.53 specifies what to do for a hybrid situation including the use of a hybrid reduction factor. I need to review LRFD to see if the same problem exists. LRFD also uses a hybrid reduction factor so My should not be controlled by web edge stress.

FROM: Wayne Skow DATE: 9/22/2011 1:26:12 PM Eastern Daylight Time  
Fixed in 6.4. Web stress will no longer determine moment at first yield.

Tester: use a built-up girder with a web yield stress much lower than either flange. For LRFD, LFRF and LFR, the moment capacity at first yield (ALFD\_17E\_My\_all\_sections for LFR, App D6.2 for for LRFD and LRFR).

FROM: Bin Zhang DATE: 5/23/2012 10:05:30 AM Eastern Daylight Time  
Verified for VO631 with the 11493 DLL update.

FROM: Aaron Kemna DATE: 6/28/2012 11:30:40 AM Eastern Daylight Time  
Verified for Virtis 6.4 Beta Build 2

FROM: Bin Zhang DATE: 8/28/2012 4:53:03 PM Eastern Daylight Time  
Re-backcheck for the acceptance build.

|                                           |
|-------------------------------------------|
| Issue ID: 11032                           |
| Subject: Custom LF's Not Used in Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 7/19/2011 1:17:49 PM |
| Modified By: kkennelly                | 7/19/2011 8:19:18 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier                               | Description |
|------|---------------------------------------------------|-------------|
|      | Pages from Oper Spans 9-11<br>As-Built Loads.pdf  |             |
|      | Pages from Virtis Truss Method<br>of Solution.pdf |             |
|      | 0900108.zip                                       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 7/19/2011 9:21:35 AM Eastern Daylight Time  
From my consultant (Souther):

RE: file NoCustLFs(0982015)-63.xml (attached)

In the referenced Virtis 6.3 model, custom Load Factors (IL Culvert) are specified under Factors/LFD but are not utilized in the analyses of the Member Alternatives. In similar model in Virtis 6.2, using BRASS, the IL Culvert load factors are used in the analyses. The IL Culvert specifies that the DL factor (A1) is 1.5, which is shown for the BRASS output but, as shown below, 1.3 was used in Virtis 6.3 AASHTO Engine.

Virtis 6.3 Spec Check...

| Rating Level | Vehicle | LL (kip-ft) | Load Factors |      | Phi (kip-ft) | Mn (Ton) | RF | Capacity |
|--------------|---------|-------------|--------------|------|--------------|----------|----|----------|
|              |         |             | A1           | A2   |              |          |    |          |
| Inv          | 1       | 1.20        | 1.30         | 2.17 | 0.90         | -42.72   | NA | NA       |

Virtis 6.2 BRASS output...

Truck 1 Load Level 2 Rating Factor(Pos mom) = 23.10 = ( 38.35 - 1.00 \* 1.50 \* -6.41) / (1.00 \* 1.30 \* 1.60)

FROM: Krisha Kennelly DATE: 7/19/2011 4:00:32 PM Eastern Daylight Time

See the attached '11032 explanation.png'. The System Default Spec and Factors are set for the member alt. If you want the member alt to use the factors from the IL Culvert factors, change the the Selection type to 'override', pick the spec and pick the IL Culvert factor. See attached '11032 rating factors.png' for the A1 = 1.50 being used by the AASHTO LFD engine after this change.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11033                                           |
| Subject: Unsymmetrical Virtis Loads Due to Suspended Span |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|



Complete Issue Information

|                              |                        |
|------------------------------|------------------------|
| Primary Contact: Zhang, Bin  |                        |
| Submitted By: Armbrecht, Tim | 7/19/2011 6:17:43 PM   |
| Modified By: plitchfield     | 11/15/2013 12:57:17 AM |
| Priority: Urgent             |                        |
| Category: Bug                |                        |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Skow, Wayne      | Assigned |          |          |
| Kennelly, Krisha |          |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Line-GirderRunError(0810011)-63.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/19/2011 2:20:40 PM Eastern Daylight Time  
 Submitted on behalf of Tim Armbrecht, IL DOT.

Received e-mail:

=====

From: Moussa A. Issa [mailto:moussa.issa@hbmengineering.com]  
 Sent: Monday, July 18, 2011 3:26 PM  
 To: Armbrecht, Tim A  
 Cc:  
 Subject: Unsymmetrical Virtis Loads Due to Suspended Span\_Shade-Lohmann Bridge

Complete Issue Information

Hello Tim,

We are completing the rating for the Shade-Lohmann bridge (090-0108 and 109) and have discovered a possible Virtis issue. The suspended span has been set up according to the "Virtis Truss Method of Solution" pdf. We eliminated the superficial elements U15U16 and L14L15 and then placed an x-axis fixity at L15 (for your convenience the pdf page is attached). The issue is that the live load maximum member forces in the truss do not have symmetry near the point of fixity and the piers. See the attached examples. We are raising this issue because we feel that it could be in the Virtis program or if it is not a problem something should be done to address this method of solution.

Thanks,

Moussa A. Issa, Ph.D., P.E., S.E.  
Chief Structural Engineer  
HBMENGINEERING GROUP, LLC

=====

FROM: Bin Zhang DATE: 7/29/2011 9:41:05 AM Eastern Daylight Time  
Fixed in VO64. This fix will be also included in the VO63 service pack.

FROM: Xinmei Li DATE: 9/8/2011 4:30:49 PM Eastern Daylight Time  
Verified fixed in VO63 service pack1.

FROM: Bin Zhang DATE: 8/28/2012 5:12:20 PM Eastern Daylight Time  
Re-backcheck for the acceptance build.

Issue ID: 11034  
Subject: Virtis 6.3 Bug - Line Girder Analysis Error

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Armbrecht, Tim 7/19/2011 8:47:38 PM  
Modified By: plitchfield 6/26/2012 4:44:11 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | CORRUG_DECK_3.XML   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrrecht DATE: 7/19/2011 4:51:40 PM Eastern Daylight Time  
From my consultant (Souther):

RE: file Line-GirderRunError(0810011)-63.xml

The line-girder superstructure, "Spans 13-15 (Main Girders)", within the referenced Virtis model, ran successfully under BRASS ends with the following error under the AASHTO engine in Virtis 6.3.

...

- Location - 740.6672 (ft)
- STAGE 2
- STAGE 3
- Location - 0.0000 (ft)

Failed to perform element specification checks.  
Object reference not set to an instance of an object.  
at

```

AbanSpec.Articles.AASHTO.LFD.SeventeenthEdition.ALFD_17E_10_48_04_01_Cb.
DoSpecificationCheck(SpecUnits eUnits)
  at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits eUnits)
  at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits units)
  at CSCSuperStructure.DoStandardSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperSteelGirderElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > > sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List<1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \*\>*
arrayIndexElementsByStage, CList<CStringArray \*\,CStringArray \*\>* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*\,CList<__int64>,__int64> \*\> \*\,CList<CList<__int64>,__int64>
\*\,CList<__int64>,__int64> \*\> \*\>* arrayIndexSpecCheckDomainsByStage, Int32* iInnerCounter, Int32*
iInnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperStructureElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > > sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List<1* listSerialized, CArray<double>,double>*

```

Complete Issue Information

arrayLocations, CArray<double\,double>\* arraySpanLengths, CList<\_\_int64\,\_\_int64>\* arrayElementIndexSpecCheckDomains, CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \>\* arrayIndexElementsByStage, CList<CStringArray \\*\,CStringArray \>\* arrayElementNamesByStage, CList<CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \> \\*\,CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \> \>\* arrayIndexSpecCheckDomainsByStage, Int32\* iInnerCounter, Int32\* iInnerTotalCount, Boolean\* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean bLTBRoundOfSpecChecks)

at CSCSuperStructure.DoElementSpecCheck(CSCSuperStructure\* , CSCSuperStructureElement\* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId, CStringT<char\,StrTraitMFC\_DLL<char\,ATL::ChTraitsCRT<char> > >\* sLocUnitDisplay, Int64\* IStart, Int64\* ITotalLength, Int64\* ISerializedLength, List`1\* listSerialized, CArray<double\,double>\* arrayLocations, CArray<double\,double>\* arraySpanLengths, CList<\_\_int64\,\_\_int64>\* arrayElementIndexSpecCheckDomains, CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \>\* arrayIndexElementsByStage, CList<CStringArray \\*\,CStringArray \>\* arrayElementNamesByStage, CList<CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \> \\*\,CList<CList<\_\_int64\,\_\_int64> \\*\,CList<\_\_int64\,\_\_int64> \> \>\* arrayIndexSpecCheckDomainsByStage, Int32\* iInnerCounter, Int32\* iInnerTotalCount, Boolean\* bFatalError, Boolean bLastRoundOfSpecCheck, Boolean bLTBRoundOfSpecChecks)

at CSCSuperStructure.DoStandardSpecificationCheck(CSCSuperStructure\* , Int32 ISysUnits)  
Fatal error occurred while processing specification checks.  
Error - Error performing LFR specification checking!

Error - Analysis failed!

FROM: Wayne Skow DATE: 7/26/2011 7:31:22 AM Eastern Daylight Time  
Krisha, the problem is that there's no brace point moment table when article ALFD\_17E\_10\_48\_04\_01\_Cb is called at the 0.0 location.

FROM: Krisha Kennelly DATE: 8/18/2011 2:30:14 PM Eastern Daylight Time  
Fixed for 6.3 service pack 1. There is no workaround.

FROM: Xinmei Li DATE: 9/8/2011 5:13:47 PM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

Issue ID: 11037  
Subject: Corrugated Deck Enhancement

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Jackson, Amanda 7/21/2011 3:43:42 PM  
Modified By: ajackson 7/8/2013 2:00:28 PM  
Priority: High  
Category: Enhancement

History

4/19/2016 3:08:36 PM

HRS AASHTO

1961

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned | Critical | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | VI_11038_verification.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 7/21/2011 11:57:49 AM Eastern Daylight Time

Requesting an enhancement to the corrugated deck module to calculate deck bending moments over the net span (edge of flange to edge of flange). The AASHTO engine currently calculates the moments from center of girder to center of girder, which results in much higher moments. I have rated a bridge with a net span of 57 inches, and am getting an inventory rating factor of 0.699. The allowable net span recommended by the manufacturer is 57 inches (for the HS 20-44 vehicle). The rating is extremely conservative, and allows the deck to control the rating when it shouldn't. This makes it difficult to use the corrugated deck module on any bridge. The enhancement would fix this problem.

FROM: Herman Lee DATE: 7/7/2013 12:56:01 PM Eastern Daylight Time

Net span model (edge of flange to edge of flange) for corrugated deck is supported in the 6.5 release.

Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 11038               |
| Subject: LFR Critical Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Skow, Wayne             | 7/25/2011 5:55:08 PM |
| Modified By: xli                      | 9/9/2011 3:45:29 PM  |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Resolved           |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | LRFR Analysis Screenshots.doc |             |
|      | LRFR lock up.doc              |             |
|      | 40214 - LRFR_Test_Span.xml    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 7/25/2011 1:56:09 PM Eastern Daylight Time  
 When LFR is performed on a prestress girder, there are 5 critical values checked by the articles:

- concrete compressive stress
- concrete tensile stress
- flexure

4/19/2016 3:08:37 PM

HRS AASHTO

1963

Complete Issue Information

shear  
prestressing steel tension

Currently, only the first four of those are considered by SCSuperStructure.cpp in PopulateAllStdCriticalResults() when determining the critical RF location. Prestressing steel tension (from articles ALFR\_1E\_6B\_06\_03\_03\_PS\_Stl\_Tensile\_Stress and ALFR\_2E\_6B\_05\_03\_03\_PS\_Steel\_Tensile\_Stress) needs to be added.

FROM: Wayne Skow DATE: 7/28/2011 7:16:13 AM Eastern Daylight Time  
coding changes were made in VO 6.4. More testing is needed.

FROM: Wayne Skow DATE: 9/8/2011 8:12:16 AM Eastern Daylight Time  
coding changes were added to VO63sp1 and tested.

FROM: Xinmei Li DATE: 9/9/2011 10:46:24 AM Eastern Daylight Time  
Attached bridge is a modification of PCITrainingBridge1. It causes PS steel tension to control. It is used to verify the code change above.

Verified fixed for 6.3 service pack 1. Now PS tensile stress controls LFD rating factors.

|                                       |
|---------------------------------------|
| Issue ID: 11039                       |
| Subject: Problems Saving LRFR Results |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Campisi, Paul           | 7/26/2011 5:42:26 PM |
| Modified By: hlee                     | 9/6/2011 7:16:51 PM  |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:08:37 PM

HRS AASHTO

1964

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 7/26/2011 1:50:05 PM Eastern Daylight Time

I am having problems saving LRFR results in Virtis. When in the Bridge Explorer, if I toggle on the "Save Analysis Results" under the "Analysis Settings" workspace, the program analyzes the first beam in the first bridge and then locks up. It appears Virtis can't save the LRFR results and then locks up after the first analysis is performed. See the attached screenshot of the "Save Analysis Results" toggle button.

I can analyze a bridge (or set of bridges) without the "Save Analysis Results" button toggled on. But when the results are displayed and I hit the "Save All" button, the computer locks up. See attached screenshot of the "Save All" button.

It appears Virtis is unable to save the LRFR results. I have no problems saving LFD results for the same bridges.

I need to be able to save both LFD and LRFR results to the department's ORACLE database. Is there a required setting I am missing to save LRFR results?

Thanks

Paul Campisi  
New York State DOT  
Office of Structures

FROM: Todd Thompson DATE: 7/28/2011 4:16:44 PM Eastern Daylight Time

I checked both LF and LRFR and appears to work fine with 6.3

FROM: Mehrdad Ordoobadi DATE: 8/17/2011 8:46:44 AM Eastern Daylight Time

Please provide the export of the bridges that cause this issue.

Also, what do you mean by locking up? Is Virtis unresponsive for a long time and does not come back at all? Is it giving you any errors?

FROM: Mehrdad Ordoobadi DATE: 8/17/2011 2:13:41 PM Eastern Daylight Time

BRASS produces so much data for LRFD and LRFR analyses. Saving BRASS analysis results takes a lot of time and database space. I Imported your bridge into a SQL Server database that is on my machine and performed an LRFR analysis for the bridge from the Bridge Explorer. The analysis took a few minutes and Bridge Rating Results window appeared. I clicked Save All. It took 3 and half minutes for the save to complete for the one bridge. I monitored the size of the database and noticed that it grew from 33 MBs to 186 MB.

Then I did another LRFR analysis with the "Save Analysis Results" check box checked. It took a while and the database size grew from 186 MB to 339 MB.

Considering the volume of the information that is being saved to the database and the fact the all these information are going through the network this behavior is normal. That's the reason, we often discourage the Virtis/Opis users to save BRASS LRFD and LRFR results to the database.

4/19/2016 3:08:37 PM

HRS AASHTO

1965



Complete Issue Information

FROM: Herman Lee DATE: 9/6/2011 3:02:33 PM Eastern Daylight Time  
Last e-mail exchange for this issue was on 8/18.  
I changed the Status to Resolved.  
Please let us know if you want to reopen this incident. Thanks.

|                                        |
|----------------------------------------|
| Issue ID: 11040                        |
| Subject: Truss Counters in Compression |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Jackson, Amanda         | 7/26/2011 8:12:45 PM |
| Modified By: hlee                     | 8/19/2011 4:01:44 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status                         | Priority | Category |
|-----------------|--------------------------------|----------|----------|
| Lee, Herman     | New                            | High     | Unknown  |
| Duray, Jim      | Assigned<br>Information Needed |          | Bug      |
|                 | Resolved                       |          |          |
|                 | Verified                       |          |          |
|                 | Duplicate                      |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | E-311.XML                     |             |
|      | L32 Rating Results Report.pdf |             |
|      | L32.XML                       |             |

Tasks

4/19/2016 3:08:37 PM

HRS AASHTO

1966

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amanda Jackson DATE: 7/26/2011 4:20:17 PM Eastern Daylight Time  
Member U5L4 in the 180 ft Through Truss is controlling the rating in axial compression. U5L4 is a counter. I don't have this issue with the HS 20-44 truck or the AASHTO legal trucks, but the truck I am rating (attached) is causing the problem. This is a V/O 6.2 file. I checked it with the latest beta version of 6.3 with the same results (we don't have the production version of 6.3 up and running yet).

FROM: Herman Lee DATE: 7/27/2011 7:50:16 AM Eastern Daylight Time  
Related to Incident 10963.

FROM: Amanda Jackson DATE: 8/4/2011 9:50:51 AM Eastern Daylight Time  
In the first xml file I attached, I had a few members defined as counters that shouldn't have been. I fixed the file, and have attached the correct one. Now I am getting axial compression in a counter controlling for the Type 3 truck for inventory and operating, and axial compression in a counter controlling the operating rating for all of the trucks (Type 3, 3S2, 3-3, and HS 20-44).

FROM: Jim Duray DATE: 8/17/2011 8:38:52 AM Eastern Daylight Time  
I believe we have fixed this issue and I would like to use your bridge to test.

Using L32.xml and a test build of Virtis member U8L8 controls (see attached file L32 Rating Results Report.pdf) for a Type 3 vehicle for both inventory and operating ratings. We will likely be issuing a service pack that includes resolution of this incident in September-October. Would you be able to do some testing to verify this incident is resolved?

FROM: Bin Zhang DATE: 8/19/2011 9:44:48 AM Eastern Daylight Time  
verified in vo63 with today's dll updates, now the program does not compute a compression capacity for counters and does not compute a rating factor for counters subjected to LL compression < DL tension.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11042                                                  |
| Subject: Error for continuous PS I-girder with LFD AASHTO Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 7/28/2011 7:07:44 PM |
| Modified By: ghuang                   | 6/26/2012 9:15:36 PM |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:08:37 PM

HRS AASHTO

1967

### Complete Issue Information

|             |           |      |         |
|-------------|-----------|------|---------|
| Lee, Herman | New       | High | Unknown |
|             | Assigned  |      |         |
| Lee, Herman | Assigned  | High | Unknown |
|             | Suspended |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 7/28/2011 3:09:35 PM Eastern Daylight Time

We are rating a 2-span pc/ps i-girder bridges and found following possible errors:

- 1) There are negative DL moment for non-compite stage, which should be zero;
- 2) The ratings at the edge of the girder (2.7% of span 2) are much smaller than those at the center of Bent 2 (100% of Span 1). This seems not reasonable. The negative moment demand usually reaches the peak value at the center of the bent. The negative moment capacity is contributed by the continuous mild steel in the deck, which should be the same at 2.7% or 0.0% points. Therefore the rating at center of pier 2 should be smaller.

Both bridge model (56-0643GH.xml) and results (56-0643Results.docx) files are attached.

FROM: George Huang DATE: 7/28/2011 4:30:29 PM Eastern Daylight Time

Another problem is that the "detailed" "Rating Results Summary" is not shown, see attached file, 56-0643detail.docx.

FROM: Herman Lee DATE: 7/31/2011 12:19:33 PM Eastern Daylight Time

The 2-span PS structure has frame connection specified in the interior support. The interior support constraints are incorrect in the stage 1 FE model.

In 6.3, only the "Detailed by Scaling" or "Detailed by Vehicles" selection will generate the detailed with/without impact and single/multi lane rating results.

FROM: Herman Lee DATE: 8/16/2011 1:54:52 PM Eastern Daylight Time

George would like to include the fix for this in the 6.3 Service Pack.

FROM: Herman Lee DATE: 8/24/2011 2:29:59 PM Eastern Daylight Time

Fixed for 6.3 Service Pack.

4/19/2016 3:08:37 PM

HRS AASHTO

1968

Complete Issue Information

FROM: Xinmei Li DATE: 9/8/2011 10:59:58 PM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

FROM: George Huang DATE: 9/15/2011 2:26:42 PM Eastern Daylight Time  
The error for stage 1 dead load moment has been corrected. The analysis result looks reasonable. The case is closed.

FROM: George Huang DATE: 6/26/2012 5:14:53 PM Eastern Daylight Time  
Verified in Virtis6.4 beta build 2.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 11045                                                              |
| Subject: Virtis Std LFD Engine failed for PS members w/o shear reinforcement |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Zhang, Bin              | 8/1/2011 1:30:47 PM |
| Modified By: hlee                     | 9/7/2011 5:16:21 PM |
| Priority: High                        |                     |
| Category: Unknown                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/1/2011 9:31:12 AM Eastern Daylight Time  
Submitted on behalf of David Wolfe, Moffatt & Nichol.

Part of the received e-mail on 7/29/2011:

=====

This is for VIRTIS 6.2. I already updated for TN0019 if that has any relevance. For a PS beam without shear reinforcement the VIRTIS LFD engine fails. Delete the shear legs from the beam in PCI training

4/19/2016 3:08:38 PM

HRS AASHTO

1969

Complete Issue Information

bridge 1 and run the VIRTIS LFD engine. The analysis progress window gets to the end and gives the lines below.

=====

FROM: Herman Lee DATE: 9/7/2011 1:15:41 PM Eastern Daylight Time  
Virtis/Opis Task Force and User Group decided not to deliver or maintain Virtis Std Engine in future releases.  
Status changed from Assigned to Suspended.

Issue ID: 11046  
Subject: Moment redistribution is not applied to the midspan areas

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Zhang, Bin 8/1/2011 2:13:08 PM  
Modified By: xli 9/13/2011 2:25:02 PM  
Priority: Critical  
Category: Bug

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Kennelly, Krisha | Assigned           | High     | Unknown  |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Skow, Wayne      |                    | Critical | Bug      |

Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
|             | Resolved  |      |             |
|             | Verified  |      |             |
| Lee, Herman | New       | High | Unknown     |
|             | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Shearplanes.pdf     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/1/2011 10:14:19 AM Eastern Daylight Time  
 Submitted on behalf of Clint M. Krajnik, TSIUUVARAS SIMMONS HOLDERNESS .

Part of the received e-mail on 7/28/2011:

```

=====
=====
We are showing that Virtis is using moment redistribution at the Pier, but not applying the redistribution
moment as an extra positive moment to midspan areas. As a result the ratings are unconservative for
positive moment.
=====
=====
    
```

FROM: Krisha Kennelly DATE: 8/15/2011 1:32:35 PM Eastern Daylight Time  
 Please attach your bridge and indicate which mbr alt you are analyzing. Also include a screenshot of  
 the article where the redistribution moment is not being applied to the midspan areas. Thanks.

FROM: Herman Lee DATE: 8/18/2011 1:47:56 PM Eastern Daylight Time  
 Attached support documents provided by Diego Santos-Noble, TSH Engineering.

FROM: Herman Lee DATE: 9/13/2011 6:38:16 AM Eastern Daylight Time  
 Resolved by Wayne Skow.

FROM: Xinmei Li DATE: 9/13/2011 10:18:56 AM Eastern Daylight Time  
 Verified fixed for 6.3SP1. Now article 6A.4.2.1 at span2 74.2' has RF 1.12.

Complete Issue Information

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 11047                                                     |
| Subject: Enhance for Concrete Shear Reinforcement Capacity with LFR |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Huang, George           | 8/2/2011 4:37:53 AM |
| Modified By: hlee                     | 8/3/2011 8:15:20 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
|                  | Assigned  |          |          |
| Thogaru, Srujana |           |          | Bug      |
|                  | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | NSG Vehicle.xml      |             |
|      | System Error.gif     |             |
|      | 00031 - B007365.xml  |             |
|      | Spec Check Error.gif |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 8/2/2011 12:41:35 AM Eastern Daylight Time  
 The virtis LFD analysis engines (BRASS, Virtis and AASHTO) utilize the shear reinforcement spacing specified at the point of interest when establishing the shear capacity. This approach could result in lower capacity. We are requesting an enhancement to provide an "Advanced" option by which user could specify how the shear capacity contribution from shear reinforcement is calculated. When this

4/19/2016 3:08:38 PM

HRS AASHTO

1972

Complete Issue Information

advanced option is selected, software will first "count" the number legs crosses the 45degree diagonal shear failure line (instead of establishing the number by using d/s) and obtain the capacity. The Advance option should give the users to choose the vertical centroid location of the 45degree shear failure plane in section (ex. mid depth or top of the section). The shear plane should be drawn from the point of interest toward the closest support. The shear failure planes are shown in the attached file.

|                                                                                      |
|--------------------------------------------------------------------------------------|
| Issue ID: 11048                                                                      |
| Subject: NSG Analysis quits for reinforced concrete models while using AASHTO Engine |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Thogaru, Srujana     |                     |
| Submitted By: Jones, Daniel           | 8/3/2011 3:33:23 PM |
| Modified By: sthogaru                 | 9/7/2011 1:34:00 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 8/3/2011 11:45:29 AM Eastern Daylight Time  
Unable to complete an advanced analysis using a NSG Vehicle for reinforced concrete spans with AASHTO Engine. Neither simple nor continuous reinforced concrete appears to be working.

4/19/2016 3:08:38 PM

HRS AASHTO

1973



Complete Issue Information

I actually get two differenet errors depending on the database I am using.  
First, I get a sytem error with regards to the number of nodes not being equal while working only in our production database. (System Error)  
Second, the stand alone SQL Server database progresses further and I get a spec check error. (Spec Check Error)  
I have included my model and the vehicle.

Thanks,  
Daniel Jones

FROM: Herman Lee DATE: 8/31/2011 9:34:28 AM Eastern Daylight Time  
Srujana, please see whether this is a duplicate of Incident 11083.

FROM: Srujana Thogaru DATE: 9/7/2011 9:32:10 AM Eastern Daylight Time  
Duplicate of 11083. Fixed for 6.3 Service Pack.

Issue ID: 11050  
Subject: Rating Results Table created in Explorer - Enhancement Request

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Kemna, Aaron 8/3/2011 5:46:58 PM  
Modified By: hlee 8/3/2011 8:13:57 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 06500 - 35-75-5353B.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 8/3/2011 2:09:43 PM Eastern Daylight Time

This was suggested by one of our raters.

I would like to see an enhancement of the Rating Results from the Bridge Explorer. Currently when you run ratings for a bridges in the Bridge Explorer it generates the "Rating Results" Dialog Box with the controlling ratings for the bridge. It is desirable that the controlling structure and member be added to "Bridge Rating Results" and the "Structure Rating Results". Also I'd like to see the material type, girder type, control point and impact factor for each rating on those two dialog boxes and the "Member Rating Results" dialog box. This way the user does not need to open the file just to see what's controlling the rating.

Maybe some user control would be nice to determine what columns show up in these tables. Such as, removing LRFR columns for LFR ratings.

Issue ID: 11052

Subject: AASHTO error in populating the x-section data and performing prestress loss LFR specification checking

Folder: /Virtis/Support Center/Virtis

4/19/2016 3:08:39 PM

HRS AASHTO

1975

### Complete Issue Information

|                                   |                     |
|-----------------------------------|---------------------|
| Primary Contact: Thogaru, Srujana |                     |
| Submitted By: Wampler, Danny      | 8/3/2011 8:07:21 PM |
| Modified By: xli                  | 9/9/2011 3:29:21 AM |
| Priority: High                    |                     |
| Category: Bug                     |                     |

### History

| Primary Contact  | Status           | Priority | Category |
|------------------|------------------|----------|----------|
| Lee, Herman      | New              | High     | Unknown  |
| Duray, Jim       | Assigned         |          |          |
| Thogaru, Srujana | Resolved         |          | Bug      |
|                  | Not Reproducible |          |          |
|                  | Assigned         |          |          |
|                  | Resolved         |          |          |
|                  | Closed           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 56-643.xml          |             |
|      | 56-643output.docx   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bin Zhang DATE: 8/3/2011 4:07:31 PM Eastern Daylight Time  
Submitted on behalf of Danny Wampler, Indiana DOT. The bridge model is attached in the document.

Part of the received e-mail on 8/3/2011:

4/19/2016 3:08:39 PM

HRS AASHTO

1976

Complete Issue Information

```

=====
=====
We installed the 64 bit version Virtis 6.3 yesterday. When attempting to run a bridge created in 6.2, I
get error messages with the AASHTO engine. The error messages are:
1.      Error populating the x-section date!
2.      Error performing prestress loss LFR specification checking!
=====
=====

```

FROM: Srujana Thogaru DATE: 8/9/2011 9:39:38 AM Eastern Daylight Time

Error in due to sum of TopSlabThickness + BotSlabThickness + B2 + B4 is 17 in which is equal to the depth of the beam(17 in), which makes current Box beam has no void.

Code has been updated to handle such situations for 6.4 release.

FROM: Srujana Thogaru DATE: 8/9/2011 10:09:33 AM Eastern Daylight Time

Workaround for this would be using circular void box beam with Number of voids, Diameter and CG distance of the Void entered as Zeros.

FROM: Srujana Thogaru DATE: 8/24/2011 8:32:11 AM Eastern Daylight Time  
Fixed for 6.3 Service Pack 1

FROM: Xinmei Li DATE: 9/8/2011 11:20:01 PM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 11053                                          |
| Subject: Errors in Output Details from AASHTO LFD Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Huang, George           | 8/9/2011 3:22:57 PM  |
| Modified By: ghuang                   | 6/26/2012 9:20:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:08:39 PM

HRS AASHTO

1977

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | NSG_Spec_Check_Crash.xml |             |
|      | NSG_Truck.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: George Huang DATE: 8/9/2011 11:29:42 AM Eastern Daylight Time  
 This is a two span PS I-girder bridge. In the details from output screen, there are 3 sets identical results listed. If the intension is to list the results from three different stages, then different stage should be listed and the results from different should not be idetical. The bridge file, 56-643.xml, and the screen shots, 56-643output.docx, are atached.

FROM: Srujana Thogaru DATE: 8/11/2011 10:26:59 AM Eastern Daylight Time  
 Error cannot be reproduced in 6.4 debug. Need to test with 6.3 SP for confirmation.

FROM: Srujana Thogaru DATE: 8/24/2011 10:57:48 AM Eastern Daylight Time  
 Error cannot be reproduced in 6.3 service pack.

FROM: Xinmei Li DATE: 9/8/2011 11:30:07 PM Eastern Daylight Time  
 Verified error not reproducible in 6.3sp1.

FROM: Herman Lee DATE: 9/15/2011 1:10:54 PM Eastern Daylight Time  
 Each run should create the SpecCheckDetails.LST file instead of trying to append to the existing file.

E-mail from George Huang:

=====

Herman,

One more thing, there are only one sets of files in C:\..., but Virtis Windows shows so many sets.

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance  
 MS 9 - 1/9I  
 ----- Forwarded by George Huang/HQ/Caltrans/CAGov on 09/15/2011 10:44 AM  
 -----

George  
 Huang/HQ/Caltrans  
 /CAGov To  
 <hlee@mbakercorp.com>

4/19/2016 3:08:39 PM

HRS AASHTO

1978

Complete Issue Information

09/15/2011 10:18 AM

cc

Subject

Fw: VI 11503

Herman:

I may found the cause of the problem: after every analysis (run), there will be a set of files, "Dist xx.xxx L(R) Bm Cap Sum", in "Details". If you run same girder three times with same or different settings, you will have three sets files with same titles.

I think we may either just same the last set results (this may be enough), or save every sets (it may not be necessary) with different labels.

Let me how do you want me comment on this VI. Thanks.

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 09/15/2011 10:01 AM

-----

George  
Huang/HQ/Caltrans  
/CAGov

To

<hlee@mbakercorp.com>

09/15/2011 09:51 AM

cc

Subject

VI 11503(Document link: George Huang)

Herman,

Both Srujana Thogaru and Xinmei Li could not reproduce the problem in 6.3sp1. However I still have the same problem. If you are able to connect to my computer, I can show you the details. Any suggestion? Thanks.

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I

=====

FROM: Srujana Thogaru DATE: 9/21/2011 10:10:25 AM Eastern Daylight Time  
Fixed code in SCSuperStructure to create a new LST file for every run.

Fixed for 6.3 SP

FROM: George Huang DATE: 9/30/2011 5:40:16 PM Eastern Daylight Time

4/19/2016 3:08:39 PM

HRS AASHTO

1979

Complete Issue Information

The problem is fixed in 6.3 SP beta 2.

FROM: George Huang DATE: 6/26/2012 5:20:50 PM Eastern Daylight Time  
Verified in Virtis 6.4 beta build 2.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 11055                                                        |
| Subject: When checking the Spec Check after running NSG Virtis Crashes |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Metcalf, William        | 8/10/2011 3:29:34 PM |
| Modified By: xli                      | 9/9/2011 2:02:43 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
|                  | Assigned |          |          |
| Ihnat, Joseph    |          |          | Bug      |
| Thogaru, Srujana |          |          |          |
| Ihnat, Joseph    | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: William Metcalf DATE: 8/10/2011 11:33:05 AM Eastern Daylight Time  
when you run the attached NSG truck on the attached structure then you click on the spec checker button you get a crash to desk top.

Complete Issue Information

FROM: Herman Lee DATE: 8/10/2011 1:10:25 PM Eastern Daylight Time  
I'm able to reproduce the crash with the attached structure and NSG vehicle.

FROM: Joseph Ihnat DATE: 9/6/2011 3:19:26 PM Eastern Daylight Time  
Fixed for 6.4 and 6.3.1

FROM: Xinmei Li DATE: 9/9/2011 9:39:14 AM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

Issue ID: 11056  
Subject: LFD Rating Results for Composite Steel too Low - BRASS(6.2)/AASHTO(6.3) Engines

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Jones, Daniel 8/10/2011 6:37:00 PM  
Modified By: hlee 9/16/2011 2:10:11 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
| Gao, Qiang      |          |          |          |
| Skow, Wayne     | Resolved |          | Support  |
|                 | Assigned |          | Unknown  |

4/19/2016 3:08:40 PM

HRS AASHTO

1981



### Complete Issue Information

|             |           |      |         |
|-------------|-----------|------|---------|
| Lee, Herman | Resolved  |      |         |
|             | Assigned  | High | Unknown |
|             | Suspended |      | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 03541 - 63163103000S090.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Daniel Jones DATE: 8/10/2011 2:44:50 PM Eastern Daylight Time  
This was sent to me from Robert Fulton of David Evans and Associates.

Attached are 2 models (One in version 6.2 for Brass Engine results and one in version 6.3 for the AASHTO Engine results) and a summary spreadsheet. In short the LFD ratings for the AASHTO engine for composite steel are too low.

Please advise.

Thanks,  
Daniel Jones

FROM: Qiang Gao DATE: 8/15/2011 9:27:45 AM Eastern Daylight Time  
I can reproduce the problem by comparing the results between 6.3 AASHTO engine and 6.2 Brass engine. In the results from 6.3 AASHTO, it is controlled by "Design Flexure-Steel" at location 27.42, while it is controlled by "SERVICEABILITY-STEEL" at location 12.2 in 6.2 Brass engine results. Firstly, I found 6.3 AASHTO model has different railing and curb models (Std Conc Curb 24" wide walkway + Approach) with 6.2 Brass model (Rail/Curb Combined). I changed 6.3 AASHTO model to use "Rail/Curb Combined", while the results still remain the same. I compared all the dead loads and live loads which are all comparable.

Wayne,  
Herman told me you are more knowledgeable on this. Could you have a look? Thanks!

FROM: Wayne Skow DATE: 8/31/2011 2:11:42 PM Eastern Daylight Time  
The problem is the cover plate. In v63, if a rolled section has a cover plate on either flange, it is not allowed to be compact. Therefore, the allowable bending moment is decreased. If the cover plate is removed, the section is treated as compact. We are contemplating a change in v64 that will allow

4/19/2016 3:08:40 PM

HRS AASHTO

1982

Complete Issue Information

compactness if there's a cover plate on the tension flange only.

FROM: Daniel Jones DATE: 9/15/2011 4:54:47 PM Eastern Daylight Time  
Robert Fulton believes this is not a matter of the member being a compact section. Instead the AASHTO Engine calculates incorrect rating factors for the Load Factor method. Based on output reports, it appears that the AASHTO engine is using  $\phi = 1.3$  from the strength capacity equations in the service check equations and not using the  $.95F_y$  allowable. AASHTO is using  $RF = (F_y - 1.3(DL) - 1.3(SDL)) / (1.3 * 5/3 * (LL + I))$  when it should be  $RF = (.95F_y - (DL) - (SDL)) / (5/3 * (LL + I))$ .

Please advise.  
Thanks,  
Daniel

FROM: Wayne Skow DATE: 9/16/2011 6:54:49 AM Eastern Daylight Time  
A decision was made to include the change I mention above in v6.3 service pack 1. With that change (compact members are allowed cover plates on the tension flange), Aashto's RF's match BRASS as indicated in Robert's spreadsheet. The controlling RF's are now service loads at 22%. In v6.3, the controlling loads were strength @ 50%.

Based on Robert's statement "Based on output reports, ...", I also checked the output of both v6.3 and v6.3sp1. There are two separate routines and reports that handle strength and service ratings. Each appear to be using the proper factors which are indicated on the output. Please have Robert review that as I cannot reproduce it. If he still finds the wrong factors reported on the output, please have him send a screen shot.

I attached screen shots from v6.3 and v6.3sp1.

|                                          |
|------------------------------------------|
| Issue ID: 11057                          |
| Subject: Virtis Std Engine crashed on G3 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Zhang, Bin              | 8/15/2011 2:44:02 PM |
| Modified By: hlee                     | 9/7/2011 5:15:15 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:40 PM

HRS AASHTO

1983

Complete Issue Information

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | unbraced cantilever.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/15/2011 10:44:11 AM Eastern Daylight Time  
Submitted on behalf of Daniel Yalda, MI DOT.

Received e-mail:

=====  
=====

Hi,  
I've created the model using Virtis 6.2 and now I tried to run it using Virtis 6.3 somehow the file crashes on third beam. Could you please look into it and let me know why is crashing on me. Thanks  
Daniel Yalda  
Load Rating Engineer  
Construction and Technology Division  
(517) 322-5682

=====  
=====

FROM: Herman Lee DATE: 9/7/2011 1:02:06 PM Eastern Daylight Time  
Virtis/Opis Task Force and User Group decided not to deliver or maintain Virtis Std Engine in future releases.  
Status changed from Assigned to Suspended.

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 11069<br>Subject: 10.48.4.1. Cb crashes for unbraced cantilevers |
|----------------------------------------------------------------------------|

|                                                                       |
|-----------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Skow, Wayne |
|-----------------------------------------------------------------------|

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 8/18/2011 5:25:30 PM |
| Modified By: xli               | 9/9/2011 2:21:55 PM  |
| Priority: High                 |                      |
| Category: Bug                  |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Skow, Wayne     | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Duplicate |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | VI_11070_Virtis_vs_Aashto_LF<br>R.docx |             |
|      | 00016 -<br>11111111000S070rev.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/18/2011 1:25:49 PM Eastern Daylight Time  
Run attached girderline with AASHTO LFD engine. 10.48.4.1 Cb crashes because the brace pt moment table is null. But since at 0' the section is an unbraced cantilever, this article shouldn't try to retrieve the moments from brace pt moment table (it won't exist because the section is unbraced). Cb = 1 for unbraced cantilevers so don't try to access the brace pt moment table if stillXSecProp.UnbracedCantilever is true.

This bridge should be put in the regression testing suite.

FROM: Wayne Skow DATE: 8/30/2011 1:40:41 PM Eastern Daylight Time  
fixed.

FROM: Xinmei Li DATE: 9/9/2011 10:19:11 AM Eastern Daylight Time

4/19/2016 3:08:40 PM

HRS AASHTO

1985

Complete Issue Information

Verified fixed for 6.3 service pack 1.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11070                                           |
| Subject: AASHTO engine rolled steel beam with cover plate |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: McMunn, Creightyn       | 8/19/2011 4:24:43 PM  |
| Modified By: cmcmunn                  | 10/20/2011 5:46:41 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 8/19/2011 12:29:30 PM Eastern Daylight Time  
When analyzing "Span 2, Typical Interior Beam" on the attached file, we are getting significantly lower results with the AASHTO engine as compared to the Virtis engine.

FROM: Wayne Skow DATE: 9/13/2011 8:59:18 AM Eastern Daylight Time  
The problem is the bottom cover plate. In 6.3, any steel girder with a cover plate is not allowed to be compact which lowers the girder's allowable capacity. This is appropriate for flanges with cover plates in compression, but compact sections with cover plates on the tension flange only should remain compact. This problem has been fixed in 6.3 service pack 1 (see attached comparison document).

## Complete Issue Information

Issue ID: 11077

Subject: Fatigue Rating issue for simple span bridge

Folder: /Virtis/Support Center/Virtis

Primary Contact: Skow, Wayne

Submitted By: Zhang, Bin

8/22/2011 6:02:56 PM

Modified By: sthogaru

8/29/2012 2:15:03 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Accepted | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          | Bug      |

### Contacts

4/19/2016 3:08:41 PM

HRS AASHTO

1987

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/22/2011 2:03:34 PM Eastern Daylight Time  
Submitted on behalf of Andrea F. Grunau, TranSystems.

Received e-mail:

=====

Herman,

It looks like all our bridges with welded cover plates are having this problem. I am including 1 bridge. All the members in span 2 have user defined POI with Fatigue Detail Category E'.

Thanks.  
Andrea

From: Bridgeware, [Bridgeware@mbakercorp.com]  
Sent: Monday, August 22, 2011 10:47 AM  
To: PR-Andrea Grunau  
Subject: RE: Fatigue Rating

Andrea,

Please sent us the bridge and indicates which member alternative is having this issue for us to investigate further.

Herman

-----Original Message-----

From: afgrunau@transystems.com [mailto:afgrunau@transystems.com]  
Sent: Monday, August 22, 2011 10:33 AM  
To: Bridgeware,  
Subject: RE: Fatigue Rating

Herman,

Yes, I disagree with this check. A simple span beam will have no negative live load moment, but the range is still tensile. I also want it to give me the rating for the Infinite Fatigue Check 7.2.4, and I have

Complete Issue Information

a category E' which is lower than C so should there not be a rating here?

Andrea

---

From: Bridgeware, [Bridgeware@mbakercorp.com]  
Sent: Monday, August 22, 2011 10:26 AM  
To: PR-Andrea Grunau  
Subject: RE: Fatigue Rating

Andrea,

The screen shot indicates that "Fatigue check not required as per Art. 7.2.3" for the \*\* note in the table. Please let me know if you disagree with this check.

Herman Lee

-----Original Message-----

From: afgrunau@transystems.com [mailto:afgrunau@transystems.com]  
Sent: Monday, August 22, 2011 9:55 AM  
To: Bridgeware,  
Subject: Fatigue Rating

Hi,

I am trying to determine the Fatigue Rating for a Category E' detail. I have a simple span so the bottom flange is always in tension. I specified a fatigue detail in the user defined Point of Interest and when running the AASHTO LRFD Fatigue Truck I do not get any rating. I have attached a screen shot of the output at my POI. I am using the AASHTO LRFR 2011 factors, with the MBE 2nd LRFD 5th 2010i as the specifications.

Is there something I have to check in order for it to calculate the fatigue ratings?

Thanks.  
Andrea

Andrea F. Grunau

TranSystems  
45 Eisenhower Drive  
Paramus, NJ 07652-1416  
Main: 201-368-0400  
Direct: 201-334-1465  
Fax: 201-368-7740  
<http://www.transystems.com/>

=====

The bridge model is attached in the documents.



Complete Issue Information

FROM: Wayne Skow DATE: 8/31/2011 1:26:26 PM Eastern Daylight Time  
This problem was actually fixed for issue 10463. However, it was only fixed in the MBE first edition version of 7.2. The fix wasn't copied to the MBE second edition version. That is now complete.

If you run the first edition, you will get a result.

FROM: Bin Zhang DATE: 8/31/2011 2:30:53 PM Eastern Daylight Time  
The workaround works!

FROM: Herman Lee DATE: 8/31/2011 2:48:36 PM Eastern Daylight Time  
Resolved by Wayne for the 6.4 Release.

FROM: Srujana Thogaru DATE: 8/29/2012 9:38:03 AM Eastern Daylight Time  
Fix verified with 6.4 Beta 4

|                                         |
|-----------------------------------------|
| Issue ID: 11081                         |
| Subject: LRFR System Factor Application |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Teal, Dean              | 8/25/2011 1:19:49 PM |
| Modified By: hlee                     | 6/4/2012 7:35:47 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Discard   |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:08:41 PM

HRS AASHTO

1990

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 8/25/2011 9:22:45 AM Eastern Daylight Time

We can apply the system factor to each member Alt (I different system factor can be applied to each)  
We need to be able to apply a system factor to ranges on the member - like we can for deterioration over a range. It's basically the same thing.

We uncovered this need during the NHI LRFR course.

FROM: Herman Lee DATE: 6/4/2012 3:35:09 PM Eastern Daylight Time  
Discarded by TAG May 2012.

|                                                                                                    |
|----------------------------------------------------------------------------------------------------|
| Issue ID: 11083                                                                                    |
| Subject: Bridge runs fine in standard gauge but doesn't run in NSG gives a spec check failed error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Metcalf, William        | 8/25/2011 6:51:32 PM |
| Modified By: xli                      | 9/9/2011 2:33:00 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:08:41 PM

HRS AASHTO

1991

Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Lee, Herman      | New       | High | Unknown     |
| Thogaru, Srujana | Assigned  |      |             |
| Lee, Herman      | New       | High | Unknown     |
|                  | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 8/25/2011 2:52:59 PM Eastern Daylight Time  
Bridge runs fine in standard gauge but doesn't run in NSG gives a spec check failed error.

FROM: Srujana Thogaru DATE: 8/29/2011 10:49:27 AM Eastern Daylight Time  
Fixed for 6.4 Release.

FROM: Srujana Thogaru DATE: 8/30/2011 1:59:50 PM Eastern Daylight Time  
Fixed for 6.3 SP 1

FROM: Xinmei Li DATE: 9/9/2011 10:27:06 AM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.

|                                           |
|-------------------------------------------|
| Issue ID: 11084                           |
| Subject: Dist. Factor LRFR Stripped Lanes |

Complete Issue Information

|                                                |
|------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis          |
| Primary Contact: Lee, Herman                   |
| Submitted By: Teal, Dean 8/25/2011 11:05:31 PM |
| Modified By: hlee 8/28/2011 11:56:45 AM        |
| Priority: High                                 |
| Category: Enhancement                          |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Skow, Wayne      | Assigned |          |          |
| Duray, Jim       |          |          |          |
| Thogaru, Srujana |          |          |          |
| Lee, Herman      |          |          | Bug      |
|                  | Resolved | Critical |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | Bridge Rating Results Report.pdf |             |
|      | 110416 truck.xml                 |             |
|      | 060-0216.xml                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 8/25/2011 7:08:06 PM Eastern Daylight Time  
 Virtis currently uses Out to Out (curb to curb) to find LRFR Dist. Factors.

4/19/2016 3:08:42 PM

HRS AASHTO

1993

### Complete Issue Information

The MBE allows the use of stripped lanes for permitting, this will allow more capacity. We need to add this feature (option) and take advantage of the MBE provisions.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 11085                                                                                |
| Subject: Rating factors for truck do not appear to be correct based on Truck weight & Capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 8/29/2011 2:38:53 PM |
| Modified By: sthogaru                 | 8/29/2012 7:01:41 PM |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 8/29/2011 10:45:57 AM Eastern Daylight Time  
From my staff (Litchfield). When he runs the attached truck for the attached structure model, the rating factors do not seem to correspond with the reported capacity and the actual truck weight. For instance, the truck weight is approx 117 tons, but in the attached report, the Operating rating factor is shown as 7.0 and the available capacity is shown as 112 tons, so the rating factor should be less than 1. Applies to Inventory as well.

4/19/2016 3:08:42 PM

HRS AASHTO

1994

Complete Issue Information

FROM: Wayne Skow DATE: 8/31/2011 1:24:58 PM Eastern Daylight Time

There appears to be a problem with the custom vehicle routines. The truck referenced above has 19 axles with weights totaling 349.51 kips. The minimum distance between the first and last axle is around 276 ft (on a 526 ft, 4 span girder). The vehicle weight being reported is 31.8 kips (58.48/3.678 or  $97.67/6.143 = 15.9$  ton) which just happens to be the combined weight of the first 2 axles.

FROM: Jim Duray DATE: 8/31/2011 4:51:16 PM Eastern Daylight Time

Only the minimum axle spacing is input. Both the minimum and maximum spacing for each axle must be input. With the current vehicle definition the software assumes a variable axle spacing for all but the first axle. The influence line loader was written to handle only one variable axle spacing for a vehicle so only the first two axles are used, the others are ignored. We are adding an error message to the AASHTO engine to inform the user of this condition.

FROM: Tim Armbrecht DATE: 9/1/2011 10:09:14 AM Eastern Daylight Time

Why not set it up so that if the max field is empty, it matches what's in the min field? Why should both be filled when there is no variable spacing? Especially for permits, when there is usually no variable spacing.

FROM: Jim Duray DATE: 9/1/2011 1:51:07 PM Eastern Daylight Time

We are going to make that change too. Until this change is released in 6.4 the user will have to define the vehicle with both a min and max.

FROM: Tim Armbrecht DATE: 9/1/2011 2:01:39 PM Eastern Daylight Time

Jim, great, thanks.

FROM: Herman Lee DATE: 9/1/2011 4:01:55 PM Eastern Daylight Time

Modified the live loader to:

- Set max spacing = min spacing when max spacing is not entered
- Set min spacing = max spacing when min spacing is not entered

Fixed for 6.4 Release.

FROM: Herman Lee DATE: 10/16/2011 7:09:04 PM Eastern Daylight Time

Also fixed for 6.3 Service Pack.

FROM: Todd Thompson DATE: 10/20/2011 9:41:40 AM Eastern Daylight Time

Tested this with 6.3 SP 1 - Beta 2 ---- appears to be corrected now. (Todd - SDDOT)

FROM: Bin Zhang DATE: 10/24/2011 2:30:34 PM Eastern Daylight Time

Verified this fix with 6.3 SP 1 - Beta 2.

FROM: Tim Armbrecht DATE: 11/4/2011 2:46:02 PM Eastern Daylight Time

Agree that this appears to have been fixed - tested in SP1 beta 3.

FROM: Srujana Thogaru DATE: 8/29/2012 2:17:14 PM Eastern Daylight Time

Verified with 6.4 Beta 4

Issue ID: 11086

4/19/2016 3:08:42 PM

HRS AASHTO

1995

Complete Issue Information

Subject: Bug fix for Article 6.6.1.2.1

Folder: /Virtis/Support Center/Virtis

Primary Contact: Mlynarski, Mark

Submitted By: Mlynarski, Mark 8/31/2011 1:49:59 PM

Modified By: bzhang 8/28/2012 9:30:28 PM

Priority: High

Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mark Mlynarski DATE: 8/31/2011 9:50:23 AM Eastern Daylight Time

When adding a change for article 6.6.1.2.1 noticed a but in the checking of the 3rd paragraph of 6.6.1.2.1.

Namely in the method ComputeStresses of

ALRFD\_4E\_2008I\_06\_06\_01\_02\_02  
 ALRFD\_5E\_06\_06\_01\_02\_02

Change

```

if(m_dDLStress + Math.Max(m_dLLMinStress,m_dLLMaxStress) > 0.0 ||
  (m_dDLStress < 0.0 &&
  Math.Abs(m_dDLStress) < 2.0 * m_dLLMaxStress))
  {

```

to

4/19/2016 3:08:42 PM

HRS AASHTO

1996

Complete Issue Information

```
if(m_dDLStress + Math.Max(m_dLLMinStress,m_dLLMaxStress) > 0.0 ||
    (m_dDLStress < 0.0 &&
    Math.Abs(m_dDLStress) < 2.0 * Math.Max(m_dLLMinStress, m_dLLMaxStress)
    {
```

Where the "Math.Max(m\_dLLMinStress, m\_dLLMaxStress)" replace the "m\_dLLMaxStress" on the 3rd line of code

FROM: Herman Lee DATE: 8/31/2011 10:35:46 AM Eastern Daylight Time  
Resolved by Mark for the 6.3 Service Pack and 6.4 Release.

FROM: Xinmei Li DATE: 9/9/2011 10:33:28 AM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.  
Tested with Trainingbridge1, added a fatigue POI, did AASHTO LRFD analysis, article 6.6.1.2.1 shows up in article 6.6.1.2.2.

FROM: Bin Zhang DATE: 8/28/2012 5:24:41 PM Eastern Daylight Time  
Re-backcheck for the acceptance build.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11087                                                          |
| Subject: Impact factor override not working in Vehicle Properties window |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Withers, Richard        | 8/31/2011 7:06:11 PM |
| Modified By: hlee                     | 8/31/2011 8:13:41 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



Complete Issue Information

Description

FROM: Richard Withers DATE: 8/31/2011 3:20:26 PM Eastern Daylight Time  
I am using the VIRTIS standard engine. When load rating a bridge, in the analysis settings window I selected the Advanced button on the right side of the window. The Vehicle Properties window pops up. When I leave the Impact field blank, the load rating runs and I get a load rating factors I will call "A". When I change the Impact to 0.0, I get load rating factors "B". If I then go back and change the impact to 0.5, I get load rating factors "A" again. It doesn't matter what I put in the Impact field, as long as it is not zero, I get load rating factors "A". In other words, it seems the VIRTIS engine only uses 1 impact modification factor, which is zero.

I have run this on multiple types of bridges with standard and non-standard gage trucks. BRASS appears to handle the impact modification factor correctly.

Thank you,  
Richard Withers

FROM: Herman Lee DATE: 8/31/2011 4:03:49 PM Eastern Daylight Time  
Yes, it's a limitation in the Virtis Std Engine. Virtis Std Engine (Virtis LFD/ASD) doesn't support impact override other than 0.0.

The analysis progress log will have the following message to warn the user.

=====  
Warning - Non-zero impact factor override is not supported!  
=====

Please note that the AASHTO Engine in 6.3 does support non-zero impact override.

Issue ID: 11088  
Subject: Horizontal Leg section loss that is entered is not included in the analysis of the truss member

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Armbrecht, Tim 9/1/2011 2:12:39 PM  
Modified By: bzhang 8/28/2012 9:45:44 PM  
Priority: High  
Category: Bug

History

4/19/2016 3:08:43 PM

HRS AASHTO

1998

Complete Issue Information

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Lee, Herman      | New                | High     | Unknown     |
| Lee, Herman      | New                | High     | Unknown     |
| Thogaru, Srujana | Assigned           |          |             |
| Skow, Wayne      | Information Needed |          |             |
|                  | Assigned           |          |             |
|                  | Suspended          |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | VI_11089_10.48.1.2.png      |             |
|      | MixedBmMomAnalysisError.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 9/1/2011 10:14:38 AM Eastern Daylight Time  
 From my consultant (Souther):

There is a bug in Virtis Truss where, under Deterioration, HorizontalLeg section loss that is entered is not included in the analysis of the truss member. In the attached Virtis model under Truss "Span 3 N Truss", consider the identical Builtup type truss Members L0L1 and L1L2. Both L0L1 and L1L2 have identical VerticalLeg section loss entered but L0L1 has HorizontalLeg section loss entered as well. But, upon examining the MemSectionProperties.XML file, one finds that the Gross and Net Areas reported for them, which are supposed to reflect both the VerticalLeg and HorizontalLeg Deterioration entered, are the same. Since there is HorizontalLeg section loss entered for L1L2 in addition to the VerticalLeg section loss that is entered for both L0L1 and L1L2 the Gross and Net Areas for L0L1 should be less than for L1L2. This bug is also reflected in the ratings, which are the same for both members but should be less for L0L1.

FROM: Herman Lee DATE: 9/6/2011 2:06:39 PM Eastern Daylight Time  
 Attached additional information from Tim Souther.

FROM: Xinmei Li DATE: 9/6/2011 3:36:27 PM Eastern Daylight Time  
 This is confirmed a bug. When angle is set deterioration at both Vertical and Horizontal legs, only

Complete Issue Information

Vertical is considered.

FROM: Xinmei Li DATE: 11/3/2011 11:00:00 AM Eastern Daylight Time  
Resolved for 6.4

FROM: Phil Litchfield DATE: 6/26/2012 4:53:01 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and is fixed.

FROM: Bin Zhang DATE: 8/28/2012 5:31:21 PM Eastern Daylight Time  
Verified for acceptance build.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 11089                                         |
| Subject: Apparent AASHTO Engine LFD Moment Analysis Bug |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Armbrecht, Tim          | 9/1/2011 6:02:33 PM  |
| Modified By: wskow                    | 9/28/2011 1:11:33 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 9/1/2011 2:05:13 PM Eastern Daylight Time  
From my consultant (Souther):

There is a bug in Virtis LFD in which analysis of a 45.5' long beam in a simple-span multi-beam WF Virtis model, made up of a 2.25' length of W27x102 spliced to the remaining 43.25' of B28x97, results in apparently erroneous results as compared to another beam identical except for being B28x97 for full length. In the attached model, the former is Member "3 - 2nd N Int-x" and the latter is Member "4 - 2nd

4/19/2016 3:08:43 PM

HRS AASHTO

2000

Complete Issue Information

S Int-y". The Virtis v. 6.3 AASHTO Engine LFD analysis results are as follows:

Member Name: 3 - 2nd N Int-x

Member Alternative Name: B28x97/W27x102-Comp

| Live Load |           | Rating |        | Controls        | Capacity |           | Location<br>Percent |
|-----------|-----------|--------|--------|-----------------|----------|-----------|---------------------|
|           |           | Factor |        |                 | (Ton)    | Span (ft) |                     |
| HS 20-44  | Inventory | 1.223  | Design | Flexure - Steel | 44.04    | 1 13.65   | 30.0                |
|           | Operating | 2.043  | Design | Flexure - Steel | 73.55    | 1 13.65   | 30.0                |

Member Name: 3 - 2nd S Int-y

Member Alternative Name: B28x97/W27x102-Comp

| Live Load |           | Rating |  | Controls        | Capacity |           | Location<br>Percent |
|-----------|-----------|--------|--|-----------------|----------|-----------|---------------------|
|           |           | Factor |  |                 | (Ton)    | Span (ft) |                     |
| HS 20-44  | Inventory | 1.380  |  | Service - Steel | 49.67    | 1 22.75   | 50.0                |
|           | Operating | 2.304  |  | Service - Steel | 82.94    | 1 22.75   | 50.0                |

Since the spliced 2.25' end should have only a possibly very minor effect in the loads and structural characteristics in the overall beam, there should be very little difference in the ratings between the two members. Both beams should be controlled by Service or Flexure at the mid-point of the span. This is the case for AASHTO ASD and for both BRASS LFD and ASD. Since this is not the case for the AASHTO LFD analysis, there is apparently a bug in the AASHTO LFD analysis engine.

In addition, the Virtis 6.3 AASHTO LFD results showing Service to be the limit-state at the span mid-point for Member 4 - 2nd S Int-y is also questionable. Note that for the Virtis 6.2 BRASS LFD analysis the limit-state is not Serviceability but Flexural - Steel Strength and is 25% lower than the Service rating factors calculated by the AASHTO LFD engine. This also suggests a possible bug. One should also take note that rating factors for BRASS and AASHTO ASD analyses are comparable.

The Virtis v. 6.2 BRASS Engine LFD analysis results for the mixed-beam member are as follows:

Member Name: 3 - 2nd N Int-x

Member Alternative Name: B28x97/W27x102-Comp

Load Factor Rating Summary

| Live Load |           | Rating |          | Controls       | Capacity |           | Location<br>Percent |
|-----------|-----------|--------|----------|----------------|----------|-----------|---------------------|
|           |           | Factor |          |                | (Ton)    | Span (ft) |                     |
| HS 20-44  | Inventory | 1.039  | Flexural | Steel Strength | 37.39    | 1 22.75   | 50.0                |
|           | Operating | 1.735  | Flexural | Steel Strength | 62.45    | 1 22.75   | 50.0                |

Also, while the apparent bugs reported here are for simple-span composite WF beams, they may also affect other bridge member types, such as plate girders, continuous and non-composite.

FROM: Wayne Skow DATE: 9/9/2011 10:39:36 AM Eastern Daylight Time

Aashto LFR appears to be working correctly.

Member "B28x97-Comp (Spliced End)" is laterally supported by diaphragms at two locations, 15.17 ft and 30.33 ft. The 30% location falls within the 1st segment (0.0 to 15.17 ft). Since this segment is made of two steel sections of different depths, the segment is no longer prismatic disqualifying it as a compact section (10.50.1.1.2 fails). This reduces the allowable causing the 30% POI to control with a

## Complete Issue Information

lower RF. Compare the 30% location with the 70% location.

If you add another diaphragm at 3 ft making the section at the 30% POI prismatic once again, you get the result you're expecting.

Do you concur?

FROM: Tim Armbrrecht DATE: 9/23/2011 4:30:50 PM Eastern Daylight Time  
My consultant's (Souther) response:

Technically, he is correct. The introduction of the slightly different 2.25' end section does make the beam within the first bracing range non-prismatic. However, I'm not sure why we are concerned with diaphragm location in a simple span since the top flange is in compression full length and is continuously supported laterally by the deck. From a practical standpoint, it is obvious that the difference between the spliced end section (W27x102) and the remainder of the beam (B28x97) is minor and would have virtually no effect on the remainder of the beam and that the beam should be considered prismatic for its full length. Virtis should be modified to consider this beam as constant depth. In the meantime, the suggested workaround will produce the proper results.

There is another issue that's somewhat unique to this beam, which answers the issue of Service controlling instead of Strength. Since the 30ksi Fy for the B28x97 section is less than 36ksi, plastic analysis does not apply (AASHTO ). When the "Allow Plastic Analysis" box is unchecked for either the B28x97 full length beams or the beams with the W27x102 spliced end, the control point is at mid-span with limit-state Strength. When the steel being used is less than 36ksi the default for this box should be unchecked in accordance with the AASHTO Standard Specifications. Perhaps we could get a procedure from Baker to apply this to our Virtis databases and a future enhancement to cause the appropriate setting based on the steel being used. I understand that some other states might want to allow plastic analysis regardless of steel type but the program should default to the Standard Specifications. This could also be an entry in our proposed global settings customization tables. When steel other than those listed in the first paragraph of 10.50.1.1, i.e., "(AASHTO M 270 Grades 36, 50, and 50W (ASTM A 709 Grades 36, 50, and 50W), and AASHTO M 270 Grade HPS70W (ASTM 709 Grade HPS70W)" plastic analysis should not be permitted. Since this is not complied with by the AASHTO Engine, it should be considered a bug in the program. That would be true even if the "Allow Plastic Analysis" box is checked. The operative word for that checkbox is "allow". It should be understood that plastic analysis is allowed when the Std. Specs. allow it. It's apparently being used to apply plastic analysis despite them.

FROM: Wayne Skow DATE: 9/28/2011 9:05:20 AM Eastern Daylight Time

The determination as to whether the section is prismatic or not and whether plastic analysis applies to a specific steel grade is based on multiple factors. Depth and Fy are only one factor in each of those cases. The exact determination in every practical situation involves more complexity than Virtis has been given. The user manages that through features and modeling. For example, 10.50.1.1's steel grade list is not exhaustive and I don't think 36 ksi is a specific limit.

At this point, I think Virtis is behaving according what is specified for 10.48.1.2 in the AASHTO LFR Engine Method of Solution (see attached)."

Issue ID: 11090

Subject: AASHTO LFD using a sustained modular ration of 1 for prestress

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Metcalf, William        | 9/1/2011 8:20:51 PM  |
| Modified By: hlee                     | 2/17/2012 4:27:25 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 00112 - MOF37-0031.xml  |             |
|      | 11091_00116 - Beta2.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 9/1/2011 4:26:34 PM Eastern Daylight Time

Here are the printout from the spec checker for a prestressed girder. The modular ratio in both stages is the same and it is 1 unless i'm missing some thing. Also if I change the number in the "Structure Typical Section" screen from 2 to 3 or 3 to 2 w/e these numbers (and the rating) do not change at all. Also for prestress girders the sustained modular ratio field in the structure typical section defaults to 3.00 where it should default to 2.00. I have included pdfs of the spec checker out put for this. The problem is not specific to a particular bridge i have observed it for several.

FROM: William Metcalf DATE: 9/1/2011 5:10:04 PM Eastern Daylight Time

err I just realized that the 2n may not have been used in LFR, i'm not sure.

4/19/2016 3:08:43 PM

HRS AASHTO

2003

Complete Issue Information

FROM: Srujana Thogaru DATE: 11/2/2011 11:05:54 AM Eastern Daylight Time  
Sustained Modular Ratio Factor is not used in the computation of stage 2 section properties because this matches with the PCI and NHI examples which are used as reference for Virtis.  
Please let us know if you any comments on this.

FROM: Herman Lee DATE: 12/2/2011 11:51:15 PM Eastern Standard Time  
Information Needed E-mail sent on 12/2/11.

FROM: Herman Lee DATE: 1/2/2012 12:24:38 PM Eastern Standard Time  
Information Needed E-mail sent on 1/2/12.

FROM: Herman Lee DATE: 2/17/2012 11:24:46 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 11091                                                           |
| Subject: Unable to analyze girder member in corrugated deck floor system. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: lhnat, Joseph        |                       |
| Submitted By: Lee, Herman             | 9/2/2011 7:59:26 PM   |
| Modified By: bzhang                   | 8/28/2012 10:12:16 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Herman Lee DATE: 9/2/2011 3:59:39 PM Eastern Daylight Time  
Submitted on behalf of Sally Doles (sdoles@lonco.com), Lonco, Inc.

Received Bridgeware e-mail:

=====

I am doing a rating for a bridge using the a Floor System Superstructure with the Girder-Floorbeam-Stringer model. The structure has a corrugated deck with gravel fill. I have entered the corrugated deck in the model but when I check the Validation list, there are warnings under each member that a "concrete deck profile or reinforcing for deck" has not been entered. The program also computes the Live load distribution factors for a concrete deck, but I had entered the moment live load distribution factors that I wanted to use.

My main problem is that when I run the rating, I get an error that says "Unable to Perform Analysis" and under debug it says "Line 616 in sourcefile AbxAshtoEngineUiCtl.cpp" but no other explanation. I have gone thru my model several times and cannot figure out why it will not run. I have attached the file in xml format. Help as to why virtis is unable to perform analysis is greatly appreciated as I am completely at a loss right now.

Thank you,

Sally D. Doles, P.E.

=====

Developer Note:

For floor system structure def, CUIBWSTreeMemberAltLabelItem::InitGirderMemberAlt should check the structure def deck panel type before setting the member alt deck type.

Alpha Testing: Confirm the apply deck load in the girder rating, validation messages and girder LL distribution factors.

FROM: Herman Lee DATE: 9/6/2011 7:32:39 AM Eastern Daylight Time  
Please remove the Shear Connectors tab in the Cross Section Ranges window if the deck type is corrugated deck.

FROM: Joseph Ihnat DATE: 9/6/2011 11:25:04 AM Eastern Daylight Time  
Fixed for 6.4

FROM: Joseph Ihnat DATE: 9/6/2011 3:20:39 PM Eastern Daylight Time  
Fixed for 6.3.1. Member alternatives entered in 6.3.0 will need to be reentered in 6.3.1 6.4

FROM: Xinmei Li DATE: 9/9/2011 10:34:39 AM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.  
Shear Connectors tab is removed. Reentered a new member alt, analyzed with no error.

FROM: Xinmei Li DATE: 10/21/2011 9:49:04 AM Eastern Daylight Time  
Similar problem may happens in floorbeams and stringers, see the following email from Sally Doles. Bridge provided by Sally is attached to this incident (11091\_00116 - Beta2.xml).



Complete Issue Information

-----Original Message-----

From: Sally Doles [mailto:sdoles@Lonco.com]  
Sent: Thursday, October 20, 2011 1:22 PM  
To: Bridgeware,  
Subject: RE: Virtis/Opis 6.3 Service Pack 1 Beta 2

\*Incident 11091 - Unable to analyze girder member in corrugated deck floor system\*

I re-entered the bridge from this incident (i.e. - girder-floorbeam-stringer superstructure with a corrugated metal deck) since the service pack does not fix the case for bridges which were entered previously.

Virtis ran a rating for the girder but it came up as failing and the Critical Moments were significantly higher than those found if the structure was entered as a Line System. But again, for both the floorbeam and stringers, I got the same error of "unable to Perform Analysis" and "Line 616 in sourcefile AbxAashtoEngineUiCtl.cpp"

Another item for this particular bridge is that when I used the Stringer Unit Layout Wizard, under the live load distribution factors, I could not use the "Compute from typical section" button. Virtis would come up with "Error computing distribution factors. But when I went into each individual stringer case after the wizard was run, I was able to use the "Compute from typical section" button without a problem.

I have attached the file I used to test this Incident.

If there are any questions, please let me know.

Thank you,

Sally D. Doles, P.E.  
LONCO, INC.  
Phone: 303-620-0098

FROM: Xinmei Li DATE: 10/21/2011 10:35:41 AM Eastern Daylight Time

FROM: Joseph Ihnat DATE: 10/24/2011 7:47:46 AM Eastern Daylight Time  
Stringers and floorbeams also fixed now for 6.3.1. Data needs to be reentered.

FROM: Bin Zhang DATE: 8/28/2012 5:46:15 PM Eastern Daylight Time  
Verified for acceptance build

Issue ID: 11092

Subject: Floorbeam Spec Check Issue

Folder: /Virtis/Support Center/Virtis

Primary Contact: Zhang, Bin

4/19/2016 3:08:44 PM

HRS AASHTO

2006

Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Armbrecht, Tim | 9/6/2011 6:27:07 PM  |
| Modified By: hlee            | 9/13/2011 7:07:50 PM |
| Priority: High               |                      |
| Category: Support            |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | Verified |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Training Bridge 1.xml               |             |
|      | 11093_Shear Rating Comparisons.docx |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/6/2011 2:27:39 PM Eastern Daylight Time  
 Submitted on behalf of Tim Armbrecht, IL DOT.

Please see attached PDF file for the e-mail with embedded graphics.

=====

From: Thompson, Dave C  
 Sent: Tuesday, September 06, 2011 10:51 AM  
 To: Armbrecht, Tim A  
 Subject: FW: Shade Lohmann FB Spec Check Issue

Tim,

4/19/2016 3:08:44 PM

HRS AASHTO

2007

## Complete Issue Information

Please see below we (AECOM) are getting 0 ton ratings using Vitis 6.3 on the floor beam ratings where it transitions from the main section of the floor beam to the cantilevered section. In Vitis 6.2 using the brass engine our model was analyzing this correctly, and then modified the model per HBM's recommendation ran it in Vitis 6.3 (AASHTO Engine) which generated 0 ton ratings at this location.

We believe this is a bug with the AASHTO engine.

If you have any questions or need additional information please let me know.

David C. Thompson

From: McCaffrey, Brian  
Sent: Thursday, September 01, 2011 1:27 PM  
To: Moussa A. Issa  
Cc: Thompson, Dave (Chicago IL); 'Mahmoud Issa'; 'Justin Brown'  
Subject: RE: Shade Lohmann FB Spec Check Issue

Moussa,

I made the changes using your proposed corrections in v/6.3 but I'm now getting 0T ratings on these floorbeams. Did you get meaningful results when you tried this on your model?

I attached 0900108 in v/6.3 with the floorbeam profile changes on Spans 1-4 EB. I will change the FB assignments in the rest of the superstructure defs when we resolve this, that won't take long.

Brian

From: Moussa A. Issa [mailto:moussa.issa@hbmengineering.com]  
Sent: Wednesday, August 24, 2011 2:18 PM  
To: McCaffrey, Brian  
Cc: Thompson, Dave (Chicago IL); 'Mahmoud Issa'; 'Justin Brown'  
Subject: Shade Lohmann FB Spec Check Issue

Hello Brian,

As you may know, we recently received a fix for the unsymmetrical loading in our main truss span through the use of Vitis 6.3 and additional fixed DLL's (to be used in Vitis 6.4). We needed to reanalysis the model because of the updated engine (AASHTO Engine instead of BRASS) and we uncovered some errors in the approach span floorbeams. The specification checks that the new engine uses does not allow for the assumptions that were made in regards to the connection of the cantilever portion of the floorbeam to the girder. Specifically, the cross section check does not allow for the top flange to have the dimensions 0.01"x0.01" (width x thickness) and it does not allow for a discontinuity in the web section (going from 60" to 48" and 48" to 60" adjacent to each other). To resolve these issues, we propose 2 fixes:

1. Make the top flange dimensions 1"x0.01" (width x thickness) and use a dummy steel of  $f_y=0.01$ ksi (resolves dimensional issue).
2. Make a transition from 60" to 48" of length 0.02" and then from 60" to 48" with the same length (resolves the discontinuity issue).

FYI: Our current tolerances are set to 0.01 ft and 0.001 in

4/19/2016 3:08:44 PM

HRS AASHTO

2008

Complete Issue Information

Please verify that these changes are satisfactory and complete them so that we can finalize the Virtis model. Attached please find the most current Virtis .xml's for the EB and the WB bridges. If you need any additional information please don't hesitate to call. We can also provide the Virtis 6.3 DLL's for you if you find that you need them. Have a nice day.

Thanks,

Moussa A. Issa, Ph.D., P.E., S.E.  
 Chief Structural Engineer  
 HBMENGINEERING GROUP, LLC  
 4415 West Harrison Street, Suite 231  
 Hillside, Illinois 60162  
 moussa.issa@hbmengineering.com

FROM: Bin Zhang DATE: 9/13/2011 2:35:04 PM Eastern Daylight Time  
 If the top flange of the floorbeam has a very small dimension (1"x0.01"), it will not pass the compression flange proportionality check ( $0.1 \leq l_{yc}/l_y \leq 0.9$ ). This led to a zero negative moment capacity and then a zero rating factor.  
 The AASHTO engine does not have the function/feature to analyze the I beam without a top flange, and I could not find a workaround to trick the AASHTO engine.

Issue ID: 11093  
 Subject: Issue with Virtis v6.3 recognizing LRFD Condition factor

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Thogaru, Srujana  
 Submitted By: Cavanaugh, Scott 9/8/2011 3:49:00 PM  
 Modified By: hlee 6/5/2012 1:01:08 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:08:44 PM

HRS AASHTO

2009

## Complete Issue Information

---

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Srujana Thogaru DATE: 9/8/2011 11:49:05 AM Eastern Daylight Time  
(From Bridgeware email from Scott E. Cavanaugh, HNTB Corporation NJ on Sep 06 2011)

Recent ratings performed by URS for a NJ Turnpike structure revealed a potential issue with shear ratings for members with low condition factors (fair or poor, 0.95 and 0.85 respectively). I performed additional runs using previously created xml files, and have confirmed the problem.

It appears as though Virtis v6.3 does not recognize the condition factor for shear ratings. However, moment ratings do appear to consider this condition factor when computing the member capacity. I have not checked whether this problem also is present in version 6.2.

I proved this by randomly selecting 3 previously created xml files, and first running them with a condition factor of 1.00 (run 1: good or satisfactory). I then ran the same member after adjusting the condition factor to 0.85 (run 2: poor). When the rating results were compared, the moment ratings decreased from run 1 to run 2, which is expected. However, the shear rating results did not change.

The bridges investigated were all steel structures.

FROM: Srujana Thogaru DATE: 9/8/2011 1:40:46 PM Eastern Daylight Time  
Fixed for 6.4 Release.

FROM: Srujana Thogaru DATE: 9/8/2011 2:34:53 PM Eastern Daylight Time  
Fixed for 6.3 Service Pack

FROM: Xinmei Li DATE: 9/9/2011 10:45:38 AM Eastern Daylight Time  
Tested with 6.3.1, used BID1, did LRFR rating. Then in member alt winow, factor tab, changed conditon factor from good to poor, then did LRFR rating again. Compared stage 3 shear resistance article detail at location 32.2', both runs are having identical shear rating results.  
I also compared LFD rating results, at the location 32.2', steel shear stress article reports the same shear rating results.

FROM: Xinmei Li DATE: 9/9/2011 11:35:20 AM Eastern Daylight Time  
Verified fixed for 6.3 service pack 1.  
Used BID1 for testing, compared LRFR rating results in article 6A.4.2.1 shear rating, shear rating results are reduced when factor is changed from good to poor.

FROM: Matt Kolis DATE: 5/3/2012 4:13:02 PM Eastern Daylight Time  
Tested the attached xml file in VO64. LRFR results were verified, however, LFD results were still the same when looking at stage 3, steel shear stress article reports @ location 32.2'.

FROM: Srujana Thogaru DATE: 5/21/2012 12:53:54 PM Eastern Daylight Time  
Condition factor and system factor apply only to LRFR analysis.

---

### Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 11094                        |
| Subject: Issue with Legal Lane Loading |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Metcalf, William        | 9/8/2011 4:17:30 PM  |
| Modified By: hlee                     | 9/13/2011 5:15:41 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Screenshot.xls      |             |
|      | I-17-NH.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 9/8/2011 12:19:59 PM Eastern Daylight Time  
this is submitted by one of our consultants:

Dana,

We believe there is possibly a glitch in VIRTIS 6.3, we've also contacted VIRTIS (Michael Baker) but they would like correspondence to go through DOTD.

It appears the Legal Lane Load Model Type II will not run properly for span lengths less than 200'.

Additional Detail I-12 @ Range Ave. and Example Bridge:  
Running a 3-span continuous unit for Range Avenue (55',87',57'), both HL-93, LADV 11, predefined

4/19/2016 3:08:44 PM

HRS AASHTO

2011

Complete Issue Information

Lane Type Legal and user-defined Lane Type Legal (MBE Figure D6A-5) doesn't run properly under the legal load case. Our user defined Lane-Type Legal in MBE Figure D6A-5 should be able to run for any continuous span arrangements since it is required for any negative moment case.

Running a fictitious 3-span continuous unit with 225' spans, HL-93, LADV 11, predefined Lane Type Legal, and our user-defined Lane Type Legal (MBE Figure D6A-5) all run properly under the legal load case.

This leads me to conclude that Virtis 6.3 is coded to only recognize truck+lane vehicle loads under legal load case for spans greater than 200'. This would be appropriate if the Lane Type Load in MBE Figure D6A-5 was not required for all cases where negative moment is presence regardless of span length.

Thanks, I'll give you a call next week to discuss.

Charles H. Hummel Jr. P.E.  
Structures Division

ABMB Engineers, Inc.  
500 Main Street | Baton Rouge, LA | 70801  
p.225.765.7400 | www.abmb.com

FROM: Herman Lee DATE: 9/13/2011 11:59:24 AM Eastern Daylight Time  
Please make sure "Legal Pair" is selected for the Lane-Type Legal Load in the Advanced Vehicle Properties window. The resulting "Truck Pair + Lane" live load type corresponds to the MBE D6A-5 model.

|                                  |
|----------------------------------|
| Issue ID: 11095                  |
| Subject: U-Girder Analysis Error |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Duray, Jim           |                     |
| Submitted By: Lee, Herman             | 9/8/2011 4:41:52 PM |
| Modified By: hlee                     | 9/8/2011 4:48:34 PM |
| Priority: High                        |                     |
| Category: Unknown                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/8/2011 12:42:11 PM Eastern Daylight Time  
 Submitted on behalf of Mike Patton (Mike.Patton@tshengineering.com), Tsiouvaras Simmons  
 Holderness.

Received Bridgeware e-mail:

=====

I have run into another problem, this time concerning a fatal error that was encountered during analysis: "Error performing prestress loss LRFR specification checking". I've checked my inputs and can not figure out what would be causing this error.

A screenshot of the error message as well as the xml file have been attached.

I have not run into this problem before, but have not done a U-girder yet either. Could you please let me know if this is a program flaw?

Thank you

Mike Patton  
 Design Engineer

=====

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 11096                                                                 |
| Subject: Retrieve d or jd corresponding to the simultaneous moment flexure type |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Thogaru, Srujana     |                     |
| Submitted By: Kemna, Aaron            | 9/8/2011 5:13:37 PM |

4/19/2016 3:08:45 PM

HRS AASHTO

2013



### Complete Issue Information

|                       |                      |
|-----------------------|----------------------|
| Modified By: akemna   | 2/23/2012 8:54:52 PM |
| Priority: High        |                      |
| Category: Enhancement |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
| Lee, Herman      | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | ErrorMessage.png              |             |
|      | VI11009_00060 - 13916_6.3.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Srujana Thogaru DATE: 9/8/2011 1:15:02 PM Eastern Daylight Time

#### Articles affected:

8.15.5.2.1,  
8.16.6.2.1,  
ASR 6B6.2.4.3, (second edition MBE)  
ASR 6B5.2.4.3, (first edition MBE)  
ALFD 1979i shear strength  
ASR RC Shear rating factor article (both first and second edition of MBE)

FROM: Srujana Thogaru DATE: 9/9/2011 3:54:39 PM Eastern Daylight Time  
Resolved for 6.3 service pack.

FROM: Krisha Kennelly DATE: 9/12/2011 1:55:22 PM Eastern Daylight Time  
These articles were modified to retrieve the d or jd corresponding to the simultaneous moment flexure type as per Aaron's email on 7/13:

4/19/2016 3:08:45 PM

HRS AASHTO

2014

Complete Issue Information

"The other issue is when to apply these values. The flexural sense should be controlled by the corresponding moment. I would think this would keep the positive flexure sense from controlling near bents which seems to be causing some of the problems. "

FROM: Krisha Kennelly DATE: 9/13/2011 2:38:32 PM Eastern Daylight Time

|                                          |
|------------------------------------------|
| Issue ID: 11098                          |
| Subject: Unable to run AASHTO LFD rating |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Li, Xinmei              | 9/9/2011 7:45:29 PM |
| Modified By: kkennelly                | 5/4/2012 3:06:28 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Xinmei Li DATE: 9/9/2011 3:46:02 PM Eastern Daylight Time  
Unable to run AASHTO LFD rating for the attached bridge in 6.3.1 Beta  
To reproduce, use LFD analysis setting "HS20 rating" template, rate "Interior Girder A2", error message screen shot is attached.

FROM: Xinmei Li DATE: 9/12/2011 11:37:19 AM Eastern Daylight Time  
This problem exists in 6.3 release version, too.

Complete Issue Information

FROM: Wayne Skow DATE: 9/13/2011 9:08:32 AM Eastern Daylight Time  
The model is set up for LRFR rating (The active "member alternative" is LRFR) but the "HS 20 Rating" template (generally used for LFR/ASR) is selected. When LRFR is setting up for analysis, it creates a list of load factors for the various limit states for the inventory and operating categories. Internally, however, it appears the inv/opr categories for LFR are not the same as the inv/opr categories for LRFR. Therefore, no load factors are assigned since there is no mapping for it. That leaves the LRFR vehicle map empty causing the analysis to terminate with the generic error message "Error performing LRFR specification checking!" A more specific error message would help the user understand the problem.

FROM: Herman Lee DATE: 9/13/2011 10:47:12 AM Eastern Daylight Time  
Added vehicle checking at the beginning of the analysis.  
Resolved for 6.4 Release.

FROM: Matt Kolis DATE: 5/3/2012 4:55:37 PM Eastern Daylight Time  
Verified in VO64 Alpha Build 3.

Issue ID: 11101  
Subject: AASHTO Engine Error (Built-Up Plate Girders Compact Check (10.48.1.1 & 10.48.2))

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: Jones, Daniel 9/15/2011 9:00:28 PM  
Modified By: bzhang 9/16/2011 1:36:27 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier                               | Description                                         |
|------|---------------------------------------------------|-----------------------------------------------------|
|      | SECTION<br>PROPERTIES_corrected.xlsx<br>error.png | Error in the Floor Truss Section<br>Properties.docx |
|      | B008714_63.xml                                    | SECTION PROPERTIES.xlsx                             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 9/15/2011 5:29:21 PM Eastern Daylight Time  
This was reported to me by Robert Fulton of David Evans and Associates.

Apparently for Built-Up Plate Griders the AASHTO Engine does not run through the 10.48.1.1 compact section criteria or does not apply 10.48.2 when the girder does not meet the compact section criteria in 10.48.1.1.

Attached is a spreadsheet for the main girder of Bin 8714 (Span 5 and Girder). I did get good agreement between the System definition and the Girder line definition. The Dead loads and Live loads were copied directly out of Virtis, and the section properties were copied from the output reports.

Thanks,  
Daniel Jones

FROM: Bin Zhang DATE: 9/16/2011 8:51:15 AM Eastern Daylight Time

It was decided that AASHTO would do the following:

- All built-up girders (with or without cover plates) will only consider 10.48.4

Please refer to 10828 for details.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 11102                                                                       |
| Subject: Section Properties of Floor Truss Section Incorrect when using Deterioration |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Jones, Daniel           | 9/16/2011 1:25:31 PM  |
| Modified By: mkolis                   | 6/19/2012 12:35:44 PM |

4/19/2016 3:08:46 PM

HRS AASHTO

2017

### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Stagger stringers.docx |             |
|      | Stringers Layout.pdf   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Daniel Jones DATE: 9/16/2011 9:32:02 AM Eastern Daylight Time  
Submitted to me by Robert Fulton of David Evans and Associates.

Section properties of floor truss sections are being calculated incorrectly when deterioration profiles are used.

It tries to use the built-up I girder definition.

Thanks,  
Daniel Jones

FROM: Bin Zhang DATE: 9/16/2011 9:40:15 AM Eastern Daylight Time  
The problem could be reproduced using the member alt "Span 5"->"Floorbeam25"->"FT25 (As-Designed)". (Truss member U0L1)  
There are 2 issues should be fixed.

1. The bottom 3 lines should be removed in the "Member Section Property Report" for the deterioration model;

2. Section properties of floor truss sections are being calculated incorrectly when deterioration profiles are used, for example Y, Z, Iyy, Izz. The hand calculation spreadsheet was attached in the document.

FROM: Xinmei Li DATE: 1/12/2012 11:38:41 AM Eastern Standard Time  
I reran the attached bridge with 6.3 release confirmed it's a bug.

4/19/2016 3:08:46 PM

HRS AASHTO

2018

Complete Issue Information

The attached hand calculation spreadsheet is not calculating lyy self correctly. I corrected it and attached the corrected spreadsheet.

In order to investigate the deterioration calculation I imported this bridge to 6.4 dev. However I can't analyze "FT25 (As-Designed)" and got errors as shown in the attached screen shot.

FROM: Xinmei Li DATE: 1/13/2012 9:39:27 AM Eastern Standard Time  
The back to back angle section flag and IsXVertical flag was not correctly set before applying deterioration for back to back angle builtup sections.

FROM: Xinmei Li DATE: 1/18/2012 3:51:42 PM Eastern Standard Time  
Both #1 and 2 are resolved for the next release.  
Added code in ResetDeterioration function.

FROM: Matt Kolis DATE: 5/4/2012 9:17:24 AM Eastern Daylight Time  
Unable to verify in VO64 Alpha Build 4. Still obtain error when analyzing FT25 (U0L1) using LFR.  
Need more information on how to generate "Member Section Property Report".

FROM: Xinmei Li DATE: 6/5/2012 1:13:28 PM Eastern Daylight Time  
Matt, I can't reproduce any error when analyzing "FT25 (As-Designed)", please try again with the newest version. After you're done with the rating, you can access "Member Section Property Report" by clicking the eyeglasses button on tool bar or go to your local directory to open the xml file directly.  
(C:\Documents and Settings\XLi\My Documents\AASHTOWARE\VirtisOpis64\B008714\Span5\Floorbeam25\FT25(As-Designed)\AASHTO\_Truss\_LFD\MemSectionProperties.XML)

FROM: Matt Kolis DATE: 6/19/2012 8:35:43 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11104                                                  |
| Subject: Enhancement to Stagger Stringers in Floor Truss Systems |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jones, Daniel           | 9/16/2011 3:22:19 PM |
| Modified By: hlee                     | 6/4/2012 8:08:21 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 19 0035nyb.xml      |             |
|      | VI_11105_Error.docx |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Daniel Jones DATE: 9/16/2011 11:45:15 AM Eastern Daylight Time

This is a request for an enhancement to be able to have stringers staggered with the floorbeams. The Word file (Stagger stringers) shows how the outside stringers usually are the same where as the middle stringer begins and ends at different floorbeams.

I have included some drawings showing how the typical floor truss system is built in Alabama.

Thanks,  
Daniel Jones

FROM: Herman Lee DATE: 6/4/2012 4:07:33 PM Eastern Daylight Time

Beta TAG May 2012 discussion:  
10083 and 11104 should be combined.

|                                                  |
|--------------------------------------------------|
| Issue ID: 11105                                  |
| Subject: Steel Girder Error in AASHTO LFR Engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Huang, George           | 9/19/2011 3:40:19 PM |

4/19/2016 3:08:46 PM

HRS AASHTO

2020

### Complete Issue Information

|                     |                      |
|---------------------|----------------------|
| Modified By: ghuang | 7/10/2012 6:03:57 PM |
| Priority: High      |                      |
| Category: Bug       |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 9/19/2011 11:45:55 AM Eastern Daylight Time

An steel girder bridge works with both BRASS LFD engine and Virtis LFD engine, does not working with AASHTO LFD engine in 6.3 service Pack 1 Beta 1. The files for bridge model and error message are attached.

FROM: Srujana Thogaru DATE: 9/22/2011 1:00:54 PM Eastern Daylight Time

This error exists in 6.3 Release.

FROM: Wayne Skow DATE: 9/22/2011 1:40:45 PM Eastern Daylight Time

Fixed in 6.4 in ALFD\_17E\_10\_50\_02\_01. The problem was a change made to 10.48.1.1 to disallow that article to be used for unbraced cantilevers. That change was not carried through to 10.50.2.1 which relies on 10.48.1.1's results.

FROM: Matt Kolis DATE: 5/4/2012 9:21:05 AM Eastern Daylight Time

Verified in VO64 Alpha Build 4.

FROM: George Huang DATE: 6/21/2012 12:25:24 PM Eastern Daylight Time

Although the attached file 19 0035nyb.xml can run in Virtis6.4 beta 1, but the rating factors for all live load cases are 99, which are wrong.

4/19/2016 3:08:46 PM

HRS AASHTO

2021



Complete Issue Information

FROM: Wayne Skow DATE: 7/2/2012 11:16:46 AM Eastern Daylight Time  
I don't know what happened in v64b1, but it's working in v64b2.

FROM: George Huang DATE: 7/10/2012 2:03:57 PM Eastern Daylight Time  
It works for V64 beta 2

|                             |
|-----------------------------|
| Issue ID: 11106             |
| Subject: Virtis Enhancement |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Hasan, Mac              | 9/20/2011 1:20:04 PM |
| Modified By: hlee                     | 9/20/2011 2:13:15 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mac Hasan DATE: 9/20/2011 9:31:04 AM Eastern Daylight Time  
AASHTO Standard Engine (version 6.3.0 or higher) needs capability to turn-off inventory level stress (i.e. prestressing steel tension, concrete tension or compression stresses) checks for Precast Prestressed Girder bridges.

This enhancement should help engineers compare/validate past rating results obtained using the Brass-engine.

Complete Issue Information

Issue ID: 11108  
Subject: Incomplete LRFR Rating Summary in BWS Report

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Lee, Herman 9/20/2011 7:33:50 PM  
Modified By: kkennelly 5/4/2012 3:05:59 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Thogaru, Srujana   | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad |          |          |          |
| Trees, Geoffrey    |          |          |          |
| Thogaru, Srujana   | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:47 PM

HRS AASHTO

2023

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 9/20/2011 3:34:28 PM Eastern Daylight Time  
See attached.

To reproduce:

1. Rate Structure Definition #1 G1 member alt in RCTrainingBridge1 with the LRFR Legal Load Rating template.
2. Open Report Tool, use BWS Report for rc girders.abr to generate the report.

Looks like database needs additional attributes for LRFR results.

FROM: Srujana Thogaru DATE: 10/3/2011 1:23:39 PM Eastern Daylight Time  
Created script for the missing attributes.  
Also updated attributes for PS and Steel girders.

FROM: Geoffrey Trees DATE: 10/4/2011 8:59:27 AM Eastern Daylight Time  
I ran the script from Srujana and checked in the database. I believe this issue is closed but I will assign it back to Srujana for verification.

FROM: Srujana Thogaru DATE: 10/11/2011 4:41:34 PM Eastern Daylight Time  
Upadted PS, RC and Steel abr files.

FROM: Matt Kolis DATE: 5/4/2012 9:25:09 AM Eastern Daylight Time  
Verified in VO64 Alpha Build 4.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 11110                                                    |
| Subject: Error in Virtis for >=75% top flange horizontal reduction |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 9/21/2011 1:15:06 PM |
| Modified By: hlee                     | 1/19/2012 9:01:10 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 |          | Critical |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00029 - 73173101000S170.xml |             |
|      | LFD Ratings.docx            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Xinmei Li DATE: 9/21/2011 9:16:45 AM Eastern Daylight Time  
Moved from VI110888

FROM: Tim Ambrecht DATE: 9/7/2011 9:45:33 AM Eastern Daylight Time  
Can you tell me if this is related? From my consultant (Shoup). You should have our XML file for 090-0030 and possibly 002-0005. They are very large files, so I'm trying not to resend them if possible.

I am getting an "Top angle horizontal leg thickness is less than or equal to zero!" Error in Virtis for >=75% top flange horizontal reduction. This would be on the floorbeam compression flange of SN: 090-0030. I could not figure out why this error was occurring. I looked at the lyc/ly Limit and that does not appear to be the reason (I am not getting this limit until about the 90% loss range).

I also checked this on SN 002-0005 and got a similar error.

4/19/2016 3:08:47 PM

HRS AASHTO

2025

Complete Issue Information

Could you please submit this and see what the issue is. I tried to trouble shoot it but didn't get much information when it does not run. Let me know if you need anything else on this one.

Thanks.

Scott

FROM: Xinmei Li DATE: 9/20/2011 3:43:27 PM Eastern Daylight Time

Scott,

I used the bridge (090-0030 Cedar Street - 2011-04-18.xml) attached to VI 10828 to test. I looked all TFS superstructure defs, can't find any deterioration defined, so I added the following lines to the bottom of "Truss 1 - North" in "Span 10; Single Span TFS".

MemberOfInterest

U17U18

Deterioration

Angles

TopRight HorizontalLeg 78.0 78.0 L17 0.0 21.0

The above lines are adding deteriorations to the top right angle horizontal leg. Losses are >75%, but I don't get any error message while rating the truss.

Please provide more information to help me to reproduce the error you got.

Thanks.

May

FROM: Tim Ambrecht DATE: 9/23/2011 9:41:16 AM Eastern Daylight Time

Scott's reply:

My issue is with the floorbeams and not the truss. Not sure if they would be related but would assume that they would not be. I am getting an error of "Top angle horizontal leg thickness is less than or equal to zero!" when the top horizontal flange of the floorbeam has about 75% section loss or more. I am not sure why I am getting this error or if the error is not labeled correctly. I would only think that I should get this error when I would specify 100% section loss on the horizontal flange of the angle.

FROM: Xinmei Li DATE: 1/19/2012 9:21:11 AM Eastern Standard Time

I tested again with 6.3 release using the bridge (090-0030 Cedar Street - 2011-04-18.xml) attached to VI 10828. I used Span8->FB0, I revised Top flange loss to Horizontal 75%. I was able to rate FB0 successfully without any error message.

Issue ID: 11111

Subject: AASHTO engine plate girder

Folder: /Virtis/Support Center/Virtis

Primary Contact: Skow, Wayne

Submitted By: McMunn, Creightyn

9/21/2011 8:36:49 PM

Modified By: mkolis

5/18/2012 1:15:37 PM

Priority: Critical

4/19/2016 3:08:47 PM

HRS AASHTO

2026

## Complete Issue Information

Category: Bug

## History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Unknown  |
| Thogaru, Srujana  | Assigned |          |          |
| Skow, Wayne       |          |          | Bug      |
| Kennelly, Krishna |          |          |          |
| Lee, Herman       | Resolved |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00030 - 73173101000S230.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Creightyn McMunn DATE: 9/21/2011 4:43:25 PM Eastern Daylight Time

When running either beam in the attached file, I am getting significantly higher results with the AASHTO engine as opposed to the Virtis engine. The results with the AASHTO engine also vary greatly when "Generate at section change points" is checked/not checked, even though the governing location is entered as a POI.

FROM: Wayne Skow DATE: 9/22/2011 1:42:24 PM Eastern Daylight Time

The problem was in "6B.4.1 General - Steel Combined Moment and Shear". There was a 0/0 division situation that was not handled properly causing NaN's (not-a-number) in the results and output. This was affecting the function that determines the critical RF. After fixing (v6.4), Aashto, Virtis and BRASS results are all very close and Aashto results are unaffected by the "Generate at section change points" switch.

FROM: Creightyn McMunn DATE: 10/20/2011 2:08:13 PM Eastern Daylight Time

This is not acceptable to wait until v6.4 to fix. This is a critical bug which produces unconservative results. The AASHTO engine is giving rating factors which are almost 40% higher than they should be.

FROM: Herman Lee DATE: 10/21/2011 7:39:44 AM Eastern Daylight Time

4/19/2016 3:08:47 PM

HRS AASHTO

2027

Complete Issue Information

The fix will be included in the 6.3 Service Pack.

FROM: Creightyn McMunn DATE: 10/21/2011 8:56:16 AM Eastern Daylight Time  
Thank you.

FROM: Bin Zhang DATE: 10/24/2011 2:16:17 PM Eastern Daylight Time  
verified in Service Pack 1 Beta 2 Update 2, AASHTO engine computes comparable rating factors to the results from the the Virtis engine.

FROM: Creightyn McMunn DATE: 10/26/2011 1:29:16 PM Eastern Daylight Time  
Verified in Service Pack 1 Beta 2 Update 2. AASHTO engine computes rating facctors at governing location when "Generate at section change points" is checked. Results are similar to Virtis engine.

FROM: Matt Kolis DATE: 5/4/2012 10:02:12 AM Eastern Daylight Time  
Issue was verified in Virtis 6.3.1, however, in VO 64 Alpha Build 4 the ratings bottom out. See attached document.

FROM: Wayne Skow DATE: 5/9/2012 2:21:14 PM Eastern Daylight Time  
This problem was caused by the rewrite of "6B.4.1 General - Steel Combined Moment and Shear" to handle the proper set of concurrent M & V (VI 11205). Fixed in v6.4.

FROM: Matt Kolis DATE: 5/18/2012 9:15:37 AM Eastern Daylight Time  
Issue has been verified in VO64 Alpha Build 5.

|                                                    |
|----------------------------------------------------|
| Issue ID: 11112                                    |
| Subject: plate girder error running LFR spec check |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McMunn, Creightyn       | 9/22/2011 6:37:19 PM |
| Modified By: cmcmunn                  | 9/10/2012 7:05:20 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

#### Description

FROM: Creightyn McMunn DATE: 9/22/2011 2:39:22 PM Eastern Daylight Time  
I cannot run the attached file using the LFD AASHTO engine. I receive the error "Error - Error performing LFR specification checking! Error - Analysis failed!"

The Virtis engine will run.

FROM: Srujana Thogaru DATE: 9/22/2011 2:53:14 PM Eastern Daylight Time  
Error exists in 6.3 Release.

FROM: Wayne Skow DATE: 9/23/2011 10:07:30 AM Eastern Daylight Time  
It's asserting in SCSuperSteelGirderElement at line 9737. There's something going on with this model relative to the 4th support.

FROM: Creightyn McMunn DATE: 10/20/2011 2:26:03 PM Eastern Daylight Time  
Running this file in v6.3 Service Pack 1, Beta 2 with the AASHTO engine causes Virtis to crash. I get the error "Virtis Application has encountered a problem and needs to close. We are sorry for the inconvenience."

FROM: Krisha Kennelly DATE: 11/17/2011 9:21:13 AM Eastern Standard Time  
A workaround is to enter the following data items to the exact length of the beam (302.0625') instead of the 302.06' that they are using now:

1. The second row of reinforcement in the Deck Profile: Reinforcement tab. It is entered with a length of 302.06' right now.
2. The Haunch profile should be entered with a length of 302.0625'. It is entered with a length of 302.06' right now.

#### Developer notes:

The FE model generated by the export ends at 302.06'. The spec check controller tries to find the FE element at the last support location (302.0625') but can't find it so it throws an error.

In the export when the FE model is generated, 302.06' is added as a node due to a change point for the rebar and haunch. Then when 302.0625' is added as the last tenth point, it does not get added to the FE model due to the tolerance. Any nodes in FE model within the tolerance of the last support should be removed and the last node in the FE model should be the last support.

FROM: Herman Lee DATE: 11/17/2011 11:55:31 AM Eastern Standard Time  
Modified girder, floor beam and stringer FE model generation to first add support nodes before adding other nodes (change points, brace points ...).

Resolved for the 6.4 Release.

FROM: Matt Kolis DATE: 5/4/2012 10:11:03 AM Eastern Daylight Time  
Verified the attached xml file can be run using the LFD AASHTO engine in VO64 Alpha Build 4.

4/19/2016 3:08:48 PM

HRS AASHTO

2029



### Complete Issue Information

FROM: Creightyn McMunn DATE: 9/10/2012 3:05:20 PM Eastern Daylight Time  
Verified the attached file can be run using LFD AASHTO engine in V064 Beta 4.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| Issue ID: 11118                                                                                  |
| Subject: Virtis not recognizing modifications to resistance factors for LFR (Versions 6.2 & 6.3) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Vargas, Luis            | 9/26/2011 4:03:57 PM |
| Modified By: sthogaru                 | 9/29/2011 7:14:11 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
|                  | Information Needed |          |          |
| Zhang, Bin       | Assigned           |          |          |
| Thogaru, Srujana |                    |          | Bug      |
|                  | Resolved           |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00028 - BR-2328.xml |             |
|      | 00035 - 6531.xml    |             |
|      | 11118.docx          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Luis Vargas DATE: 9/26/2011 12:14:54 PM Eastern Daylight Time  
We have project specific conditions that require us to modify the Resistance Factors for LFR runs. We have tried to reduce the reinforced concrete resistance factors to 0.855 (from 0.9) for Reinforced

4/19/2016 3:08:48 PM

HRS AASHTO

2030

Complete Issue Information

Concrete Flexure factor and to 0.8075 (from 0.85) for Reinforced Concrete Shear factor. However, if comparing the results of the same run with modified resistance factors and without, the rating factors are identical. We then tried using resistance factors of 0.5, just to make sure that this was not a rounding problem, and still the results did not change. Therefore, it appears that modifications to LFR resistance factors are not being picked up by Virtis.

FROM: Herman Lee DATE: 9/26/2011 12:24:40 PM Eastern Daylight Time  
Please attach the bridge to this incident for investigation.

FROM: Luis Vargas DATE: 9/26/2011 2:08:04 PM Eastern Daylight Time  
The first bridge file was modeled using version 6.3, and the second one using version 6.2

FROM: Bin Zhang DATE: 9/26/2011 2:19:28 PM Eastern Daylight Time  
1. In VO63, AASHTO LFR could not pick up the LFD factor if I modify it in the "Factors-LFD" window (figure1 and 2).  
There is a workaround for this issue. You can use specs override to trigger Virtis to pick up the modified factors (figure 3).  
2. In VO62, Virtis LFR has similar issue in picking up the modified factors.  
Please read the attached word document with embeded figures for details.

FROM: Srujana Thogaru DATE: 9/29/2011 2:28:49 PM Eastern Daylight Time  
This is not an error.

If you use System default in the specs window, factors obtained by the program will be from the library.

If you want to change the factors, you should override the default factors/library factors with the factors defined in LFD factors window.

You have changed the concrete resistance factor from 0.90 to 0.85 in the LFD window but did not override the factors in the specs window.

Similar name from factors defined in LFD factors window and library factors is also a reason for confusion.

Please let us know if you have further questions.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 11119                                                   |
| Subject: getting p/s loses error with this, newly input structure |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Metcalf, William        | 9/26/2011 4:58:44 PM |
| Modified By: mkolis                   | 5/7/2012 6:21:42 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Skow, Wayne     | New       | High     | Unknown  |
|                 | Assigned  |          |          |
|                 | Resolved  |          |          |
|                 | Duplicate |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00033 - 63163172000S101.xml |             |
|      | Opis Print Document.pdf     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: William Metcalf DATE: 9/26/2011 1:03:05 PM Eastern Daylight Time  
gettting p/s loses error not sure why I've included bridge plans and xml file.

FROM: Srujana Thogaru DATE: 9/28/2011 11:15:55 AM Eastern Daylight Time  
Error is due to Circular box beam shear key dimensions entered as zeros. This has been fixed in 6.3 Service Pack Beta Build 2.

FROM: Bin Zhang DATE: 9/28/2011 11:25:29 AM Eastern Daylight Time  
Duplicate issue with #11103. Verified this fix using the New DLL in the 6.3.1 Beta 2 Updates folder: AbanSpec.

FROM: Matt Kolis DATE: 5/7/2012 2:21:42 PM Eastern Daylight Time  
Verified in VO64 Alpha Build 5, beams run without errors.

Complete Issue Information

Issue ID: 11126  
 Subject: AASHTO LFD spec check error for the steel plate girder

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Skow, Wayne  
 Submitted By: Zhang, Bin 10/6/2011 6:07:52 PM  
 Modified By: hlee 10/7/2011 1:50:06 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Third Party |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | A7662.xml           |             |
|      | BrassErrorA7662.gif |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 10/6/2011 2:08:07 PM Eastern Daylight Time  
 Submitted on behalf of Daniel Yalda, MDOT. The bridge XML file and the log file were attached in the document.

Received e-mail:

=====

Complete Issue Information

Hi,

I have the attached file ran using AASHTO engine and at middle of analyzing it I get the failed error message that says "Failed to perform element specification checks. Object reference not set to an instance of an object." But when I am using the virtis LFD engine it works fine. Could you please look into and tell me what's that I am doing wrong. I've checked everything and seem ok. Thanks

Dan

p.s. also I attached the failed message that I get.

Daniel Yalda  
Load Rating Engineer  
Construction and Technology Division  
(517) 322-5682

=====

FROM: Wayne Skow DATE: 10/7/2011 9:21:00 AM Eastern Daylight Time  
This is the same problem as issue 11105. The problem is with unbraced cantilevers. article 10.50.2.1 relies on results from 10.48.1.1. 10.48.1.1 was changed to not allow unbraced cantilevers, however, 10.50.2.1 was not. Therefore, when 10.50.2.1 runs the proper data is not present.

This has been fixed in v6.4.

A possible work-a-round for this problem is to add a longitudinal stiffener to the unbraced cantilever segment of the girder. 10.50.2.1 is disallowed when there's a long-stif present. Generally, this should not affect a rating unless it's controlled by shear.

|                                  |
|----------------------------------|
| Issue ID: 11127                  |
| Subject: BRASS Error Zero Rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Kemna, Aaron            | 10/6/2011 7:34:10 PM |
| Modified By: hlee                     | 4/12/2013 3:55:38 PM |
| Priority: High                        |                      |
| Category: Third Party                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:08:49 PM

HRS AASHTO

2034

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 10/6/2011 3:43:56 PM Eastern Daylight Time

This is a BRASS issue. I was lead to believe that we should still be reporting these issues through this website. Let me know if this has changed. I have multiple issues to report.

I have a bridge that ran in 6.2, but gets zero ratings for 6.3 (BRASS GIRDER (LRFD) 2.1). For some reason the prestress force is not being included in the stress checks. I'll attach a screen capture and the xml file. I ran the HL93 Truck.

FROM: Herman Lee DATE: 4/12/2013 11:55:19 AM Eastern Daylight Time

Updated Status to Resolved per BridgeTech request.

|                                                    |
|----------------------------------------------------|
| Issue ID: 11130                                    |
| Subject: AASHTO LF Engine - Tons reported is wrong |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Thogaru, Srujana     |                        |
| Submitted By: Thompson, Todd          | 10/11/2011 12:56:22 PM |

### Complete Issue Information

|                        |                       |
|------------------------|-----------------------|
| Modified By: tthompson | 10/20/2011 1:41:01 PM |
| Priority: High         |                       |
| Category: Bug          |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 08068084.xml          |             |
|      | test_todd_vehicle.xml |             |
|      | Truss1.log            |             |
|      | new_truck_vehicle.xml |             |
|      | 11133.docx            |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 10/11/2011 8:59:05 AM Eastern Daylight Time

I've been noticing cases where the tons reported when using the AASHTO LF engine is used are wrong.

I'll attach a screen shot of the summary report and my truck.

Assuming the Rating Factor is correct - the Tons should have been 177.84 based on  $RF = 1.384$  since the truck weighs 128.5 tons. But in the summary it is showing 25.61 tons.

I've noticed this with several different trucks and bridges and haven't been able to isolate anything.

FROM: Jim Duray DATE: 10/11/2011 10:22:54 AM Eastern Daylight Time

Srujana - please investigate this issue.

4/19/2016 3:08:49 PM

HRS AASHTO

2036

Complete Issue Information

FROM: Srujana Thogaru DATE: 10/12/2011 8:14:03 AM Eastern Daylight Time  
Fixed for 6.4 release.

FROM: Srujana Thogaru DATE: 10/12/2011 10:16:28 AM Eastern Daylight Time  
This issue is a duplicate of 11085.  
Workaround is to enter both max and min axial spacing while defining the vehicle.

FROM: Todd Thompson DATE: 10/13/2011 11:24:47 AM Eastern Daylight Time  
Actually BOTH tons and Rating Factors are wrong. So users have the potential to get very WRONG answers.

This should be a CRITICAL BUG. (and warranty bug since it was during the warranty period)

FROM: Todd Thompson DATE: 10/20/2011 9:41:01 AM Eastern Daylight Time  
Tested this with 6.3 SP 1 - Beta 2 ---- appears to be corrected now.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11133                                                  |
| Subject: Truss - can not get this truck to work on these trusses |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Zhang, Bin           |                       |
| Submitted By: Thompson, Todd          | 10/13/2011 7:00:25 PM |
| Modified By: tthompson                | 9/7/2012 5:17:00 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 10/13/2011 3:04:31 PM Eastern Daylight Time  
I have had these two trusses working fine and have analyzed several trucks over them.

4/19/2016 3:08:50 PM

HRS AASHTO

2037



Complete Issue Information

But for this particular truck - I get an error message -  
Unable to add axle to vehicle definition.  
02:02:19 PM - Line 5817 in source file AbxTrussLfdEngine.cpp.

And the truss fails to run.

I'll attach the truck and bridge xml files.  
Not sure if there is a length or number of axle limitation for Trusses?

The two trusses are:  
Spans 5, 6, & 7 Truss Spans (Use)  
Spans 8 & 9 Truss Spans (Use)

Version 6.3 - ASA Database - Windows 7, IE 8

FROM: Todd Thompson DATE: 10/13/2011 3:17:11 PM Eastern Daylight Time  
I suspect it may be the truck. As I tried another Truss and it doesn't work there either.

FROM: Todd Thompson DATE: 10/13/2011 3:48:33 PM Eastern Daylight Time  
I added the vehicle again to the library and should be the same but this truck works. But the original truck somehow doesn't work. Not sure why.

But Truss Model is fine.

I'll attach the new truck model.xml file I created.

FROM: Bin Zhang DATE: 10/18/2011 9:01:21 AM Eastern Daylight Time  
There is an accuracy problem for the truck definition (test\_todd-vehicle). Axle spacing at the location of no.7 and no.9 should be modified as shown in the figure 1 and 2. Please read the attached word document for the details.

FROM: Todd Thompson DATE: 10/18/2011 2:00:10 PM Eastern Daylight Time  
I guess I don't understand the problem. As long as the Min is less than the Max axle spacing and if you can enter that many digits of accuracy - why in this case do we need to only use 2 digits of accuracy?

FROM: Bin Zhang DATE: 10/18/2011 10:03:37 AM Eastern Daylight Time  
You can use more digits of accuracy as long as the Min is consistent with the Max. For example, you can use 62.667 for both Min and Max at the location of Axle 9. Please feel free to let me know if you have further questions about this.

|                                                   |
|---------------------------------------------------|
| Issue ID: 11139                                   |
| Subject: Unable to run analysis on a floor system |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Waheed, Amjad           | 10/19/2011 7:55:09 PM |
| Modified By: awaheed                  | 10/21/2011 3:17:46 PM |

4/19/2016 3:08:50 PM

HRS AASHTO

2038

### Complete Issue Information

|                                     |
|-------------------------------------|
| Priority: High<br>Category: Support |
|-------------------------------------|

### History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Duray, Jim       | New       | High     | Unknown  |
| Thogaru, Srujana | Assigned  |          |          |
| Skow, Wayne      | Duplicate |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00007 - 09109034000S040.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Assistant Administrator Amjad Waheed DATE: 10/19/2011 4:00:54 PM Eastern Daylight Time  
Attached bridge worked in VO62 using BRASS LFD. In VO63, when AASHTO LFD was picked, the system could not calculate the Wearing Surface load. When Wearing Surface was removed from Typical Section, it ran but the girder rating factors were all zeros.

FROM: Herman Lee DATE: 10/21/2011 8:12:35 AM Eastern Daylight Time  
Below is the error message when I tried to rate "Girder 1" with the AASHTO Engine.  
"Export cannot compute wearing surface dead load if lane position location varies over length of structure definition!"

There are two sidewalks on the typical section. For the first sidewalk, the entered Distance At Start is 1.167 ft and Distance At End is 1.1667 ft. For the second sidewalk, the entered Distance At Start is 1.167 ft and Distance At End is 1.16667 ft. The computed lane position based on these two sidewalks varies over the length of the structure definition. Looks like the BRASS engine in 6.2 didn't detect this issue. My suggestion is to consistently use 1.1667 ft for the sidewalk Distance At Start and Distance At End inputs. After changing the two sidewalks, the lane position generated by the Compute button in the Lane Position tab will no longer varies over length of the structure definition.

4/19/2016 3:08:50 PM

HRS AASHTO

2039

Complete Issue Information

With the above changes, I'm able to complete the analysis but the ratings are zeros. There's a longitudinal stiffener specified for "Girder 1". It is located at 1.71 in from the top flange. Please double check the location of this longitudinal stiffener. If it is located at 1.71 ft (20.52 in), the HS20 Truck Operating RF is 1.673. Please resubmit this incident if the input of the longitudinal stiffener is correct.

FROM: Assistant Administrator Amjad Waheed DATE: 10/21/2011 11:17:46 AM Eastern Daylight Time  
Thanks Herman. It resolved the issue.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11141                                       |
| Subject: Point of interest error - AASHTO engine, LFD |

|                                                       |
|-------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                 |
| Primary Contact: Skow, Wayne                          |
| Submitted By: McMunn, Creightyn 10/19/2011 8:57:50 PM |
| Modified By: cmcmunn 9/10/2012 7:21:05 PM             |
| Priority: High                                        |
| Category: Bug                                         |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 10/19/2011 5:03:15 PM Eastern Daylight Time  
When running the Typical Interior Girder in the AASHTO engine (LFD) with "Allow Plastic Analysis" and "Generate at User-Defined Points" control options, I get results. If I add either "Generate at tenth points" or "Generate at section change points" I get the error "Error performing LFR specification checking! Error - Analysis failed!"

FROM: Srujana Thogaru DATE: 11/2/2011 9:25:41 AM Eastern Daylight Time  
Wayne, this error appears to be fixed in 6.4 Debug. Please confirm.

Complete Issue Information

FROM: Wayne Skow DATE: 11/2/2011 10:53:42 AM Eastern Daylight Time

This is the same problem as 11105 which has been fixed in 6.4. The hinge is causing that section of the girder to be classified as an unbraced cantilever. It should be ignoring 10.50.2.1, but isn't because of the bug. You can get around the problem by adding a longitudinal stiffener to the section that is considered an unbraced cantilever since this also disallows 10.50.2.1.

FROM: Creightyn McMunn DATE: 9/10/2012 3:21:05 PM Eastern Daylight Time  
Verified this has been fixed for V6.4 Beta 4.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11142                                                          |
| Subject: System Error - Bar is located 3.42 ft above the top of the beam |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: McMunn, Creightyn       | 10/19/2011 9:40:30 PM |
| Modified By: cmcmunn                  | 2/6/2012 9:25:52 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Lee, Herman      | New      | High     | Unknown        |
|                  | Assigned |          |                |
| Kennelly, Krisha | Resolved |          | Bug<br>Support |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Creightyn McMunn DATE: 10/19/2011 5:46:05 PM Eastern Daylight Time

After running a parabolic concrete tee beam with the AASHTO LFD Engine, I received an error message that certain bars are located above the top of the beam – see attached screenshot. This appears to be a possible bug in Virtis v6.3, because it should not be possible to define bars above the top of the beam. It appears as though somewhere in the analysis the input dimension is being flipped – i.e. instead of measuring 41in from the top of the beam down as shown on the sketches in the Virtis input help file, the analysis engine is interpreting this dimension to be 41in above the top of the beam. This bridge was previously analyzed in v6.2 with the BRASS engine and had the same error.

FROM: Herman Lee DATE: 10/21/2011 9:12:06 AM Eastern Daylight Time

Developer Note:

The A114 bar is closer to the bottom of the girder than to the top. The input of A114 is measured from the top of the girder.

FROM: Krisha Kennelly DATE: 11/16/2011 10:48:47 AM Eastern Standard Time

The A114 bar is entered incorrectly. See the attached VI 11142.pdf for the calcs showing how the A114 bar referenced 41" from the top of the girder has the bar sticking out of the bottom of the beam.

Also see attached Vi 11142 bar location.png to see that at 48.82' the bar is 0.56" below the bottom of the beam (40.43" - 41" = -0.56").

The error message being issued by Virtis is displaying the incorrect position of the bar, this error message will be fixed for 6.4.

However, the main problem with this bridge is the incorrect data entry.

FROM: Krisha Kennelly DATE: 11/17/2011 9:18:14 AM Eastern Standard Time

Error message has been corrected for version 6.4.

Issue ID: 11143

Subject: Error computing distribution factors after using Stringer unit Layout wizard

Folder: /Virtis/Support Center/Virtis

Primary Contact: Thogaru, Srujana

4/19/2016 3:08:51 PM

HRS AASHTO

2042

### Complete Issue Information

|                          |                       |
|--------------------------|-----------------------|
| Submitted By: Li, Xinmei | 10/21/2011 2:35:32 PM |
| Modified By: xli         | 10/21/2011 8:26:58 PM |
| Priority: High           |                       |
| Category: Unknown        |                       |

### History

| Primary Contact | Status             | Priority | Category       |
|-----------------|--------------------|----------|----------------|
| Lee, Herman     | New                | High     | Unknown        |
| Li, Xinmei      | Assigned           |          |                |
|                 | Information Needed |          |                |
|                 | Assigned           |          |                |
|                 | Resolved           |          | Bug<br>Support |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00036 - 25421.xml   |             |
|      | DF.pdf              |             |
|      | xliHandcalcs.pdf    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Xinmei Li DATE: 10/21/2011 10:37:48 AM Eastern Daylight Time  
This is found out while investigating VI11091, bridge (11091\_00116 - Beta2.xml) is attached to VI11091  
The following is the original email from Sally.  
I ran the bridge with 6.3.1 release. The rating factors for girder is zero. I am able to reproduce the rest  
problems described in the following email.  
The error of "unable to Perform Analysis" for floorbeams and stringers are similar to incident 11091 and  
is resubmitted.

Complete Issue Information

-----Original Message-----

From: Sally Doles [mailto:sdoles@Lonco.com]  
Sent: Thursday, October 20, 2011 1:22 PM  
To: Bridgeware,  
Subject: RE: Virtis/Opis 6.3 Service Pack 1 Beta 2

\*Incident 11091 - Unable to analyze girder member in corrugated deck floor system\*

I re-entered the bridge from this incident (i.e. - girder-floorbeam-stringer superstructure with a corrugated metal deck) since the service pack does not fix the case for bridges which were entered previously.

Virtis ran a rating for the girder but it came up as failing and the Critical Moments were significantly higher than those found if the structure was entered as a Line System. But again, for both the floorbeam and stringers, I got the same error of "unable to Perform Analysis" and "Line 616 in sourcefile AbxAashtoEngineUiCtl.cpp"

Another item for this particular bridge is that when I used the Stringer Unit Layout Wizard, under the live load distribution factors, I could not use the "Compute from typical section" button. Virtis would come up with "Error computing distribution factors. But when I went into each individual stringer case after the wizard was run, I was able to use the "Compute from typical section" button without a problem.

I have attached the file I used to test this Incident.

If there are any questions, please let me know.

Thank you,

Sally D. Doles, P.E.  
LONCO, INC.  
Phone: 303-620-0098

FROM: Herman Lee DATE: 10/21/2011 12:43:37 PM Eastern Daylight Time  
May be related to 11091. After 11091 is fixed, please verify whether the above Stringer Unit Layout Wizard issue is also fixed.

FROM: Xinmei Li DATE: 10/21/2011 4:26:03 PM Eastern Daylight Time  
This incident is not related to 11091.

Issue ID: 11146

Subject: Exterior Girder Distribution Factor

Folder: /Virtis/Support Center/Virtis

Primary Contact: Li, Xinmei

Submitted By: Vargas, Luis

10/24/2011 3:47:17 PM

4/19/2016 3:08:51 PM

HRS AASHTO

2044

### Complete Issue Information

|                   |                      |
|-------------------|----------------------|
| Modified By: xli  | 11/2/2011 3:09:02 PM |
| Priority: High    |                      |
| Category: Support |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
| Lee, Herman     | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description                       |
|------|---------------------|-----------------------------------|
|      | 00036 - 25421.xml   | Report Tool for spec articles.png |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Luis Vargas DATE: 10/24/2011 11:56:18 AM Eastern Daylight Time

In the attached file, the calculated distribution factor for Moment and Shear for the exterior girder does not seem to be correct. Virtis value is 1.7, while both hand calculations and CONSPAN program result in 1.35. Interior girder seems to be OK.

FROM: Luis Vargas DATE: 10/24/2011 12:14:27 PM Eastern Daylight Time

This is regarding the LFD distribution factor

FROM: Luis Vargas DATE: 10/31/2011 11:42:07 AM Eastern Daylight Time

Xinmei Li; please provide an update on the reported incident.

Thanks,  
Luis

FROM: Herman Lee DATE: 10/31/2011 12:01:34 PM Eastern Daylight Time

Please attach the hand calculations to this incident. Thanks.

FROM: Luis Vargas DATE: 10/31/2011 5:57:40 PM Eastern Daylight Time

Distribution Factor calculation has been attached.

4/19/2016 3:08:51 PM

HRS AASHTO

2045



Complete Issue Information

FROM: Xinmei Li DATE: 11/1/2011 4:26:06 PM Eastern Daylight Time  
When calculating exterior girder distribution factors deck edge location is used as lane edge location.  
Currently there is no work around for bridges with parapet.

FROM: Xinmei Li DATE: 11/2/2011 10:20:23 AM Eastern Daylight Time  
I went back to the bridge and found out that in Structure Typical Section window, Parapet tab, "Distance At End" column is left blank. I put the same values as the "Distance At Start" column. Then compute DFs again, I got 1.315 which is still slightly different than the number in your hand calculations. I did my own hand calculations based on the model you entered. I used the numbers you put in the Structure Typical Section window, got 1.315, see attached hand calculation file.

Issue ID: 11148  
Subject: Output for AASHTO LFD engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Vargas, Luis 10/25/2011 6:19:32 PM  
Modified By: hlee 10/31/2011 12:25:13 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Luis Vargas DATE: 10/25/2011 2:24:47 PM Eastern Daylight Time  
We are load rating a prestressed beam bridge using AASHTO LFD Analysis module. When trying to retrieve the output, we are unable to get the Section Properties or the Detailed Rating Results using the LFD analysis Output option under the Report Tool. We can obtain this information by going to "View Spec Check" tool, however, it cannot be printed from there. Is there a way to be able to obtain a complete Output report using the AASHTO LFD Analysis module? File is attached.

4/19/2016 3:08:51 PM

HRS AASHTO

2046

Complete Issue Information

FROM: Herman Lee DATE: 10/31/2011 8:11:36 AM Eastern Daylight Time  
Spec checks report can be generated using the Report Tool. Please see attached screen capture.

Please note that the Special Consultant License Option only allows us to provide limited support for installation. The primary support channel for consultant is through the sponsoring agency of your license.

Issue ID: 11149  
Subject: V6.3 does not display timber deck rating results in the analysis results window

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Murgoitio, Shanon 10/26/2011 3:00:52 PM  
Modified By: sghosh 5/9/2013 4:39:21 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          | Bug      |
| Lee, Herman     |          |          |          |

4/19/2016 3:08:52 PM

HRS AASHTO

2047

### Complete Issue Information

|                 |          |      |                         |
|-----------------|----------|------|-------------------------|
| Goodrich, Brian |          |      |                         |
| Lee, Herman     | New      | High | Bug - Madero<br>Unknown |
| Goodrich, Brian | Assigned |      |                         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | ITD_Issue_20.docx   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Shannon Murgoitio DATE: 10/26/2011 11:14:50 AM Eastern Daylight Time  
Virtis v6.3 does not display timber deck ratings. From our investigation it appears the Madero engine is rating the timber deck, it is just not being displayed in the analysis results window. Please see the attached word file for screen prints of results with more information, and the xml file.  
Thank you,  
Shanon Murgoitio

FROM: Shannon Murgoitio DATE: 10/26/2011 12:46:02 PM Eastern Daylight Time  
I am running a Windows 7, 64 bit operating system.

FROM: Herman Lee DATE: 10/26/2011 12:46:34 PM Eastern Daylight Time  
Ben, please confirm it's a defect in the system.

FROM: Bin Zhang DATE: 10/26/2011 5:31:03 PM Eastern Daylight Time  
It's a program bug, I can also reproduce it in a WinXP 32 bit OS. This bug has not been fixed in Virtis6.3.1 build 2 or Virtis64 yet. This display issue does not appear in Virtis62.

FROM: Herman Lee DATE: 11/1/2011 10:53:30 AM Eastern Daylight Time  
Developer Note:  
The vehicle id in DoDeckPanelRatingSummary AddRow is 0.

FROM: Brian Goodrich DATE: 11/9/2011 9:27:36 AM Mountain Standard Time  
I'm running 64-bit Window 7 and am able to duplicate the error with the attached bridge. The vehicle name that is added to the results object within the export is the same one that is used to retrieve the ID in the Madero engine. I also confirmed that the flag returned by the DeckPanelResultsPtr->AddVehicle function was true. Within the engine the results object function IDoDeckPanelResults\_GetVehicleId is

4/19/2016 3:08:52 PM

HRS AASHTO

2048

## Complete Issue Information

called, but it returns the vehicle ID as zero. The same code is called for a timber stringer and the `IDoMemberResults_GetVehicleId` function returns a non-zero vehicle ID.

I also ran the deck and stringer for `TimberTrainingBridge1` and the same error occurs for just the deck analysis. So, this issue is not limited to just the user's bridge.

Herman - I cannot find any problem in the Madero export or engine. Please verify the problem does not reside in the `DeckPanelResultsPtr->AddVehicle` function or in the `IDoDeckPanelResults_GetVehicleId` results object functions.

FROM: Aaron Kemna DATE: 11/18/2011 11:09:41 AM Eastern Standard Time  
I ran into the same issue. I'll attach the bridge in case it would be helpful.

FROM: Amanda Jackson DATE: 2/9/2012 9:54:57 AM Eastern Standard Time  
I also ran into the same issue on a Windows XP 32 bit OS. I have attached my file as well (`timber_deck_error.xml`).

FROM: Herman Lee DATE: 3/26/2012 2:36:13 PM Eastern Daylight Time  
Brian, please see the attached two screenshots.

1. `DeckPanelResults_AddVehicle.png` - Madero export adds vehicles to the deck panel results. The export vehicle id is ok (not zero).
2. `DeckPanelRatingSummary_AddRow.png` - Madero engine adds rating results to the deck panel rating summary. The export vehicle id is zero.

Could you put a break point in the Madero engine when calling `AddRow` to confirm the export vehicle id being added? Thanks.

FROM: Brian Goodrich DATE: 3/27/2012 1:48:28 PM Mountain Daylight Time  
The vehicle ID is zero when the `AddRow` function is called. Prior to this call, the Madero engine passes the vehicle name to the `IDoDeckPanelResults_GetVehicleId` function, but the vehicle ID that is returned here is zero. Within the Madero export, just prior to calling the Madero engine, I called the function `DeckPanelResultsPtr->GetVehicleId("Type 3_TRK")` to see what was returned. Vehicle ID 1 was returned here, which was correct. I compared the interface code for this function to others in the file and don't see anything that could be causing this. Can you see what is going on when the `DeckPanelResultsPtr->GetVehicleId` function is called by the Madero engine?

FROM: Herman Lee DATE: 5/11/2012 10:35:02 AM Eastern Daylight Time  
I put a breakpoint inside `DoDeckPanelResults::GetVehicleId`. That function never get called. I compared 6.3 `aborslt` source code with 6.2. The only difference is the module id to GUID changes.

FROM: Herman Lee DATE: 5/24/2012 8:59:25 AM Eastern Daylight Time  
Joe suggested to try the `Madero.dll` that comes with `Virtis 6.2` in `6.3`. The old `Madero.dll` works in `6.3` and the deck rating results passed back ok. If you don't see any changes between `Madero 1.2.3` and `1.2.4` that will cause this, my suggestion is to see whether rebuilding the `aborslt` Fortran interface file using the `6.3 aborslt` will fix this problem.

4/19/2016 3:08:52 PM

HRS AASHTO

2049

Complete Issue Information

FROM: Herman Lee DATE: 8/30/2012 9:00:50 AM Eastern Daylight Time  
Brian's e-mail on 8/28/2012:

=====  
Herman,

I'm getting the same problem with the deck results as with 6.3. I've compared both engine and export source code with those from Virtis 6.2.

I added a call to GetVehicleId before and after the call to the Madero engine and those calls return a valid vehicle ID. The correct object pointer is being passed into the Madero engine and I verified that. The only thing that makes sense is there is something going on with the interface function to the results object. I uploaded this file (VirtisAboResults.f90) to the FTP site (Incoming/Virtis). Only the IDoDeckPanelResults\_GetVehicleId seems to be a problem.

Brian  
=====

FROM: Herman Lee DATE: 10/26/2012 10:27:12 AM Eastern Daylight Time  
Attached further e-mail communication for this issue (RE\_ Madero.pdf).

FROM: Amanda Jackson DATE: 12/5/2012 4:51:55 PM Eastern Standard Time  
Did this get resolved? I'm still having the issue in 6.4. Is there another way to get the results out of the program? I only see one rating factor in the Madero output files. I don't want to have to hand-rate all of our timber decks until this is fixed. Any help would be appreciated.

FROM: Amanda Jackson DATE: 12/6/2012 10:53:50 AM Eastern Standard Time  
Ok, I figured out where the different Operating and Inventory rating factors are in the Madero output - just had to look closer.

FROM: Herman Lee DATE: 4/1/2013 1:07:10 PM Eastern Daylight Time  
Brian Goodrich email on 3/12/2013:

=====  
I put together a Madero solution that reproduces the problem. I uploaded the files (MaderoTest.zip) to the FTP server (Incoming/Virtis/Madero folder).

Set a breakpoint in SetVehicleId.f90 where the IDoMemberResults\_GetVehicleId and IDoDeckPanelResults\_GetVehicleId functions are called. IDoMemberResults\_GetVehicleId returns a vehicle ID while IDoDeckPanelResults\_GetVehicleId returns zero.

Thanks,  
Brian  
=====

FROM: Mehrdad Ordoobadi DATE: 4/11/2013 11:19:28 AM Eastern Daylight Time  
I debugged the Virtis/Opis application and set a break point in the AddRow function in CDoDeckPanelRatingSummary and it receives a IVehicleId = 0 when AddRow is called.

That's causing the GetVehicleId function call to return 0.

Complete Issue Information

FROM: Brian Goodrich DATE: 4/12/2013 10:09:59 AM Eastern Daylight Time  
The test program doesn't contain the call to the IDoDeckPanelRatingSummary\_AddRow function. When that function is called, BRASS is passing the vehicle ID it retrieved from IDoDeckPanelResults\_GetVehicleId. The IDoDeckPanelResults\_GetVehicleId function is returning the vehicle ID of zero. All vehicle IDs are obtained prior to calling IDoDeckPanelRatingSummary\_AddRow, and they are all zero.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 1:40:18 PM Eastern Daylight Time  
I set a break point inside the long CDoDeckPanelResults::GetVehicleId(LPCTSTR sExportVehicleName) function. The debugger never stops at that break point.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 4:46:35 PM Eastern Daylight Time  
Found the problem inside the aborslt project. Fixed for 6.5 Beta 1.

FROM: Subhadeep Ghosh DATE: 5/9/2013 12:05:32 PM Eastern Daylight Time  
Verified for 6.5 beta 1.

|                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 11150                                                                                                                            |
| Subject: Madero 1.02.04 engine output sets laterally unsupported lengths and unbraced lengths at midspan regardless of diaphragm locations |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Goodrich, Brian      |                       |
| Submitted By: Murgoitio, Shanon       | 10/26/2011 3:15:41 PM |
| Modified By: hlee                     | 10/26/2011 4:55:40 PM |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:08:52 PM

HRS AASHTO

2051

## Complete Issue Information

### Description

FROM: Shannon Murgoitio DATE: 10/26/2011 11:21:51 AM Eastern Daylight Time  
The Madero 1.02.04 engine output sets laterally unsupported lengths and unbraced lengths at midspan, regardless of interior diaphragm locations input. See attached word file for screen prints of input and output. See Issue ID 11149 for xml file.  
Thank you,  
Shanon Murgoitio

FROM: Shannon Murgoitio DATE: 10/26/2011 12:45:22 PM Eastern Daylight Time  
I am running a Windows 7, 64 bit operating system.

Issue ID: 11151

Subject: Cannot change Engine Help Configuration unless running v6.3 as an admin

Folder: /Virtis/Support Center/Virtis

Primary Contact: lhnat, Joseph

Submitted By: Murgoitio, Shanon

10/26/2011 6:41:57 PM

Modified By: mkolis

5/7/2012 5:23:48 PM

Priority: High

Category: Bug

### History

4/19/2016 3:08:52 PM

HRS AASHTO

2052

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
| Lee, Herman     | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Shannon Murgoitio DATE: 10/26/2011 2:55:05 PM Eastern Daylight Time  
I cannot change the Engine Help Configuration unless I am running v6.3 as an administrator.

When in a bridge workspace I go to Help==>Engine Help Configuration and try to switch engines (example: AASHTO Std. to AASHTO LRFD) and I get the following message:  
"!Failed to change engine help. Please close any open help windows and try again."  
If running v6.3 as an administrator this action can be performed and the message does not appear.

Is there something I can do that will allow the Engine Help Configuration to be changed even if you are not running v6.3 as an administrator? We can't have all our users running as admin.

Operating System: Windows 7, 64bit  
Virtis v6.3 loaded in the default location. C:\Program Files\AASHTOWARE

Thank you,  
Shanon Murgoitio

FROM: Herman Lee DATE: 10/26/2011 3:21:21 PM Eastern Daylight Time  
Ben, please confirm it's a defect in the system and assign the incident to Geoff.

FROM: Joseph Ihnat DATE: 10/26/2011 3:52:41 PM Eastern Daylight Time  
Try granting "Full Control" to "Everyone" for the C:\Program Files\AASHTOWARE\Virtis63\Help folder. Not sure why the permissions granted to the Virtis63 folder in the install don't extend to the Help folder. We'll have to investigate.

FROM: Joseph Ihnat DATE: 12/6/2011 8:19:02 AM Eastern Standard Time  
Fixed for version 6.4

FROM: Matt Kolis DATE: 5/7/2012 1:23:48 PM Eastern Daylight Time

4/19/2016 3:08:52 PM

HRS AASHTO

2053



Complete Issue Information

Verified fix in VO64 Alpha Build 4.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 11153                                                        |
| Subject: Rate steel girders as simple for dead and continuous for live |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Teal, Dean              | 10/27/2011 3:17:13 AM |
| Modified By: hlee                     | 5/16/2014 7:54:17 PM  |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/26/2011 11:18:34 PM Eastern Daylight Time  
Enhancement request coming from the West Virginia Virtis marketing trip.

FROM: Herman Lee DATE: 6/4/2012 4:09:04 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
Michigan DOT is interested in this enhancement.

FROM: Herman Lee DATE: 5/16/2014 3:53:12 PM Eastern Daylight Time  
Rate steel girders as simple for dead and continuous for live implemented for 6.6 release.

## Complete Issue Information

Issue ID: 11156

Subject: LL DF for permit vehicle using the AASHTO LRFR engine

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Zhang, Bin

10/28/2011 5:31:32 PM

Modified By: hlee

6/5/2012 1:00:34 PM

Priority: High

Category: Bug

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Doc6.docx           |             |

### Tasks

4/19/2016 3:08:53 PM

HRS AASHTO

2055

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 10/28/2011 1:35:39 PM Eastern Daylight Time

For the special (limited crossing) permit truck, the single lane distribution factors have been divided by 1.2 to remove the multiple presence factor. However, if I checked the single lane loaded box in the advanced section of the analysis, the 1.2 factor failed to be applied.

The problem could be reproduce using the BID1 TrainingBridge1, member alt of G1, LRFR permit load rating.

FROM: Herman Lee DATE: 10/31/2011 9:26:34 AM Eastern Daylight Time

Fixed for the AASHTO LRFR Engine. Resolved for the 6.4 Release.

FROM: Matt Kolis DATE: 5/18/2012 12:40:56 PM Eastern Daylight Time

See attached document from VO64 Alpha Build 5. After selecting "single lane loaded" for a Type-3 vehicle, analysis still says distribution factors have been divided by 1.2.

FROM: Herman Lee DATE: 5/18/2012 1:05:50 PM Eastern Daylight Time

Matt, based on the document. The issue described above is fixed. TrainingBridge1 is a multi-lane bridge. When you select the single lane checkbox for the special (limited crossing) permit truck, single lane DF is used and 1.2 is divided out.

|                                         |
|-----------------------------------------|
| Issue ID: 11157                         |
| Subject: AASHTO LFD Engine Shear Rating |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Vargas, Luis            | 10/28/2011 6:35:11 PM |
| Modified By: hlee                     | 10/31/2011 4:47:54 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:08:53 PM

HRS AASHTO

2056

Complete Issue Information

|                    |          |      |         |
|--------------------|----------|------|---------|
|                    | Assigned |      |         |
|                    | Resolved |      | Support |
| Lee, Herman        | New      | High | Unknown |
|                    | Assigned |      |         |
| Ordoobadi, Mehrdad |          |      | Bug     |
|                    | Resolved |      |         |
|                    | Assigned |      |         |
|                    | Resolved |      |         |
|                    | Verified |      |         |
|                    | Accepted |      |         |
|                    | Closed   |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | F1bmAnalysisFailures(0999901)<br>63.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Luis Vargas DATE: 10/28/2011 2:46:12 PM Eastern Daylight Time

We are load rating an AASHTO girder bridge using Virtis' AASHTO LFD analysis module. The ratings that Virtis is reporting are controlled by shear, however, the output is reporting the controlling section at 0 ft from support instead of H/2. When we run the same file using Virtis LFD analysis module, the reported controlling section for shear ratings is shown correct at H/2. Is there a way to ignore the shear ratings in AASHTO LFD analysis output within H/2? File is attached.

FROM: Herman Lee DATE: 10/31/2011 8:25:29 AM Eastern Daylight Time

4/19/2016 3:08:53 PM

HRS AASHTO

2057

Complete Issue Information

AASHTO Std 9.20.1.4 specifies that sections located within h/2 from face of support are evaluated for shear acting at the h/2 location. AASHTO Engine evaluates all the points of interests within h/2 with the Vu at the h/2 location.

Please note that the Special Consultant License Option only allows us to provide limited support for installation. The primary support channel for consultant is through the sponsoring agency of your license.

FROM: Luis Vargas DATE: 10/31/2011 12:18:30 PM Eastern Daylight Time  
Based on AASHTO Std 9.20.1.4, the shear (Vu) within h/2 of the support should be taken the same as at location h/2. However, the AASHTO LFD engine gives me different results at location 0 ft (RF=1.62 ), at location 1.26 ft (RF=1.69) and at location h/2=2.58 ft (RF=1.76) . The rating factor at locations between 0 to h/2 should equal rating factor at location h/2. Please clarify.

FROM: Herman Lee DATE: 10/31/2011 12:19:23 PM Eastern Daylight Time  
The Vn at 0 ft is different than the Vn at h/2. Please resubmit if you disagree with Virtis Vn calculations.

|                                      |
|--------------------------------------|
| Issue ID: 11158                      |
| Subject: Floorbeam Analysis Failures |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Armbrecht, Tim          | 10/31/2011 1:09:55 PM |
| Modified By: mordoobadi               | 6/4/2013 4:46:04 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 10/31/2011 9:13:07 AM Eastern Daylight Time

4/19/2016 3:08:53 PM

HRS AASHTO

2058

## Complete Issue Information

From my consultant (Souther):

Analysis fails for two of the floorbeams in the attached Virtis model (FlbmAnalysisFailures(0999901)63.xml) under the "West Bascule Leaf" Superstructure Definition. In addition the analysis of Unit 2 stringers yields questionable results, with shear controlling.

When attempting to analyze Floorbeam F1 (a floorbeam truss), the following error occurs:  
Error - Unable to determine stringer dead load reactions!  
Error - Analysis failed!

When attempting to analyze Floorbeam F2 (a riveted built-up plate girder), the following error occurs immediately after the stringer reactions are computed:  
Unable to perform analysis!  
08:47:34 AM - Line 616 in source file AbxAshtoEngineUiCtl.cpp.

(For both of the preceding, it appears that there is a problem with the calculation of Stringer Unit 2 reactions. Unit 2 is comprised simple span stringers with a 3' cantilever.)

FROM: Herman Lee DATE: 11/1/2011 11:51:55 AM Eastern Daylight Time  
Developer Note:  
iSupportNum = 0 in CUiAnalysisProgressDlg::PopulateDeadLoadReactionObjects Line 15702.  
The code should skip locating the floorbeam at the free end of the cantilever.

FROM: Mehrdad Ordoobadi DATE: 5/3/2012 2:21:29 PM Eastern Daylight Time  
Fixed in Virtis/Opis 6.4 Alpha 4.

FROM: Phil Litchfield DATE: 6/26/2012 5:18:00 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and problem still exists.

FROM: Mehrdad Ordoobadi DATE: 6/27/2012 10:44:50 AM Eastern Daylight Time  
Fixed in Beta 2. Checked in on 6/27/2012.

FROM: Phil Litchfield DATE: 8/8/2012 12:47:18 PM Eastern Daylight Time  
Checked in Beta 3, and problem still exists. While trying to analyze Floorbeam 1 in the west bascule we get the following error.

Info - Analyzing Flbm Truss @ PP1 with AASHTO Truss LFR Engine...

Info - Capacities determined using AASHTO Std Specifications 17th Edition  
Info - Ratings determined using AASHTO MBE Specifications 2nd Edition  
Info - Validating Stage 1 truss model...  
Info - Finished validating Stage 1 truss model...  
Info - Generating Stage 1 superstructure finite element model...  
Info - Finished generating Stage 1 superstructure finite element model...  
Info - Validating Stage 3 truss model...  
Info - Finished validating Stage 3 truss model...  
Info - Generating Stage 3 superstructure finite element model...  
Info - Finished generating Stage 3 superstructure finite element model...  
Info - Generating load cases for all models...  
Info - Structure typical section loads are applied at stringer locations.

4/19/2016 3:08:53 PM

HRS AASHTO

2059



Complete Issue Information

Info - Finished generating Stage 3 Span Model...

Info - Generating virtual stringer Stage 3 Virtual Stringer Model...

Error - Unable to perform analysis!

Error - Analysis failed!

And this was in the pop up window.

Unable to perform analysis!

11:38:55 AM - Line 871 in source file AbxAashtoEngineUiCtl.cpp.

FROM: Krisha Kennelly DATE: 8/8/2012 3:47:25 PM Eastern Daylight Time  
Assigned based on Resubmit in the status.

FROM: Mehrdad Ordoobadi DATE: 8/14/2012 4:50:52 PM Eastern Daylight Time  
The code that corrected this issue was lost when someone else checked in their code. The fix is checked into the TFS again.

FROM: Bin Zhang DATE: 8/29/2012 9:11:45 AM Eastern Daylight Time  
Verified for acceptance build, the "West Bascule Leaf" Superstructure run to completion successfully.

FROM: Phil Litchfield DATE: 6/4/2013 10:41:26 AM Eastern Daylight Time  
Correct in 6.4.1.

FROM: Mehrdad Ordoobadi DATE: 6/4/2013 11:06:19 AM Eastern Daylight Time  
Accepted by Phil Litchfield on 6/4/2013

|                                                    |
|----------------------------------------------------|
| Issue ID: 11162                                    |
| Subject: Analysis Fails for WF Bridge w/Cantilever |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Armbrecht, Tim          | 11/3/2011 7:38:58 PM |
| Modified By: tarmbrecht               | 11/4/2011 4:33:22 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |

4/19/2016 3:08:54 PM

HRS AASHTO

2061



Complete Issue Information

|             |           |      |         |
|-------------|-----------|------|---------|
|             | Resolved  |      |         |
|             | Duplicate |      | Bug     |
| Lee, Herman | New       | High | Unknown |
|             | Assigned  |      |         |
|             | Resolved  |      | Bug     |
|             | Assigned  |      |         |
|             | Resolved  |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                              | Description |
|------|------------------------------------------------------------------|-------------|
|      | Doc6.docx                                                        |             |
|      | 00048 - 82182191000S260.xml                                      |             |
|      | Girder Line vs. Girder System<br>Superstructure differences.docx |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 11/3/2011 3:41:20 PM Eastern Daylight Time  
 From my consultant (Souther). File attached.

When I attempt to perform an analysis of "East Counterweight Span WF/S2 - 1st N Int-x/CB21x83-Comp", a single span multi-beam wide flange bridge with a short (4.08') cantilever, it terminates with the following:

- Location - 34.1666 (ft)
- STAGE 2
- STAGE 3
- Location - 0.0000 (ft)

Failed to perform element specification checks.  
 Object reference not set to an instance of an object.  
 at  
 AbanSpec.Articles.AASHTO.LFD.SeventeenthEdition.ALFD\_17E\_10\_48\_04\_01\_Cb.  
 DoSpecificationCheck(SpecUnits eUnits)  
 at AbanSpec.Specifications.Specification.DoSpecificationCheck(SpecCheckDomain

## Complete Issue Information

```
specCheckDomain, SpecUnits eUnits)
  at AbanSpec.General.SpecificationChecker.DoSpecificationCheck(SpecCheckDomain
specCheckDomain, SpecUnits units)
  at CSCSuperStructure.DoStandardSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperSteelGirderElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \> \> \*,CList<CList<__int64>,__int64>
\*,CList<__int64>,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* ilnnerCounter, Int32*
ilnnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoSteelElementSpecCheck(CSCSuperStructure* ,
CSCSuperStructureElement* pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits
eUnits, String sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \> \> \*,CList<CList<__int64>,__int64>
\*,CList<__int64>,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* ilnnerCounter, Int32*
ilnnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecChecks, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoElementSpecCheck(CSCSuperStructure* , CSCSuperStructureElement*
pElement, SpecificationChecker specChecker, Int32 stage, SpecUnits eUnits, String
sSpecCheckDomainPath, Int32 iLocUnitId, Int32 iDistUnitId,
CStringT<char>,StrTraitMFC_DLL<char>,ATL::ChTraitsCRT<char> > >* sLocUnitDisplay, Int64* IStart,
Int64* ITotalLength, Int64* ISerializedLength, List`1* listSerialized, CArray<double>,double>*
arrayLocations, CArray<double>,double>* arraySpanLengths, CList<__int64>,__int64>*
arrayElementIndexSpecCheckDomains, CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \>)*
arrayIndexElementsByStage, CList<CStringArray \*,CStringArray \>)* arrayElementNamesByStage,
CList<CList<CList<__int64>,__int64> \*,CList<__int64>,__int64> \> \> \*,CList<CList<__int64>,__int64>
\*,CList<__int64>,__int64> \> \>)* arrayIndexSpecCheckDomainsByStage, Int32* ilnnerCounter, Int32*
ilnnerTotalCount, Boolean* bFatalError, Boolean bLastRoundOfSpecCheck, Boolean
bLTBRoundOfSpecChecks)
  at CSCSuperStructure.DoStandardSpecificationCheck(CSCSuperStructure* , Int32 ISysUnits)
  Fatal error occurred while processing specification checks.
  Error - Error performing LFR specification checking!
```

Error - Analysis failed!

Members in another Superstructure Definition, "West Counterweight Span WF", which is a mirror image of the subject, run successfully.

FROM: Wayne Skow DATE: 11/4/2011 8:39:53 AM Eastern Daylight Time  
Issue 11069's problem was from the same bug. The crash is caused by the article trying to fetch data to do a Cb calculation when the data is not available . In this case, Cb is automatically 1.0 because it's

4/19/2016 3:08:54 PM

HRS AASHTO

2063

Complete Issue Information

an unbraced cantilever and that data is not needed.

This problem has been fixed in v6.3 service pack 1 and in v6.4.

FROM: Tim Armbrecht DATE: 11/4/2011 12:33:22 PM Eastern Daylight Time  
We confirmed the fix in the service pack beta 3. Thanks.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 11163                                                   |
| Subject: Girder Line vs. Girder System Superstructure differences |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: McMunn, Creightyn       | 11/7/2011 8:11:51 PM  |
| Modified By: cmcmunn                  | 11/14/2012 7:45:14 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 11/7/2011 3:12:01 PM Eastern Standard Time  
Submitted on behalf of CREIGHTYN E. McMUNN, MDOT. The bridge XML file was attached in the document.

Received e-mail:

=====

=====

From: McMunn, Creightyn (MDOT) [mailto:McMunnC@michigan.gov]  
Sent: Friday, November 04, 2011 4:38 PM  
To: Bridgeware,  
Subject: Girder Line vs. Girder System Superstructure differences

4/19/2016 3:08:54 PM

HRS AASHTO

2064

Complete Issue Information

I received this issue from a consultant. They originally modeled the worst case scenario (Span 2 Girder B) as a girder line only. This barely passed for Michigan loads. They then modeled the entire flared girder structure. Span 2 Interior Girder B still governs but the rating factor is now slightly less than 1.0. They are running in AASHTO engine, LRFR.

We compared the moments between the girder line model and the girder system superstructure. All moments were comparable between the two, except "Concrete Deck Load". The concrete deck moment for the girder line is 1298.16 k-ft, which is to be expected for a 9" deck with 6.42' tributary width (the average spacing for the flared system). The concrete deck moment for the flared girder system is 1526.08 k-ft, which is significantly larger and does not seem accurate. The spacing perpendicular to the beam varies from 6.28125' to 6.5625', so even the largest spacing of 6.5625' should only produce a moment of 1326.9 k-ft. Is there something that we are missing or is this an error in the AASHTO engine?

Thank you,

CREIGHTYN E. McMUNN, PE  
LOAD RATING ENGINEER

Michigan Department of Transportation  
P.O. Box 30049  
Lansing, MI 48909  
(517) 322-1372  
mcmunnc@michigan.gov

=====

FROM: Bin Zhang DATE: 11/7/2011 3:16:24 PM Eastern Standard Time  
The deck load intensity in the Girder system superstructure is higher than the girder line results. The girder line deck load intensity exactly matched my hand calculation. The hand calculation and the deck load intensity snapshots were attached in the word document.

FROM: Herman Lee DATE: 11/11/2011 11:00:51 AM Eastern Standard Time  
Fixed a defect in CDoGirderSystemStructDef::PopulateGirderDataArray when determining girder spacings for non-parallel system.  
Resolved for 6.4 Release.

FROM: Matt Kolis DATE: 5/7/2012 4:12:15 PM Eastern Daylight Time  
When testing this issue in VO64 Alpha Build 5, I get an error when trying to do an LRFR analysis for Span 2 (Simple Span) - Interior Girder B Member Alternative. This same member runs fine in VO631.

FROM: Herman Lee DATE: 5/11/2012 10:33:04 AM Eastern Daylight Time  
Matt, please reverify this incident in Alpha 6.

FROM: Matt Kolis DATE: 5/23/2012 9:51:10 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

FROM: Creightyn McMunn DATE: 9/10/2012 3:33:46 PM Eastern Daylight Time  
In V6.4 Beta 4, I am still getting a moment of 1496.34 k-ft for the girder system superstructure, which is

4/19/2016 3:08:54 PM

HRS AASHTO

2065

Complete Issue Information

significantly higher than it should be.

FROM: Creightyn McMunn DATE: 9/10/2012 3:48:01 PM Eastern Daylight Time  
Disregard my previous comment. I was running the wrong member. When running Span 2, Girder B, in AASHTO LRFR I get the following error: "Error - UNable to determine Haunch Load entered on the PS Haunch Profile window! Error - Unable to determine haunch load! Error - Analysis failed!" Other members run fine.

FROM: Creightyn McMunn DATE: 11/14/2012 2:45:13 PM Eastern Standard Time  
I can run Span 2, Girder B, in AASHTO LRFR without error and get a concrete deck moment of 1298.12 k-ft. The issue has been resolved in V6.4.1 Beta.

Issue ID: 11164  
Subject: Issue with rating for user-defined points only - for RC beams using LRFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: vinayagamoorthy, vinacs 11/8/2011 2:31:15 PM  
Modified By: ghuang 7/10/2012 6:12:04 PM  
Priority: High  
Category: Bug

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |
| Kolis, Matt      | Assigned |          |          |
|                  | Resolved |          |          |
| Thogaru, Srujana | Assigned |          |          |
| Skow, Wayne      |          |          |          |
|                  | Resolved |          |          |

Contacts

4/19/2016 3:08:55 PM

HRS AASHTO

2066

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | BR10-113.xml        |             |
|      | BR10-0113.docx      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/8/2011 9:32:07 AM Eastern Standard Time  
Submitted on behalf of Vinacs M Vinayagamoorthy, Caltrans.

Received e-mail:

=====

Herman

We have been rating continuous span Tee beam bridges at the "User defined" points only. These user defined points are set such that the software does not rate bridges over the support location (100 or 200) etc.

(Embedded image moved to file: pic27013.jpg)

When I analyzed this bridge using LRFR, the controlling rating factor is reported at 100 point. See below (Embedded image moved to file: pic30477.jpg)

I believe this is a bug!, Please check this for me and add to the Incident list.

Thanks

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

The image for the rating results is coming from the Virtis LRFR Engine. I'm able to reproduce the issue in both 6.2 and 6.3.

FROM: Krisha Kennelly DATE: 11/8/2011 9:55:02 AM Eastern Standard Time  
I have confirmed that this is a bug. There is no workaround.

It will be fixed in version 6.4.

FROM: Krisha Kennelly DATE: 1/3/2012 12:43:26 PM Eastern Standard Time  
Fixed for 6.4. Controlling location is no longer a support location.

4/19/2016 3:08:55 PM

HRS AASHTO

2067

Complete Issue Information

This problem only existed for RC beams rated using LRFR.

FROM: Bin Zhang DATE: 2/3/2012 1:30:41 PM Eastern Standard Time  
Verified in VO631 with the caltran dll updates.

FROM: George Huang DATE: 2/9/2012 4:43:46 PM Eastern Standard Time  
The issue is resolved with the patch for VO6.3.1.

FROM: Matt Kolis DATE: 5/8/2012 10:59:36 AM Eastern Daylight Time  
The attached xml file seems to lock up VO64 Alpha Build 5 every time I attempt to perform an LRFR analysis.

FROM: Krisha Kennelly DATE: 5/22/2012 12:08:35 PM Eastern Daylight Time  
i can't reproduce this in 6.4 beta 1. please retry and if it happens again list all steps that lead to this error.

FROM: Matt Kolis DATE: 5/23/2012 9:07:52 AM Eastern Daylight Time  
Bridge continues to lock up in VO64 Beta Build 1. Steps are shown in attached "Doc1". I did an LRFR analysis using HL-93 inventory and operating rating vehicles.

FROM: Matt Kolis DATE: 5/23/2012 10:21:54 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

FROM: George Huang DATE: 6/26/2012 6:17:02 PM Eastern Daylight Time  
The LRFR rating factors from 6.4 beta 2 are much different than those from 6.3.1, which are more reasonable.  
The results for G2 from the attached file 24 0261R RR.xml are 0.059 for Type 3 from 6.4 but 1.05 from 6.3.1. the screen shots (VI11164\_64vs631.docx) are attached.

FROM: Krisha Kennelly DATE: 6/27/2012 8:58:13 AM Eastern Daylight Time  
Srujana - please investigate the different ratings between 6.3.1 and 6.4 beta 2.

FROM: Srujana Thogaru DATE: 6/27/2012 9:45:29 AM Eastern Daylight Time  
Reason for the differences in the rating factor is due to the change in the dv value. ComputeDV function in RCBeamCapacity.cs has been changed.

FROM: Wayne Skow DATE: 6/27/2012 4:07:29 PM Eastern Daylight Time  
Restored RCBeamCapacity.cs to it's previous version.

FROM: George Huang DATE: 7/10/2012 2:12:04 PM Eastern Daylight Time  
I'm just curious about the reason to change DV for 6.4 beta 2. We should use the right DV function.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 11168<br>Subject: Problems for Floor Beam in Truss Bridge |
|---------------------------------------------------------------------|

|                                                                      |
|----------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis<br>Primary Contact: Zhang, Bin |
|----------------------------------------------------------------------|

4/19/2016 3:08:55 PM

HRS AASHTO

2068

Complete Issue Information

|                             |                       |
|-----------------------------|-----------------------|
| Submitted By: Huang, George | 11/17/2011 1:47:21 PM |
| Modified By: jihnmat        | 8/21/2012 4:22:49 PM  |
| Priority: High              |                       |
| Category: Bug               |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |
|                  | Verified |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 0990057.xml          |             |
|      | FW_ Virtis error.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/17/2011 8:48:13 AM Eastern Standard Time  
 Submitted on behalf of George Huang, Caltrans.

Received e-mail:

=====

Hi Herman and Brian,

I found problems in the floor beam analysis. The word file for problem description and the xml Virtis file are both attached. The list results for Floorbeam3 are based on the BRASS LFD engine in both Virtis 6.2 and 6.3, and AASHTO LFD engine in Virtis 6.3. Let me know if you need more information. Thanks.

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance

4/19/2016 3:08:55 PM

HRS AASHTO

2069



Complete Issue Information

MS 9 - 1/9I

=====

FROM: Herman Lee DATE: 11/17/2011 10:09:14 AM Eastern Standard Time  
George is using the "AASHTO Manual for Condition Evaluation of Bridge Article 6.7.2.2" option in the Preferences window's Bridge Workspace tab.

FROM: Herman Lee DATE: 11/17/2011 12:17:28 PM Eastern Standard Time  
Received e-mail:

=====

Brian,

I need to correct my previous comments (2) "Based on the hand calculation the rating factors should be the same for travel way width between 18 and 24 feet, but the results from BRASS engine vary with the different width. The smallest rating, 0.625, occurs at the 18' width. If this rating is right, then this rating factor should be used for all cases between 18 and 24 feet." The ratings for width between 20' to 24', not 18' to 24', should be the same, since the minimum distance between the wheel and edge of lane is different for traffic lane width less than 10'.

Thanks.  
George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance

=====

FROM: Herman Lee DATE: 11/19/2011 8:06:22 AM Eastern Standard Time  
Brian added this issue to the BRASS incident tracking system. (11/17/2011 e-mail)

FROM: Herman Lee DATE: 11/21/2011 8:46:44 AM Eastern Standard Time  
George, I'm not able to reproduce the "Inv RF (AASHTO)" numbers in the Word file. I suspect those numbers are the results of lane loading. For the AASHTO Engine, the first row in the Analysis Results window is for HS20 Lane Load and the second row is for HS20 Truck Load.

The 99 rating factors are caused by defects in the input of the transverse loader. The defects has been fixed.

For this bridge, the floorbeam length (25.6667 ft) does not match up with the truss spacing (26.6667 ft). The wheel positions on the floorbeam are off by 0.5 ft. I modified the code to handle this situation. All the influence lines and live load patterns are listed in the LL Detail and LL Summary files.

AASHTO Engine does support MBE 6B.6.2.2 for floorbeam transverse live load analysis.

Resolved for the 6.4 Release.

FROM: Matt Kolis DATE: 5/18/2012 11:47:26 AM Eastern Daylight Time

4/19/2016 3:08:55 PM

HRS AASHTO

2070

Complete Issue Information

Verified in VO64 Alpha Build 5.

FROM: George Huang DATE: 6/8/2012 3:14:48 PM Eastern Daylight Time  
 For AASHTO engine, the 99 rating factors have been corrected. The rating for travel way width from 10 to less than 18' the ratings are fine. However for travel way width from 18' to 24', the rating factors need to be checked. I am using the same Br10-113 file to analyze floorbeam2. the results for 20' to 24' the results are identical to those from Virtis6.3 shown in BR10-113.docx, which are different for different width. I think these ratings may should be the same. The Inventory ratings for 18' and 19' travelway are 0.637 and 0.653. But the rating for 20' width is 0.647, which should be larger that that for 19' width. Please take a look at my previous comment (3) in BR10-113.docx. I think beta 1 only address my comment (4).

FROM: Herman Lee DATE: 7/2/2012 3:31:12 PM Eastern Daylight Time  
 George, below are the rating results for different travelway widths. The results I have for 20' width is 0.674. Could you also take a look at Incident 7007 (Wrong LL DF for 20' to 24' roadways?) for the procedure Virtis used to determine number of lanes? We could discuss over the phone after that. Thanks.

=====  
 =====  
 Superstructure Definition:           Span 4 (Warren pony truss)

Floorbeam Member Alt: floorbeam2

Std Spec (3.6.3)

MCEB (6.7.2.2)

| MCEB (6.7.2.2) |                             | Std Spec (3.6.3) |              |             |             |  |
|----------------|-----------------------------|------------------|--------------|-------------|-------------|--|
| HS 20 Rating:  | Travelway Width (ft)        | No of Lanes      | Truck Inv RF | Lane Inv RF | No of Lanes |  |
|                | Truck Inv RF    Lane Inv RF |                  |              |             |             |  |
| 0.709          | 24                          | 2                | 0.709        | 0.674       | 2           |  |
| 0.785          | 23                          | 2                | 0.785        | 0.745       | 2           |  |
| 0.758          | 22                          | 2                | 0.758        | 0.720       | 2           |  |
| 0.733          | 21                          | 2                | 0.733        | 0.696       | 2           |  |
| 0.709          | 20                          | 2                | 0.709        | 0.674       | 2           |  |
| 0.688          | 19                          | 1                | 1.130        | 1.074       | 2           |  |
|                | 18                          | 1                | 1.130        | 1.074       | 2           |  |

4/19/2016 3:08:55 PM

HRS AASHTO

2071

Complete Issue Information

Ben, for the node corresponding to the truck rating controlling locaton, find the max moment in the "Span LL Summary" text file and confirm the max moment with the indicated load pattern. Thanks.

FROM: Bin Zhang DATE: 7/16/2012 5:26:11 PM Eastern Daylight Time

When calculating the transverse load patterns, Virtis uses the parameters listed below.

- 1. Lane increment = 4.0000 ft
- 2. Vehicle increment within a lane = 2.0000 ft

I did a simple test for the floorbeam 2 with a travelway width of 23 feet. The Truck Inv RF decreased from 0.785 to 0.709 after I refined the 2 parameters to the numbers below.

- 1. Lane increment = 1.0000 ft
- 2. Vehicle increment within a lane = 0.5 ft

An enhancement request is submitted into the issue net to add the 2 parameters into the GUI, so the user will be able to modify them when calculating the transverse load patterns. The issue ID is 11720.

The controlling pattern is correct based on the two hard coded increments. Also, the moment calculation is correct based on its corresponding load pattern.

FROM: George Huang DATE: 8/10/2012 3:56:19 PM Eastern Daylight Time  
verified in v6.4 beta build 2.

|                                        |
|----------------------------------------|
| Issue ID: 11170                        |
| Subject: Unable to generate NSG model. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Armbrecht, Tim          | 11/21/2011 3:56:40 PM |
| Modified By: mkolis                   | 5/18/2012 3:59:00 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:08:55 PM

HRS AASHTO

2072

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/21/2011 10:57:27 AM Eastern Standard Time  
Submitted on behalf of Tim Armbrecht, IL DOT:

Below is the e-mail without embedded graphics. Attached PDF file is the e-mail with embedded graphics.

=====  
From: Litchfield, Phillip R  
Sent: Monday, November 21, 2011 9:38 AM  
To: Armbrecht, Tim A  
Subject: Virtis error

I just received this error while trying to run a NSG analysis. I've reported this error before for a different structure and I thought they had corrected it. I've attached the xml for the structure.

Thanks,  
Phil

=====  
FROM: Krisha Kennelly DATE: 11/21/2011 11:06:09 AM Eastern Standard Time  
The error message issued by Virtis in 6.3.1 is the same message that was issued previously (in VI 10858) but it is being issued for a different reason in this issue.

We have fixed the cause of this error and are testing it. We will be sending you a dll to test the fix for this issue soon.

FROM: Bin Zhang DATE: 11/21/2011 2:52:52 PM Eastern Standard Time  
I verified this fix for VO631-64Bit with the "AbxVirtisDistFactAnalysis.dll" update. The testing was performed under the Win7-64Bit OS.

FROM: Krisha Kennelly DATE: 12/21/2011 8:48:59 AM Eastern Standard Time  
Email for DLL via FTP was sent to Tim on Nov 21, 2011 3:33 pm from Bridgeware

FROM: Tim Armbrecht DATE: 12/21/2011 10:48:09 AM Eastern Standard Time  
Phil reports that the problem appears to have been resolved with this fix. Thanks.

FROM: Matt Kolis DATE: 5/18/2012 11:58:59 AM Eastern Daylight Time  
Verified NSG model now runs to completion in VO64 Alpha Build 5.

|                                       |
|---------------------------------------|
| Issue ID: 11172                       |
| Subject: Virtis ASD Shear Calculation |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Li, Xinmei           |                       |
| Submitted By: Armbrecht, Tim          | 11/29/2011 2:38:39 PM |

4/19/2016 3:08:56 PM

HRS AASHTO

2073

Complete Issue Information

|                          |                      |
|--------------------------|----------------------|
| Modified By: plitchfield | 6/27/2012 6:42:16 PM |
| Priority: High           |                      |
| Category: Bug            |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | New      | High     | Unknown  |
|                  | Assigned |          | Bug      |
|                  | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI 11175.png        |             |
|      | 540Amin.xml         |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/29/2011 9:38:59 AM Eastern Standard Time  
Submitted on behalf of Tim Ambrecht, IL DOT:

Received e-mail:

=====

Tim,

It appears that Virtis is not calculating a difference between the Inventory and Operating capacity for shear. I am specifically looking at SN: 086-0001, Span 6, Floorbeam 0 which is a built up section with  $F_y = 30$  ksi. I am not aware of an exception in the code that would allow these capacity to be the same. I think Baker should verify that it is calculating the Inventory and Operating Shear capacity correctly.

Let me know if you need any additional information or if you know of a code reason for this issue.

Thanks.

Scott

=====

4/19/2016 3:08:56 PM

HRS AASHTO

2074

Complete Issue Information

FROM: Wayne Skow DATE: 12/20/2011 7:08:26 AM Eastern Standard Time  
Scott is correct. The allowable shear stress for operating rating wasn't being set properly. Currently, allowable shear stress is always .33\*Fyw. Operating allows .45\*Fyw, so the current value is conservative.

Fixed in v6.4.

FROM: Matt Kolis DATE: 5/7/2012 10:11:23 AM Eastern Daylight Time  
When analyzing the bridge using LFR in VO64 Alpha Build 4, VO gives the error which can be seen in the attached word document. VO631 does not give that error.

FROM: Wayne Skow DATE: 5/9/2012 3:21:17 PM Eastern Daylight Time  
This error is an entirely different problem. The original problem involved ASR. This problem is with LFR. The reported error concerns floor beam 6 which is a built-up member. The controller (SCSuperSteelGirderElement->PopulateCompositeInfo(...)) see lines 17424 to 17455) populates composite info for this member, but it does not have an option for built-up cross-sections. It only handles rolled and plate girder cross-sections.

FROM: Matt Kolis DATE: 5/18/2012 9:08:31 AM Eastern Daylight Time  
When performing an ASR analysis on the bridge, Virtis gives a spec check error which can be seen in the attached ASD Error document.

FROM: Xinmei Li DATE: 5/23/2012 10:51:27 AM Eastern Daylight Time  
Fixed for the next build

FROM: Phil Litchfield DATE: 6/27/2012 2:42:16 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and appears to be fixed.

Issue ID: 11175  
Subject: P and CGS instead of strands in Strand Layout window gives Zero Inventory rating factor in LFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Thogaru, Srujana 11/30/2011 8:06:36 PM  
Modified By: mkolis 5/7/2012 1:27:23 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:08:56 PM

HRS AASHTO

2075

## Complete Issue Information

---

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | VI 11176 incorrect model.png |             |
|      | 0010019-TrussRunFailure.xml  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Srujana Thogaru DATE: 11/30/2011 3:07:04 PM Eastern Standard Time

Virtis gives zero Inventory rating for LFR analysis when input was given as P and CGS instead of strands in Strand Layout window.

Reason for PS stresses in 6B.5.53.3 PS Concrete Tensile Stress are considered as zeros.

Example bridge file is attached, G1 and G2 gives zero Inventory rating factor as P and CGS are give as Input where as G9 gives good rating since input strands.

FROM: Srujana Thogaru DATE: 3/13/2012 10:42:01 AM Eastern Daylight Time

This Issue was addressed in many support emails.

Fixed for 6.4 release.

FROM: Matt Kolis DATE: 5/7/2012 9:27:23 AM Eastern Daylight Time

Verified issue has been fixed in VO64 Alpha Build 4.

Issue ID: 11176

Subject: Truss Run Failure

Folder: /Virtis/Support Center/Virtis

Primary Contact: Duray, Jim

4/19/2016 3:08:56 PM

HRS AASHTO

2076

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Submitted By: Armbrecht, Tim | 12/1/2011 3:11:16 PM |
| Modified By: plitchfield     | 6/26/2012 8:54:16 PM |
| Priority: High               |                      |
| Category: Bug                |                      |

### History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Thogaru, Srujana | Assigned  | High     | Bug      |
|                  | Resolved  |          |          |
|                  | Duplicate |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 09252.xml           |             |
|      | F-17-LU.xml         |             |
|      | Error.png           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 12/1/2011 10:14:20 AM Eastern Standard Time  
From my consultant (Souther):

RE: 0010019-TrussRunFailure.xml

For an unknown reason the truss (South Truss) in the attached Virtis export file generates the following error when analysis is attempted:

```
// SelfWeight DC@ U2' : Fx = 0.000 kip , Fy = -11.984 kip, NodeNum 98
Initiating finite element analysis...
FEA - Building model...
FEA - Creating nodes...
FEA - Creating elements...
***Error - A non-standard exception occurred.
***Error - Failed to complete the finite element analysis.
```

Error - Analysis failed!

4/19/2016 3:08:56 PM

HRS AASHTO

2077



Complete Issue Information

The Truss successfully passes Verification.

FROM: Jim Duray DATE: 12/15/2011 1:58:37 PM Eastern Standard Time  
The model defines U6L6 as L6 L6. I believe it should be U6 L6. If that change is made in the truss definition the truss analysis runs to completion. I did not check to see if the results are correct. See attached model plot of the model before my suggested change.

FROM: Jim Duray DATE: 12/16/2011 7:57:04 AM Eastern Standard Time  
I added code to check for equal end nodes and issue an error msg (for 6.4).

FROM: Matt Kolis DATE: 5/7/2012 9:22:18 AM Eastern Daylight Time  
Error message has been verified in VO64 Alpha Build 4.

FROM: Phil Litchfield DATE: 6/26/2012 4:54:16 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and is fixed.

Issue ID: 11177  
Subject: Unable to perform LRFR permit analysis.

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Lee, Herman 12/1/2011 3:08:34 PM  
Modified By: hlee 3/2/2012 3:02:26 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/1/2011 10:09:01 AM Eastern Standard Time

4/19/2016 3:08:57 PM

HRS AASHTO

2078

Complete Issue Information

Submitted on behalf of Elizabeth Befikadu, AI Engineers (ebefikadu@aiengineers.com).

Received e-mail:

=====

=  
Herman,

How are you doing?

We are working on a RC T-beam bridge. All the beams run ok except member G1 (under As-built Span1) for Blanket permit vehicles. I have captured the screen shot of the error message. The beam runs also with Brass Engine with no error. We are at Virtis 6.2

Attach you will find the XML file

Thanks for your help

Elizabeth Befikadu

=====

=

Developer Note:

I'm able to reproduce the problem with a LRFR permit vehicle in 6.3.1.

FROM: Srujana Thogaru DATE: 12/9/2011 8:49:17 AM Eastern Standard Time  
Similar error in Atatched bridge F-17-LU.Xml file.(From support email sent by Purto, Brian [mailto:Purto@pbworld.com])

FROM: Srujana Thogaru DATE: 3/2/2012 9:49:25 AM Eastern Standard Time  
Similar to VI 11252. Found to be fixed in 6.4 Development.

Issue ID: 11178  
Subject: PS Service I specification check - correct answer is computed but sometimes incorrect stress data is shown in the article output

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kolis, Matt  
Submitted By: Lee, Herman 12/2/2011 1:06:33 PM  
Modified By: hlee 5/23/2012 1:48:25 PM  
Priority: High  
Category: Bug

History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Kennelly, Krishna | Assigned | High     | Unknown  |

4/19/2016 3:08:57 PM

HRS AASHTO

2079

Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
|                  | Resolved           |      |         |
| Lee, Herman      | New                | High | Unknown |
| Kennelly, Krisha | Information Needed |      |         |
|                  | Resolved           |      | Support |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/2/2011 8:06:59 AM Eastern Standard Time  
 Submitted on behalf of Jordan Pitt, LPA (WJPitt@lpagroup.com).

Received e-mail:

=====

Bridgeware,

While checking one of our Prestressed Concrete bridges, we noticed that the Service I specification check is reporting stress values for the Prestressed Section in the negative moment region, while it should be reporting for the Reinforced Concrete section over the pier, similar to the other two permit trucks OFRD #2 and OFRD #3. However, the rating appears to be computed correctly per the Reinforced Concrete section information and the problem seems to be only within the stresses that are being reported.

The .xml file has been attached for your use, in case you wish to check if there is an error with the engine or simply an error within our file.

Thanks,  
 -Jordan

=====

FROM: Krisha Kennelly DATE: 12/2/2011 9:11:23 AM Eastern Standard Time  
 The correct stress ratio was computed and printed out but incorrect summary data was sometimes printed out in the article table.

Code has been fixed for 6.4. Text file showing corrected article output is attached.

Complete Issue Information

FROM: Matt Kolis DATE: 5/7/2012 9:10:37 AM Eastern Daylight Time  
The bridge gets the error documented in "Doc3.docx" when G1 is analyzed with the LRFR Design Load Rating template.

FROM: Krisha Kennelly DATE: 5/22/2012 12:08:10 PM Eastern Daylight Time  
i can't reproduce this in 6.4 beta 1. please retry and if it happens again list all steps that lead to this error.

FROM: Matt Kolis DATE: 5/23/2012 9:27:12 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

|                             |
|-----------------------------|
| Issue ID: 11182             |
| Subject: Rating Factor is 0 |

|                                               |
|-----------------------------------------------|
| Folder: /Virtis/Support Center/Virtis         |
| Primary Contact: Kennelly, Krisha             |
| Submitted By: Mothe, Ram 12/7/2011 3:04:49 AM |
| Modified By: kkennelly 12/7/2011 3:26:03 PM   |
| Priority: High                                |
| Category: Support                             |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Ram Mothe DATE: 12/6/2011 10:12:29 PM Eastern Standard Time  
The rating factor is 0 for all girders. I have rated using both LFD and LRFR with the same result.

Please see the attached file.

FROM: Krisha Kennelly DATE: 12/7/2011 8:54:25 AM Eastern Standard Time

4/19/2016 3:08:57 PM

HRS AASHTO

2081

## Complete Issue Information

Please attach your file. Also indicate which engine you are using - BRASS or AASHTO.

Since you are getting zero rating factors for both rating methods there is likely something incorrect with your model. Please review the FAQ help topic "I get a very low rating factor for an existing bridge. What is wrong?" available from the Virtis Help/Frequently Asked Questions for ways to track down if your data is entered incorrectly.

Examples of incorrect data might be dead loads entered incorrectly (too large values resulting in DL greater than capacity) or composite properties not being used due to shear connectors not being defined.

FROM: Krisha Kennelly DATE: 12/7/2011 10:22:49 AM Eastern Standard Time  
email response sent to Corin Piacenti from Bridgeware:

Hi Corin,

I took a quick look at your bridge. You can follow these types of steps to determine the source of your problem.

Rate G2 for an HS20 vehicle. See the following rating results. Flexure is controlling at 71' (which is over the pier).

Open the spec check viewer to see the moment capacity computed at this location. Capacity computed for negative moment is zero.

Check the Deck Profile:Reinforcement window to see if there is any slab reinforcement to carry the negative moment. There is not.

If you enter some rebar in the slab to achieve negative moment capacity at the pier location you will get a non-zero rating.

Regards,  
Krisha Kennelly, PE  
Michael Baker Jr., Inc.

Issue ID: 11184

Subject: Virtis: Deteriorated Stringer Run Failure

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krisha

Submitted By: Armbrecht, Tim

12/8/2011 6:56:48 PM

Modified By: hlee

5/23/2012 1:48:05 PM

Priority: High

Category: Bug

## History

4/19/2016 3:08:57 PM

HRS AASHTO

2082

Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          | Support  |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | floorbeams.PNG       |             |
|      | 12085080.xml         |             |
|      | floorbeam_output.PNG |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 12/8/2011 1:59:34 PM Eastern Standard Time  
 From my consultant (Souther):

In the referenced Virtis model of a truss-floorbeam-stringer system the attempt to analyze Stringer 1 in Stringer Unit 4 terminates with the following run failure message...

```

...
- Location - 0.3073 (ft)
System Error - Contact Technical Support: Missing data in article: "6B.4 Steel Combined Moment and Shear - " - stage 3, round 2
- Location - 15.6875 (ft)
System Error - Contact Technical Support: Missing data in article: "6B.4 Steel Combined Moment and Shear - " - stage 3, round 2
- Location - 21.3750 (ft)
- Location - 21.4358 (ft)
- Location - 31.3750 (ft)
Fatal error occurred while processing specification checks.
Error - Error performing LFR specification checking!
    
```

Error - Analysis failed!

This stringer has been assigned Analysis Locations at 21.375' & 21.4358'. Web loss is 11.1% starting

### Complete Issue Information

at 21.4358' for a length of 0.50'. Bottom Flange Loss is 16.8% of thickness starting at 21.375' for a length of 2.00'.

Upon investigation, I found that if an analysis location is greater than 15.6975', the analysis fails. If it is 15.6975' or less, it succeeds.

FROM: Wayne Skow DATE: 12/15/2011 8:21:24 AM Eastern Standard Time  
There's a problem in the controller. The controller sets the following:

```
stl_Mp_pos_left = 10012, // Mp from 10.48.1 at left brace location
stl_Mp_pos_right = 10013, // Mp from 10.48.1 at right brace location
stl_Mp_neg_left = 10014, // Mp from 10.48.1 at left brace location
stl_Mp_neg_right = 10015, // Mp from 10.48.1 at right brace location
```

based on the bracing conditions to the left and right of the point. These values aren't getting set properly relative to the UnbracedCantilever flag.

FROM: Krisha Kennelly DATE: 12/15/2011 8:41:34 AM Eastern Standard Time  
A workaround is to select 'Generate at tenth points' for the LFD Control Options on the Member Alt window. You'll get more data than you want but the analysis will run to completion.

Still looking into a proper fix in the code.

FROM: Krisha Kennelly DATE: 12/15/2011 10:17:10 AM Eastern Standard Time  
Fixed for version 6.4. Note to developer: code fixed in AdjustBracePointsForPOIS() - not related to UnbracedCantilever flag

FROM: Mark Mlynarski DATE: 12/19/2011 3:22:44 PM Eastern Standard Time  
Tested new DLL (abaspecctrl.dll) using the attached procedure (see attached file VI-11184-Testing.pdf).  
Problem ran OK with new DLL.

FROM: Krisha Kennelly DATE: 12/21/2011 8:51:21 AM Eastern Standard Time  
Email for DLL via FTP was sent to Tim on Dec 20, 2011 9:27 am from Bridgeware

FROM: Tim Armbrecht DATE: 12/21/2011 10:44:49 AM Eastern Standard Time  
Tested the fix and Tim Souther reports that the error appears to be fixed. Thanks.

FROM: Bin Zhang DATE: 2/3/2012 1:51:08 PM Eastern Standard Time  
Changed teh status to be verified.

FROM: Matt Kolis DATE: 5/5/2012 5:11:26 PM Eastern Daylight Time  
Error during LFR analysis is fixed in VO64 Alpha Build 4, however, the program crashes during an LRFR analysis.

FROM: Krisha Kennelly DATE: 5/22/2012 12:17:19 PM Eastern Daylight Time  
The crash for the LRFR analysis is a different item. I've entered that as issue 11496

FROM: Matt Kolis DATE: 5/23/2012 9:32:14 AM Eastern Daylight Time  
Verified in VO64 Beta Build 1.

---

4/19/2016 3:08:58 PM

HRS AASHTO

2084

### Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 11185              |
| Subject: Floorbeam - LL DF's |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Thompson, Todd          | 12/12/2011 8:19:59 PM |
| Modified By: tthompson                | 9/7/2012 5:16:28 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Skow, Wayne     | Assigned | Critical |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1236Virtis6.20.xml  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 12/12/2011 3:25:36 PM Eastern Standard Time  
6.3.0 - Virtis OPis

I've been working on a Stringer - Floorbeam - Girder system bridge.  
I've been wanting to verify the live loads of the floorbeams and trying to get the LL distribution factor's used. I checked to output the LL DF's but they never show up in the output anywhere.

I attached the output section for the analysis and what shows up in the output. I'll also attach the XML of the bridge. You can use either the 684 FT or 900 FT units for reviewing the floorbeams.

4/19/2016 3:08:58 PM

HRS AASHTO

2085



## Complete Issue Information

FROM: Herman Lee DATE: 12/12/2011 4:26:59 PM Eastern Standard Time

For GFS system, floorbeam LL analysis will first perform a virtual stringer LL analysis to find out the longitudinal LL reaction at the floorbeam location. That reaction will then be used as the wheel load in the transverse LL analysis.

For Floorbeam 1 in the 684 unit:

1. Select the "Summary Influence Line Loading" and "Detailed Influence Line Loading" AASHTO Engine Reports in the Analysis Settings window.
2. The "Stringer Model LL Detail" and the "Stringer Model LL Summary" files contain the virtual stringer LL analysis. HS20 truck LL reaction at Node 1 is 36.576 kip.
3. The "Span Model LL Detail" and the "Span Model LL Summary" files contain the transverse LL analysis. The wheel load in each loading pattern on the floorbeam is half of the reaction.

|                                        |
|----------------------------------------|
| Issue ID: 11205                        |
| Subject: LFR combined moment and shear |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Skow, Wayne             | 12/28/2011 1:20:41 PM |
| Modified By: mkolis                   | 5/21/2012 7:10:37 PM  |
| Priority: Critical                    |                       |
| Category: Bug                         |                       |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Wayne Skow DATE: 12/28/2011 8:30:48 AM Eastern Standard Time

Submitted on behalf of Mohammad Islam

4/19/2016 3:08:58 PM

HRS AASHTO

2086

Complete Issue Information

received email:

---

From: Mohammad Islam [mailto:MIslam@azdot.gov]  
Sent: Monday, December 19, 2011 11:33 AM  
To: Lee, Herman  
Cc: Mohammed Baki  
Subject: FW: Different Rating Results in different virtis versions  
Importance: High

Hi Herman:

As per our telephone conversation please find attached the input files for Version 6.2 and 6.3 – we got very high ratings using Version 6.3. Please note that we used BRASS LFD engine for Version 6.2 and AASHTO LFD Engine for ratings. I would appreciate if you could please check and let us know your findings.

Thanks.  
Amin

---

From: Mohammad Islam  
Sent: Monday, December 19, 2011 7:50 AM  
To: Lee, Herman  
Cc: Mohammed Baki  
Subject: FW: Different Rating Results in different virtis versions  
Importance: High

Hi Herman:

You can see that in HS20-44 Lane 6.3 shear governs at supports, where as in 6.2 HS20-44 flexure governs. Usually we do not consider shear at supports – therefore, if we choose point of interest to check flexural capacity, then the flexural ratings for 6.3 is very high compared to 6.2 – I think this a big problem. Actually this example was not a good example because here shear and flexure mixes - I have another example where only flexure governs in both versions and ratings in 6.3 version are very high and I will send this example to you soon – please look at it – this happened only in steel Plate girder bridges – not in Rolled section girder bridges. Thanks.

Amin

---

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Friday, December 16, 2011 9:35 AM  
To: Mohammad Islam  
Subject: RE: Different Rating Results in different virtis versions

Amin,

I reviewed G2 in the main spans. Virtis LFD ratings are the same in 6.2 and 6.3 (see the attached HS20 Ratings file). AASHTO LFD ratings in 6.3 are comparable with those in Virtis LFD. The attached HS20 lane Load file compares the LL actions at the reported BRASS LFD HS20 lane load controlling location (first interior support). I think the difference is due to the way member stiffness is determined for use in the structural analysis (see attached PDF file, there's a table comparing Virtis LFD and BRASS LFD).

4/19/2016 3:08:58 PM

HRS AASHTO

2087

Complete Issue Information

Herman

From: Mohammad Islam [mailto:MIslam@azdot.gov]  
Sent: Thursday, December 15, 2011 3:41 PM  
To: Lee, Herman  
Subject: RE: Different Rating Results in different virtis versions

Actually, I want LFR analysis( VIRTIS LFD in 6.3 version and BRASS LFD in 6.2 version), interior girder G2 for the main spans plate girders -not LRFR – also note that I am having problem with plate girder spans. Thanks.  
Amin

---

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Thursday, December 15, 2011 1:31 PM  
To: Mohammad Islam  
Subject: RE: Different Rating Results in different virtis versions

Amin,

Which superstructure definition and girder you would like us to check? I assume you want us to compare the AASHTO LRFR Engine analysis results. Is that correct?

Thanks,  
Herman

From: Mohammad Islam [mailto:MIslam@azdot.gov]  
Sent: Thursday, December 15, 2011 3:10 PM  
To: Lee, Herman  
Subject: Different Rating Results in different virtis versions  
Importance: High

Dear Herman,

I would appreciate if you could please check these above two virtis files and let us know what's wrong with them? The same model is giving different rating values in different virtis versions. As you see, version 6.30 is giving very high rating compared to Version 6.20. Additionally, flexure is governing in version 6.20 and shear in support is governing in version 6.30.

Thanks

Amin Islam, Ph.D., PE.  
ADOT Bridge Group  
(602)712-8621  
e-mail: mislam@azdot.gov

---

FROM: Wayne Skow DATE: 12/28/2011 8:37:12 AM Eastern Standard Time  
There is a problem with ALFR\_1E\_2010I\_B6\_05\_Steel\_Flexure\_Combined\_MV and  
ALFR\_2E\_6B\_04\_Steel\_Combined\_MV. The proper combination of M and V is not always used

4/19/2016 3:08:58 PM

HRS AASHTO

2088

Complete Issue Information

leading to possibly unconservative rating factors. I'm working on a fix in v6.4.

FROM: Wayne Skow DATE: 3/22/2012 3:09:28 PM Eastern Daylight Time  
Fixed in v6.4

FROM: Matt Kolis DATE: 5/21/2012 3:10:36 PM Eastern Daylight Time  
Verified in VO64 Alpha Build 5.

|                                       |
|---------------------------------------|
| Issue ID: 11206                       |
| Subject: Lane Type Legal out of Range |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: Teal, Dean              | 12/29/2011 3:36:58 PM |
| Modified By: hlee                     | 1/3/2012 3:39:25 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
| Kennelly, Krisha | Assigned  |          | Bug      |
|                  | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | Lane Type Legal Out of Range.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 12/29/2011 10:38:31 AM Eastern Standard Time  
Load rate with LRFR using AASHTO engine

4/19/2016 3:08:58 PM

HRS AASHTO

2089

Complete Issue Information

Select the analysis template for Legal Loads

Now we have added Truck + Lane to compliment the truck Pair + Lane we already had in 6.2

Run the analysis and you will see that newly added Truck + Lane is out of range. It reports 3960 Tons for every slab bridge I run.

FROM: Herman Lee DATE: 12/29/2011 10:43:29 AM Eastern Standard Time  
The Lane-Type Legal Load Model (Truck + Lane) is only applicable for spans greater than 200 ft. As a result, this model doesn't have live load applied for the attached slab bridge. The rating factor is set to 99 and the resulting capacity is 3960 Ton.

I noticed that the Points of Interest has only "Generate at user-defined points" selected but the controlling location is not at a user-defined point of interest. Krisha, please see whether this issue is a duplicate of Incident 11164.

FROM: Krisha Kennelly DATE: 1/3/2012 9:56:13 AM Eastern Standard Time  
yes, the problem with the controlling location not being a user defined point of interest is a duplicate of 11164.

Issue ID: 11207  
Subject: View Analysis Output Order

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Teal, Dean 12/30/2011 3:32:53 PM  
Modified By: dteal 8/25/2012 3:11:41 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | EXPORT_FOR_VIRTIS_ISSUE<br>_SUBMITTAL.XML |             |
|      | VIRTIS_ISSUE.JPG                          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 12/30/2011 10:35:23 AM Eastern Standard Time  
In the View Analysis Output – do we have any control of the order?

Reason – we use an automated process to capture and use the LRFR results  
AASHTO and BRASS have different orders to the report

LRFR analysis

Using provided LRFR Legal Load Rating template in the analysis setting  
I attached the output from each

This difference in order really makes our automated process unusable

FROM: Herman Lee DATE: 12/31/2011 6:22:27 AM Eastern Standard Time  
The Analysis Output can be sorted by double-clicking the header of the column.

The order of the Live Load and Live Load Type in the Rating Results Summary is based on the order the results are populated by the analysis engine. It will be a minor change in the user interface to sort the results based on certain criteria before displaying.

|                                               |
|-----------------------------------------------|
| Issue ID: 11209                               |
| Subject: Constructability Check in LFD Rating |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Kennelly, Krisha     |                     |
| Submitted By: Jackson, Amanda         | 1/5/2012 5:02:56 PM |
| Modified By: ajackson                 | 1/5/2012 8:03:38 PM |
| Priority: High                        |                     |

## Complete Issue Information

Category: Support

## History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Skow, Wayne        | Assigned           | High     | Unknown  |
|                    | Information Needed |          |          |
|                    | Assigned           |          | Bug      |
|                    | Resolved           |          |          |
|                    | Verified           |          |          |
|                    | Resubmit           |          |          |
| Ordoobadi, Mehrdad |                    |          |          |
| Lee, Herman        | Assigned           |          |          |
|                    | Resolved           |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | LFR Analysis Error.docx   |             |
|      | SKMBT_C28012010317210.pdf |             |
|      | I-80 Model.xml            |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Amanda Jackson DATE: 1/5/2012 12:16:19 PM Eastern Standard Time

I am getting an inventory rating factor of 0.635 for the main exterior girders on the attached bridge. When I track this rating factor down in the spec check (at 100% of span 2 - at support number 3), it shows web buckling from LFD 17th edition article 10.61 as the controlling rating. All of the numbers seem to be correct. The problem is that article 10.61 is a constructability check, which should not control a rating. It is for web buckling before the deck has hardened. Also, live loads should not be applied to the strength calculated in article 10.61, which appears to be what the AASHTO engine is doing when I look at the spec checker (see attached screenshot).

FROM: Krisha Kennelly DATE: 1/5/2012 1:04:22 PM Eastern Standard Time

From MBE 6B.5.3.1, second paragraph, third sentence: For beams, the overload limitations of Article

4/19/2016 3:08:59 PM

HRS AASHTO

2092

Complete Issue Information

10.57 of the AASHTO Standard Specifications should also be considered.

From Art. 10.57: Web bend buckling shall be checked for the overload according to Equation 10-173.

Equation 10-173 is in 10.61.1 but it is not being evaluated for constructibility, it is being used to evaluate the overload in 10.57.

Also refer to MBE Appendix L6B.2.5.3 and Appendix A Example A1 to see how this equation is used to compute the rating. Virtis is following this approach.

FROM: Amanda Jackson DATE: 1/5/2012 3:03:38 PM Eastern Standard Time  
Got it. Thanks for the explanation. I was having issues with the rating in the negative moment region over the pier. I knew the rating was too low and thought that was the explanation. I added the thickness of the fill plates to the web thickness for that cross-section and got a more reasonable rating. I'll forward this bridge to you when I get the entire thing created. It's a good one for testing. It is a haunched girder-floorbeam-stringer bridge with a lot of cross-section changes and a mixture of solid floorbeams and truss floorbeams. Virtis seems to be handling it perfectly.

|                                              |
|----------------------------------------------|
| Issue ID: 11210                              |
| Subject: Issue with Mu calculated in 10.48.4 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 1/6/2012 1:05:27 PM  |
| Modified By: hlee                     | 7/13/2012 4:01:24 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:08:59 PM

HRS AASHTO

2093



Complete Issue Information

FROM: Herman Lee DATE: 1/6/2012 8:05:58 AM Eastern Standard Time  
Submitted on behalf of Tim Armbrecht, IL DOT.

Received e-mail:

=====

Herman, please enter this in to VI for me. File name is I-80 Model.xml.

Note that Tim Souther confirms that there may be an issue here.

Timothy A. Armbrecht, P.E., S.E.  
Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures

From: Schafer, Aaron M. [mailto:AMSchafer@modjeski.com]  
Sent: Wednesday, January 04, 2012 12:56 PM  
To: Armbrecht, Tim A  
Cc: Mertz, Rachel L; Petermeier, David W; Souther, Timothy E  
Subject: RE: VIRTIS 6.3

Tim,

The I-80 VIRTIS model can be found on the IDOT ftp site: <ftp://ftp.dot.state.il.us/pub/Bridges/>, in the VIRTIS folder. Below are the questions we have for Baker:

We are currently calculating the load ratings for the Cedar Street Bridge and have noticed some differences between the ratings between VIRTIS version 6.2 and 6.3. Upon further investigation, it seems that V6.3 is using different capacities than V6.2, on some members. One member in particular are the floorbeams of the girder spans. The floorbeam frames between the two girders and then consists of cantilever sections framing into the outside of the girders. In V6.2, the moment capacity was calculated using 10.48.4 of the standard specifications and gave:  
 $Mu = MrRb = 2993.81 * 0.806 = 2413.01 \text{ k*ft}$ . In V6.3, it seems that it is using the equations from 10.48.4, with the same Mr and Rb values; however, the Mu that is being calculated is not correct (see attachment). Have you ran into something like this before?

There also seems to be a difference between the capacities used between V6.2 and V6.3 for the continuous beam spans on the approach spans (Spans 1-4). The cross section at Span 4 – 60% (Fascia Beam) consists of a WF with a bottom cover plate. V6.2 calculates the capacity of the beam using section 10.50 of the standard specifications. In V6.3, the capacity is calculated using section 10.48.4 of the standard specifications and it states that section 10.50 does not apply because cross section contains a cover plate. This assumption seems incorrect.

Please evaluate and verify if errors exist for these two situations.

Thank you,

AARON M. SCHAFFER, EIT | Structural Engineer in Training

Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center, Edwardsville, IL 62025

4/19/2016 3:08:59 PM

HRS AASHTO

2094

Complete Issue Information  
amschafer@modjeski.com

From: Souther, Timothy E  
Sent: Wednesday, January 04, 2012 9:40 AM  
To: Armbrecht, Tim A  
Cc: 'Schafer, Aaron M.'; Mertz, Rachel L; Shoup, Scott M  
Subject: FW: VIRTIS 6.3

Tim,

M&M sent this in (read below). Both BRASS & Virtis purport to use  $\text{Mu}=\text{MrRbR}$  but are getting different results. For the member that produced the attached output, BRASS appears to generate the correct value according to M&M.  
 $\text{Mr}=2993.81$ ,  $\text{Rb}=0.806$ ,  $\text{R}=1.000$  ->  $\text{Mu}$  (BRASS) = 2413.01 k-ft;  $\text{Mu}$ (Virtis) = 1947.19 k-ft.

Please forward this to Baker for evaluation. I presume, if necessary, that M&M could provide an export file for whatever bridge the attached output is based on.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

From: Schafer, Aaron M. [mailto:AMSchafer@modjeski.com]  
Sent: Tuesday, January 03, 2012 4:38 PM  
To: Souther, Timothy E  
Cc: Mertz, Rachel L  
Subject: VIRTIS 6.3

Tim,

We are currently calculating the load ratings for the Cedar Street Bridge and have noticed some differences between the ratings between VIRTIS version 6.2 and 6.3. Upon further investigation, it seems that V6.3 is using different capacities than V6.2, on some members. One member in particular are the floorbeams of the two girder system. The floorbeam frames between the two girders and then consists of cantilever sections framing into the outside of the girders. In V6.2, the moment capacity was calculated using 10.48.4 of the standard specifications and gave:  
 $\text{Mu}=\text{MrRb}=2993.81*0.806=2413.01$  k\*ft. In V6.3, it seems that it is using the equations from 10.48.4, with the same Mr and Rb values; however, the Mu that is being calculated is not correct (see attachment). Have you ran into something like this before?

Thank you,

AARON M. SCHAFFER, EIT | Structural Engineer in Training

Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center, Edwardsville, IL 62025  
amschafer@modjeski.com

=====

4/19/2016 3:08:59 PM

HRS AASHTO

2095

Complete Issue Information

FROM: Wayne Skow DATE: 1/20/2012 1:38:05 PM Eastern Standard Time  
The I-80 bridge is attached to this incident, but I don't think it's the bridge M&M is referring to. Please attach the bridge from which the report in the pdf file came from and specify exactly which member to run.

Thanks,  
Wayne

FROM: Wayne Skow DATE: 1/20/2012 8:12:54 PM Eastern Standard Time  
10.48.4 is producing a bad value because of 10.48.2. 10.48.2 fails, but it is indicating a pass. I can't figure out a work around for it.

FROM: Wayne Skow DATE: 1/21/2012 10:39:40 AM Eastern Standard Time  
Concerning the 10.48.4 issue, there is a problem with 10.48.2. At the point indicated in the pdf file, 10.48.2 should show fail as indicated in 10.48.2.1. But it is showing pass. If 10.48.2 had failed, 10.48.4 would have shown the correct Mu of 2413. But as is, Rb was applied twice. I tried to figure out a work-a-round, but couldn't.

Concerning the bottom flange cover plate. This was discussed last year. When a flange is in compression and has a coverplate, we cannot assume the coveplate can go plastic. Therefore, we don't allow 10.50.2.1 when there's negative moment or 10.50.1.1.2 when there's positive moment. This should probably be controllable so the engineer can decide when to override.

FROM: Krisha Kennelly DATE: 1/25/2012 11:27:04 AM Eastern Standard Time  
The issue with 10.48.4 applying Rb twice has been resolved. A patch dll will be sent to Illinois via FTP.

Please note that the patch is for version 6.3.1. The xml file attached to this issue is for version 6.3.0. Please upgrade your software to version 6.3.1 before applying the patch.

FROM: Bin Zhang DATE: 2/3/2012 1:53:13 PM Eastern Standard Time  
Verified in VO631 with the caltran dll updates.

FROM: Matt Kolis DATE: 5/18/2012 9:50:35 AM Eastern Daylight Time  
Added document "LFR Analysis Error". Spans 20-24 (GFS) - Flbm2 was analyzed and produced the attached error in VO64 Alpha Build 5. Unable to verify incident.

FROM: Wayne Skow DATE: 6/25/2012 12:08:14 PM Eastern Daylight Time  
This is a new error and looks like its a result of removing the UpdateUpToDateFlag check in DoFlrbmStringerDLReaction.

Note - to reproduce the error, run LFR on Spans 20-24, FB 2.

FROM: Mehrdad Ordoobadi DATE: 7/12/2012 3:58:15 PM Eastern Daylight Time  
The two first and two last stringers produce errors during the analysis. The AASHTO Engine says the finite element model is unstable. The stringers are not adequately supported.

Info - Analyzing N Fascia with AASHTO LFR Engine...

Info - Analysis Preference Setting: None

4/19/2016 3:08:59 PM

HRS AASHTO

2096

Complete Issue Information

Info - Capacities determined using AASHTO Std Specifications 17th Edition  
Info - Ratings determined using AASHTO MBE Specifications 2nd Edition  
Info - Generating Stage 1 Span Model...  
Error - Support constraints are inadequate. Finite element model will be unstable!

Error - Analysis failed!

=====

After changing the assignment of those four stringers the analysis completes without any errors.

Observed that the "Pier 19 Rehabbed Stringers" stringer definition was not associated with any stringer group def. If I switch it to be associated with "4-Sp Group" the stringer analysis is successful.

I think this is probably a tolerance issue. This is not related to Up to date flag changes.

FROM: Herman Lee DATE: 7/13/2012 11:53:06 AM Eastern Daylight Time  
The defect is indirectly related to the fix for Incident 11112.  
Resolved for Beta 3.

|                                         |
|-----------------------------------------|
| Issue ID: 11211                         |
| Subject: Virtis: LRFR PS Bm Run Failure |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Thogaru, Srujana     |                     |
| Submitted By: Armbrecht, Tim          | 1/6/2012 4:47:54 PM |
| Modified By: plitchfield              | 6/4/2013 2:42:13 PM |
| Priority: High                        |                     |
| Category: Unknown                     |                     |

History

| Primary Contact  | Status           | Priority | Category |
|------------------|------------------|----------|----------|
| Lee, Herman      | New              | High     | Unknown  |
| Thogaru, Srujana | Assigned         |          |          |
|                  | Not Reproducible |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

## Complete Issue Information

### Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | VirtisRunLimitError64bit.gif  |             |
|      | VirtisRunLimitError64bit2.gif |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 1/6/2012 11:49:33 AM Eastern Standard Time  
From my consultant (Souther):

When attempting to do a LRFR analysis of Member "1st N Int-x" in the subject Virtis model of a PS concrete deck-beam bridge, it fails to complete the run, producing the following message:

Building Spec Check Domain objects.  
11x48 PS Deck-beam - Stage 1  
Error - Error performing LRFR specification checking!

Error - Analysis failed!

I have investigated and have not found any obvious reason for it. It ran successfully on December 21, 2011.

FROM: Srujana Thogaru DATE: 3/2/2012 4:10:47 PM Eastern Standard Time  
Attached bridge was tested in 6.3.1, analysis completed successfully. Unable to reproduce any error.

FROM: Phil Litchfield DATE: 6/4/2013 10:42:13 AM Eastern Daylight Time  
Correct in 6.4.1.

Issue ID: 11214

Subject: Error After Running Large Amount of Bridges in Virtis - Windows7 - 64 bit

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Kemna, Aaron

1/11/2012 8:42:17 PM

Modified By: akemna

5/22/2012 12:43:41 PM

Priority: High

Category: Bug - BRASS

4/19/2016 3:09:00 PM

HRS AASHTO

2098

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 1/11/2012 3:46:21 PM Eastern Standard Time

I tried running a large group of bridges (857) in Virtis. At some point during the run an error will kick out. I'll attach the error. The bridge that kicks out is different everytime. I ran 300+, then 607, then 400+ until I started getting the error after each run. Each run began after shutting my system down. Once a bridge kicks out, additional attempts to run without restarting the computer will give the error only for concrete bridges (Some concrete bridges will run, but most spit out the error). Steel bridges are not affected. This is a BRASS Error, but the problem seems to be similar to the dll error that pops up with a 32 bit system. This seems to be a compiler problem so I decided to send this to Virtis.

FROM: Brian Goodrich DATE: 1/12/2012 10:15:23 AM Mountain Standard Time

This issue is the same as BRASS Incident 241, which has been fixed. There is no workaround. WYDOT will release a new version soon.

### Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 11219                    |
| Subject: Virtis Output Enhancement |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jackson, Amanda         | 1/23/2012 6:22:28 PM |
| Modified By: hlee                     | 4/2/2012 7:34:42 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Skow, Wayne     | Assigned         | High     | Bug      |
|                 | Resolved         |          |          |
|                 | Assigned         |          |          |
|                 | Not Reproducible |          |          |
|                 | Resolved         |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Doc2.docx           |             |
|      | LRFR Library.xml    |             |
|      | pic16359.jpg        |             |
|      | pic08340.jpg        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amanda Jackson DATE: 1/23/2012 1:23:17 PM Eastern Standard Time  
I would like to see an enhancement to the Virtis rating output that lists the controlling location for all of the spec checks, not just the lowest rating factor. Some ratings calculated by Virtis are conservative

4/19/2016 3:09:00 PM

HRS AASHTO

2100

### Complete Issue Information

(i.e. web stiffness checks in built-up sections – the AASHTO engine ignores the vertical legs of the flange angles). An engineer needs to use judgment in looking at rating results, and is unable to do this without a full output – especially on Girder-Floorbeam-Stringer superstructures, where generating an LFD Analysis Report is not an option.

Also along these lines, it would be helpful to have a control option to ignore certain spec check results. These control options would need to be used with caution, but will help in cases such as rating a bridge where the results of a certain spec check are too conservative, and the engineer has verified a higher rating factor by hand. Checking “ignore” would allow the engineer to get the second controlling condition out of the program.

Conservative results are good in design, but they can be a problem in rating, especially if an engineer is trying to determine whether emergency vehicles can safely cross a bridge. Rating engineers need to be able to pick and choose which spec check conditions are allowed to control the entire bridge rating.

FROM: Herman Lee DATE: 4/2/2012 3:19:27 PM Eastern Daylight Time  
Please see whether the New Detailed LFR Report in the Virtis 6.4 release satisfies your needs.

|                                                |
|------------------------------------------------|
| Issue ID: 11223                                |
| Subject: N/A rating in Rating Results Summary. |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: vinayagamoorthy, vinacs | 1/25/2012 8:45:28 PM |
| Modified By: ghuang                   | 8/10/2012 8:03:24 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

4/19/2016 3:09:00 PM

HRS AASHTO

2101



Complete Issue Information

FROM: Herman Lee DATE: 1/25/2012 3:45:42 PM Eastern Standard Time  
Submitted on behalf of Vinacs M Vinayagamoorthy, Caltrans.

Part of the received e-mail:

=====

Herman

Could you please help in resolving the following issue:

I have analyzed the bridge using 8 permit trucks that Caltrans uses.

However the for one truck configuration it lists the rating in tons as.  
Why?

(Embedded image moved to file: pic16359.jpg)

This happens to the P15DBL wide truck only

Analysis setting is shown here

(Embedded image moved to file: pic08340.jpg)

Also, I am attaching the truck configuration and California specified load factors files below:

(See attached file: LRFR Library.xml)

=====

I'm able to reproduce the problem using the RC Training Bridge 1.

To reproduce the problem.

1. Import the vehicles in the attached Library XML file. Do not import the LRFR factor in the file (see Incident 11222 for reason).
2. Setup the Analysis Settings based on the pic08340.jpg file.
3. Rate G1 in RC Training Bridge 1.

Wayne, please first to check whether the bug is in AbaSpecCtrl.

FROM: Wayne Skow DATE: 2/27/2012 7:23:32 AM Eastern Standard Time

The problem was UiMemberResultsReportVw.cpp. The wrong vehicle Id was being used to determine if it was the special pedestrian vehicle. The ped vehicle Id was 12. So, whenever there are 12 or more vehicles in the analysis, the 12th one is identified as the ped vehicle and those extra fields are filled with values.

Fixed in v6.4. Workaround is to process less than 12 vehicles per analysis.

FROM: Matt Kolis DATE: 5/5/2012 5:41:10 PM Eastern Daylight Time

When attempting to import the LRFR Library, VO64 Alpha Build 4 crashes. See attached Doc2.docx for screenshots.

FROM: Wayne Skow DATE: 5/9/2012 11:02:14 AM Eastern Daylight Time

I was able to successfully import the file into v64a4 (running under Oracle VM VirtualBox)

4/19/2016 3:09:00 PM

HRS AASHTO

2102

Complete Issue Information

FROM: George Huang DATE: 8/10/2012 4:03:24 PM Eastern Daylight Time  
Vinacs verified in v6.4 beta build 3.

|                                                    |
|----------------------------------------------------|
| Issue ID: 11225                                    |
| Subject: Input problem in Floorbeam Member window. |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis           |
| Primary Contact: Ihnat, Joseph                  |
| Submitted By: Lee, Herman 1/26/2012 10:06:20 PM |
| Modified By: jihnat 10/24/2012 7:48:00 PM       |
| Priority: High                                  |
| Category: Bug                                   |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/26/2012 5:07:12 PM Eastern Standard Time  
To reproduce:

1. Open "FLine GFS TrainingBridge1" BWS.
2. Open "Floor Line GFS with Deck" FB2 Floorbeam Member window.
3. Click on the "Number of main floorbeam spans" down arrow button to change the value from 1 to 0.
4. Click Cancel to close the window.
5. Open the window. The value should be back to 1.

FROM: Joseph Ihnat DATE: 1/27/2012 8:46:24 AM Eastern Standard Time

4/19/2016 3:09:01 PM

HRS AASHTO

2103

Complete Issue Information

Fixed for 6.4

FROM: Matt Kolis DATE: 5/5/2012 5:44:40 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

FROM: Herman Lee DATE: 10/24/2012 9:46:05 AM Eastern Daylight Time  
When I import the bridge attached in Incident 11373 into 6.4, the Floorbeam Length Between Supports input is blank.

FROM: Joseph Ihnat DATE: 10/24/2012 3:47:38 PM Eastern Daylight Time  
Fixed for 6.4.1

|                                       |
|---------------------------------------|
| Issue ID: 11226                       |
| Subject: Error calculating 10.48.2 Rb |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Armbrecht, Tim          | 1/31/2012 1:21:06 PM |
| Modified By: wskow                    | 1/31/2012 7:05:21 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Assigned | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 0810011-10.48.2RbCalcError.xml |             |

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/31/2012 8:21:56 AM Eastern Standard Time  
Submitted on behalf of Tim Armbrrecht, IL DOT.

Part of the received e-mail:

=====

From: Souther, Timothy E  
 Sent: Monday, January 30, 2012 12:02 PM  
 To: Armbrrecht, Tim A  
 Subject: RE: Error calculating Rb

It does appear to be calculating Rb under 10.48.2 incorrectly, utilizing Mr/Sxc instead of fb in the equation as required. In the attached export, I have eliminated all Superstructure Definitions other than "Spans 9-19 (Double Girder System)" to reduce the file size (now 1MB).

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

From: Armbrrecht, Tim A  
Sent: Monday, January 30, 2012 9:24 AM  
To: 'Schafer, Aaron M.'; Souther, Timothy E  
Cc: Mertz, Rachel L; Petermeier, David W  
Subject: RE: Error calculating Rb

I'm out o the office this week. Tim S., can you please verify before I forward this to Herman? Thanks,

Tim

From: Schafer, Aaron M. [mailto:AMSchafer@modjeski.com]  
Sent: Friday, January 27, 2012 2:44 PM  
To: Armbrrecht, Tim A  
Cc: Souther, Timothy E; Mertz, Rachel L; Petermeier, David W  
Subject: Error calculating Rb

Tim,

The errors we were encountering previously have been resolved; however, I've noticed another error when calculating Mu in section 10.48.2. When working through the VIRTIS output, it was verified that the member I am looking at meets the requirements of a braced Noncompact section. In Section 10.48.2 (Braced Noncompact Sections) it states that when calculating Rb, fb should be substituted in for the Mr/Sx term. In VIRTIS, fb is not being substituted into the equation and Mr/Sx is being used. The member I am looking at is in the Line Girder Superstructure Definition titled "Spans 9-19 (Double Girder System)". The point of interest is Span 6 at 95.25 ft. I have attached the Mu calculation output and the Rb calculation output for your use. As you can see from the attachments, when VIRTIS calculates Rb it is using Mr/Sx = 36ksi and getting Rb=0.734. If fb=25.67ksi (Inventory Load case I) is

Complete Issue Information

substituted into the equation you get  $R_b=0.79$ , which increases the capacity of the member. Also, by using  $f_b$ , the  $R_b$  values would change for all load cases. Have you come across this error and if not, could you please forward this to Baker for their review. The I-80 model should still be on the IDOT ftp site, but if you need me to send it to you again please let me know.

Thank you,

AARON M. SCHAFFER, EIT | Structural Engineer in Training

Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center, Edwardsville, IL 62025  
amschafer@modjeski.com www.modjeski.com

FROM: Wayne Skow DATE: 1/31/2012 12:25:52 PM Eastern Standard Time

This is not a bug. Virtis is calculating  $R_b$  as intended when doing a rating. The problem with using  $f_b$  when rating a girder is that the resultant rating factor is not "linear" meaning you cannot take a resultant rating factor of, say, 1.1 from a 10 ton truck and assume you'd get a 1.0 rating factor from an 11 ton truck. In fact, you'd get a rating factor less than 1.0 since  $f_b$  would be larger, making  $R_b$  smaller. To manage this, Virtis uses either  $M_r/S_xc$  or  $F_{cr}$  (as stated in the output for 10.48.4.1. $R_b$ ), which is the maximum allowed stress in the section. The resulting rating factor will be smaller, but the extrapolation to a rating factor of 1.0 is OK since, at that point, the girder is stressed to exactly  $M_r/S_xc$  or  $F_{cr}$ .

Issue ID: 11228  
Subject: AASHTO LRFR Engine fails to analyze interior girders when support skews are varied

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: vinayagamoorthy, vinacs 1/31/2012 6:21:33 PM  
Modified By: jihnat 8/21/2012 4:23:06 PM  
Priority: High  
Category: Bug

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |

4/19/2016 3:09:01 PM

HRS AASHTO

2106

### Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
|             | Closed   |      |         |
| Lee, Herman | New      | High | Unknown |
|             | Assigned |      | Bug     |
| Zhang, Bin  | Resolved |      |         |
|             | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Analysis Results.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Srujana Thogaru DATE: 1/31/2012 1:22:11 PM Eastern Standard Time  
(Email from Vinacs M Vinayagamoorthy on Jan 30th 2012)

For the attached Bridge XML file AASHTO LRFR Engine fails to analyze interior girders when support  
skews are varied. Exterior girders are analyzed successfully.

In 6.4 Development I was able to reproduce the problem. Upon further investigation found that the code  
first asserts at Line 7040 in AbaSpecCtrl - scsuperstructure and then the analysis is aborted for  
DoLoadResistanceRcElementSpecCheck.

FROM: Krishna Kennelly DATE: 2/1/2012 10:43:45 AM Eastern Standard Time  
Conservative workaround I found:

For G2, on the Girder Profile: Web Depth tab revise the first range length from 48.457344 to  
48.457340. See attached file.

The member can then be analyzed with the AASHTO LRFR engine. The results for shear at the piers  
will be conservative since the engine is not recognizing these locations as supports and thus shear will  
be evaluated there. If the engine were to properly recognize these locations as supports, dv would be  
computed there and shear would not be checked in the regions located within dv of the support.

The source of the problem is the web range entered by the user as 48.457344 is stored as a section  
change point when exporting the cross section data. Then the engine tries to add the computed  
support at 48.457343563 but it is within the user tolerance of 48.457344 so it is not added as a point to

4/19/2016 3:09:01 PM

HRS AASHTO

2107

Complete Issue Information

be evaluated. (The supports are evaluated to compute dv to determine if user defined points are within the dv location and shear can be ignored there. A rating won't be performed at the supports since you haven't selected tenth pts as a control option.) The engine later compares 48.457344 against the computed span length of 48.457343563 using a tolerance tighter than the user tolerance, finds that they aren't equal and then doesn't consider 8.457344 to be support.

Problem has been fixed for 6.4.

FROM: Matt Kolis DATE: 5/5/2012 5:48:04 PM Eastern Daylight Time  
Fix verified in VO64 Alpha Build 4.

FROM: George Huang DATE: 8/10/2012 4:05:05 PM Eastern Daylight Time  
Vinacs verified in V64 beta build 3.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 11231                                        |
| Subject: Dynamic Load Allowance Being Used Improperly? |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Zhang, Bin           |                        |
| Submitted By: Teal, Dean              | 2/1/2012 6:47:35 PM    |
| Modified By: dteal                    | 12/11/2012 12:33:21 PM |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 2/1/2012 1:50:25 PM Eastern Standard Time  
I received this from a designer at HNTB (Michael Briggs)

Using the AASHTO engine (V/O v.6.3.1), upon reviewing LRFR output (specifically, in this case for a

Complete Issue Information

steel girder system superstructure) it appears that a 33% Dynamic Load Allowance (IM) is being used to increase to the live load force for lane (reactions at a minimum... but possibly the moment and shears too? The output is not specific in that nature). Either way, is this an output "bug" or is IM actually being applied to the lane load? It should always be 1.00 for lane load.

Screen Shot Attached

FROM: Herman Lee DATE: 2/2/2012 8:00:19 AM Eastern Standard Time  
It is a bug in the output. The reported lane loads are without impact.

FROM: Bin Zhang DATE: 9/11/2012 9:23:54 AM Eastern Daylight Time  
It's a cosmetic error in the report grid, resolved for VO6.5.

FROM: Bin Zhang DATE: 11/27/2012 1:06:15 PM Eastern Standard Time  
This fix will also be available in Version 6.4.1.

FROM: Laura Volle DATE: 11/30/2012 1:26:14 PM Eastern Standard Time  
It has been verified in 6.4.1 beta 2 version that the impact is displayed as 0 for the lane load.

FROM: Dean Teal DATE: 12/11/2012 7:33:21 AM Eastern Standard Time  
Accepted 6.4.1 beta 2

Issue ID: 11237  
Subject: 1979 Specs not applied correctly with AASHTO LFR engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krishna  
Submitted By: McMunn, Creightyn 2/6/2012 9:11:01 PM  
Modified By: cmcmunn 9/10/2012 8:06:42 PM  
Priority: High  
Category: Bug

History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          | Bug      |

4/19/2016 3:09:02 PM

HRS AASHTO

2109



## Complete Issue Information

|                 | Information Needed |      |             |
|-----------------|--------------------|------|-------------|
| Lee, Herman     | New                | High | Unknown     |
| Goodrich, Brian | Assigned           |      | Bug - BRASS |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Runtime Error.JPG   |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Creightyn McMunn DATE: 2/6/2012 4:22:21 PM Eastern Standard Time  
Our consultants have run into some trouble applying the 1979 Specs with the AASHTO LFR engine.

"When the 1979 spec is used for shear, the Virtis LFR and AASHTO LFR engines are calculating the shear capacity very differently. Per the AASHTO 1979 Interim Specification Section 1.6.13 – Shear: "For the design of web reinforcement in simply supported members carrying moving loads, it is recommended that shear be investigated only in the middle half of the span length." Therefore, the Virtis Engine ignores the shear between 0 and 25% & 75% and 100% of the span and the RF is then controlled by moment at midspan. When using the 1979 Spec, the AASHTO Engine is not using this provision and is not ignoring the shear at the end quarters of the span." See attached documents.

FROM: Krisha Kennelly DATE: 2/9/2012 2:21:05 PM Eastern Standard Time  
I have confirmed that this is a bug. The results produced by the AASTHO LFR engine are conservative since it is computing a shear rating factor where it should not be.

FROM: Creightyn McMunn DATE: 2/24/2012 1:36:17 PM Eastern Standard Time  
When will this bug be fixed? We have a large number of bridges in our inventory that rely on the 1979 Specifications.

FROM: Aaron Kemna DATE: 3/28/2012 12:10:41 PM Eastern Daylight Time  
I just want to clarify that for continuous bridges, the ends of girders are checked except at the ends of the bridge. Also, the AASHTO engine adds the vertical prestress force to the shear capacity. I am fairly certain that the vertical prestress force should not be included for 1979 AASHTO.

FROM: Aaron Kemna DATE: 3/30/2012 11:37:21 AM Eastern Daylight Time  
BRASS includes the Vp force. I think this is a carry over from the current AASHTO method. I don't have a problem keeping it in there, but this may be straying away from the code.

4/19/2016 3:09:02 PM

HRS AASHTO

2110

Complete Issue Information

FROM: Creightyn McMunn DATE: 8/9/2012 5:49:28 PM Eastern Daylight Time

This issue has not been fixed for Version 6.4. It is critical that this be fixed before 6.4 is released as Michigan has a large number of bridges requiring the 1979 Shear Specifications. This is even more critical if the Virtis engine is not going to be included in 6.4 because we will have no options available to accurately run the 1979 Shear Specifications.

FROM: Krisha Kennelly DATE: 8/10/2012 9:14:35 AM Eastern Daylight Time

Can you answer the following before we start work on this:

1. Do you want the Vp force included in the capacity?
2. Please clarify what Aaron said on 3/28 about continuous bridges. For continuous span bridges, should the AASHTO engine only ignore shear between 0 and 25% of span 1 and between 75% and 100% of the end span? Shear is to be checked at all other regions of the continuous span?

FROM: Creightyn McMunn DATE: 8/10/2012 11:15:48 AM Eastern Daylight Time

1. I agree with Aaron that using Vp is straying away from the code. I do not believe it should be included in the capacity.

2. I agree with your statement regarding continuous bridges.

FROM: Creightyn McMunn DATE: 8/10/2012 11:16:27 AM Eastern Daylight Time

Please confirm that this will be included in 6.4.

FROM: Krisha Kennelly DATE: 8/10/2012 11:44:53 AM Eastern Daylight Time

Yes, it will be in 6.4.

FROM: Krisha Kennelly DATE: 8/11/2012 9:31:58 AM Eastern Daylight Time

Fixed for 6.4 acceptance build

FROM: Bin Zhang DATE: 8/29/2012 9:50:44 AM Eastern Daylight Time

Verified for acceptance build:

1. Vp is NOT included in the capacity.
2. For simple span bridges, the shear between 0 and 25% & 75% and 100% of the span are ignored.
3. For continuous span bridges, AASHTO LFD engine only ignore shear between 0 and 25% of span 1 and between 75% and 100% of the end span. Shear is checked at all other regions of the continuous span.

FROM: Creightyn McMunn DATE: 9/10/2012 4:06:42 PM Eastern Daylight Time

Results for AASHTO engine in V6.4 Beta 4 are similar to results in V6.3.1 for Virtis engine.

Issue ID: 11242

Subject: Run Time Fatal Error – Batch Ratings

Folder: /Virtis/Support Center/Virtis

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

2/16/2012 3:20:18 PM

Modified By: bgoodrich

2/23/2012 3:45:35 PM

4/19/2016 3:09:02 PM

HRS AASHTO

2111

### Complete Issue Information

|                                         |
|-----------------------------------------|
| Priority: High<br>Category: Bug - BRASS |
|-----------------------------------------|

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | UnlimitedVsSingle.pdf |             |
|      | 19730.xml             |             |
|      | BPs.xml               |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 2/16/2012 10:21:50 AM Eastern Standard Time

I had set up a batch rating of 251 structures

On structure #26 "Existing" wasn't declared so the batch paused till I said OK, when it went on it seemed to be running the analysis way to fast, then it stopped with the attached run time error – this was fatal error that closed Virtis.

I restarted and tried to run the batch again – this time it did not stop on #26, it simply ran for a short time and produced the same run time error and then Virtis closed.

I rebooted and started the same batch again – this time it ran to about #130 before issuing the run time error and fatally closing Virtis. Note – it don't stop at structure #26 like it should have?

This is a windows 7 64 bit installation utilizing the BRASS engine, all LFD.

FROM: Dean Teal DATE: 2/16/2012 12:06:59 PM Eastern Standard Time

Note:

I was able to run the 251 batch load rating on my XP computer, I then tried it on my 64 bit windows 7 laptop and did not have any troubles.

4/19/2016 3:09:02 PM

HRS AASHTO

2112

Complete Issue Information

FROM: Dean Teal DATE: 2/21/2012 9:02:46 AM Eastern Standard Time  
I did a uninstall and reinstall of both virtis and brass softwares. The results are unchanged.  
One note - it appears that the program is looking for a file called "MbrAlt1.scratch"

FROM: Dean Teal DATE: 2/22/2012 7:24:48 AM Eastern Standard Time  
We reinstalled oracle - no change  
Note: the stoppage does not occure at the same time or the same bridge - it is very random

FROM: Brian Goodrich DATE: 2/22/2012 1:49:58 PM Mountain Standard Time  
I believe this is identical to BRASS Incident 241. I will send you instructions for downloading a new version.

FROM: Brian Goodrich DATE: 2/23/2012 8:41:06 AM Mountain Standard Time  
Some BRASS subroutines had been storing a memory address in an integer variable that was not the correct size for the 64-bit version. Sometimes the address was OK, but other times it did not which leads to the randomness you're seeing. This was fixed for BRASS Incident 241.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 11246                                            |
| Subject: Single Trip rating not in-line with other ratings |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Thogaru, Srujana     |                       |
| Submitted By: Silvis, Bryan           | 2/21/2012 3:52:42 PM  |
| Modified By: sthogaru                 | 10/16/2012 2:16:37 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:09:02 PM

HRS AASHTO

2113

Complete Issue Information

FROM: Bryan Silvis DATE: 2/21/2012 11:00:34 AM Eastern Standard Time

For the attached two-span continuous CIP slab structure, rating results for VDOT's BP-115 and BP-90 vehicle are out-of-line with other ratings with Vehicle Properties set to single trip. With Vehicle Properties set to unlimited crossings, they are in-line with other ratings. This occurs both in Versions 6.2 and 6.3.1.

Attached is the .xml file for the structure, the library export for the BP-115 and BP-90 vehicles, and a pdf containing screenshots of the two vehicle settings and the resulting rating.

FROM: Srujana Thogaru DATE: 10/16/2012 10:01:45 AM Eastern Daylight Time

Above mentioned issue is caused due to difference in the distribution factors.

As mentioned in the analysis progress window For single trip single lane distribution factors are divided by 1.2

Warning - Using single lane distribution factor for special (limited crossing) permit vehicle BP-115!  
For the special (limited crossing) permit truck, the single lane distribution factors have been divided by 1.2 to remove the multiple presence factor.

And

Warning - Using single lane distribution factor for special (limited crossing) permit vehicle BP-90!  
For the special (limited crossing) permit truck, the single lane distribution factors have been divided by 1.2 to remove the multiple presence factor.

Multi Lane distribution factors entered in the LLDF window are not equal if single lane divided by 1.2. Adjusting the distribution factors gives nearly same rating for "Single Trip" and "Unlimited Crossing"

Issue ID: 11252  
Subject: Issue with Service I rating for permit analysis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: vinayagamoorthy, vinacs 2/23/2012 6:27:40 PM  
Modified By: vvinayagamoorthy 9/5/2012 8:10:08 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:03 PM

HRS AASHTO

2114

Complete Issue Information

|                  |           |      |         |
|------------------|-----------|------|---------|
| Lee, Herman      | Resolved  | High | Bug     |
|                  | Verified  |      |         |
| Duray, Jim       | New       | High | Unknown |
| Lee, Herman      |           |      |         |
| Kennelly, Krisha | Assigned  |      | Bug     |
|                  | Resolved  |      |         |
|                  | Duplicate |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 11253 web profile.png       |             |
|      | Span 3 support.jpg          |             |
|      | Span 3 midspan.jpg          |             |
|      | 00041 - 13113083000S040.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 2/23/2012 1:30:25 PM Eastern Standard Time  
 Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

Received e-mail:

=====

Herman

If I remove the Service-I check (or rating) for Permit analysis, software is completing the rating. It is interesting to note that MBE requires us to rate the concrete bridges using Service-I load case for Permit Trucks only.

Vinacs M Vinayagamoorthy  
 Senior Bridge Engineer

YES

We typically analyze for several cases, including HL93 Inventory and Operating. Three Legal Trucks

4/19/2016 3:09:03 PM

HRS AASHTO

2115

Complete Issue Information  
and 8 Permit Trucks.

(Embedded image moved to file: pic04068.jpg)

Spec Load factors are overwritten by using Advance Analysis setting as shown below: (impact factor of permit trucks are reduced to 25%, Load factors is overwritten by 1.35 for permit and 1.5 for Legal:  
(Embedded image moved to file: pic31372.jpg)

Could you please try this scenario as well?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

"Lee, Herman"  
<HLee@mbakercorp.com>  
To  
Murugesu Vinayagamoorthy  
02/22/2012 02:23 PM <murugesu\_vinayagamoorthy@dot.ca.gov>  
v>  
cc  
George Huang  
<george\_huang@dot.ca.gov>  
Subject  
RE: 02 0151 error message

Vinacs,

I am able to complete the LRFR analysis for the G2 girder. Attached is the rating results. Did you perform legal or permit load ratings and did you specify any advanced vehicle properties in the analysis settings?

Herman

-----Original Message-----

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]

Sent: Wednesday, February 22, 2012 2:38 PM

To: Lee, Herman

Cc: George Huang

Subject: Fw: 02 0151 error message

Attached is a bridge that gives decent results (when analyzed by BRASS LFR, BRASS LRFR), but fails to run when using AASHTO LRFR.

Error message is:

(Embedded image moved to file: pic25099.jpg)

Please try the G2 (Interior Girder) of Span1-3 StructureDefinition.

4/19/2016 3:09:03 PM

HRS AASHTO

2116

Complete Issue Information

Also, have you got the user enter LLDF problem that I sent to you yesterday?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

I'm able to reproduce the problem in 6.3.1 by performing a LRFR permit analysis using the Type 3 vehicle (no modification to the advanced vehicle properties). But I'm not able to reproduce the problem in 6.4 Development and 6.4 Alpha 2.

FROM: Bin Zhang DATE: 4/19/2012 5:00:40 PM Eastern Daylight Time  
Verified for VO64 Alpha3. LRFR rating analysis completed successfully.

FROM: vinacs vinayagamoorthy DATE: 9/5/2012 4:10:08 PM Eastern Daylight Time  
Seems to be working and I was able to analyze the bridge.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 11253                                         |
| Subject: Dead/Live loads incorrect in AASHTO spec check |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: McMunn, Creightyn       | 2/27/2012 8:50:49 PM |
| Modified By: cmcmunn                  | 9/10/2012 9:07:43 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:09:03 PM

HRS AASHTO

2117



Complete Issue Information

FROM: Creightyn McMunn DATE: 2/27/2012 4:10:18 PM Eastern Standard Time

A consultant brought to my attention that Virtis is using the wrong dead and live loads for the attached parabolic concrete tee beam structure. When reviewing the AASHTO spec check for "B6.5.1 Shear Rating General Concrete Shear", the same dead load and live loads are being used for the entire length of Span 3. The attached spec check screenshots show the same shear near midspan as at the supports.

FROM: Herman Lee DATE: 2/28/2012 8:34:27 AM Eastern Standard Time

Span 3 midspan location cannot be within d from support. There's a defect in retrieving the actions at that location.

FROM: Krisha Kennelly DATE: 2/28/2012 10:32:39 AM Eastern Standard Time

This issue is a duplicate of 11228 which has been fixed for Version 6.4.

Due to tolerance issues, the third support is not being considered as a support.

A workaround is to specify the 4th web profile range on the Girder Profile: Web tab as starting at 0' from Support 3. Then the AASHTO LFR engine will recognize this pt as a support and correctly evaluate points within dv of this support and adjust their shear correctly. See the attached '11253 web profile.png' for the change required in the data entry.

FROM: Creightyn McMunn DATE: 9/10/2012 5:07:43 PM Eastern Daylight Time

Verified fixed in V6. 4 Beta 4.

|                                          |
|------------------------------------------|
| Issue ID: 11256                          |
| Subject: Virtis: Truss Run Error Message |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Armbrecht, Tim          | 3/6/2012 3:49:29 PM |
| Modified By: plitchfield              | 6/4/2013 2:43:57 PM |
| Priority: High                        |                     |
| Category: Support                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:03 PM

HRS AASHTO

2118

Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
| Lee, Herman | New      | High | Unknown |
| Zhang, Bin  | Assigned |      |         |
| Lee, Herman | New      | High | Unknown |
| Li, Xinmei  | Assigned |      | Bug     |
|             | Resolved |      |         |
|             | Resubmit |      |         |
|             | Assigned |      |         |
|             | Resolved |      |         |
|             | Verified |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | SouthLLDFCalculations_Detail.TXT |             |
|      | HandCalcs.xlsx                   |             |
|      | LLDFCalculations_Detail.TXT      |             |
|      | NorthLLDFCalculations_Detail.TXT |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 3/6/2012 10:52:09 AM Eastern Standard Time  
 From my consultant (Souther):

When performing the analysis of either North Truss or South Truss within the referenced Virtis bridge model, the following Error Message is produced:

Error getting rolled shape from steel rolled shape ranges to left of 12.19200000 m!  
 Current tolerance for m is 0.00304800.

It repeats 15 times within the message box.

Two issues:

4/19/2016 3:09:03 PM

HRS AASHTO

2119

Complete Issue Information

- What is causing this error? I haven't found anything that seems erroneous in the input and the results of the analysis seem reasonable.
- Why is it that it is using metric dimension when everything to do with this model is U.S. Customary?

FROM: Bin Zhang DATE: 3/7/2012 10:29:43 AM Eastern Standard Time  
 I could not find any model error in the #11256 bridge, I think it's a program bug related to locate the haunch distance.

FROM: Herman Lee DATE: 12/5/2012 9:13:05 AM Eastern Standard Time  
 The errors are caused by the following stringer definition inputs. Domain computation (helper) functions use metric units, that's why the error message is displayed using metric units.

1. 24WF84(30'/P3) The length of the 24WF84 shape should be 28.6666'.
2. 24WF84(30'/P4) The length of the 24WF84 shape should be 28.6666'.
3. 24WF84(30'/P4') The length of the 24WF84 shape should be 28.6666'.
4. 30WF108(40'/P17') Total length of rolled shape is 35' but the span length in the associated stringer group definition is 40'.

|                                                 |
|-------------------------------------------------|
| Issue ID: 11257                                 |
| Subject: Truss LLDF Virtis Computation in Error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 3/6/2012 3:52:39 PM  |
| Modified By: plitchfield              | 6/26/2012 8:57:34 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Tim Armbrecht DATE: 3/6/2012 10:53:37 AM Eastern Standard Time  
From my consultant (Souther) - please use the XML file submitted with 11256.

The multi-lane LLDF calculated by Virtis for the North and South Trusses within the Virtis bridge model contained in the referenced export file are incorrect. The manually calculated multilane LLDF values are 1.38956 for the North Truss and 1.478571 for the South Truss, both based on 3 lanes loaded with a 0.9 reduction factor. The values, respectively, calculated by Virtis are 0.83 and 1.40 (taken from the Truss Rating Results table). It appears that, for the North Truss, Virtis is ignoring vehicle loads located on the two-lane side of the median barrier. I don't know how Virtis is getting the South Truss value.

Note: The referenced export is the same as for the bug report sent by the email with Subject: Virtis: Truss Run Error Message.

FROM: Bin Zhang DATE: 3/13/2012 2:15:00 PM Eastern Daylight Time  
I agree with Souther, I think it's a program bug. Virtis only considers the 1st travelway when calculating the LLDF for the truss bridge.

FROM: Xinmei Li DATE: 3/19/2012 11:21:44 AM Eastern Daylight Time  
While computing multilane distribution factor Median between travelways were considered as another parapet, so travelway2 was not considered. This error also exists in girder system LLDF calculations.

FROM: Xinmei Li DATE: 3/21/2012 2:03:16 PM Eastern Daylight Time  
This bug is resolved for Truss for 64 release.  
I also tested BID19 to make sure that single travel way still works fine. I attached hand calculations for both bridges. The LLDF calculations by virtis match my hand calcs.

FROM: Todd Thompson DATE: 4/10/2012 1:57:29 PM Eastern Daylight Time  
Agree - anytime you have a median barrier - Virtis only sees the first travelway and all LLDF's are based upon that travel way. I have as a workound - eliminate the median barrier - compute the LL DF's (truss or girder) and then put the median barrier back. A pain but a shortcoming with the application.

FROM: Bin Zhang DATE: 4/19/2012 3:25:28 PM Eastern Daylight Time  
Issue still exists for VO64Alpha3, please read the attached "LLDFCalculations\_Detail" for details.

FROM: Xinmei Li DATE: 5/7/2012 1:35:16 PM Eastern Daylight Time  
Please retest. I can't reproduce the attached "LLDFCalculations\_Detail".  
See attached details for North and South trusses. LLDF for multi lane is 1.39 for North and 1.48 for South.

FROM: Bin Zhang DATE: 5/7/2012 2:05:05 PM Eastern Daylight Time  
Verified for VO64Alpha5.

FROM: Phil Litchfield DATE: 6/26/2012 4:57:34 PM Eastern Daylight Time  
Checked with 6.4 beta 1, and is fixed.

Issue ID: 11258

Subject: Virtis: Truss Appurtenance Dead Load Computation in Error

4/19/2016 3:09:04 PM

HRS AASHTO

2121

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Armbrecht, Tim          | 3/6/2012 3:53:58 PM  |
| Modified By: bzhang                   | 3/16/2012 7:18:47 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Unknown  |
| Ihnat, Joseph      | Assigned |          | Bug      |
| Ordoobadi, Mehrdad |          |          |          |
| Ihnat, Joseph      | Resolved |          |          |
|                    | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | SpWontUncheck(0900115).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 3/6/2012 10:54:49 AM Eastern Standard Time  
From my consultant (Souther) - please use the XML file submitted with 11256.

The calculation of a non symmetric appurtenance load to be applied to a truss panel point is incorrect. The computation should be based on the lever-rule (for both Stage 1 and Stage 2 loads), which would apply the loading to each truss proportionate to the distance from the load. When the load is defined as Stage 2, it erroneously applies 50% of the load to each truss. And, when it's a Stage 1 load it appears that it applies the entire load to the nearer truss and none to the farther truss. In the

4/19/2016 3:09:04 PM

HRS AASHTO

2122

Complete Issue Information

referenced example, the median barrier is 17.25' oc from the North Truss and 28.25' oc from the South Truss. Therefore the median load should be 58.55% on the North Truss and 41.45% on the South Truss for both Stage 1 and Stage 2 loads.

Note: The referenced export is the same as for the bug report sent by the email with Subject: Virtis: Truss Run Error Message.

FROM: Bin Zhang DATE: 3/14/2012 9:17:52 AM Eastern Daylight Time  
Virtis has several options for the dead load distribution. I listed the description of the dead load distribution for both stage 1 and stage 2 as below. I also attached a figure in the document to show how to set the dead load distribution in the GUI for the user. Please let me know if this does not answer your question.

\*\*\*\*\*  
\*\*\*\*\*

Stage 1 dead load distribution

Specify the manner in which the stage 1 dead loads are to be distributed as either by tributary area, by transverse simple-beam analysis, by transverse continuous-beam analysis, or user input results from independent 3D elastic analysis. These dead load distribution methods are described below. Stage 1 represents non-composite dead load.

Stage 2 dead load distribution

Specify the manner in which the stage 2 dead loads are to be distributed as either uniformly to all girders, by tributary area, by transverse simple-beam analysis, by transverse continuous-beam analysis, or user input results from independent 3D elastic analysis. These dead load distribution methods are described below. Stage 2 represents composite (sustained) dead load.

Description of dead load distribution methods:

1. Uniformly to all girders – the program computes the total dead load and distributes it equally to each girder, regardless of the location of the loads and the girders in the cross section.
2. By tributary area – the program establishes tributary areas for each girder (based on the midpoint between girders) and then distributes all dead loads according to their location within the various tributary areas.
3. By transverse simple-beam analysis – the program distributes all dead loads assuming that the deck behavior is like that of a simple beam, with each girder acting as a simple support.
4. By transverse continuous-beam analysis – the program distributes all dead loads assuming that the deck behavior is like that of a continuous beam, with each girder acting as a support for the continuous deck.
5. User-defined dead load – the program uses the dead loads that you input based on an independent analysis.

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 3/15/2012 11:30:06 AM Eastern Daylight Time  
In the truss attached in the incident, "By tributary area" is selected to distribute the dead load for stage one. That's the reason why we get "the entire load to the nearer truss and none to the farther truss" for stage one. If "By transverse simple-beam analysis" is selected, Virtis will apply the lever-rule to distribute the dead load as Mr. Souther expected.  
" By transverse simple-beam analysis " is selected to distribute the dead load for stage two. That's the reason why we get "50% of the load to each truss " for stage two. Similarly, we can use the option "By

4/19/2016 3:09:04 PM

HRS AASHTO

2123

Complete Issue Information

transverse simple-beam analysis" to apply the lever-rule to distribute the dead load. Please read the attached word document with embedded figure for details.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 11259                                                              |
| Subject: Virtis Bug Report: Can't Unselect Stringer Cantilever Span Checkbox |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Ihnat, Joseph        |                     |
| Submitted By: Armbrecht, Tim          | 3/6/2012 3:55:38 PM |
| Modified By: plitchfield              | 6/4/2013 2:44:39 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 3/6/2012 10:56:52 AM Eastern Standard Time  
From my consultant (Souther):

The STRINGER MEMBER, "Interior Stringers" has the first span erroneously checked as a Cantilever Span. Attempts to uncheck it fail. If one un-checks the box and clicks <Apply>, it appears to work but when the Stringer Member window is closed and reopened, the check mark reappears.

FROM: Joseph Ihnat DATE: 4/30/2012 3:43:55 PM Eastern Daylight Time  
Note to developer: There's no Domain function to un-Cantilever a stringer; the Cantilever checkbox isn't being handled.  
Workaround is to reenter the stringer member or at least change the number of stringer spans.

FROM: Mehrdad Ordoobadi DATE: 5/8/2012 3:11:53 PM Eastern Daylight Time  
Added code to the domain for removing start and end cantilever spans.

4/19/2016 3:09:05 PM

HRS AASHTO

2124

Complete Issue Information

FROM: Joseph Ihnat DATE: 6/18/2012 3:06:35 PM Eastern Daylight Time  
Fixed for 6.4

FROM: Bin Zhang DATE: 8/29/2012 1:00:08 PM Eastern Daylight Time  
Verified for acceptance build.

FROM: Phil Litchfield DATE: 6/4/2013 10:44:38 AM Eastern Daylight Time  
Correct in 6.4.1.

Issue ID: 11261  
Subject: Continuous Prestressed Concrete I-Girder Bridge Model, Concrete Shear Strength Calculation Near Interior Support

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Vaisa, Chris 3/7/2012 2:40:53 PM  
Modified By: bzhang 4/19/2012 7:25:01 PM  
Priority: High  
Category: Bug

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:09:05 PM

HRS AASHTO

2125



Complete Issue Information

| Name | Resource Identifier                                                               | Description |
|------|-----------------------------------------------------------------------------------|-------------|
|      | Jaguar_dr_over_NM599<br>Version 6-3-1.xml<br>00051 -<br>Copyof13113083000S040.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Chris Vaisa DATE: 3/7/2012 9:44:36 AM Eastern Standard Time

Refer to the attached version 6.3.1 model, "Jaguar\_dr\_over\_NM599 Version 6-3-1.xml". The final controlling inventory-level & operating-level ratings are unexpectedly low. Both ratings occur near Support 2 and are controlled by shear capacity. Upon some investigation, it appears that the program may not be properly calculating concrete strength,  $V_c$  in the negative moment region, between (but not including) the points 1.09 (0.9 point in Span 1) & 2.01 (0.1 point in Span 2). In this region, the value for  $V_c$  is reverting to  $V_{ci}$  minimum ( $1.7 \sqrt{f'c} b d$ ), which causes a substantial drop in the shear capacities and shear rating factors, as compared to the adjacent tenth points. It appears that this may be caused by incorrect accounting for negative shear values and resulting incorrect calculation of  $V_{ci}$ .

Refer to the attached version 6.2 model of the same bridge, "Jaguar Version 6-2 Model.xml". This model was created to see if the low concrete shear strength & rating factors occur in this earlier version. This model does not appear to have low shear values near/at the support – this conclusion is based on comparison of values at points 1.10 & 2.00, since, unlike version 6.3.1, I did not find calculations for intermediate (non-tenth) points. Shear rating factors at the above points, at Support 2, are quite high (inventory rating factor > 10) due to a large concrete shear capacity,  $V_c$  (which at this point is based on  $V_{ci}$ ). The final rating factors for this model are 1.05 & 1.68, both being controlled by shear in the areas of 0.3 – 0.4 of the spans.

Note: By ignoring the suspect region in the version 6.3.1 model, the controlling shear ratings appear to agree closely with the version 6.2 results – shear rating factors of 1.04 to 1.05 in the same 0.3 – 0.4 regions were observed in the version 6.3.1 model

FROM: Srujana Thogaru DATE: 3/16/2012 2:08:57 PM Eastern Daylight Time

In article 9.20.2.2 Equation 9-27  $M_{max}$  is not handled for the negative moment values.

Fix: Absolute value of the  $M_{max}$  is considered for proper computation of  $V_{ci}$ .

There is no workaround for this issue.

Fixed for 6.4 Release.

FROM: Bin Zhang DATE: 4/19/2012 2:46:47 PM Eastern Daylight Time

Verified for VO64 Alpha3

|                                                 |
|-------------------------------------------------|
| Issue ID: 11263                                 |
| Subject: PS Box Beam won't run in AASHTO engine |

Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Li, Xinmei                         |
| Submitted By: McMunn, Creightyn 3/7/2012 9:41:20 PM |
| Modified By: cmcmunn 9/10/2012 8:55:26 PM           |
| Priority: High                                      |
| Category: Bug                                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Plan.pdf            |             |
|      | S-17-043.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 3/7/2012 4:44:48 PM Eastern Standard Time  
 When trying to run the "Typical Fascia Beam" in either "Span 1 and Span 4 (Fascia PS Box Beams G1 and G8 Only)" or "Span 2 and Span 3 (Fascia PS Box Beams G1 and G8 Only)" for the attached file, I get the error "Error - Error performing prestress loss LFR specification checking! Analysis failed!" Both will run when using the Virtis Std engine.

FROM: Krisha Kennelly DATE: 3/8/2012 9:43:12 AM Eastern Standard Time  
 Looking at Typical Fascia Beam in "Span 1 and Span 4 (Fascia PS Box Beams G1 and G8 Only)", I see that the haunch to the outside edge of the beam is entered as 22.5". That plus the beam width of 48" equals 70.5". The effective flange width of the slab is entered as 58.5". The routine that creates the sections used in spec checking has a validation that checks that the haunch can't be wider than the effective slab width. Is the data entered for this girder correct?

FROM: Krisha Kennelly DATE: 3/8/2012 2:34:36 PM Eastern Standard Time  
 email from Creightyn:

Complete Issue Information

The effective flange width of 58.5" was computed by Virtis by clicking "Compute from Typical Section...". It seems to me that the correct effective flange width should be 82.5" (1/2 the spacing from CL fascia to CL interior beam plus the distance from the CL of fascia to edge of deck). Entering 82.5" for effective flange width solves the initial concern, but now there is the concern of how the 58.5" was calculated?

Thank you,  
Creightyn

May - please investigate. The correct value should be 82.5". It is computed correctly in debug for 6.4 but incorrectly in 6.3.1 release.

FROM: Xinmei Li DATE: 3/15/2012 1:50:14 PM Eastern Daylight Time  
I can reproduce this issue with 6.3.1. It is a duplicate of VI 10835. It's resolved for 6.4 release.  
Workaround is to enter effective flange width manually.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11265                                                  |
| Subject: Through steel truss with floorbeams NOT at panel points |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Nakrani, Navnit         | 3/8/2012 3:23:21 PM  |
| Modified By: hlee                     | 3/9/2012 12:33:11 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Navnit Nakrani DATE: 3/8/2012 10:31:50 AM Eastern Standard Time

4/19/2016 3:09:06 PM

HRS AASHTO

2128

## Complete Issue Information

Hello, My name is Naveen working with UIC/ Prime Engg. located in Wallingford, CT. I am trying to do a load rating of a Truss Floorbeam Stringer System using Virtis 6.2.

The bridge has three through trusses. Two outside trusses and one inside truss. The outside trusses are identical, the inside truss is similar with different section properties.

I have defined two trusses, floorbeams and stringers. But when I run the program for analyzing the trusses, it gives a error saying,

```
" Computing nodal loads due to floorbeams...
  // Floorbeam1 -> 3.894 kip @ 0.000 ft
  //   Applied to L0 - Node Number 12
  // Floorbeam2 -> 2.698 kip @ 22.812 ft
###Warning - Couldn't find panel point at floorbeam location 22.812446 ft..
###Warning - Couldn't apply floorbeam loads to panel point..
???Error - Unable to compute floorbeam loads ...
???Error - Unable to compute floorsystem loads...
```

and a similar error for the same floorbeam for the other truss also,

```
"Computing nodal loads due to floorbeams...
  // Floorbeam1 -> 3.894 kip @ 0.000 ft
  //   Applied to L0 - Node Number 12
  // Floorbeam2 -> 2.698 kip @ 2.521 ft
###Warning - Couldn't find panel point at floorbeam location 2.520754 ft..
###Warning - Couldn't apply floorbeam loads to panel point..
???Error - Unable to compute floorbeam loads ...
???Error - Unable to compute floorsystem loads...
```

I am attaching the Virtis file and the plan. Any help would be greatly appreciated.  
thank you so much,  
Naveen

FROM: Herman Lee DATE: 3/8/2012 12:49:03 PM Eastern Standard Time  
Please double check that truss panel points are defined at the floorbeam locations.

Please note that the Special Consultant License Option only allows us to provide limited support for installation. The primary support channel for consultant is through the sponsoring agency of your license.

FROM: Navnit Nakrani DATE: 3/8/2012 2:12:45 PM Eastern Standard Time  
Lee, the truss panel points are not at the floorbeam locations for this bridge. Can we use virtis to do such bridges?

FROM: Herman Lee DATE: 3/8/2012 2:54:54 PM Eastern Standard Time  
You could model the structure using truss line superstructure definition.

FROM: Navnit Nakrani DATE: 3/8/2012 4:36:03 PM Eastern Standard Time  
Lee, thank you for the reply.

4/19/2016 3:09:06 PM

HRS AASHTO

2129

Complete Issue Information

In this case, since the floorbeams and panel points are at different locations on the bottom chord, will Virtis analyze the bottom chord for the combined bending and axial forces?. How moving vehicle load will be considered for truss line superstructure compared to truss system superstructure?

FROM: Herman Lee DATE: 3/9/2012 7:30:39 AM Eastern Standard Time  
 No, main truss in Virtis is modeled using truss finite elements (tension and compression only).

|                                  |
|----------------------------------|
| Issue ID: 11283                  |
| Subject: Corrugated Deck Problem |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Jackson, Amanda         | 3/9/2012 10:19:52 PM |
| Modified By: ajackson                 | 12/7/2012 9:41:06 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          | Bug      |
| Zhang, Bin      |          |          |          |
| Lee, Herman     |          |          |          |
| Zhang, Bin      | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | I05302.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Amanda Jackson DATE: 3/9/2012 5:22:40 PM Eastern Standard Time  
When I run an analysis on the attached deck, I get a 99 rating factor on the deck for all trucks. If I change the number of girders to 14, and make any 3 of the girder bay spacings 3 ft, I get reasonable rating factors for the deck. If I then change the spacings to 2.99 ft or lower, I get the 99 rating factors again. I have no idea what I am doing wrong, or what is causing this. Please help!

FROM: Herman Lee DATE: 3/11/2012 9:56:17 AM Eastern Daylight Time  
There's a defect in generating the deck FE model when the girder spacing is less than 3 ft. For this configuration, no FE node is generated between the supports (girder locations). The resulting influence lines are incorrect. There's no workaround for this problem in 6.3.1.

Developer Note:  
The defect is in CABxDeckModelGen::AddXthPoints.

FROM: Herman Lee DATE: 12/5/2012 7:13:42 AM Eastern Standard Time  
I confirmed that Ben Zhang fixed the defect in the 6.4.0 release.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11294                                           |
| Subject: Large negative ratio in the Design Review Report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 3/12/2012 4:48:11 PM |
| Modified By: bzhang                   | 4/19/2012 3:36:05 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | EngineNotAvailable.png |             |
|      | AnalysisModules.png    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 3/12/2012 12:53:54 PM Eastern Daylight Time

In the attached files, there seems to be an anomaly in the Design Review report. For some reason there is a negative triple digit ratio at one of the 10th points. For 082-0335 it is at 0.7, span 1, and for 082-0334 it is at 0.6, span 2.

FROM: Xinmei Li DATE: 3/16/2012 11:57:22 AM Eastern Daylight Time

I cannot reproduce this issue with 64 dev version.

For bridge 082-334 design ratio is 2.18 at 0.6, span 2.

For bridge 082-0335 it is 2.09 at 0.7, span 1.

It is resolved for 6.4 release.

FROM: Bin Zhang DATE: 4/19/2012 9:20:15 AM Eastern Daylight Time

Verified for VO64Alpha3.

Issue ID: 11300

Subject: AASHTO vs BRASS Engine

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Laughlin, Christopher 3/13/2012 2:16:39 PM

Modified By: hlee 3/13/2012 9:27:28 PM

Priority: High

Category: Support

4/19/2016 3:09:07 PM

HRS AASHTO

2132

Complete Issue Information

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Mlynarski, Mark  |          |          | Bug      |
| Thogaru, Srujana |          | Critical |          |
|                  | Resolved |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |
|                  | Assigned |          |          |
|                  | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | 11307 Ifr rating.png                            |             |
|      | BR 53_3020 Flexural Resistance PrintScreen.docx |             |
|      | Negative Moment Capacity for PSGirder.docx      |             |
|      | 53_3020.xml                                     |             |
|      | 11307 lfd rating.png                            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:09:07 PM

HRS AASHTO

2133



Complete Issue Information

FROM: Christopher Laughlin DATE: 3/13/2012 10:34:38 AM Eastern Daylight Time  
After running the scripts to convert from the BRASS to AASHTO Engine, what happens to a bridge that was previously analyzed using BRASS ? In other words, if we convert to the AASHTO Engine and then open Virtis and pull up an existing structure, what can a user expect ? Do they just re-analyze and view the new results ? Are there any "white papers" or documentation that will help us determine if we should convert or purchase a BRASS license ? thanks

FROM: Christopher Laughlin DATE: 3/13/2012 11:07:44 AM Eastern Daylight Time  
FYI: We have already reviewed the Release Notes Comparison table. Looking for additional information, impact to users, results, etc.....

FROM: Herman Lee DATE: 3/13/2012 5:00:49 PM Eastern Daylight Time  
After running the scripts to convert from the BRASS to AASHTO Engine, the engine selections set in the bridge will be switched to the AASHTO Engine (see attached AnalysisModules.png file). Analysis will be performed using the AASHTO Engine.

If you haven't applied the optional scripts and BRASS is not installed, a dialog will pop up at the beginning of the analysis for switching to another engine (see attached EngineNotAvailable.png file).

We don't have any feedback from agencies that switched to the AASHTO Engine. My suggestion is to run a group of bridges that represents the inventory to get a feel of the AASHTO Engine.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11307                                                          |
| Subject: Negative Moment Capacity of PC/PS Concrete in AASHTO LFD Engine |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Thogaru, Srujana     |                       |
| Submitted By: Huang, George           | 3/14/2012 10:32:36 PM |
| Modified By: hlee                     | 10/5/2012 7:41:39 PM  |
| Priority: Critical                    |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:09:08 PM

HRS AASHTO

2134

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 3/14/2012 6:43:50 PM Eastern Daylight Time

In AASHTO LFD engine, when calculate negative moment capacity, reinforced concrete capacity with  $\phi=0.9$  is only used at the center of bent support. The precast prestressing concrete capacity with  $\phi=1.0$  is used at all composite girder location. This may not be right. The reinforced concrete capacity with  $\phi=0.9$  should be used to calculate the negative moment capacity at all composite section, which is used in the AASHTO LRFR engine.

FROM: Krisha Kennelly DATE: 3/19/2012 1:59:03 PM Eastern Daylight Time

I agree this is a bug.

FROM: Krisha Kennelly DATE: 3/19/2012 2:24:24 PM Eastern Daylight Time

George didn't attach a bridge so I attached screen shots from BID 9.

FROM: Srujana Thogaru DATE: 6/7/2012 3:49:25 PM Eastern Daylight Time

Fixed for 6.4 Release. (Available for testing in Beta Build 2)

FROM: George Huang DATE: 8/10/2012 3:37:49 PM Eastern Daylight Time

It was right in 6.4 beta build 2, but it is wrong again in build 3.

FROM: Srujana Thogaru DATE: 8/13/2012 1:45:51 PM Eastern Daylight Time

Fixed for 6.4 acceptance build.

FROM: vinacs vinayagamoorthy DATE: 9/14/2012 10:41:14 AM Eastern Daylight Time

There appears two problems and therefore resubmit this issue on behalf of George Huang

(1) The FIX is NOT working

I reviewed the Flexural Strength reported by Spec Check. For negative moment, it used the  $\phi$  factor of 0.9 and resulted in  $\phi$ -Mn of 2763.26 (at Inventory Level for HS20 loading). However, When I check Flexural Rating Output (using the spec check), the  $\phi$ -Mn is reported as 3070.29 (= 2763.26/0.9); This means the Flexural Rating subroutine gets Mn not  $\phi$ -Mn or It assumes  $\phi$  of 1.0 for both positive and negative moment.

(2) When we have negative moment due to live load, the rating factor should be based on "negative moment capacity" not based on positive moment demand.

I checked the Flexural Rating Spec output at Span1-96.46ft location. The software is using the  $\phi$ -Mn of 13382 kip-ft when establishing the rating factor using negative moment demand.  $\phi$ -Mn of 13382 is positive moment capacity and therefore It is incorrect. It should be using the negative moment capacity. Furthermore, for some reason reported the RF as NA.

The negative moment capacity at this point is -2763.26 ( $\phi=0.9$ , Mn=3070.29). When I evaluated the rating factor for negative moment for P13 truck (#10), it came about as 2.24, which is much lower than what is established (7.67) by the software

$RF = [-2763.26 - 1.3(1946-97.53)] / (1.3 \times 1774) = 2.24$

See attached word document "Negative Moment Capacity for PS-I girder"

In other words, the rating results based on negative demand is NOT properly evaluated and as a result, I resubmit this issue.

4/19/2016 3:09:08 PM

HRS AASHTO

2135

Complete Issue Information

FROM: Srujana Thogaru DATE: 9/17/2012 1:05:57 PM Eastern Daylight Time  
Fixed for Beta Build 5.

FROM: Geoffrey Trees DATE: 9/26/2012 4:05:48 PM Eastern Daylight Time  
Verified

FROM: vinacs vinayagamoorthy DATE: 10/3/2012 4:55:22 PM Eastern Daylight Time  
This fix does not take care of the problem reported at 96.46ft location. RF is NOT established using negative moment. The RF at this point for P13 permit truck is given as 7.67. If we did the calculation, the RF based on negative moment 2.34.

The software is checkin whether factored TOTAL demand is positive or negative to decided whether to rate using positive, negative moment, or both. This logic needs to be modified and it should rate for both positive and negative LL demand regardless of the sign of factored TOTAL demand.

FROM: Herman Lee DATE: 10/5/2012 3:19:02 PM Eastern Daylight Time  
I have submitted Incident 11958 for the second issue entered by Vinacs on 9/14.

|                                                          |
|----------------------------------------------------------|
| Issue ID: 11320                                          |
| Subject: Non Standard Gage Vehicle Not Running Correctly |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Nakrani, Navnit         | 3/21/2012 5:56:43 PM |
| Modified By: hlee                     | 3/21/2012 7:59:05 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:09:08 PM

HRS AASHTO

2136

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Navnit Nakrani DATE: 3/21/2012 2:16:19 PM Eastern Daylight Time

I'm trying to run a non standard gage load on a 2 girder simple span bridge. When I run a standard gage on the bridge, both the girders and the floor beams are analyzed, but when I try to run the non standard load, only the floor beams are analyzed. I've attached a virtis file so you can take a look at it, I'm not sure what I need to change to make it run. Thanks!

FROM: Herman Lee DATE: 3/21/2012 3:57:37 PM Eastern Daylight Time

Please review the "Capabilities and Limitations" section in the Distribution Factor Analysis topic in Virtis/Opis Help.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 11331                                                                     |
| Subject: Issue with Interior girder LLDF for bridge with Nail Laminated Timber Deck |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: vinayagamoorthy, vinacs | 3/28/2012 5:18:45 PM |
| Modified By: jihnat                   | 8/21/2012 4:23:21 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

4/19/2016 3:09:08 PM

HRS AASHTO

2137

Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
| Lee, Herman      | New      | High     | Unknown  |
|                  | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Srujana Thogaru DATE: 3/28/2012 1:19:27 PM Eastern Daylight Time

-----Mail From Vinacs -----

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
 Sent: Tuesday, March 27, 2012 10:11 AM  
 To: Lee, Herman  
 Subject: Issue with Interior girder LLDF for bridge with Nail Laminated Timber Deck

Herman

Attached is a steel bridge that has 6" Nail Laminated Timber Deck. We have some issue with Interior girder LLDF

Per spec, the LLDF should be S/5.0 for One Traffic Lane and S/4.25 for Two or more lanes.

However, the "Calculate" button of Virtis shows the following:

(Embedded image moved to file: pic24276.jpg)

One Lane distribtuion factor is correctly established. However, the multi lane DF

Why is the software is using S/5 to establish multi lane DF?

Vinacs M Vinayagamoorthy  
 Senior Bridge Engineer  
 916-227-2676

Complete Issue Information

---

FROM: Srujana Thogaru DATE: 4/10/2012 9:33:10 AM Eastern Daylight Time  
Above error while computing LL distribution factors is due to bug in the implementation of Bridge Article 6.7.2.2 while calculating DF, which resulting in consideration of number of lanes as 1.

Code has been updated in Analytical tools-> AbaLfdDistFactorTool to consider Bridge Article 6.7.2.2.

This error has been fixed for 6.4 release.

FROM: Srujana Thogaru DATE: 4/23/2012 4:34:06 PM Eastern Daylight Time

Another support email related to similar incident Bridge xml file 11C0139.xml is attached to the incident.

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
Sent: Monday, April 23, 2012 1:59 PM  
To: Lee, Herman  
Cc: George Huang  
Subject: Fw: LLDF - Virtis is not acknowledging the MBE 18ft-20ft width as two traffic lane.

Herman

Our engineers are saying the Virtis LLDF calcs does not recognize the bridges with width (18ft to 20ft) as two lane bridge, even if the option of AASHTO Manual for Condition Evaluation is chosen. Is that true?

Attached is the one of our engineers findings. This write up has the bridge model as well.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

This error has been fixed for 6.4 release

FROM: Srujana Thogaru DATE: 4/23/2012 4:39:36 PM Eastern Daylight Time

-----Original Message-----

From: George Huang [mailto:george\_huang@dot.ca.gov]  
Sent: Monday, April 23, 2012 3:10 PM  
To: Lee, Herman  
Cc: Murugesu Vinayagamoorthy  
Subject: Re: Fw: LLDF - Virtis is not acknowledging the MBE 18ft-20ft width as two traffic lane.

Hi Herman,

Same problem happens for stringers in Truss bridge. The same problem for floor beams is already included in VI 11015. Thanks.

4/19/2016 3:09:08 PM

HRS AASHTO

2139

Complete Issue Information

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Office: (916) 227-8769  
Cell: (916) 802-0949  
Fax: (916) 227-8357

This error has been fixed for 6.4 release.

FROM: Matt Kolis DATE: 5/7/2012 2:36:24 PM Eastern Daylight Time  
Fix has been verified in VO64 Alpha Build 5.

FROM: George Huang DATE: 8/10/2012 4:06:28 PM Eastern Daylight Time  
Vinacs verified in V6.4 beta build 3.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 11334                                                |
| Subject: NSG on precast prestressed multibeam box (deck) beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 3/29/2012 7:31:08 PM |
| Modified By: hlee                     | 3/29/2012 8:54:36 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 3/29/2012 3:35:29 PM Eastern Daylight Time

4/19/2016 3:09:08 PM

HRS AASHTO

2140

Complete Issue Information

Is there any way to run NSG on PPC deck beams that are connected with shear keys? They would be similar to the drawing in LRFD Spec Table 4.6.2.2.1-1 (g). Basically, the beams act like a deck.

FROM: Herman Lee DATE: 3/29/2012 4:48:06 PM Eastern Daylight Time

No, a deck is required in the generation of the 3D FE model during the Distribution Factor Analysis.

This issue is a duplicate of Incident 8845 (NSG will not run on Adjacent PS Box bridge with no deck.)

|                           |
|---------------------------|
| Issue ID: 11336           |
| Subject: 3D Analysis Fail |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Nakrani, Navnit         | 4/3/2012 7:03:40 PM  |
| Modified By: hlee                     | 4/17/2012 1:45:55 PM |
| Priority: High                        |                      |
| Category: Third Party                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:09:08 PM

HRS AASHTO

2141



### Complete Issue Information

|             |                    |      |         |
|-------------|--------------------|------|---------|
|             | Information Needed |      | Support |
| Zhang, Bin  |                    |      | Unknown |
| Lee, Herman | New                | High | Unknown |
| Zhang, Bin  | Assigned           |      | Support |
|             | Information Needed |      |         |
|             | Resolved           |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Control Options.png            |             |
|      | Stage 3 Spec Check Results.XML |             |
|      | 11338.docx                     |             |
|      | Shippee-74.75.xml              |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 4/3/2012 3:10:49 PM Eastern Daylight Time

When trying to run a non standard gage analysis on a stringer/floorbeam/girder system, I am getting an error that says 3D Engine did not run, but there are no details as to why. What could be causing this? I've attached the analysis printout.

FROM: Herman Lee DATE: 4/3/2012 4:08:48 PM Eastern Daylight Time

I don't see any files attached in this incident. Please attach the analysis printout again. Thanks.

FROM: Navnit Nakrani DATE: 4/4/2012 9:00:12 AM Eastern Daylight Time

It should be attached now.

FROM: Herman Lee DATE: 4/4/2012 2:02:52 PM Eastern Daylight Time

Please attach the bridge XML file for further investigation.

FROM: Bin Zhang DATE: 4/16/2012 9:25:59 AM Eastern Daylight Time

I tried to run the attached XML using the VO6.2, some of the floorbeams run to completion successfully, some of them failed. I attached the snapshots in the document (NSG analysis1 and 2).

|                                     |
|-------------------------------------|
| Issue ID: 11338                     |
| Subject: LRFD Girder Shear Analysis |

4/19/2016 3:09:09 PM

HRS AASHTO

2142

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Nakrani, Navnit         | 4/6/2012 1:10:05 PM  |
| Modified By: nnakrani                 | 4/12/2012 5:29:06 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

## History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Lee, Herman        | New      | High     | Bug      |
| Skow, Wayne        | Assigned |          | Unknown  |
| Kennelly, Krishna  |          |          | Bug      |
| Bhanushali, Girish | Resolved |          |          |
|                    | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | 00051 -<br>Copyof2810002040800.xml |             |
|      | VI_11342_screen_shots_1.<br>docx   |             |
|      | 11342 Workaround.docx              |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Navnit Nakrani DATE: 4/6/2012 9:20:33 AM Eastern Daylight Time

When I run and check for shear, the result always says "Ignore by User" even though interest points are entered.

How do I get shear check result output for LRFD

4/19/2016 3:09:09 PM

HRS AASHTO

2143

Complete Issue Information

FROM: Herman Lee DATE: 4/6/2012 10:05:08 AM Eastern Daylight Time

FROM: Navnit Nakrani DATE: 4/9/2012 9:22:18 AM Eastern Daylight Time  
Hi Herman,

I did not see any response from you except the date. Are you still working on the response? The required files were attached for your use.

Thanks,

Navnit

FROM: Herman Lee DATE: 4/9/2012 9:55:55 AM Eastern Daylight Time  
Navnit,

We are investigating whether the issue is caused by a defect in the system. We will keep you posted once we conclude our investigation.

Herman

FROM: Bin Zhang DATE: 4/9/2012 2:54:05 PM Eastern Daylight Time  
I used the HL93 Design Review loading template for the LRFD analysis (figure 1). I don't have a problem with the spec check for the shear (figure 2 and 3). Please read the attached the Word document for the fugures.  
Do I miss something here? Please specify more details so I could reproduce the problem.

FROM: Navnit Nakrani DATE: 4/10/2012 1:53:06 PM Eastern Daylight Time  
Please see attached file "Stage 3 Spec Check Results.xml" I do not get the shear check result. The displayed message is " Shear (5.8.3.3, 5.8.2.5, 5.8.2.7, 5.8.3.5) Ignore by User " It appears from the word document file you are getting results, why we are not?

Thanks,

Navnit

FROM: Bin Zhang DATE: 4/9/2012 5:09:40 PM Eastern Daylight Time  
Thanks, Navnit! I have several quick question.  
1. Can you reproduce this issue on your computer or it just happened occasionally/randomly?  
2. I was using the Shippee-74.75.xml attached in the document, is it the bridge model I suppose to use? Or do you have another XML model to reproduce this issue?  
3. I was using the LRFD loading template(HL-93US, LRFD fatigue truckUS), should I use other vehicles for the LRFD analysis?  
Thanks!

FROM: Navnit Nakrani DATE: 4/11/2012 10:18:55 AM Eastern Daylight Time  
Thanks for quick response.

1. Same issue persist.
2. I am using the same xml file.

4/19/2016 3:09:09 PM

HRS AASHTO

2144

Complete Issue Information

3. We are unable to select LRFD analysis template. Rather we are running LRFR rating template and our attached result file is due to rating rather than analysis, which does not run the shear analysis.

4. How do we get selection of analysis template? Do we need additional patches? How do we set up analysis setting?

Your help will be appreciated.

Thanks

Thanks,

Navnit

FROM: Bin Zhang DATE: 4/11/2012 3:16:50 PM Eastern Daylight Time

I am running a full Virtis/Opis version, that's the reason why you don't have the LRFD loading template as I do. Now I can reproduce your problem. In order to calculate the shear results, you need to uncheck the "Ignore design & legal load shear" option under the "Control Options" tab. Please read the attached figure for details (Control Options.png).

FROM: Navnit Nakrani DATE: 4/12/2012 1:29:06 PM Eastern Daylight Time

Thanks,

It is resolved.

Navnit

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 11342                                                            |
| Subject: Missing data in article: "6.10.8.2.1 - General" - stage 1 round 2 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Zhang, Bin              | 4/10/2012 5:57:53 PM |
| Modified By: mmlynarski               | 4/8/2013 8:03:35 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

4/19/2016 3:09:09 PM

HRS AASHTO

2145

Complete Issue Information

---

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 4/10/2012 2:02:54 PM Eastern Daylight Time

While running a LRFR analysis for a steel girder system in Virtis, the analysis reports "System Error – Contact Technical Support: Missing data in Article: 6.10.8.2.1 – General" – stage 1, round 2. I could reproduce this issue in VO631 too. Below is the email from the user.

Please use the attached XML file to reproduce this issue, member alternative of G1, LRFR loading template.

\*\*\*\*\*  
\*\*\*\*\*

From: Kyle Ramer [mailto:kylerr@bridgetest.com]  
Sent: Tuesday, April 10, 2012 10:48 AM  
To: Bridgeware,  
Subject: RE: Virtis Modeling Help

While running a LRFR analysis for a steel girder system in Virtis, the analysis reports "System Error – Contact Technical Support: Missing data in Article: 6.10.8.2.1 – General" – stage 1, round 2. We believe the problem is due to the shear stud definition, because when the girder/slab interface is made composite, the problem disappears. How can we resolve this issue with Virtis?

Kyle Ramer | BDI  
P: 303.494.3230 X: 110  
C: 717.422.3850  
www.bridgetest.com

\*\*\*\*\*  
\*\*\*\*\*

FROM: Wayne Skow DATE: 4/13/2012 11:24:19 AM Eastern Daylight Time

When this model is run in v64dev, it asserts in SCSuperSteelGirderElement.cpp at line 1824. Since the assert is inactive in the release version, I assume it is the same problem. I attached screen shots from v631 and v64dev.

FROM: Krisha Kennelly DATE: 5/24/2012 8:46:56 AM Eastern Daylight Time

The workaround was sent to Kyle Ramer on April 13, 2012.  
The workaround is to change the shear connectors settings in the deck profile window. Please read the attached word document with the figures for details.

FROM: Girish Bhanushali DATE: 2/7/2013 1:18:43 PM Eastern Standard Time

This issue has been fixed to be verified in next release (6.5). The fix developed for VI#12155 also took care of this problem.

User posted bridge was used in testing and fix was verified using x64 bit 6.5 debug build.  
Design Review & Rating analysis for G1 and G2 (LRFD and LRFR templates) were successful without any errors. No changes were made to the bridge provided by user.

4/19/2016 3:09:09 PM

HRS AASHTO

2146

## Complete Issue Information

FROM: Mark Mlynarski DATE: 4/8/2013 4:01:50 PM Eastern Daylight Time  
successfully runs G1 and G2 for LRFR in V6.5 (alpha 3)

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11343                                                                         |
| Subject: insufficient memory to perform the spec check for multiple vehicle LRFR rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Huang, George           | 4/10/2012 9:05:09 PM |
| Modified By: hlee                     | 4/12/2012 6:59:59 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Zhang, Bin      | Assigned |          | Unknown  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Loading vehicles.png    |             |
|      | CApermit.xml            |             |
|      | pic16658.jpg            |             |
|      | 430013 Pajaro River.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bin Zhang DATE: 4/10/2012 5:05:38 PM Eastern Daylight Time  
Virtis has error message about insufficient memory to perform the spec check for multiple vehicle LRFR rating (pic16658.jpg). The bridge model and the vehicles are attached in the document.  
Please use member alternative of G2 to reproduce this issue, the loading vehicles are shown as in file

4/19/2016 3:09:09 PM

HRS AASHTO

2147

Complete Issue Information

Loading vehicles.png in the documents.

Below is the email from the user.

\*\*\*\*\*  
\*\*\*\*\*

-----Original Message-----

From: George Huang [mailto:george\_huang@dot.ca.gov]  
Sent: Friday, April 06, 2012 2:51 PM  
To: Lee, Herman  
Subject: Errors In AASHTO LRFR Engine

Herman,

Here are some AASHTO LRFR issues for a steel girder bridge. This is the same bridge for the notional vehicle.

When I run LRFR for G2 the first time, there is no error. But when I run second time, the analysis can not complete with follow error message (Embedded image moved to file: pic16658.jpg)

After I close the Virtis and open again, then I am able to run with all live loads again. If I run the entire bridge with G1 and G2 together, then I got the same error message. I was able to run LRFR with two permit vehicles with no error but the results are different (changed from 0.947 and 0.944 to 0.890 and 0.887 as listed here.

(Embedded image moved to file: pic17874.jpg)

I think this is dangerous, since it does not show any error message.

Thanks.

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Office: (916) 227-8769  
Cell: (916) 802-0949  
Fax: (916) 227-8357  
-

(See attached file: 430013 Pajaro River.xml)(See attached file: CApermit.xml)(See attached file: 43-13Rating.docx)

\*\*\*\*\*  
\*\*\*\*\*

FROM: Herman Lee DATE: 4/12/2012 2:57:27 PM Eastern Daylight Time

4/19/2016 3:09:09 PM

HRS AASHTO

2148

Complete Issue Information

The analysis has exceeded the 2 GB limit for each process on 32-bit Windows OS.

|                           |
|---------------------------|
| Issue ID: 11350           |
| Subject: Floorbeam Rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jackson, Amanda         | 4/12/2012 4:20:27 PM |
| Modified By: ajackson                 | 12/7/2012 9:38:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Assigned  |          |          |
|                 | Duplicate |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | I34_floorbeam.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amanda Jackson DATE: 4/12/2012 12:23:28 PM Eastern Daylight Time  
 This might be the same as incident 11168, but I am getting 99 rating factors for the floorbeams in the attached model. I can't figure out where I might have messed up any input.

If this is the same as 11168, is there a workaround, and if not, which version is it fixed for?

FROM: Herman Lee DATE: 4/13/2012 1:34:29 PM Eastern Daylight Time  
 Yes, this is a duplicate of Incident 11168. There's no workaround for the problem. The fix will be



Complete Issue Information  
 included in the 6.4 release in the summer.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 11355                                                                     |
| Subject: Truss Analysis - Error Message - Unable to Add Axle to Vehicle Description |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 4/13/2012 5:09:22 PM |
| Modified By: hlee                     | 4/13/2012 5:33:58 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |
|                 | Closed |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 01338 - 07100328.xml |             |
|      | truss_results.PNG    |             |

4/19/2016 3:09:10 PM

HRS AASHTO

2150

Complete Issue Information

|                                            |
|--------------------------------------------|
| Truck_Nick.xml                             |
| truss_analysis_output_message.PNG          |
| Stage 3 Spec Check Results-Shear Query.xml |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 4/13/2012 1:15:29 PM Eastern Daylight Time  
 I have a truss that normally runs fine. But we were doing an overload today and that specific truck produces an error message that it was unable to Add Axle to Vehicle Description. It says the analysis fails, but the analysis results look ok. And I don't see any problems with the vehicle description.

Will attach bridge.xml, vehicle.xml, and a couple of screen shots of the results and error messages.

FROM: Todd Thompson DATE: 4/13/2012 1:19:36 PM Eastern Daylight Time  
 Ok - this is the same as 11133 --- so go ahead and close this.

|                                           |
|-------------------------------------------|
| Issue ID: 11357                           |
| Subject: LRFR Spec Check Result for Shear |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Nakrani, Navnit         | 4/17/2012 1:11:02 PM |
| Modified By: hlee                     | 4/17/2012 1:49:43 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:09:10 PM

HRS AASHTO

2151

### Complete Issue Information

|            |          |      |         |
|------------|----------|------|---------|
| Zhang, Bin | Resolved |      | Support |
|            | Assigned | High | Unknown |
|            | Resolved |      | Bug     |
|            | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | 016-0193 Rating Results.xlsx       |             |
|      | 0160193-<br>TrsCntrOutputWrong.xml |             |
|      | RE_ Truss Counter<br>Question.pdf  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Navnit Nakrani DATE: 4/17/2012 9:20:23 AM Eastern Daylight Time

Good morning,

Attached are two files: 1. VIRTIS input file and 2. Spec Check results

Why the shear check results for symmetrical simple beam are different at a same distance from the supports even though all the properties and materials are same. At one end it passed and at the other end its failed. Please see attached result file.

Thanks,

Navnit R. Nakrani

FROM: Herman Lee DATE: 4/17/2012 9:46:47 AM Eastern Daylight Time

Please note that the Special Consultant License Option only allows us to provide limited support for installation. The primary support channel for consultant is through the sponsoring agency of your license.

|                              |
|------------------------------|
| Issue ID: 11362              |
| Subject: Truss Counter Issue |

4/19/2016 3:09:11 PM

HRS AASHTO

2152

## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Armbrecht, Tim          | 4/18/2012 3:14:48 PM |
| Modified By: dmcdonagh                | 8/31/2012 3:34:07 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | virtis results 2.pdf |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Herman Lee DATE: 4/18/2012 11:15:18 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IDOT.

Tim's e-mail attached as a PDF file.

FROM: Bin Zhang DATE: 4/25/2012 12:09:20 PM Eastern Daylight Time  
This is a program bug. The program computed the rating factor to be zero for the counter when both the dead load action and the max live load action are zero. This is the reason why we have the zero rating factor in the rating factors summary table.

FROM: Bin Zhang DATE: 5/9/2012 9:34:08 AM Eastern Daylight Time  
If a counter member is always under compression due to the load case combinations of "DL+LL", the rating factor of this counter is assigned as 99.0. So this counter won't be in control.  
Resolved for VO6.4.

4/19/2016 3:09:11 PM

HRS AASHTO

2153

Complete Issue Information

FROM: Herman Lee DATE: 5/9/2012 1:22:04 PM Eastern Daylight Time  
Verified the fix with the updated version 6.3.1 AbxVirtisTruss.dll.

FROM: Tim Armbrecht DATE: 5/14/2012 9:23:45 AM Eastern Daylight Time  
Appears to have fixed the issue - thanks for sending the fix out promptly!

FROM: Srujana Thogaru DATE: 8/29/2012 3:44:01 PM Eastern Daylight Time  
Fix verified with 6.4 Beta 4

|                                |
|--------------------------------|
| Issue ID: 11365                |
| Subject: virits results output |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis               |
| Primary Contact: Lee, Herman                        |
| Submitted By: Metcalf, William 4/19/2012 8:09:51 PM |
| Modified By: hlee 4/20/2012 11:05:53 AM             |
| Priority: High                                      |
| Category: Bug                                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: William Metcalf DATE: 4/19/2012 4:14:14 PM Eastern Daylight Time  
Look at the output for the LATYPE3s2 truck why is it incomplete and weird? This didn't always happen. The effect is independent of bridge, and the best I can tell the truck is defined exactly as the other legal trucks in the analysis.

Complete Issue Information

FROM: Herman Lee DATE: 4/20/2012 6:59:35 AM Eastern Daylight Time  
Duplicate of Incident 11223. The fix for 11223 will be included in the coming 6.4 release.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 11367                                           |
| Subject: VIRTIS calculation of C for FB with Section Loss |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Armbrecht, Tim          | 4/20/2012 8:50:47 PM |
| Modified By: hlee                     | 5/4/2012 6:02:17 PM  |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Assigned  | High     | Unknown     |
|                  | Suspended |          | Enhancement |

Contacts

4/19/2016 3:09:11 PM

HRS AASHTO

2155

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                         | Description |
|------|---------------------------------------------|-------------|
|      | Line Model_Span LL<br>Summary.pdf           |             |
|      | Crossbeam Rating.xml                        |             |
|      | System Model_Span LL<br>Summary.pdf         |             |
|      | Floorbeam system and<br>Floorbeam Line.docx |             |
|      | Response2.docx                              |             |
|      | AASHTOWARE.pdf                              |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/20/2012 4:51:27 PM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IDOT.

Received e-mail:

=====

Herman, please enter this as an incident in VI. It is the same bridge as the one submitted with 11256. It's possible that the XML for 11256 contains part of the bridge and not the part referenced here. If you believe that is the case, let me know, and I'll ask M&M to provide a new XML.

Timothy A. Armbrecht, P.E., S.E.  
Chief, Bridge Ratings & Permits Unit  
Illinois Department of Transportation  
Bureau of Bridges and Structures

From: Mertz, Rachel L [mailto:RLMertz@modjeski.com]  
Sent: Friday, April 13, 2012 1:28 PM  
To: Armbrecht, Tim A  
Cc: Petermeier, David W; Siow, Yuenn-Shuenn; Schafer, Aaron M.  
Subject: FW: VIRTIS calculation of C for FB with Section Loss

Tim,

Per conversations regarding our previous rating work for MLK which originally resulted in low as-inspected floorbeam ratings from Virtis, I am sending you information supporting our opinion that Virtis incorrectly reduces the web buckling coefficient which ultimately produces an overly conservative shear capacity and low as-inspected shear ratings. When the average section loss is applied across a

4/19/2016 3:09:11 PM

HRS AASHTO

2156

Complete Issue Information

shear plane, Virtis automatically reduces the web buckling coefficient (C), even when the section loss is local and occurs in only a small portion of the shear plane. It is our opinion that in situations with this type of section loss, Virtis should use the full web thickness to calculate C. The rating factor would then be calculated by applying the load over the shear plane, using the reduced web area. Please see Aaron's email below and his attached documents for more information.

If you need anything else from us as you forward this information to Baker for their investigation, just let me know.

RACHEL L. MERTZ, PE, SE | Project Engineer

Modjeski and Masters, Inc.  
4 Sunset Hills Professional Center, Edwardsville, IL 62025

From: Schafer, Aaron M.  
Sent: Thursday, April 05, 2012 3:35 PM  
To: Mertz, Rachel L  
Subject: VIRTIS calculation of C for FB with Section Loss

Tim,

An error was observed when rating floorbeams with local web section loss. When web section loss was entered in VIRTIS, the web buckling coefficient (C) is automatically reduced and the shear capacity of the web tends to be overly conservative, even if the section loss is local and occurs over a relatively short length (parallel to the length of the floorbeam as illustrated in the attached sketch).

We believe that for as-inspected ratings, with local section loss only covering a short length of the web panel, the full web thickness should be input to determine C. The plastic shear force (Vp) should then be calculated by applying the load over the shear plane, using the reduced web area.

I have attached a sketch of a floorbeam with noted section loss, hand calculations illustrating the capacity increase due to the increase in C and the data printout of how VIRTIS is calculating the shear capacity of the floorbeam with section loss. Could you please forward this issue to Baker for their review?

Thank you,

AARON M. SCHAFER, EIT | Structural Engineer in Training

Modjeski and Masters, Inc.  
#4 Sunset Hills Professional Center, Edwardsville, IL 62025

=====  
FROM: Herman Lee DATE: 5/4/2012 1:54:56 PM Eastern Daylight Time  
Reply e-mail:

=====  
Herman, I apologize for the late response. To answer your question, we believe your proposed solution would be an appropriate way to accommodate this type of situation since it will require engineering judgment to determine when to use this option.

4/19/2016 3:09:11 PM

HRS AASHTO

2157



Complete Issue Information

Thanks,

Tim

From: Lee, Herman [mailto:HLee@mbakercorp.com]  
Sent: Friday, April 20, 2012 4:18 PM  
To: Armbrecht, Tim A  
Cc: 'Mertz, Rachel L'  
Subject: RE: VIRTIS calculation of C for FB with Section Loss

Tim,

The incident number is 11367.

Is this an enhancement request to implement a control option for "with local section loss only covering a short length of the web panel, the full web thickness should be input to determine C" since engineering judgment is involved in determining whether the loss is local and only cover a short length?

Thanks,  
Herman

=====

|                                       |
|---------------------------------------|
| Issue ID: 11373                       |
| Subject: Floor Beam Load Calculations |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Teal, Dean              | 4/24/2012 6:15:04 PM   |
| Modified By: dteal                    | 12/11/2012 12:34:25 PM |
| Priority: Critical                    |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
| Zhang, Bin      | Resolved |          | Support  |
|                 | Assigned |          | Unknown  |

4/19/2016 3:09:11 PM

HRS AASHTO

2158

### Complete Issue Information

|             |           |      |     |
|-------------|-----------|------|-----|
|             |           |      | Bug |
| Lee, Herman | Assigned  | High | Bug |
| Zhang, Bin  |           |      |     |
| Lee, Herman | Duplicate |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 20C0224SB.xml            |             |
|      | Virtis-error message.bmp |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 4/24/2012 2:18:56 PM Eastern Daylight Time

I had a consultant send this in and I couldn't answer his questions - will you have a look

I have been working on a load rating for an existing stringer/floorbeam system. In this particular case, the stringers are continuous over 3 interior piers with the middle pier being a simple span floorbeam. I have modeled the bridge as both as Floor System Superstructure and a Floor Line Superstructure. The problem I'm seeing is that the applied floorbeam live loads aren't being computed the same for the floor system as the floor line; it appears that for the Floor Line case, the live loads are calculated as if the stringers were simply supported between interior piers when they should be assumed as continuous. This appears to be underestimating the live loads.

### Documentation attached

FROM: Bin Zhang DATE: 4/27/2012 2:47:46 PM Eastern Daylight Time

For both floor system and floor line, the multiple-span stringer is considered as a continuous other than simply supported. Figure 1 showed the live load moments of a three span stringer in a floor line superstructure. The negative moments distribution showed that it's continuous other than simply supported.

In the bridge model you provided, the live load was transferred in different ways between the floor line and floor system superstructure.

For the Floor Line Superstructure:

Loads are transferred from the deck directly to the floorbeams, the live load is a uniform load here. (figure 2).

4/19/2016 3:09:11 PM

HRS AASHTO

2159

Complete Issue Information

For the Floor System Superstructure:

Loads are transferred from the deck and through the stringers to the floorbeams, the live load is a point load (concentrated load) here (figure 3).

Please read the attached word document for the figures "Floorbeam system and Floorbeam Line.docx".

FROM: Dean Teal DATE: 5/2/2012 9:56:25 AM Eastern Daylight Time

The consultant that reported this doesn't believe this explanation resolves his issues; his response is attached as Response2.docx

FROM: Bin Zhang DATE: 5/10/2012 2:08:24 PM Eastern Daylight Time

The checkbox of "Select Floorbeam Being Described" in the "Floorbeam Member" window does not work, the live load output is the same if we change to any floorbeams listed there. I think it's always using the exterior floorbeam (floorbeam A or E) no matter which floorbeam is picked. It's a bug for the floor line superstructure.

The "SB Prop" LL output is comparable to the LL output of "Floorbeam 1" in the floor system superstructure. So currently we can only compare the LL output for the exterior floorbeam, I did not find a workaround to compare the results between floorline and floorsystem for the interior floorbeam (floorbeam C).

FROM: Herman Lee DATE: 10/24/2012 6:05:35 PM Eastern Daylight Time

Fixed a defect in locating the stringer support for the floorbeam being analyzed in a floor line superstructure definition.

Resolved for 6.4 Service Pack (6.4.1).

FROM: Matt Kolis DATE: 11/1/2012 10:05:07 AM Eastern Daylight Time

Verified in 6.4.1.

FROM: Matt Kolis DATE: 12/6/2012 10:05:38 AM Eastern Standard Time

Verified in 6.4.1 Beta 2.

FROM: Dean Teal DATE: 12/11/2012 7:34:25 AM Eastern Standard Time

Accepted 6.4.1 beta 2

|                                           |
|-------------------------------------------|
| Issue ID: 11386                           |
| Subject: Issue with corrugated metal deck |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 4/26/2012 2:24:11 PM |
| Modified By: hlee                     | 12/3/2012 8:58:34 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

4/19/2016 3:09:12 PM

HRS AASHTO

2160

Complete Issue Information

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Duplicate |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/26/2012 10:24:39 AM Eastern Daylight Time  
 Submitted on behalf of George Huang, Caltrans.

Received e-mail:

=====

Hi Herman,

we are having problem to use the corrugated metal deck in Truss Bridge. See the attached file for details. Thanks.

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance  
 MS 9 - 1/9I

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 04/25/2012 03:02 PM  
 -----

Sebastian  
 Barajas/HQ/Caltrans/CAGov

To  
 George Huang/HQ/Caltrans/CAGov@DOT

04/25/2012 02:50 PM cc

Subject  
 Issue with corrugated metal deck

4/19/2016 3:09:12 PM

HRS AASHTO

2161

Complete Issue Information

Hi George - I am having trouble running this model. It is a through truss with a corrugated metal deck. For some reason the program is asking me for concrete haunch material properties; however, there is no concrete on this bridge. The stringers run just fine. The floor beams and the trusses can not run.

Here is the virtis file:  
(See attached file: 20C0224SB.xml)

Here is a screen shot of the error message from virtis:

(See attached file: Virtis-error message.bmp)

Please help - thanks,  
Sebastian

=====

FROM: Herman Lee DATE: 12/3/2012 3:43:20 PM Eastern Standard Time  
Duplicate of Incident 12078.

Add haunch load for concrete deck only.

Fixed for 6.4.1 Beta 2. Resolved for 6.4.1 release.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11400                                                          |
| Subject: Virtis Enhancement Suggestion: Floor System Stringer Unit Names |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Armbrecht, Tim          | 5/2/2012 2:27:44 PM    |
| Modified By: hlee                     | 11/19/2013 11:26:40 PM |
| Priority: High                        |                        |
| Category: Enhancement                 |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Ambrecht DATE: 5/2/2012 10:28:31 AM Eastern Daylight Time

Make the Stringer Unit Layout names to be editable by users.

Currently the stringer unit names are designated by the program and cannot be altered by users. It would be beneficial to be able to rename the stringer units in accordance with their designations on the plans.

FROM: Herman Lee DATE: 11/19/2013 6:21:48 PM Eastern Standard Time

Duplicate of BRDRSUP-115 (Stringer Unit Layout Names).

Issue ID: 11407

Subject: Option for User Defined Cb in AASHTO LFD

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Huang, George

5/3/2012 5:26:32 PM

Modified By: ghuang

5/3/2012 5:54:04 PM

Priority: High

4/19/2016 3:09:12 PM

HRS AASHTO

2163

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |
| Skow, Wayne     | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | cb-1.pdf            |             |
|      | 51.42R.xml          |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 5/3/2012 1:27:39 PM Eastern Daylight Time

The current Cb formula (AASHTO Std Section 10.48.4.1) is based on the research for the unbraced segment with linear distributed moment. There is also the value of Cb=1.0 for Cantilever and large moment at the middle section of the segment conditions. The curvature of the segment is decided by the end moments. I think this formula is good enough for most structures with intermediate bracings. However this equation may not work for case for the interior spans of a three or more spans continue structure with no bracing between the bent supports. The alternate formula based on the maximum moment and the moments at quarter, center, and three quarter points may be used. In many cases, the Cb values from Virtis are close to 1.0, but they vary from 1.15 to 2.38 based on different moment distribution from the alternate formula (Kirby and Nethercot, 1979). My suggestion is to have the option for user defined Cb value. BRASS engine used to have that option.

FROM: George Huang DATE: 5/3/2012 1:54:04 PM Eastern Daylight Time

This is also very important for the stringer analysis in the stringer-floor beam system, as well as in the truss system.

4/19/2016 3:09:12 PM

HRS AASHTO

2164

Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 11411                   |
| Subject: cb calculation in virtis |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Skow, Wayne          |                     |
| Submitted By: Cavanaugh, Scott        | 5/4/2012 6:23:49 PM |
| Modified By: hlee                     | 5/9/2012 8:03:22 PM |
| Priority: High                        |                     |
| Category: Support                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/4/2012 2:24:09 PM Eastern Daylight Time  
Submitted on behalf of Scott Cavanaugh, HNTB:

Received Bridgeware Support e-mail:

=====

Herman,  
Some questions have been raised regarding the cb computations in Virtis for NJ Turnpike bridge ratings, specifically for new bridges that have been designed using Merlin-Dash and STLRFD.

Based on this, I had been asked to review the calcs in virtis. In doing so, I noticed the spec article which outlined in tabular form the method for determining cb. See my attached pdf. In this case, why doesn't virtis use equation 7 since it seems as though  $f_{mid} / f_2$  is less than 1.00?

I have also attached my xml file for your use, if needed.

4/19/2016 3:09:12 PM

HRS AASHTO

2165



Complete Issue Information

Any info you can provide regarding this issue would be appreciated.

Thanks

Scott E. Cavanaugh, P.E.  
Project Engineer / Team Leader  
HNTB Corporation  
State Route 3 Eastbound  
Turnpike Maintenance Yard  
East Rutherford, NJ 07073  
www.hntb.com

=====

FROM: Wayne Skow DATE: 5/9/2012 10:47:47 AM Eastern Daylight Time  
Referencing eq. 6 as the reason for Cb=1.0, in this case, is not strictly correct. The actual reason is because the section is not prismatic between unbraced lengths (see INPUT: at top of screen shot).

|                                              |
|----------------------------------------------|
| Issue ID: 11424                              |
| Subject: Spec Check Pass/Fail flag incorrect |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: McMunn, Creightyn       | 5/8/2012 6:02:42 PM  |
| Modified By: cmcmunn                  | 9/10/2012 8:52:18 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
| Skow, Wayne      | Not Reproducible   |          |          |
|                  | Information Needed |          | Support  |
|                  |                    |          | Unknown  |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | 0160344-<br>TrsSchematicMalfunction.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 5/8/2012 2:10:10 PM Eastern Daylight Time  
 When running Girder G4 in the attached file, I get a rating factor less than 1.0 for Michigan legal vehicles with service governing at 17.43' of Span 3. The Spec Check at this location shows a rating factor of 0.819 but the Pass/Fail "flag" does not indicate this failure. See attached screenshots.

FROM: Wayne Skow DATE: 5/9/2012 2:29:42 PM Eastern Daylight Time  
 Creighton, when I run it on v6.3.1, I get the errors shown in the attached pdf file (VI\_11424\_1.pdf). Since you reported this problem in v6.3.1, something is amiss. Can you check the model and resubmit?

FROM: Wayne Skow DATE: 5/10/2012 7:34:05 AM Eastern Daylight Time  
 After Krishna fixed a problem in abobrdg/dogirdersystemstructdef.cpp, I was able to run this model in v64dev and reproduce the problem. Therefore, I'm returning the status to Assigned.

The pass/fail flag was not being set properly in ALFR\_2E\_6B\_04\_Steel\_Flexure\_Overload or in ALFR\_1E\_B6\_05\_Steel\_Flexure\_Overload. Fixed in v6.4.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11450                                                  |
| Subject: Virtis Bug: View Schematic Window Malfunction for Truss |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ihnat, Joseph        |                      |
| Submitted By: Armbrecht, Tim          | 5/14/2012 3:43:42 PM |
| Modified By: hlee                     | 5/15/2012 7:35:48 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:13 PM

HRS AASHTO

2167

### Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Lee, Herman   | New       | High | Unknown     |
| Ihnat, Joseph | Assigned  |      |             |
| Lee, Herman   | Suspended | High | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                                  | Description |
|------|----------------------------------------------------------------------|-------------|
|      | FW_ Virtis 6.4 Development -<br>Truss Builtup Member<br>Revision.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/14/2012 11:46:44 AM Eastern Daylight Time  
From my consultant (Souther):

After opening the View Schematic window for the truss within the subject Virtis bridge model the <Start Zoom> and <Pan> buttons do not function. Scott, Adam and I all got the same results. We suspect it is related to the switch to Windows 7/64 bit.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Joseph Ihnat DATE: 5/15/2012 12:39:24 PM Eastern Daylight Time  
I'm not able to reproduce this. Tried both 32-bit and 64-bit Virtis on W7 64-bit, both working OK.

Issue ID: 11458

Subject: Truss Builtup Member Revision

4/19/2016 3:09:13 PM

HRS AASHTO

2168

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Armbrecht, Tim          | 5/15/2012 9:51:58 AM |
| Modified By: hlee                     | 5/15/2012 9:55:29 AM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Lee, Herman      | New       | High     | Unknown  |
| Thogaru, Srujana | Assigned  |          | Bug      |
|                  | Resolved  |          |          |
|                  | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LFR_Ext_781.bmp     |             |
|      | 00025 - 00781.xml   |             |
|      | asd.docx            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 5/15/2012 5:52:31 AM Eastern Daylight Time  
Submitted on behalf of Tim Armbrecht, IL DOT.

Please see attached PDF file for the e-mail with embedded graphics.

=====  
From: Souther, Timothy E  
Sent: Wednesday, July 27, 2011 3:45 PM  
To: Armbrecht, Tim A  
Subject: Virtis 6.4 Development - Truss Builtup Member Revision

Complete Issue Information

This is a proposed Virtis Truss enhancement to provide for coding of a very common truss member type, which cannot be currently coded in Virtis Truss without using a workaround. It is a 4-angled built-up member without flange plates and with lacing or batten plates instead of a web plate (see diagram). It should be defined as a Builtup Member.

Tim Souther, PE  
%IDOT Bridge Ratings Unit

=====

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11491                                                  |
| Subject: Error performing ASR specification checking for RC slab |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Silvis, Bryan           | 5/21/2012 5:08:37 PM |
| Modified By: bsilvis                  | 10/4/2012 5:29:39 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bryan Silvis DATE: 5/21/2012 1:17:35 PM Eastern Daylight Time  
The attached file completes LFR rating without incident (also attached), but ASR analysis failed with attached error message.

FROM: Srujana Thogaru DATE: 9/18/2012 8:51:47 AM Eastern Daylight Time

Complete Issue Information

I can reproduce the above mention error in 6.3.1 and has been fixed for 6.4 release.

FROM: Bryan Silvis DATE: 10/4/2012 1:29:39 PM Eastern Daylight Time  
ASR analysis no longer fails in 6.4 Beta 5 with dll updates.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 11493                                            |
| Subject: Question about Art. 10.48.4.1 for a hybrid girder |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Armbrecht, Tim          | 5/21/2012 8:11:55 PM |
| Modified By: tarmbrecht               | 6/7/2012 4:18:20 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Skow, Wayne     | Assigned  |          |          |
|                 | Duplicate |          | Bug      |

4/19/2016 3:09:13 PM

HRS AASHTO

2171

## Complete Issue Information

|  |
|--|
|  |
|--|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | 081-0011 - LLDF - Lever Rule.xlsx              |             |
|      | 0810011-Spans 20-24-132WPG Std Dist Factor.TXT |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Tim Armbrecht DATE: 5/21/2012 4:15:11 PM Eastern Daylight Time  
From one of our designers (Coppernoll):  
RE: SN 016-2437, My calculation for Art. 10.48.4.1 for a hybrid girder

The project noted above rated below HS 20 at the piers for the case with 50 psf FWS. We heard back from the EOR and they confirmed that their design is adequate for this hybrid, composite-everywhere plate girder. I've spend some time looking into the design checks that were performed by the EOR's software (MDX), Virtis, and some hand calculations that I performed, and I am concerned about the methodology that Virtis seems to employ when determining the limiting value for Mr, which is My. I have attached some output from the Virtis spec checker for the location in question. The program uses My at the bottom of the web as the controlling capacity. The program determines this value using the applied moments and the yield strength of the web (36 ksi). Article 10.53(1.) notes that Fy of the compression flange should be used for Article 10.48.4.1 and it seems counter-productive to limit the strength of the section based on the strength of the web.

I think hybrid girder theory acknowledges that the lower strength web will yield first, but it assumes the stress is distributed to both flanges. The section strength is then limited by the R factor. If the yield strength of the web governed, it seems like the most benefit we could ever get from a hybrid section would be close to the ratio of the two section properties ( $1424.3/1375.3 = 1.03$ ). As a result, perhaps the flange would only need to be around  $36\text{ksi} \times 1.03 = 37.28\text{ ksi}$ ? While this logic isn't absolutely correct, it seems like we should be getting more benefit from the hybrid section than what Virtis is allowing.

We will discuss the design with the EOR and may request additional justification/calculations from the EOR that verify the adequacy. The project is on the August letting, so a quick resolution to the rating issue would be beneficial. We will pass along any supplemental information from the EOR that may allow us to modify the rating and accept the design. We would like to know what Baker's opinion is regarding how Virtis calculates the moment capacity of hybrid sections. Please forward my email and

4/19/2016 3:09:13 PM

HRS AASHTO

2172

Complete Issue Information

attachment as you see fit.

Philip E. Coppernoll, P.E.  
Illinois Department of Transportation  
Bureau of Bridges and Structures  
Phone: (217) 558-0004  
Email: Philip.Coppernoll@illinois.gov

FROM: Herman Lee DATE: 5/21/2012 4:18:57 PM Eastern Daylight Time  
Wayne, please see whether this is a duplicate Incident 11029.

FROM: Wayne Skow DATE: 5/22/2012 7:14:23 AM Eastern Daylight Time  
Yes it is. This was fixed in v6.4, but it doesn't look like v63sp1 has it. So Tim isn't seeing the change yet.

FROM: Herman Lee DATE: 5/23/2012 11:39:18 AM Eastern Daylight Time  
Ben verified the fix with the update AbanSpec.dll for 6.3.1.

FROM: Tim Armbrecht DATE: 6/7/2012 12:18:20 PM Eastern Daylight Time  
Accepted

Issue ID: 11495  
Subject: Virtis Girder Live Load Distribution Factor

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Li, Xinmei  
Submitted By: Armbrecht, Tim 5/22/2012 3:31:19 PM  
Modified By: plitchfield 11/15/2013 12:55:11 AM  
Priority: High  
Category: Bug

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Li, Xinmei      | Assigned  |          | Bug      |
|                 | Duplicate |          |          |
|                 | Resolved  |          |          |



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                  | Description |
|------|------------------------------------------------------|-------------|
|      | Virtis Crash when running LLDF<br>Comp (0490159).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Tim Armbrecht DATE: 5/22/2012 11:34:06 AM Eastern Daylight Time  
From my consultant (Shoup):

In checking 081-0011 I noticed that there is a discrepancy of the LLDF for the dual girder system (Spans 20-24). Virtis has the multi lane DF of 4.4608 and M&M has 4.573. I ran the calculation and agree with M&M. I tried to track down the difference between our calculation and what Virtis is calculating but could not figure out exactly how the software is calculating it. There is not a big difference but I don't think that there should be any difference in this calculation.

I have attached the Virtis LLDF Calculation and a copy of the spreadsheet that I am using to verify the LLDF of M&M.

Please use the XML for 081-0011 submitted with previous incidents.

FROM: Herman Lee DATE: 5/22/2012 12:03:26 PM Eastern Daylight Time  
May, please use the bridge attached in Incident 11210 for investigation.

FROM: Tim Armbrecht DATE: 5/22/2012 2:23:07 PM Eastern Daylight Time  
Some additional commentary from another of my consultants, Mr. Souther:

Virtis is only calculating shear and moment LLDF's for one and two lanes loaded. It should also be calculating values for three and four lanes since there is a total of four lanes on the bridge. It is considering the four lanes when computing deflection. I suspect that the presence of the median barrier is causing it to erroneously ignore the traffic lanes on the opposite side of the barrier from the beam in question. This should be reported as a bug to Baker.

FROM: Xinmei Li DATE: 6/1/2012 9:57:27 AM Eastern Daylight Time  
This is the same issue as VI 11257.

FROM: Xinmei Li DATE: 6/5/2012 1:59:14 PM Eastern Daylight Time  
This is resolved for 6.4 release.

|                                             |
|---------------------------------------------|
| Issue ID: 11523                             |
| Subject: Virtis - Crash When Computing LLDF |

4/19/2016 3:09:14 PM

HRS AASHTO

2174

Complete Issue Information

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Thogaru, Srujana     |                        |
| Submitted By: Armbrecht, Tim          | 5/29/2012 2:24:35 PM   |
| Modified By: plitchfield              | 11/15/2013 12:54:52 AM |
| Priority: High                        |                        |
| Category: Unknown                     |                        |

History

| Primary Contact    | Status        | Priority | Category |
|--------------------|---------------|----------|----------|
| Lee, Herman        | New           | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned      |          |          |
| Lee, Herman        |               |          |          |
| Li, Xinmei         |               |          |          |
| Zhang, Bin         |               |          |          |
| Bhanushali, Girish |               |          |          |
|                    | Investigation |          |          |
|                    | Resolved      |          |          |
|                    | Resubmit      |          |          |
| Lee, Herman        | Assigned      |          |          |
|                    | Resolved      |          |          |
|                    | Duplicate     |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | 00046 - MP1111SO-keep.xml     |             |
|      | VI-11524-AdditionalError.docx |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Complete Issue Information

Description

FROM: Tim Armbrecht DATE: 5/29/2012 10:28:11 AM Eastern Daylight Time  
From my consultant (Souther):

RE: Virtis Crash when running LLDF Comp (0490159).xml (attached)

When attempting to run the Live Load Distribution computation for Member "6 - Center Line Beam", Virtis crashes.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
(217) 785-2935  
timothy.souther@illinois.gov

FROM: Srujana Thogaru DATE: 9/18/2012 8:50:19 AM Eastern Daylight Time  
I have tested the attached bridge xml file by running the LFD and LRFD LLDF for, "6 - Center Line Beam" member alternative. I am unable to reproduce the crash in 6.3.1. If you still get the error, please let us know with details.

|                                                 |
|-------------------------------------------------|
| Issue ID: 11524                                 |
| Subject: Error in saving the LFD rating rerults |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Zhang, Bin              | 5/29/2012 5:51:35 PM |
| Modified By: hlee                     | 6/20/2013 1:26:38 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Bin Zhang DATE: 5/29/2012 1:51:46 PM Eastern Daylight Time

The issue was submitted on behalf of Riaz Zamil, PE from S & R Engineers, PC. Part of the email was listed below.

Please use Span1 , member alt of S11 to reproduce this issue, and use HS20 for the LFD rating vehicle. The rating results could not be saved. The error message was listed below.

\*\*\*\*\*  
\*\*\*\*\*

Error updating database record set.

10:50:56 AM - Line 423 in source file DmResultsCritLoadLfd.cpp.

State:23000,Native:2627,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

Violation of PRIMARY KEY constraint 'XPKabw\_results\_crit\_load\_lfd'. Cannot insert duplicate key in object 'dbo.abw\_results\_crit\_load\_lfd'. The statement has been terminated.

\*\*\*\*\*  
\*\*\*\*\*

Email from Riaz Zamil

\*\*\*\*\*  
\*\*\*\*\*

From: Riaz Zamil [mailto:rzamil@sandrengineers.com]

Sent: Friday, May 25, 2012 11:01 AM

To: Bridgeware,

Cc: 'Scott Cavanaugh'

Subject: RE: Virtis File - Getting Error

I am using version 6.3.1.3001.

I couldn't figure it out.

Something happening with database.

This file I copied and made changes from MP111.1NO- Here the span lengths are smaller than MP111.1NO.

I changed all the data.

When I was saving the file, the information I am getting are –

Distributed load not on superstructure member.

Shear distribution factor range not on member alternative.

Moment distribution factor range not on member alternative.

When I was running the file for SPAN 2 and SPAN 3, the information I am getting is –

The girder member distributed load will not entirely applied.

But I was able to save analysis results and rating results for all members.

When I was running the file for SPAN 1, the information I am getting is –

The girder member distributed load will not entirely applied.

And It was not saving the results and the message is “Error updating database record set, Line 423 in source file---.

And it was showing result for all members in Span 1 except S11.

4/19/2016 3:09:14 PM

HRS AASHTO

2177

Complete Issue Information

Please take a look at let me know.

Thank you.

Riaz Zamil, PE  
Senior Project Engineer  
S & R Engineers, PC  
DBE, MBE, SBE & ESBE  
8 Commerce Way, Suite 130  
Hamilton, NJ 08691  
Phone: 609-588-9701  
Fax: 609-588-9702  
rzamil@sandrengineers.com

\*\*\*\*\*  
\*\*\*\*\*

FROM: Mehrdad Ordoobadi DATE: 7/12/2012 1:55:12 PM Eastern Daylight Time  
The error indicates that duplicate records are added to the results object. The database does not allow duplicates and the saving of results fails.  
This has happened in populating the LFD Critical loads.  
Please assign to appropriate person to correct the population of the LFD Critical Loads object.

FROM: Girish Bhanushali DATE: 1/29/2013 2:33:23 PM Eastern Standard Time  
The problem was due to speck checker processing a point for user entered diaphragm that was too close to a standard point , while engine not able to receive unique point id due to point skipping logic while populating the results.  
This was due to mismatch of node location tolerances used between speck checker and engine.  
This issue has been fixed for next release (6.5).

FROM: Mark Mlynarski DATE: 4/8/2013 6:37:28 PM Eastern Daylight Time  
While backchecking this revision, I encountered a crash when following the steps shown below:  
(the Detaile Windows are in the attached document VI-11524-AdditionalError.docx)

1. Import the bridge attached to issue 11524
2. Use the following analysis settings
3. Analyze Span 1-Girder S11
4. Click on 'Save Analysis Results' icon before 'Saving' bridge
5. You will get the following message
6. Select 'File->Save'
7. Click the 'Save Analysis Results' icon again.

4/19/2016 3:09:14 PM

HRS AASHTO

2178

Complete Issue Information

- 8. Following error is produced
- 9. If I save the BridgeWorkspace and exit the Bridge Workspace and open it back up, I am able to Save the Analysis Results without crashing.s

FROM: Herman Lee DATE: 6/20/2013 8:10:30 AM Eastern Daylight Time  
 Fixed crash for the Beta 4/Acceptance Build.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 11565                                                  |
| Subject: Virtis Girder Live Load Distribution Factor Discrepancy |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Li, Xinmei           |                      |
| Submitted By: Armbrecht, Tim          | 5/30/2012 7:49:27 PM |
| Modified By: plitchfield              | 8/6/2012 7:02:06 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
| Li, Xinmei      | Duplicate |          | Bug      |
|                 | Resolved  |          |          |
|                 | Duplicate |          |          |
|                 | Resubmit  |          |          |
|                 | Resolved  |          |          |
|                 | Duplicate |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

|                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 081-0011 - LLDF - Lever<br>Rule.xlsx<br>Advanced Rating Results<br>Summary Report_WinXP.png<br>P0202.xml<br>IE Trusted Sites Zone<br>Settings.png<br>Advanced Rating Results<br>Summary Report_Win7.png<br>House_Load_4_6_12.xml |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 5/30/2012 3:52:03 PM Eastern Daylight Time  
From my consultant (Shoup). Should have this structure (081-0011) from previous incidents.

In checking 081-0011 I noticed that there is a discrepancy of the LLDF for the dual girder system (Spans 20-24). Virtis has the multi lane DF of 4.4608 and M&M has 4.573. I ran the calculation and agree with M&M. I tried to track down the difference between our calculation and what Virtis is calculating but could not figure out exactly how the software is calculating it. There is not a big difference but I don't think that there should be any difference in this calculation.

I have attached the Virtis LLDF Calculation and a copy of the spreadsheet that I am using to verify the LLDF of M&M.

I think we should forward this to Baker to verify the difference of the calculations.

FROM: Herman Lee DATE: 5/30/2012 6:22:07 PM Eastern Daylight Time  
This issue was previously entered as Incident 11495.  
Changed Status to Duplicate.

FROM: Xinmei Li DATE: 6/5/2012 1:58:43 PM Eastern Daylight Time  
This is resolved for 6.4 release.

FROM: Phil Litchfield DATE: 6/28/2012 3:05:05 PM Eastern Daylight Time  
Checked with 6.4 beta 1 and issue still exists.

FROM: Xinmei Li DATE: 7/10/2012 10:56:31 AM Eastern Daylight Time  
I reran it with current development version, Virtis multi land DF is 4.573, which matches the number in the attached spread sheet. Please retest it when next beta build is available.

FROM: Phil Litchfield DATE: 8/6/2012 3:02:06 PM Eastern Daylight Time  
Issue Resolved in Beta 3.

Complete Issue Information

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 11628                                                       |
| Subject: Error to access the "Advanced Rating Results Summary Report" |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Kemna, Aaron            | 6/7/2012 5:51:49 PM  |
| Modified By: bzhang                   | 8/28/2013 5:33:53 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00027 - P273021.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/7/2012 1:54:59 PM Eastern Daylight Time  
 Moved from #11410.

FROM: Aaron Kemna DATE: 6/4/2012 3:01:45 PM Eastern Daylight Time  
 We ran into the same problem here recently. A rater was trying to access the "Advanced Rating Results Summary Report" for a non-standard gauge rating and got the same error reported above. I will attach a screen shot of where the report was trying to be accessed. We already tried the above resolution, but the XSL File folder was there. I know I can get this same error outside of Virtis so this could be an operating system issue. Maybe a recent update?

4/19/2016 3:09:15 PM

HRS AASHTO

2181



Complete Issue Information

FROM: Aaron Kemna DATE: 6/4/2012 3:28:27 PM Eastern Daylight Time  
I am attaching the bridge xml file and the truck xml file in case that helps. P0202 & House

FROM: Bin Zhang DATE: 6/7/2012 2:00:29 PM Eastern Daylight Time  
I could not reproduce this issue on both WinXP and Win7 OS. I attached the snapshots of the reports I got ("Advanced Rating Results Summary Report\_Win7.png", "Advanced Rating Results Summary Report\_WinXP.png"). Herman, could you help to look into this issue?

FROM: Bin Zhang DATE: 6/7/2012 2:28:44 PM Eastern Daylight Time  
A workaround is to change the Internet Explorer "Access data sources across domains" setting to either "Enable" or "Prompt". (See attached IE Trusted Sites Zone Settings.png file)  
Please let see know whether this works for you.

FROM: Herman Lee DATE: 7/3/2012 8:53:25 AM Eastern Daylight Time  
Information Needed E-mail sent on 7/3/12.

FROM: Aaron Kemna DATE: 7/3/2012 11:52:34 AM Eastern Daylight Time  
I will try to get information about this, but I am having many problems with these reports. When I try to replicate this issue on my machine (V6.3.1), the Advanced Report won't come up when I click on it. I can get the report by finding it on my local drive so I don't appear to be having the XSL issue. I have a 64 bit labtop where I am testing V6.4, but right now I can not access the report tool reports. These reports are coming up as XML text in notepad. I tried opening the files in XML Editor with no luck. Any ideas how to fix these issues?

FROM: Herman Lee DATE: 7/9/2012 10:16:12 AM Eastern Daylight Time  
Aaron, please check whether your machine has Internet Explorer as the associated application for XML files.

=====  
Internet Explorer needs to be the associated application for opening xml files on your computer.  
1) Right-click on any xml file in Windows Explorer.  
2) Select Open With - Choose Program  
3) Select IE in the list, also check "Always use the selected program...", click OK.  
=====

FROM: Aaron Kemna DATE: 7/11/2012 12:25:47 PM Eastern Daylight Time  
OK, I am getting my labtop to work now. When I test this incident in 6.4 - 64 bit, I can access the Advanced Rating Results Summary Report.

FROM: Aaron Kemna DATE: 7/11/2012 2:48:18 PM Eastern Daylight Time  
I tested this on a 32 bit machine - Win 7, V6.4 and I get nothing to happen when I try to access the Advanced Rating Results Summary Report. This is the same as the 6.3.1 test on my machine which is 32 bit. I can't duplicate the XSL issue, but I have seen this.

|                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 11630<br>Subject: System Error - Contact Technical Support: Missing data in article: 6A.4.2.1 General Load Rating Equation - Concrete Flexure - stage 3, round 2 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Primary Contact: Thogaru, Srujana |                      |
| Submitted By: Zhang, Bin          | 6/7/2012 8:56:26 PM  |
| Modified By: mmlynarski           | 4/8/2013 11:31:06 PM |
| Priority: High                    |                      |
| Category: Bug                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | test.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/7/2012 4:56:33 PM Eastern Daylight Time  
 Submitted on behalf of Jason Fennell, P.E. The email was listed below.  
 The bridge model XML file was attached in the document. Please use member alt of G1, LRFR to reproduce this issue.

\*\*\*\*\*

From: Jason Fennell [mailto:jason.fennell@engensus.com]  
 Sent: Wednesday, June 06, 2012 2:59 PM  
 To: Bridgewater,  
 Subject: System error in Virtis

We keep obtaining the following error when trying to run prestressed box girders:

System Error - Contact Technical Support: Missing data in article: "6A.4.2.1 General Load Rating Equation - Concrete Flexure - " - stage 3, round 2

Thank you,

4/19/2016 3:09:15 PM

HRS AASHTO

2183

Complete Issue Information

Jason Fennell, P.E.  
 9191 Siegen Lane Building 6, Suite Ac  
 Baton Rouge, LA 70810  
 Phone (225) 246-8206  
 Fax (225) 246-8592  
 Cell (225) 603-8473  
 www.engensus.com

\*\*\*\*\*

FROM: Srujana Thogaru DATE: 2/4/2013 4:16:45 PM Eastern Standard Time  
 The reason for the above error is that the spec ctrl is unable to handle properly when Beam projections are entered as zeros in beam details window – under Span Details tab.  
 Fixed for 6.5 release. For internal testing fixed for 6.5 alpha 2.

FROM: Mark Mlynarski DATE: 4/8/2013 7:20:17 PM Eastern Daylight Time  
 Verified this runs in Alpha 3.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 11644                                                      |
| Subject: VIRIS 6.3 LRFR Slab Span Cross-Section Based Entry Capacity |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Thogaru, Srujana        | 6/14/2012 1:34:33 PM |
| Modified By: bzhang                   | 8/29/2012 6:11:00 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:09:15 PM

HRS AASHTO

2184

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Srujana Thogaru DATE: 6/14/2012 9:35:10 AM Eastern Daylight Time

From: Wolfe, David [mailto:DWolfe@moffatnichol.com]  
 Sent: Tuesday, June 05, 2012 1:30 PM  
 To: Bridgware,  
 Subject: VIRIS 6.3 LRFR Slab Span Cross-Section Based Entry Capacity

Bridgware – Attached is a cross-section based entry of a slab span entered on a per foot basis. The rating results are the same for 1.00 bars and 1.09 bars in the section. That is nominally 9% difference in capacity, but the program (VIRTIS 6.3.1 AASHTO LRFR Engine) assigns the same moment capacity to the sections.

Why is this the result? For entry on a per foot basis, I believe that fractional bars should be available in increments less than 0.1 bars.

Here are capacity calculations from the model:

1.00 BARS PER FOOT

Flexural Reinforcement

| As<br>(in <sup>2</sup> ) | Dist. From<br>Bottom<br>(in) |
|--------------------------|------------------------------|
| 0.44                     | 3.00                         |

AASHTO 5.8.2.9

| Tensile Limit State Capacity |           | Mr=<br>dv=max(Mn/As*fy,0.9de,0.72h)<br>Load Combination |       | NA<br>Mr/Mu |        | Max Conc<br>Depth | Max Rebar<br>Ac | Stress<br>ksi | Stress<br>ksi | Stress<br>kip |
|------------------------------|-----------|---------------------------------------------------------|-------|-------------|--------|-------------------|-----------------|---------------|---------------|---------------|
| in                           | kip       | in                                                      | in    | kip-ft      | kip-ft | in                | in <sup>2</sup> | ksi           | ksi           | kip           |
| STR-I                        | 1, DesInv | 52.05                                                   | 17.15 | 0.33        | 0.75   | 72.00             | 3.45            | 60.00         |               |               |
| 26.40                        | 8.68      | 26.40                                                   | 9.00  | 12.00       |        |                   |                 |               |               |               |

1.09 BARS PER FOOT

Flexural Reinforcement

| As<br>(in <sup>2</sup> ) | Dist. From<br>Bottom<br>(in) |
|--------------------------|------------------------------|
| 0.48                     | 3.00                         |

4/19/2016 3:09:15 PM

HRS AASHTO

2185

Complete Issue Information

AASHTO 5.8.2.9

|             |                              | Mr=    |          | NA    | Max Conc | Max Rebar |        |        |  |
|-------------|------------------------------|--------|----------|-------|----------|-----------|--------|--------|--|
| Tensile     | dv=max(Mn/As*fy,0.9de,0.72h) | Mu     | Phi * Mn | Mr/Mu | Depth    | Ac        | Stress | Stress |  |
| Limit State | Load                         | de     | h        |       |          |           |        |        |  |
| Capacity    | dv As*fy                     | kip-ft | kip-ft   | in    | in^2     | ksi       | ksi    | kip    |  |
| in          | Combination                  |        |          |       |          |           |        |        |  |
| kip         | in in                        |        |          |       |          |           |        |        |  |
| STR-I       | 1, DesInv                    | 52.05  | 17.15    | 0.33  | 0.75     | 72.00     | 3.45   | 60.00  |  |
| 26.40       | 8.68 26.40                   | 9.00   | 12.00    |       |          |           |        |        |  |

Respectfully - DW

FROM: Srujana Thogaru DATE: 6/18/2012 10:51:27 AM Eastern Daylight Time  
 Error in the computation of the area of reinforcement while computing capacity has been fixed for 6.4 release.

FROM: Bin Zhang DATE: 8/29/2012 1:28:34 PM Eastern Daylight Time  
 Verified for acceptance build.

Issue ID: 11645  
 Subject: Automatically save new computed stringer reactions checkbox issue when importing a truss from Virtis 6.0 to 6.3.1

Folder: /Virtis/Support Center/Virtis  
 Primary Contact: Lee, Herman  
 Submitted By: Pichura, Mike 6/14/2012 8:48:36 PM  
 Modified By: hlee 8/27/2012 1:29:43 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

4/19/2016 3:09:16 PM

HRS AASHTO

2186

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 6.3.1 Truss.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/14/2012 4:50:56 PM Eastern Daylight Time

I submitted this issue on behalf of Pichura, Mike from Baker

The problem is with the "Automatically save new computed stringer reactions" box in the Preference settings. When importing a truss from Virtis 6.0 to 6.3.1, it was observed that if the box is checked, it applies each load twice since 6.3.1 uses different names for the same load as compared to 6.0.

The email was listed below.

\*\*\*\*\*  
\*\*\*\*\*

From: Pichura, Mike

Sent: Wednesday, June 13, 2012 4:48 PM

To: Lee, Herman

Cc: Hart, Sean

Subject: Virtis 6.3.1 Truss Issues

Herman,

We encountered a problem when importing a truss from Virtis 6.0 to 6.3.1. The problem is with the "Automatically save new computed stringer reactions" box in the Preference settings. It has been our practice to check this box to eliminate the need to manually accept new reactions.

However, it was observed that if the box is checked, it applies each load twice since 6.3.1 uses different names for the same load as compared to 6.0.

See the attached word document for more detailed description of the problem. You can try it yourself using the 6.0 Truss.xml file.

In addition, we also noticed that Virtis is incorrectly calculating stringer reactions for wearing surfaces. For example, a 13'-7" roadway has a 1", 140 pcf overlay. The distributed load applied to each stringer is 0.396 k/ft ( 13.583' \* 0.083' \* 0.140 kcf / 4 stringers ). The reaction should then be 0.277 kips ( 0.396 k/ft \* 14' span length / 2 ). Virtis calculates a reaction of 0.08 kips though. See 6.3.1 Truss.xml.

Let me know if you have any questions.

Thanks,

Mike

\*\*\*\*\*  
\*\*\*\*\*

The XML files and the Word file were attached in the documents. I am able to reproduce this issue in

4/19/2016 3:09:16 PM

HRS AASHTO

2187

Complete Issue Information  
 both VO631 and VO64 Beta1.

FROM: Herman Lee DATE: 8/19/2012 12:35:53 AM Eastern Daylight Time  
 Ben Zhang fixed the wearing surface load problem.  
 Implemented code to cleanup previously accepted reactions.  
 Resolved for 6.4 Acceptance Build.

FROM: Bin Zhang DATE: 8/20/2012 4:31:29 PM Eastern Daylight Time  
 I verified the Implemented code to cleanup previously accepted reactions.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 11646                                                               |
| Subject: incorrect calculation of the stringer reactions for wearing surfaces |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Pichura, Mike           | 6/15/2012 4:23:19 PM |
| Modified By: sthogaru                 | 8/29/2012 3:32:34 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Bin Zhang DATE: 6/15/2012 12:23:28 PM Eastern Daylight Time

I submitted this issue on behalf of Pichura, Mike from Baker

Virtis is incorrectly calculating stringer reactions for wearing surfaces. For example, a 13'-7" roadway has a 1", 140 pcf overlay. The distributed load applied to each stringer is 0.0396 k/ft ( 13.583' \* 0.083' \* 0.140 kcf / 4 stringers ). The reaction should then be 0.277 kips ( 0.0396 k/ft \* 14' span length / 2 ). Part of the email was listed below.

\*\*\*\*\*  
\*\*\*\*\*

From: Pichura, Mike  
Sent: Wednesday, June 13, 2012 4:48 PM  
To: Lee, Herman  
Cc: Hart, Sean  
Subject: Virtis 6.3.1 Truss Issues

Herman,

In addition, we also noticed that Virtis is incorrectly calculating stringer reactions for wearing surfaces. For example, a 13'-7" roadway has a 1", 140 pcf overlay. The distributed load applied to each stringer is 0.396 k/ft ( 13.583' \* 0.083' \* 0.140 kcf / 4 stringers ). The reaction should then be 0.277 kips ( 0.396 k/ft \* 14' span length / 2 ). Virtis calculates a reaction of 0.08 kips though. See 6.3.1 Truss.xml.

Let me know if you have any questions.

Thanks,

Mike

\*\*\*\*\*  
\*\*\*\*\*

The bridge model XML file file was attached in the documents. Please use the AASHTO LFD engine, member alt of "Unit1 Stringer1"->U1S1 to reproduce this issue. I am able to reproduce this issue in both VO631 and VO64 Beta1.

FROM: Bin Zhang DATE: 6/25/2012 3:48:22 PM Eastern Daylight Time

The bug is in the AbxAashtoEngine, Virtis missed a unit conversion from meter to feet. Fixed for the next build.

FROM: Srujana Thogaru DATE: 8/29/2012 11:13:36 AM Eastern Daylight Time

Fixed verified with 6.4 Beta 4

Issue ID: 11647  
Subject: Impact included in pedestrian live load

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: McMunn, Creightyn 6/15/2012 5:12:51 PM  
Modified By: sthogaru 7/8/2013 6:45:30 PM



### Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | B-23-005=M-18-002(B6M).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Creightyn McMunn DATE: 6/15/2012 1:27:08 PM Eastern Daylight Time  
For the attached file, I ran Span 1, Girder E and reviewed the spec check results for 50% (36.25 ft), Stage 3 Flexure. The AASHTO LFD engine is incorrectly including impact in the pedestrian live load calculation. I verified that that AASHTO LRFR engine is NOT including impact in the pedestrian live load calculation.

In addition, it appears as though the Engine Related Help is referencing an incorrect location. When I tried to verify that the Virtis LFD engine did not use the pedestrian live load input, I got the attached screenshot.

FROM: Bin Zhang DATE: 5/23/2013 5:28:54 PM Eastern Daylight Time  
Virtis LFD engine has been removed from the AASHTOWare bridge design and bridge rating, so the Virtis Engine related help document will NOT be available any more.  
Geoff, Please update the help document for Member. For example, the "Pedestrian load" was moved from Member window to Member Loads window.

FROM: Geoffrey Trees DATE: 5/29/2013 9:28:11 AM Eastern Daylight Time  
Help updated.

FROM: Bin Zhang DATE: 5/30/2013 11:33:01 AM Eastern Daylight Time  
Resolved for Version6.5 beta3.

FROM: Kane Gyovai DATE: 6/11/2013 2:32:31 PM Eastern Daylight Time

4/19/2016 3:09:16 PM

HRS AASHTO

2190

Complete Issue Information  
Verified for Version 6.5 Beta 3.

FROM: Creightyn McMunn DATE: 6/24/2013 3:49:25 PM Eastern Daylight Time  
Verified impact is no longer included in AASHTO LFR pedestrian live load calculation.

FROM: Srujana Thogaru DATE: 7/8/2013 2:28:10 PM Eastern Daylight Time  
Re-Verified for Version 6.5 Beta 4.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 11663                                                |
| Subject: Issue with handling truck + lane in legal load rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 6/22/2012 3:32:19 PM |
| Modified By: hlee                     | 6/26/2012 9:10:24 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/22/2012 11:32:45 AM Eastern Daylight Time  
Submitted on behalf of Fran Karyadi, Jacobs (Fran.Karyadi@jacobs.com).

Received Bridgeware e-mail:

=====

To whom it may concern,  
I am rating the beams using LRFR method.

My input ran fine; however, under H20 or HS20 loading cases (Legal Load Rating – Routine), the moments under H20 and HS20 are zero along the beam, and the RF (H20 or HS20) was 99.0. I tried

4/19/2016 3:09:16 PM

HRS AASHTO

2191

Complete Issue Information

to run all beams, and they all gave me the same results (zero moments under H20/HS20). This case has never happened before.

Could you please help check what I missed in the input? I double-checked my input, and I think I didn't miss any.

Please run BM. #2 under H20/HS20 (Legal Load – Routine).

Thank you very much for your help.

Regards,  
Fran

Francisca Karyadi, PE  
JACOBS | Bridge Group  
343 Congress Street, 2nd Floor  
Boston, MA 02210  
www.jacobs.com  
fran.karyadi@jacobs.com

=====

FROM: Herman Lee DATE: 6/26/2012 2:46:10 PM Eastern Daylight Time  
Reply e-mail:

=====

Fran,

When using HS20 for legal load, Virtis checks the Lane-Type Legal Load Model requirements in MBE (Figure D6A-4 and D6A-5). Since it's a simple span structure and the span length is less than 200 ft, both models do not apply to the analysis.

Herman

=====

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 11682                                                                          |
| Subject: Capacity should be limited to Moment at first yield for girders with Fy <30 ksi |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Skow, Wayne          |                     |
| Submitted By: vinayagamoorthy, vinacs | 7/2/2012 6:23:31 PM |
| Modified By: hlee                     | 7/3/2012 5:40:00 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:17 PM

HRS AASHTO

2192

Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
| Duray, Jim  | New       | High | Unknown     |
| Skow, Wayne | Assigned  |      |             |
| Lee, Herman | New       | High | Enhancement |
|             | Suspended |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Truss_Bridge_85.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: vinacs vinayagamoorthy DATE: 7/2/2012 2:31:24 PM Eastern Daylight Time  
 Moment capacity for girders with Fy <30 ksi should be limited to moment at first yield within LFD.  
 So, whether the user chose the option of ALLOW Plastic Analysis is ON, software should limit the capacity to moment at first yield.

The AASHTO Engine seems to use the plastic moment capacity for girder with Fy=26ksi, when ALLOW PLASTIV ANALYSIS option turned on.

Please use Span 2 MDL 1 of 1, Girder 2 to test. While First Alternative has the control option Allow Plastic Capacity is OFF, the second Alternative has the option ON.

FROM: Herman Lee DATE: 7/2/2012 4:30:12 PM Eastern Daylight Time  
 Wayne, is this a releasae bug or beta bug?

FROM: Herman Lee DATE: 7/3/2012 7:39:11 AM Eastern Daylight Time  
 Wayne confirmed this is a release bug. Changed Folder to /Support Center/Virtis.

FROM: Herman Lee DATE: 7/3/2012 9:44:47 AM Eastern Daylight Time  
 Krishna's comment:

=====

This came up in beta testing when we added LFD to the AASHTO engine.

Neither the Std nor LRFD spec give a hard restriction on the Fy that can achieve Mp.

The Std spec says the following and I don't see the LRFD spec saying anything similar:

Complete Issue Information

10.48.1.2 Article 10.48.1 is applicable to steels with a demonstrated ability to reach Mp. Steels such as AASHTO M 270 Grades 36, 50 and 50W (ASTM A 709 Grades 36, 50 and 50W), and AASHTO M 270 Grade HPS70W (ASTM A 709 Grade HPS70W) meet these requirements. The limitations set forth in Article 10.48.1 are given in Table 10.48.1.2A.

We addressed this in the Method of Solution manual flowcharts by saying the preceding article is controlled by the 'allow plastic analysis' switch.

This is an enhancement subject to TAG agreement and TF direction.

=====  
Changed Category to Enhancement.

FROM: Herman Lee DATE: 7/3/2012 1:33:01 PM Eastern Daylight Time  
E-mail from Vinacs:

=====  
I noticed that Baker considered this VI as enhancement.

This issue came up in the past and BRASS software is modified to limit the capacity to moment at first yield for Fy <30 ksi.

Here is the copy of the MBE Article that lead to limit the capacity to My.  
This MBE requirement is adapted in 1994.

(Embedded image moved to file: pic09518.jpg)

We have a lot bridges that are modeled in our system, where the flag (limit it to yield) is not turned on. These bridges, if rated using AASHTO will yield higher.

I am OK with this as is, however, it needs to be incorporated into the engine.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====  
Issue ID: 11685  
Subject: using the interaction equations for tension and compression members in the Guide Specs for Truss (Section 1.8) with eccentricity

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Huang, George 7/3/2012 1:14:17 PM  
Modified By: hlee 7/3/2012 1:38:08 PM  
Priority: High

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | 00031 - Copyof230139Emjj.xml<br>test.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Bin Zhang DATE: 7/3/2012 9:14:57 AM Eastern Daylight Time  
Enhancement request (could be a control option) for using the interaction equations for tension and compression members in the Guide Specs for Truss (Section 1.8) when eccentricity is entered for the member. The Guide Specs for Truss provided by George was attached in the document.

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 11686                            |
| Subject: LFD LLDF calculation details file |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Thogaru, Srujana     |                       |
| Submitted By: Huang, George           | 7/3/2012 2:02:55 PM   |
| Modified By: hlee                     | 10/16/2012 3:53:30 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Xinmei Li DATE: 7/3/2012 10:03:57 AM Eastern Daylight Time

This incident was found through testing VI9590.

In attached word files, the check for  $s \leq 10.0$  and  $s \leq 16.0$  always display the same for concrete deck, S should be 7 in interior girder calculation details. They are both release bugs, not related to the lever rule enhancement.

FROM: Srujana Thogaru DATE: 10/16/2012 10:16:53 AM Eastern Daylight Time

Above mentioned error has been fixed in 6.4 Release.

FROM: Herman Lee DATE: 10/16/2012 11:52:37 AM Eastern Daylight Time

Srujana tested above issue in 6.4 Release.

4/19/2016 3:09:17 PM

HRS AASHTO

2196

## Complete Issue Information

Issue ID: 11720

Subject: Add 2 parameters into the GUI for the calculation of the transverse load patterns

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Zhang, Bin

7/16/2012 8:50:10 PM

Modified By: hlee

7/17/2012 5:40:36 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:09:17 PM

HRS AASHTO

2197



## Complete Issue Information

### Description

FROM: Bin Zhang DATE: 7/16/2012 4:50:28 PM Eastern Daylight Time

When calculating the transverse load patterns, Virtis uses the parameters listed below.

1. Lane increment = 4.0000 ft
2. Vehicle increment within a lane = 2.0000 ft

The 2 parameters are currently hard coding, and the user is not able to modify them from the GUI. Adding these 2 parameters into the GUI will make Virtis more flexible for the users who are willing to trade somewhat calculation time for the higher accuracy.

Issue ID: 11739

Subject: Steel Girder FB with Non STD Gage Vehicle

Folder: /Virtis/Support Center/Virtis

Primary Contact: Zhang, Bin

Submitted By: Pichura, Mike

7/20/2012 3:25:34 PM

Modified By: hlee

10/23/2013 12:37:01 PM

Priority: High

Category: Support

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:09:18 PM

HRS AASHTO

2198

Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Zhang, Bin       | Assigned |      |         |
|                  | Resolved |      |         |
| Kennelly, Krisha | New      | High | Unknown |
|                  | Assigned |      |         |
| Zhang, Bin       |          |      | Bug     |
| Ghosh, Subhadeep |          |      |         |
| Lee, Herman      |          |      |         |
| Kennelly, Krisha | Resolved |      |         |
|                  | Verified |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 28107.xml           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mike Pichura DATE: 7/20/2012 11:29:38 AM Eastern Daylight Time

The analysis gets stuck generating the advanced analysis finite element model when running a non STD gage vehicle. See the attached screen shot.

FROM: Herman Lee DATE: 7/20/2012 11:31:50 AM Eastern Daylight Time

Ben, please see whether it is due to not enough memory.

FROM: Bin Zhang DATE: 8/1/2012 1:32:58 PM Eastern Daylight Time

I am able to reproduce this issue that Mike had. It does not look like a memory issue. I think Virtis does not handle the NSG analysis for the GirderFloorbeam system superstructure. I can also reproduce this issue using the BID15 FSys GF TrainingBridge3 which also has a GF system.

FROM: Bin Zhang DATE: 8/28/2013 1:34:05 PM Eastern Daylight Time

This issue has been resolved for version 6.5.0.

4/19/2016 3:09:18 PM

HRS AASHTO

2199

Complete Issue Information

|                                                |
|------------------------------------------------|
| Issue ID: 11744                                |
| Subject: PS I-beam Bridge Error for LFR engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Pichura, Mike           | 7/24/2012 6:37:05 PM |
| Modified By: ssalata                  | 4/22/2013 6:59:42 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 7/24/2012 2:38:30 PM Eastern Daylight Time  
 This issue is submitted on behalf of Mike Pichura. AASHTO LFR failed the analysis for a PS I beam.  
 The issue could be reproduced using the LFR engine, HS20 vehicle, Mem alt of G1.  
 The email from Mike is listed below. The bridge model is attached in the document.

\*\*\*\*\*  
 \*\*\*\*\*

From: Pichura, Mike  
 Sent: Tuesday, July 24, 2012 10:55 AM  
 To: Lee, Herman  
 Cc: Hart, Sean  
 Subject: 4-span continuous PS I-beam Bridge Error

Herman,  
 I have a 4-span continuous PS I-beam (Wide Top Flange Type) bridge that will not run with the AASHTO LFD engine. The following error pulls up.

4/19/2016 3:09:18 PM

HRS AASHTO

2200

Complete Issue Information

The AASHTO LRFR engine as well as the Virtis LFD engine work fine and produce valid results. Can you please have someone look into this?

Thanks,

Mike

\*\*\*\*\*  
\*\*\*\*\*

FROM: Herman Lee DATE: 7/26/2012 12:10:10 PM Eastern Daylight Time  
Std spec transfer length 25" is located on Span 1 left overhang 25.6875". Virtis doesn't consider the left overhang portion in the FE model and unable to determine the FE section at that location. Transfer points that is not within the span length shouldn't be added to the FE model. Need to check for both Std spec and LRFD spec transfer points.

FROM: Herman Lee DATE: 9/21/2012 4:26:28 PM Eastern Daylight Time  
Transfer length issue has been fixed. The fix will be included in the 6.5 release.

Further down the analysis when building spec check domain objects, the AASHTO LFD Engine complains "Unable to set live load nodal displacements!".

FROM: Krishna Kennelly DATE: 4/18/2013 10:23:14 AM Eastern Daylight Time  
Removed the error for setting live load displacements. Code was trying to set live load displacements in the stage 1 model but the models are different for stage 1 and 3. Since LL displacements only occur in stage 3, I removed the setting of the displacements in the stage 1 and 2 spec check objects.

Fixed for 6.5.0

FROM: Steve Salata DATE: 4/22/2013 2:50:19 PM Eastern Daylight Time  
Verified fix. Version 6.5.0 (Beta Build 1) produces the following message:

Info - Analysis completed!

Issue ID: 11770  
Subject: Enhancement of Truss Member and Cross Section Inputs

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Huang, George 7/30/2012 1:59:42 AM  
Modified By: hlee 7/30/2012 7:49:45 PM  
Priority: High  
Category: Enhancement

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Incomplete Steel GUI.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: George Huang DATE: 7/29/2012 10:06:51 PM Eastern Daylight Time

The current commands for inputting truss member properties may not be sufficient for the analysis purpose, especially for members with eccentric connections. Here are some suggestions:

- 1)The cross section input need to able to rotate the section, or to switch x and y axes direction. It is very important for members with eccentric connections, since the eccentricity e can be only defined along the vertical direction. Or the direction of eccentricity, e, needs to be defined specifically.
- 2)The effective member length factors Kx and Ky need to be defined separately, since the lateral effective length are not always the same for the in-plan and out of plan buckling. For example, if batten plates are used, the lateral effective length has to be modified based on MCEB. Also the lateral bracing may not be located at all truss joints.
- 3)For the eccentric distance, e, input, both positive and negative signs may be necessary, to order to define the locations are above, or below the CG line.
- 4)If the signs of e are used, then the section modulus S (distances from extreme fibers to CG) for both top and bottom need to be defined.
- 5) The eccentricities at both direction can be specified at the same times. This condition is usefull if the member has some lateral deformatin, or some section loss.

## Complete Issue Information

|                                           |
|-------------------------------------------|
| Issue ID: 11771                           |
| Subject: Incomplete GUI for Steel W Shape |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Pichura, Mike           | 7/31/2012 11:52:55 AM |
| Modified By: jihnat                   | 7/31/2012 2:45:30 PM  |
| Priority: High                        |                       |
| Category: Support                     |                       |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Resolved |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Mike Pichura DATE: 7/31/2012 7:55:32 AM Eastern Daylight Time

Just thought I'd share that after getting my new machine with Windows 7, I've had the following issues with trying to view certain graphics in Virtis 6.3.1. Other graphics also have issues, but this one seems to be the worse.

This is submitted by Mike Pichura on behalf of Zach Chill

FROM: Joseph Ihnat DATE: 7/31/2012 10:43:25 AM Eastern Daylight Time

It looks like the computer is using a font size that is larger than the default. Virtis has never supported this.

## Complete Issue Information

Issue ID: 11777

Subject: Solid Ends of Voided Prestressed Concrete Box Beams

Folder: /Virtis/Support Center/Virtis

Primary Contact: Kennelly, Krishna

Submitted By: Waheed, Amjad

8/1/2012 3:34:54 PM

Modified By: kkennelly

9/7/2012 11:47:13 PM

Priority: High

Category: Support

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 8/1/2012 11:40:03 AM Eastern Daylight Time

I am not sure how solid end portions of Prestressed Concrete Voided Box Beams are being modeled

4/19/2016 3:09:19 PM

HRS AASHTO

2204

Complete Issue Information

and analyzed in Virtis program. Solid portions need to be correctly modeled to include their weights, properties and shear capacities.

FROM: Krisha Kennelly DATE: 8/1/2012 1:47:24 PM Eastern Daylight Time  
PS Box and U Beams have a window called 'interior Diaphragms' where you can enter the solid portions of the beam. The user is responsible for entering the weight. The interior diaphragms are not considered in the shear capacity.

FROM: Amjad Waheed DATE: 9/7/2012 3:33:34 PM Eastern Daylight Time  
Are solid ends considered in shear capacity calculations?

FROM: Krisha Kennelly DATE: 9/7/2012 7:46:31 PM Eastern Daylight Time  
The solid ends are not considered in the shear capacity calculations.

Issue ID: 11778  
Subject: Use "AASHTO Manual for Condition Evaluation of Bridges" to compute the allowable stress for the ASD engine

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Zhang, Bin 8/2/2012 8:48:11 PM  
Modified By: wskow 5/13/2013 6:34:17 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Lee, Herman     | New    | High     | Enhancement |



Complete Issue Information

|             |           |      |         |
|-------------|-----------|------|---------|
|             | Suspended |      |         |
| Skow, Wayne | Assigned  |      | Bug     |
| Lee, Herman | New       | High | Unknown |
| Zhang, Bin  | Assigned  |      |         |
|             | Resolved  |      | Support |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | O`Neal_MainSpan.xml |             |
|      | VirtisFB5.xlsx      |             |
|      | 11781.docx          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/2/2012 4:48:29 PM Eastern Daylight Time

Currently, Virtis is using the "AASHTO Standard Specifications for Highway Bridges, Seventeenth Edition – 2002" to calculate the allowable stress. The allowable stress is the same for both Inv and Operating when the member is unsupported and under compression. So the Inv RF and the Opr RF are the same for this situation. It's suggested to use "AASHTO Manual for Condition Evaluation of Bridges" to compute the allowable stress for Inv and Opr level.

The issue is submitted on behalf of Adam Summers from Schwartz & Associates, Inc. The contact email was listed below. Figures from Adam were attached in the document.

\*\*\*\*\*  
\*\*\*\*\*

Ben,

I believe that the equation for Fb you have shown should be different for the operating level. In the AASHTO Manual for Condition Evaluation of Bridges the formula is different for inventory and operating levels as shown below.

Inventory Level

Operating Level

If you work through the math of the  $91 \times 10^6 / F.S.$  you get about 50,000,000 for the Inventory level which is shown in your equation for the Fb. For the operating level the 50,000,000 in the Fb equation should be about 68,000,000. It is difficult to explain through email so I am sorry if it is unclear. Please give me a call at (540) 206-3230 if you have any questions.

Complete Issue Information

Thanks

Adam Summers  
Schwartz & Associates, Inc.  
7331 Timberlake Road Suite 305  
Lynchburg, VA 24502  
(434) 237-6584

\*\*\*\*\*  
\*\*\*\*\*

FROM: Herman Lee DATE: 5/13/2013 8:30:53 AM Eastern Daylight Time  
The two Fb equations are also specified in MBE.

FROM: Wayne Skow DATE: 5/13/2013 12:27:41 PM Eastern Daylight Time  
1.34 was being used for both inv and op. Changed in v6.5 to use 1.34 for opr and 1.82 for inv.

|                                         |
|-----------------------------------------|
| Issue ID: 11781                         |
| Subject: Truss Floorbeam Rating Factors |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Zhang, Bin           |                     |
| Submitted By: Clark, Austin           | 8/6/2012 4:18:36 PM |
| Modified By: bzhang                   | 9/4/2012 3:09:48 PM |
| Priority: High                        |                     |
| Category: Support                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:09:19 PM

HRS AASHTO

2207

Complete Issue Information

FROM: Austin Clark DATE: 8/6/2012 12:25:49 PM Eastern Daylight Time  
To whom it may Concern,

We have encountered a discrepancy in the rating factors calculated and summarized for Truss Floorbeams in a Half-Deck Truss Bridge.

The attached Excel uses the output provided in Virtis and calculates the rating factor for the given location. In most locations the excel calculations match the Virtis output RF, however for Node 3, element 2 end and element 3 start, there are some differences in the rating factors.

Example Floorbeam 5

- member U2U3 (3) Start Max Moment Virtis Output RF: 0.966
- member U2U3 (3) Start Max Moment Virtis Calculated RF: 1.001

Could you provide any guidance as to the reason for this discrepancy? The Bridge Model file is also attached.

Regards,

Austin Clark  
TranSystems  
alclark@transystems.com  
804-282-0377

FROM: Bin Zhang DATE: 9/4/2012 10:54:02 AM Eastern Daylight Time  
I can show you an example how Virtis calculats the RF for member U2U3 with HS20 truck. The table below listed the dead load, max and min live load for each truss members (figure 1). For floorbeam 5, all the truss member are modeled as beam elements (figure 2). Virtis is using interaction rating for the truss floorbeam (figure 3). You can read the "VIRTIS TRUSS ANALYSIS METHOD OF SOLUTION" for details.

Please read the attached word document (11781.docx) for the figures.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 11815                                         |
| Subject: Detailed Rating Report using BWS Report writer |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 8/9/2012 7:16:38 PM  |
| Modified By: hlee                     | 10/9/2012 6:47:48 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:20 PM

HRS AASHTO

2208

### Complete Issue Information

|                   |           |      |             |
|-------------------|-----------|------|-------------|
| Duray, Jim        | New       | High | Unknown     |
| Duray, Jim        | New       | High | Unknown     |
| Kennelly, Krishna | Assigned  |      |             |
| Lee, Herman       | Suspended |      | Enhancement |
| Ghosh, Subhadeep  | Assigned  |      |             |
|                   | Resolved  |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 8/9/2012 3:44:40 PM Eastern Daylight Time  
I have analyzed a bridge using LRFR, where AC overlay exists.

This report does combine the dead loads belongs to DC and DW load cases and report the unfactored dead load. Unfortunately, since contribution of DC and DW is not known, I find it difficult to check the rating factor using the information provided in the report. It would have been better to report DC and DW separately.

I am not sure whether separating the dead load was discussed in the original development and/or for somehow it was slipped through our mind. If this is a new request, I would like to add this as future enhancement request.

FROM: Herman Lee DATE: 10/9/2012 2:45:22 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center/Virtis.

4/19/2016 3:09:20 PM

HRS AASHTO

2209

### Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 11830                       |
| Subject: Detailed LRFR Rating Results |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ghosh, Subhadeep     |                       |
| Submitted By: Wagner, Brad            | 8/10/2012 5:27:51 PM  |
| Modified By: bwagner                  | 12/10/2012 4:17:42 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved | Bug      |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | Stage 4 DL result.pdf |             |
|      | 0220047.xml           |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 8/10/2012 1:38:07 PM Eastern Daylight Time

Currently the HL-93 report includes separate tables for Truck and Tandem. The previously available reports consolidated these numbers into one table indicating (T) for locations where the truck controls. A consolidated report would simplify this output.

It was our understanding that LRFR for 6.4 was going to include analysis output similar to the reports available in LFR (Overall Summary, Reactions, Moments, Shears, etc). Upon correction of the issues

4/19/2016 3:09:20 PM

HRS AASHTO

2210

Complete Issue Information

identified in incident 11828, the only desired report that cannot be replicated in LRFR using the detailed rating results Output is the Overall Summary Report. For proper (and useful) documentation of analysis output, the overall summary style report is greatly needed.

FROM: Herman Lee DATE: 8/14/2012 4:31:22 PM Eastern Daylight Time  
Copied below is the work plan for this enhancement.

=====

6. LRFR Analysis Report - detailed report listing ratings at all POI not just the controlling rating factor

- a. Mockup report and UI changes
- b. UI changes to add a new 'canned' report to the Report Tool
- c. Create the 'canned' report

    Xml report will be generated from the Virtis LRFR spec check intermediate results  
    Report will contain a section for each rating category (ie, Flexure, Shear, PS Tensile Stress, Serviceability, etc.) that is performed  
    Report will show each category for each vehicle (eg, Flexure will show up for HL-93, Type 3, etc.)

=====

A sample LRFR report was sent on 8/12/2011 for review and comment. I'm changing this to an enhancement request.

FROM: Brad Wagner DATE: 8/20/2012 8:23:30 AM Eastern Daylight Time  
As I stated - our review was based on the assumption that the reports available in LFR would be available in LRFR.

FROM: Herman Lee DATE: 10/9/2012 2:47:57 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center/Virtis.

FROM: Herman Lee DATE: 10/24/2012 11:26:45 AM Eastern Daylight Time  
Subhadeep, please implement the "Overall Summary" topic for the LRFR Analysis Output. Formatting of the topic should be similar in appearance to the same topic in the LFD Analysis Output. Thanks.

FROM: Subhadeep Ghosh DATE: 11/1/2012 1:55:36 PM Eastern Daylight Time  
Implemented for 6.4.1. The "Overall Summary" for LRFR was created to handle all the LRFR load cases.

FROM: Brad Wagner DATE: 11/14/2012 1:13:49 PM Eastern Standard Time  
This summary report was created to mirror the LFR summary report. The content appears to generate correctly.

In the LFR report, \*\*\*\* are created for levels (inventory or operating) that a given truck that wasn't analyzed for. This becomes an issue for LRFR as there are 4 levels for every truck (inventory, legal, permit, operating), leaving 3 empty rows for every row of data. Can we eliminate the rows for the LRFR report that do not apply on a per truck basis? This would shorten the content significantly.

Complete Issue Information

The LRFR report was truncated as requested. Change going into 6.4.1 Beta 2.

FROM: Brad Wagner DATE: 12/10/2012 11:17:42 AM Eastern Standard Time  
Accepted - 6.4.1 Beta 2

|                            |
|----------------------------|
| Issue ID: 11841            |
| Subject: Stage 4 Dead load |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Litchfield, Phil        | 8/13/2012 8:37:16 PM |
| Modified By: mberry                   | 4/18/2013 7:22:01 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 8/13/2012 4:41:30 PM Eastern Daylight Time  
From consultant (Tempinson):

We have a structure model that is report a Stage 4 Dead load. We can't find anything about this in the help file. Can someone tell me what dead loads that would be and where to define them?

FROM: Herman Lee DATE: 12/6/2012 10:00:21 AM Eastern Standard Time  
The "4" in "Stage 4 Dead Load" is an ID internal in the system indicating simple span make continuous for live load model. Report generation should report as "Stage 2 Dead Load".

Resolved for the 6.5 release.

FROM: Melanie Berry DATE: 4/18/2013 3:22:01 PM Eastern Daylight Time

4/19/2016 3:09:20 PM

HRS AASHTO

2212

Complete Issue Information

Verified that the Stage 4 Dead Load was fixed and called out as Stage 2 Dead Load in the Report.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 11861                                                           |
| Subject: No Connection Command Required For Double Angles In Truss Module |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Bhanushali, Girish   |                      |
| Submitted By: Campisi, Paul           | 8/16/2012 4:20:20 PM |
| Modified By: mberry                   | 4/18/2013 7:27:02 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |
|                 | Assigned |          |          |
| Zhang, Bin      |          |          |          |

4/19/2016 3:09:21 PM

HRS AASHTO

2213



### Complete Issue Information

|                    |               |      |             |
|--------------------|---------------|------|-------------|
| Bhanushali, Girish | Investigation |      |             |
| Duray, Jim         | New           | High | Unknown     |
| Li, Xinmei         | Assigned      |      |             |
| Zhang, Bin         |               |      | Bug         |
|                    | Suspended     |      | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 8/16/2012 12:26:11 PM Eastern Daylight Time

The double angle example on page 32 of the Truss Command Language Manual does show the "Connection Riveted/Bolted/Welded x.x" command. This is typically shown for all other examples. It is noted that this command works for a double angle section. Why is this command left out?

Paul Campisi  
NYSDOT

FROM: Xinmei Li DATE: 8/20/2012 9:36:08 AM Eastern Daylight Time

If you look at page 31 in Command Language Manual, Note 2 for Connection command, it says "Do not enter this command BackBackAngles, or SingleAngle.". So connection command is not for double or single angle sections.

FROM: Xinmei Li DATE: 8/20/2012 2:45:36 PM Eastern Daylight Time

Copied from email on 8/20/2012

Paul,  
The Net Area in Tension is calculated according to the area of the angles only.  
If you have more questions or comments feel free to enter in the incident.  
Thank you.

May

From: Campisi, Paul (DOT) [mailto:Paul.Campisi@dot.ny.gov]

4/19/2016 3:09:21 PM

HRS AASHTO

2214

Complete Issue Information

Sent: Monday, August 20, 2012 11:45 AM

To: Li, Xinmei

Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority has been resolved.

How is the Net Area in Tension calculated? This command is available for other members.

Thanks

Paul

FROM: Paul Campisi DATE: 8/21/2012 3:41:13 PM Eastern Daylight Time

I think the "Connection Riveted/Bolted/Welded x.x" command should be include in the example. It appears to work when added the section commands.

FROM: Xinmei Li DATE: 8/22/2012 1:16:17 PM Eastern Daylight Time

The verification should have warned the user that connection command is not available for builtup double angle and single angle sections. This bug exists in last release. So I changed it to 6.3 release bug.

FROM: Xinmei Li DATE: 8/22/2012 3:10:28 PM Eastern Daylight Time

The bug is resolved for next build.

FROM: Bin Zhang DATE: 8/24/2012 10:17:09 AM Eastern Daylight Time

Verified in VO64 Acceptance Build, I am able to capture the error message for builtup double angle and single angle sections when the connection command is used.

FROM: Herman Lee DATE: 8/31/2012 11:01:48 AM Eastern Daylight Time

I consider missing the Connection command for BackBackAngles is a bug.

FROM: Girish Bhanushali DATE: 12/26/2012 2:51:59 PM Eastern Standard Time

Linked to VI# 11903

FROM: Girish Bhanushali DATE: 12/28/2012 10:36:05 AM Eastern Standard Time

Connection command for back to back angle section is supported. Help has been updated. This issue has been resolved for next release (6.5.x).

FROM: Melanie Berry DATE: 4/18/2013 3:27:02 PM Eastern Daylight Time

I verified that the command for Back to Back with connection worked and also compared the rating results with and without the Connection command to make sure the connection k value and effective

Issue ID: 11863

Subject: Built-Up I Beam Member: No Provision For a Horizontal Back To back Dimension

4/19/2016 3:09:21 PM

HRS AASHTO

2215

Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Campisi, Paul           | 8/16/2012 6:55:02 PM |
| Modified By: bzhang                   | 4/12/2013 8:56:24 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  |                    |          | Bug      |
|                  |                    |          | Unknown  |
|                  |                    |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | LLDF_Sh@Supports_Err_(0826001)-631.xml |             |
|      | LLDF_Sh@Supports_Err_(0826001).xml     |             |
|      | Screenshot - LLDF Shear.jpg            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

4/19/2016 3:09:21 PM

HRS AASHTO

2216

Complete Issue Information

FROM: Paul Campisi DATE: 8/16/2012 3:12:45 PM Eastern Daylight Time

For the Built-Up Member named "MyBultup2" on page 31 of the Truss Command Language Manual, there is no provision to space the vertical legs of the angles. lyy is calculated as if the vertical angle legs are in contact (Back to Back Horizontal = 0). The web lacing is usually installed between the vertical angle legs, which increases lyy. There should be a horizontal back To back command to space the angles. Or maybe a default value of 0.75 inches, which is two 0.375 inch lacing bars.

Additionally, there is an incorrect command line in the example. The word "Horizontal" is on its own line as shown below.

```
Bultup = MyBultup2
TopFlangePlate
18.0 1.125 A440-2
BottomFlangePlate
18.0 1.125 A440-2
TopAngles "L 5x3.5x0.75" Horizontal
BottomAngles "L 5x3.5x0.75"
Horizontal <===== ?
BackToBack 20.0
Connection Riveted 10.3125
Lacing Web
```

FROM: Xinmei Li DATE: 8/20/2012 9:34:50 AM Eastern Daylight Time

This example was in 6.3 version. Changed to support.

FROM: Herman Lee DATE: 10/10/2012 9:43:01 AM Eastern Daylight Time

The BackToBack <horizontal> command was added for implementing BackBackAngles in 6.1. It will be an enhancement request to support the BackToBack <horizontal> command for the other built-up sections. Enhancing the Lacing <lacing\_location> command to include thickness is another option for consideration.

May, please fix the incorrect command in the example indicated by Paul.

FROM: Herman Lee DATE: 4/10/2013 7:45:15 AM Eastern Daylight Time

The example in the Truss Command Language Manual will be corrected for the 6.5 release. I'm changing this incident to an enhancemnet request.

FROM: Bin Zhang DATE: 4/12/2013 4:55:45 PM Eastern Daylight Time

The example in the Truss Command Language Manual has been fixed for the 6.5 release.

Issue ID: 11867  
Subject: LLDF for Shear at Supports

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Litchfield, Phil 8/16/2012 11:45:30 PM

4/19/2016 3:09:21 PM

HRS AASHTO

2217

Complete Issue Information

|                     |                      |
|---------------------|----------------------|
| Modified By: sghosh | 5/9/2013 12:52:50 PM |
| Priority: High      |                      |
| Category: Bug       |                      |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Duray, Jim         | New                | High     | Unknown  |
| Trees, Geoffrey    | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Open               |          |          |
|                    | Assigned           |          | Bug      |
|                    | Resolved           |          |          |
|                    | Resubmit           |          |          |
|                    | Assigned           |          |          |
| Ordoobadi, Mehrdad |                    |          |          |
| Lee, Herman        |                    |          |          |
|                    | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 51150082-VO-6_4_1.xml |             |
|      | 00055 - 51150082.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 8/16/2012 7:48:58 PM Eastern Daylight Time  
 From consultant (Souther):

Virtis is producing erroneous values for Shear at Supports Live Load Distribution for Member S3 - 2nd

4/19/2016 3:09:21 PM

HRS AASHTO

2218

Complete Issue Information

N Int-x. It appears that the 1-Lane value is being reported as the Multi-Lane value and the Multi-Lane value is being reported as the 1-Lane value.

FROM: Srujana Thogaru DATE: 8/17/2012 3:14:26 PM Eastern Daylight Time  
Can you please provide screen shot of the values you are getting?

FROM: Phil Litchfield DATE: 8/17/2012 3:23:49 PM Eastern Daylight Time  
Screenshot attached.

FROM: Phil Litchfield DATE: 8/20/2012 10:32:50 AM Eastern Daylight Time  
6.3.1 Model Attached.

FROM: Herman Lee DATE: 8/20/2012 10:38:04 AM Eastern Daylight Time  
I'm changing the Folder from Beta Testing to Support Center since this issue exists in 6.3.1.

FROM: Srujana Thogaru DATE: 5/2/2013 11:37:17 AM Eastern Daylight Time  
Reason for the error is that the beam3 is within 2ft from the edge and is not considered as special beam. Fixed for beta 1.

FROM: Subhadeep Ghosh DATE: 5/9/2013 8:52:32 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11895                                                                         |
| Subject: Can't Save Analysis Results from Bridge Explorer on some bridges - LF Analysis |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Thompson, Todd          | 8/29/2012 1:04:29 PM |
| Modified By: tthompson                | 6/24/2013 6:31:35 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:09:21 PM

HRS AASHTO

2219

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 8/29/2012 9:17:11 AM Eastern Daylight Time

For some reason - I have some bridges that I can not save the Analysis Results when I run the bridge analysis from the bridge explorer. (LF Analysis)

I get the following error message -

Unsaved data detected.

08:02:44 AM - Line 5022 in source file UiAnalysisProgressDlg.cpp.

Error updating database record set.

08:02:44 AM - Line 423 in source file DmResultsCritLoadLfd.cpp.

State:23000,Native:2627,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

Violation of PRIMARY KEY constraint 'XPKabw\_results\_crit\_load\_lfd'. Cannot insert duplicate key in object 'dbo.abw\_results\_crit\_load\_lfd'. The duplicate key value is (55, 2, 2, 1, 7365, 3, 1, 61). The statement has been terminated.

The structure is a steel girder system. It rates fine if I don't check the Save Analysis Results box.

There are no problems with LRFR analysis results being saved.

Apologize if this was reported already.

FROM: Geoffrey Trees DATE: 8/29/2012 9:34:32 AM Eastern Daylight Time

Todd, I have not seen this yet but I am able to reproduce the issue with the bridge you have attached.

Since I don't have any other bridges that can produce this problem, I am not able to test this in 6.3.

Does this work properly in 6.3 or is this a new issue in 6.4? Also, did this work in previous betas and just start in beta 3?

FROM: Todd Thompson DATE: 8/29/2012 10:31:04 AM Eastern Daylight Time

Let me check with Virtis 6.3 and see if it is a pre-existing condition or something new.

It was something I just noticed when I was testing in Beta 3.

I had some other bridges that the Exterior Girder would save but I'd get the same error message on the interior girders.

FROM: Todd Thompson DATE: 8/29/2012 11:28:02 AM Eastern Daylight Time

Checked in Virtis 6.3.0 with same structure - and get the same error message. So it's not a new bug in 6.4 but a bug nonetheless.

FROM: Geoffrey Trees DATE: 8/29/2012 2:54:46 PM Eastern Daylight Time

This is a 6.3 Release Bug. I have moved this to the Virtis/Support Center folder.

FROM: Geoffrey Trees DATE: 4/18/2013 1:27:25 PM Eastern Daylight Time

Todd, I just got back to this now and I can no longer reproduce it. I am not sure if this was related to

4/19/2016 3:09:21 PM

HRS AASHTO

2220

Complete Issue Information

another bug and that got resolved or what. I am going to mark it as resolved but when you get the Beta for 6.5, please give it a try again and let me know if you can still produce it. Not sure what the cause was??

FROM: Mark Mlynarski DATE: 4/22/2013 2:05:00 PM Eastern Daylight Time  
Added version 6.4.1 version of XML file.

FROM: Subhadeep Ghosh DATE: 4/24/2013 4:40:40 PM Eastern Daylight Time  
Saving the 6.4.1 version, bridge fails in 6.5 beta 1 but runs in debug. This needs to be tested in the next build.

FROM: Geoffrey Trees DATE: 4/29/2013 10:44:19 AM Eastern Daylight Time  
Sounds good Subhadeep. I think it was fixed during Beta 1 but since we are only repackaging DLLs that developers specify, it has not made it into the release build. Let us test this during Beta 2 when Joe rebuilds all the DLLs with the latest code. If this issue still persists then we need to investigate why it happens in release build but no longer debug build. I am pretty certain that it is only because not all the DLLs were rebuilt for Beta 1 release 2. I make this assumption because I was able to reproduce this issue in debug months ago but now I can't.

FROM: Subhadeep Ghosh DATE: 5/22/2013 5:14:41 PM Eastern Daylight Time  
The problem still persists for both the attached bridges in 6.5 Beta 2.

FROM: Mehrdad Ordoobadi DATE: 6/13/2013 3:15:20 PM Eastern Daylight Time  
I can reproduce this issue in Debug in Beta 3.

The error description suggests that duplicate rows are being added to the LFD Critical Loads results object.

FROM: Mehrdad Ordoobadi DATE: 6/13/2013 3:44:59 PM Eastern Daylight Time  
The AASHTO Engine code is populating the duplicate rows  
BOOL CABxEngineResultGen::LFDCriticalLoads(IDoMemberResultsPtr& MemberResultsPtr, short iStage, bool bRC)

Line 5729.

Herman could you please take a look?

FROM: Herman Lee DATE: 6/20/2013 9:09:32 AM Eastern Daylight Time  
Fixed saving analysis results problem for the Beta 4/Acceptance Build.

FROM: Todd Thompson DATE: 6/24/2013 2:31:35 PM Eastern Daylight Time  
Good - I just noticed for LRFR - NSG Analysis - that Save Analysis Results did not work either...

Will await Beta 4 of 6.5.0

Issue ID: 11896

Subject: Corrugated deck structure typical section loads always applied to DC load case

4/19/2016 3:09:22 PM

HRS AASHTO

2221



Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kennelly, Krisha        | 8/29/2012 7:03:23 PM |
| Modified By: hlee                     | 8/29/2012 8:02:11 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Ihnat, Joseph    | Information Needed |          | Bug      |
| Lee, Herman      | Assigned           |          | Unknown  |
| Ghosh, Subhadeep | Not Reproducible   |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | Girder_plate_thickness_Apply_error.jpg |             |
|      | Virtis_Library-fixed.xml               |             |
|      | LFD Report.pdf                         |             |
|      | 4802764.xml                            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/29/2012 3:05:00 PM Eastern Daylight Time  
 Structure typical section loads like wearing surface, parapets, etc. are always applied to DC load case for LRFR rating.

Fixed for 6.4 beta build 4. Loads are now assigned to the load case specified by the user.

4/19/2016 3:09:22 PM

HRS AASHTO

2222

Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 11907                                                |
| Subject: Cannot generate LFD Analysis report using Report Tool |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ghosh, Subhadeep     |                      |
| Submitted By: Waheed, Amjad           | 9/5/2012 6:35:56 PM  |
| Modified By: hlee                     | 10/9/2012 8:25:25 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 9/5/2012 2:40:50 PM Eastern Daylight Time  
Two issues with this long (31 spans) member.

1. We cannot generate LFD Analysis report using Report Tool. It runs forever.
2. When top or bottom cover plate thickness is entered and "Applied" the plate width get saved in thickness box. Have any one reported this behavior earlier too?

4/19/2016 3:09:22 PM

HRS AASHTO

2223

Complete Issue Information

FROM: Herman Lee DATE: 9/5/2012 2:41:25 PM Eastern Daylight Time

1. Amjad, I'm not able to rate the 31-spans member. What are the tolerance settings in your database and how many vehicles were included in the rating? Thanks.

2. I'm able to reproduce the problem. The entered thickness is being applied correctly but the thickness input is replaced with the width input in the user interface. If you close the window and open again, the entered thickness shows up correctly in the window. This issue has not been reported earlier.

FROM: Amjad Waheed DATE: 9/7/2012 3:26:07 PM Eastern Daylight Time

1. We were able to rate the bridge for HS20. I also attaching our library for your reference.

2. It seems a bug in the program and should be documented, right?

FROM: Joseph Ihnat DATE: 9/11/2012 11:23:58 AM Eastern Daylight Time

Since these are two different problems, a new incident has been created for the second problem (11921).

FROM: Herman Lee DATE: 10/5/2012 1:46:40 PM Eastern Daylight Time

Subhadeep, please see whether you are able to reproduce the first problem. Thanks.

FROM: Subhadeep Ghosh DATE: 10/8/2012 1:32:15 PM Eastern Daylight Time

Tried to reproduce the issue for 6.4 Release and found it to be fixed.

FROM: Subhadeep Ghosh DATE: 10/9/2012 1:52:28 PM Eastern Daylight Time

LFD report attached for HS20 Rating

|                             |
|-----------------------------|
| Issue ID: 11912             |
| Subject: P/S analysis crash |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Thogaru, Srujana     |                       |
| Submitted By: McCaffrey, Brian        | 9/7/2012 1:35:50 PM   |
| Modified By: hlee                     | 9/13/2012 12:35:30 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |

4/19/2016 3:09:22 PM

HRS AASHTO

2224

### Complete Issue Information

|             | Information Needed |      |     |
|-------------|--------------------|------|-----|
| Duray, Jim  | Assigned           | High | Bug |
| Lee, Herman | Resolved           |      |     |
|             | Verified           |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Analysis_screen_shot.pdf          |             |
|      | Caltrans Trucks.xml               |             |
|      | Analysis_settings_screen_shot.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian McCaffrey DATE: 9/7/2012 9:59:50 AM Eastern Daylight Time

The attached P/S model for either girder will crash on an LRFR analysis with the error detailed in the log file at the end of this message. I traced the problem to the concrete strength values entered for the deck and the beam. The beam f'c is 8.5 ksi and the deck f'c is 4.0 ksi. If the f'c ratio is >2 then this error occurs - the modular ratio calcs seems to be where the problem is. This will effect the Mn calc and cause the analysis crash. Once f'c for the deck is changed to 4.26 ksi or higher the beam runs fine. f'c of 4.25 ksi and below will generate the LRFR analysis error. The analysis will complete for an LFD run but the RF's are all 0. Once the deck f'c is raised to 4.26 the LFD ratings are also normal.

Note that I have the Ignore Design/Legal and Permit load shear buttons unchecked.

- Location - 64.0000 (ft)
- Location - 72.0000 (ft)
- Location - 77.3333 (ft)
- STAGE 1 - Final Round
- Location - 0.0000 (ft)
- Location - 80.0000 (ft)
- STAGE 2 - Final Round
- Location - 0.0000 (ft)
- Location - 80.0000 (ft)
- STAGE 3 - Final Round
- Location - 0.0000 (ft)

System Error - Contact Technical Support: Missing data in article: "6A.4.2.1 General Load Rating

4/19/2016 3:09:22 PM

HRS AASHTO

2225

Complete Issue Information

Equation - Concrete Shear - " - stage 3, round 3

- Location - 80.0000 (ft)

System Error - Contact Technical Support: Missing data in article: "6A.4.2.1 General Load Rating

Equation - Concrete Shear - " - stage 3, round 3

Fatal error occurred while processing specification checks.

Error - Error performing LRFR specification checking!

Error - Analysis failed!

FROM: Srujana Thogaru DATE: 9/12/2012 12:27:20 PM Eastern Daylight Time

Please attach the bridge xml file which was causing the above error.

FROM: Srujana Thogaru DATE: 9/12/2012 4:10:13 PM Eastern Daylight Time

Above mentioned existed in 6.3.1 (by unchecking Ignore design & legal load shear and Ignore permit load shear) but has been fixed for 6.4 release.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 11920                                                              |
| Subject: LRFR Line Girder analysis fails for permit vehicle+ pedestrian load |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: vinayagamoorthy, vinacs | 9/11/2012 2:08:31 PM |
| Modified By: sghosh                   | 4/24/2013 9:47:37 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 9/11/2012 10:10:09 AM Eastern Daylight Time

This is submitted on behalf of Vinacs Vinayagamoorthy and was originally reported in issue 11596.

4/19/2016 3:09:22 PM

HRS AASHTO

2226

Complete Issue Information

When a particular permit vehicle, in this case "P 5 Annual" along with a pedestrian load is analysed for LRFR using Line Girder, the analysis fails to complete (see attached screen shot). To reproduce the problem, run G2 in BID8, PCITrainingBridge5 (see screen shot).

Herman determined the issue is with the vehicle's "notional" switch. When notional, there is a problem. There is no problem when the vehicle is non-notional.

FROM: Herman Lee DATE: 4/8/2013 12:53:45 PM Eastern Daylight Time  
Fixed processing of notional single component (truck, tandem or lane) vehicle + pedestrian load.

Resolved for 6.5 release.

FROM: Subhadeep Ghosh DATE: 4/24/2013 5:25:01 PM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 11929                                                                         |
| Subject: Ignore Positive Moment Rating for PS-I is not considered by AASHTO LRFR engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: vinayagamoorthy, vinacs | 9/17/2012 8:14:11 PM |
| Modified By: vvinayagamoorthy         | 9/19/2012 6:46:57 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:09:23 PM

HRS AASHTO

2227

Complete Issue Information

|                  |          |          |  |         |
|------------------|----------|----------|--|---------|
| Kennelly, Krisha | Resolved |          |  | Support |
| Duray, Jim       | New      | High     |  | Unknown |
| Skow, Wayne      | Assigned |          |  |         |
| Kennelly, Krisha |          |          |  | Bug     |
|                  |          | Critical |  |         |
|                  | Resolved |          |  |         |
|                  | Verified |          |  |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00023 - 82182252000S110.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: vinacs vinayagamoorthy DATE: 9/17/2012 4:17:26 PM Eastern Daylight Time  
 Ignore positive moment at supports for Prestress I girder bridges made continuous for live load seems to be not working when the AASHTO LRFR engine is utilized to rate the bridge.

Attached bridge model - Span 1-3, Interior girder

FROM: Krisha Kennelly DATE: 9/18/2012 9:39:45 AM Eastern Daylight Time  
 This exists in 6.3.1 release so I've changed the folder to support.

The EngineHelp for the AASHTO LRFD/LRFR/Std engines state that this field is not used by these engines.

FROM: vinacs vinayagamoorthy DATE: 9/19/2012 2:46:57 PM Eastern Daylight Time  
 I should have reviewed the HELP prior to reporting this. I accept the build

|                                           |
|-------------------------------------------|
| Issue ID: 11931                           |
| Subject: Using 10-129c instead of 10-129d |

### Complete Issue Information

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: McMunn, Creightyn       | 9/18/2012 8:54:43 PM  |
| Modified By: cmcmunn                  | 11/14/2012 9:06:10 PM |
| Priority: Critical                    |                       |
| Category: Bug                         |                       |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Trees, Geoffrey    | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Open     |          |          |
|                    | Resolved |          |          |
|                    | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | MP34.49A.xml        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Creightyn McMunn DATE: 9/18/2012 4:59:18 PM Eastern Daylight Time

In the attached file, running "A2-A7 Interior Girder" in the AASHTO LFD engine, the Spec Check results indicate the section is compact composite in the positive moment regions but non-compact over the pier. This indicates Equation 10-129d should be used to calculate Mu in the positive moment sections. The spec check shows Equation 10-129c being used instead.

FROM: Krisha Kennelly DATE: 9/19/2012 1:59:53 PM Eastern Daylight Time

Please investigate if this is a release bug or a bug new to 6.4. (Folder is beta testing but version name says 6.3.1) Change the folder to Support Center if it is a bug in 6.3.1, or change the version name if it is new to 6.4.

FROM: Wayne Skow DATE: 9/20/2012 7:21:10 AM Eastern Daylight Time

4/19/2016 3:09:23 PM

HRS AASHTO

2229



Complete Issue Information

This is a release bug. You get the same result from v6.3.1. The problem is that when 10.50.1.1.2 runs for a mid-span location, like 54.37ft on span 1, it looks for a table (Stl\_10\_50\_01\_01\_02PierTable) containing information about the adjacent piers. If that table doesn't exist, it assumes it's a simple span and 129c then controls. That table needs to be created by the controller before stage 3 but is not.

FROM: Krisha Kennelly DATE: 9/25/2012 2:48:50 PM Eastern Daylight Time  
Summary of this issue:

In Std Spec Article 10.50.1.1.2, the moment capacity for compact composite positive moment sections with noncompact pier sections shall be taken as either  $M_y$  determined in Article 10.50(c) or as  $M_u = M_y + A(M_u - M_s)_{pier}$  (10-129d).

For this case in 6.3.1, the AASHTO Std Engine is instead computing the moment capacity as per (10-129b) or (10-129c) which are functions of the plastic moment capacity which is larger than  $M_y$ .

This results in rating factors larger than they should be.

=====

As per TF approval, for Version 6.4 this bug has been fixed to use the moment capacity equal to  $M_y$  as determined in Article 10.50(c).

Version 6.4.1 will include the implementation of Eq. 10-129d.

FROM: Krisha Kennelly DATE: 9/26/2012 2:55:20 PM Eastern Daylight Time  
Verified for the acceptance build by regression testing.

Results of the regression testing for the steel bridges in the test suite:  
- There were no differences for LRFD, LRFR or ASR.

-There were 12 different bridges run with LFR. 1 bridge had its overall rating factor drop but it was due to the 10.50.1.1.2 changes so it is now correct. The others ran with no differences.

FROM: Krisha Kennelly DATE: 10/11/2012 1:50:53 PM Eastern Daylight Time  
New issue has been added for the full implementation of eq 10-129d for version 6.41. Issue 11966 is the new issue.

FROM: Creightyn McMunn DATE: 11/14/2012 3:36:54 PM Eastern Standard Time  
Verified that Eqn 10-129d is now being used in the positive moment region of Span 1, A2-A7 Interior Girder.

Issue ID: 11932  
Subject: Cannot delete LRFR factors

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Cavanaugh, Scott 9/24/2012 6:28:09 PM

### Complete Issue Information

|                     |                     |
|---------------------|---------------------|
| Modified By: sghosh | 5/9/2013 6:31:46 PM |
| Priority: High      |                     |
| Category: Bug       |                     |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Trees, Geoffrey    | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Resubmit |          |          |
|                    | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | 2012 Interim LL factors-Fixed.xml |             |
|      | 2012 Interim LL factors.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Geoffrey Trees DATE: 9/24/2012 2:30:33 PM Eastern Daylight Time

On behalf of Scott Cavanaugh sent to bridgeware support.

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]

Sent: Monday, September 10, 2012 4:41 PM

To: Bridgeware,

Subject: Cannot delete LRFR factors file

Herman,

I cannot seem to figure out why I cannot delete the "NJTA Load Rating Manual" from this virtis file. I have checked and double checked the MEMBER ALTERNATIVES in all 4 spans, and do not see anywhere where this file is currently being used. Any idea why I can't delete?

4/19/2016 3:09:23 PM

HRS AASHTO

2231

## Complete Issue Information

Thanks  
Scott

FROM: Geoffrey Trees DATE: 9/24/2012 2:30:33 PM Eastern Daylight Time

We are not sure of the cause of this issue but we have determined if we remove a few values from the database, it will allow for the removal of the affected LRFR factors. Since this has been discovered to be a 6.3 release bug, a fix will be addressed for 6.5 migration and script be provided to users who have this issue.

FROM: Mehrdad Ordoobadi DATE: 4/11/2013 12:11:35 PM Eastern Daylight Time

Removing the LRFR factor fails because the factor is referenced in the ABW\_BEAM\_DEF table. But the field is not editable.

A work around is to run a SQL query to set the value of OVERRIDE\_LRFR\_FACTOR\_ID in table ABW\_BEAM\_DEF to NULL for the bridge.

Here are the instructions:

- 1 - Close the bridge if it is open.
- 2 - Locate the bridge in the Bridge Explorer and find the value in the BID field. Make a note of it.
- 3 - Using the SQL Server Management Studio login to the server.
- 4 - Click "New Query" on the toolbar.
- 5 - Switch to the Virtis/Opis database that you would like to make corrections to by selecting it in the database in the Available Databases drop down list on the toolbar
- 6 - Type in the following SQL statement in the query window.  
UPDATE ABW\_BEAM\_DEF SET OVERRIDE\_LRFR\_FACTOR\_ID = NULL WHERE bridge\_id = <<<The BID from step 2>>>

You need to replace <<<The BID from step 2>>> with the BID that you got in step 2.

- 7 - Click the Execute button.

Now you can open the bridge and remove the LRFR factor and save your bridge.

Please do not do this for other bridges because their situation maybe different.

FROM: Mehrdad Ordoobadi DATE: 4/11/2013 1:07:37 PM Eastern Daylight Time

Migration Wizard / Version Conversion should set all override factors in abw\_beam\_def to null for non stringer , non floorbeam members.

FROM: Mehrdad Ordoobadi DATE: 4/25/2013 3:05:51 PM Eastern Daylight Time

Migration Wizard updated to set the override factors to null in abw\_beam\_def when the beam def is not for stringer or floorbeam.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 9:37:17 AM Eastern Daylight Time

4/19/2016 3:09:24 PM

HRS AASHTO

2232

Complete Issue Information

Version Conversion corrected to set the override factors to null in abw\_beam\_def when the beam def is not for stringer or floorbeam.

FROM: Mehrdad Ordoobadi DATE: 4/26/2013 9:38:07 AM Eastern Daylight Time  
Fixed in 6.5 Beta 1

FROM: Subhadeep Ghosh DATE: 5/9/2013 1:08:46 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                        |
|----------------------------------------|
| Issue ID: 11933                        |
| Subject: Cannot import library factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Cavanaugh, Scott        | 9/24/2012 6:35:30 PM |
| Modified By: mordoobadi               | 4/26/2013 7:20:29 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Geoffrey Trees DATE: 9/24/2012 2:36:26 PM Eastern Daylight Time

On behalf of Scott Cavanaugh sent to bridgeware support.

From: Scott Cavanaugh [mailto:SCavanaugh@HNTB.COM]  
Sent: Wednesday, September 12, 2012 10:22 AM  
To: Bridgeware,  
Cc: Cody Parker  
Subject: FW: UDOT load rating program questions

4/19/2016 3:09:24 PM

HRS AASHTO

2233

## Complete Issue Information

Herman,

One of our engineers recently received a live load factor file, and upon importing, both his version of virtis and mine crashed / froze. Is there any way you can take a look at the file and see what is the problem?

Thanks  
Scott

From: Cody Parker  
Sent: Wednesday, September 12, 2012 9:33 AM  
To: Scott Cavanaugh  
Subject: UDOT load rating program questions

Hello Scott,

I'm working on the load rating program and we were given some live load factors to incorporate into our load ratings (see attached). Can you tell me how to import these? I tried to import them into the library explorer under Factors/LRFR but it closes down the program. Could I be doing something wrong?

Thanks,

Cody

FROM: Geoffrey Trees DATE: 9/24/2012 2:36:26 PM Eastern Daylight Time  
We have not yet found the cause for this issue. Since it is a 6.3 release bug, once we find a solution we will add it to 6.5. We will notify the users if we find a work around.

FROM: Mehrdad Ordoobadi DATE: 4/11/2013 1:10:39 PM Eastern Daylight Time  
This problem is casued by a bug in the export code for LRFR Factor Library.

Attached is the corrected Library Factor.

FROM: Steve Salata DATE: 4/24/2013 2:11:24 PM Eastern Daylight Time  
Installed 6.5 and copied Updates folder into installation. When importing 2012 Interim LL factors-Fixed.xml, the following error is generated:

Import operation failed!  
02:19:07 PM - Line 2281 in source file UiLibraryImportDlg.cpp.

Unable to save new library item.  
02:19:07 PM - Line 1526 in source file DmLibraryCache.cpp.

Error updating database record set.  
02:19:07 PM - Line 812 in source file DmLibLrfrLs.cpp.  
State:23000,Native:2627,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

4/19/2016 3:09:24 PM

HRS AASHTO

2234

Complete Issue Information

Violation of PRIMARY KEY constraint 'XPKabw\_lib\_lfr\_ls'. Cannot insert duplicate key in object 'dbo.abw\_lib\_lfr\_ls'. The statement has been terminated.

FROM: Bin Zhang DATE: 4/24/2013 5:09:16 PM Eastern Daylight Time  
The fixed library (2012 Interim LL factors-Fixed.xml) works for Version6.5Beta1.

|                                                                                        |
|----------------------------------------------------------------------------------------|
| Issue ID: 11938                                                                        |
| Subject: Floorline Fb's with intermediate supports have inconsistent results reporting |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Kennelly, Krisha        | 9/28/2012 2:25:12 PM |
| Modified By: mmlynski                 | 4/24/2013 2:34:22 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
|                 | Assigned |          |          |
| Ihnat, Joseph   |          |          |          |
| Lee, Herman     |          |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | 11938 641 file.xml     |             |
|      | 11938.png              |             |
|      | 11938 (6.4.0.3001).xml |             |
|      | VI 11938.docx          |             |

Tasks

4/19/2016 3:09:24 PM

HRS AASHTO

2235

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 9/28/2012 10:25:38 AM Eastern Daylight Time  
Found while working on 11931.

Floorbeam 1 in the attached bridge has an intermediate support. the attached screenshot shows the inconsistent reporting of the results between the graph, spec check locations and tabular results.

FROM: Herman Lee DATE: 10/26/2012 8:02:15 AM Eastern Daylight Time  
Joe, please see whether they are user interface issues or results object issues.

FROM: Joseph Ihnat DATE: 1/23/2013 2:36:11 PM Eastern Standard Time  
CDoMemberResults::GetPointInfo() seems to be returning incorrect information. The spec check tree doesn't call this but the other two do.  
abgrsltUiMemberResultsReportVw, line 2575  
abgrsltUiXYGridView, line 4799

FROM: Joseph Ihnat DATE: 1/23/2013 2:59:10 PM Eastern Standard Time  
The bridge originally attached was from 6.4.0 Beta 4. I've attached the same bridge from 6.4.0 release ("11938 (6.4.0.3001).xml").

FROM: Herman Lee DATE: 4/6/2013 9:23:32 PM Eastern Daylight Time  
Floorbeam span information should consider intermediate support locations.

Resolved for 6.5 release.

FROM: Melanie Berry DATE: 4/19/2013 9:59:56 AM Eastern Daylight Time  
Verified that the analysis reports are handling the intermediate support correctly for the floorbeam. See attached screen shots.

|                             |
|-----------------------------|
| Issue ID: 11942             |
| Subject: LRFR Rating Engine |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Durall, Brian           | 10/1/2012 12:49:24 PM |
| Modified By: hlee                     | 10/1/2012 1:12:38 PM  |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:24 PM

HRS AASHTO

2236

### Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
| Lee, Herman | New      | High | Unknown |
|             | Resolved |      | Support |
| Duray, Jim  | New      | High | Unknown |
| Skow, Wayne | Assigned |      | Bug     |
|             | Resolved |      |         |
|             | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | 0205002.xml                      |             |
|      | Inconsistent Rating.jpg          |             |
|      | Permit Vehicles - 3 & 8 Axle.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Durall DATE: 10/1/2012 8:58:39 AM Eastern Daylight Time

I cannot get any of my structure models to run using LRFR Rating criterial. Even the pre-built example structures yeild a failed analysis. When I select LRFR from the Rating Method drop down menu, under Analysis Settings, I do not have an option to select Virtis LRFR Engine, if that option should be available. Any guidance on how to solve this problem would be greatly appreciated. Thank you, Brian.

FROM: Herman Lee DATE: 10/1/2012 9:06:14 AM Eastern Daylight Time

Analysis engines are selected in the Member Altenative Description window's Specs tab.

|                                              |
|----------------------------------------------|
| Issue ID: 11957                              |
| Subject: Inconsistent Culvert Rating Results |

4/19/2016 3:09:24 PM

HRS AASHTO

2237



### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Litchfield, Phil        | 10/5/2012 4:53:15 PM |
| Modified By: mkolis                   | 12/6/2012 3:16:18 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

### History

| Primary Contact  | Status    | Priority | Category                   |
|------------------|-----------|----------|----------------------------|
| Kennelly, Krisha | Suspended | High     | Enhancement<br>Maintenance |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/5/2012 1:01:02 PM Eastern Daylight Time  
From consultant (Souther):

The rating factor and the load rating in Tons is not matching. See attached screenshot.

FROM: Wayne Skow DATE: 10/9/2012 2:52:31 PM Eastern Daylight Time  
There was a bug causing some of the capacities in the rating article to be displayed incorrectly. The capacity passed to the analysis results dialog was also incorrect causing those values to be displayed incorrectly. The rating factors, however, are correct in both cases.

This fix will be included in version v6.4.1. It was too late to include it in v6.4.0.

FROM: Matt Kolis DATE: 10/31/2012 10:06:02 AM Eastern Daylight Time  
Verified LFR load ratings.

FROM: Phil Litchfield DATE: 11/20/2012 6:34:16 PM Eastern Standard Time  
Fixed in 6.4.1 Beta 1.

FROM: Matt Kolis DATE: 12/6/2012 10:16:18 AM Eastern Standard Time

4/19/2016 3:09:24 PM

HRS AASHTO

2238

Complete Issue Information

Verified in 6.4.1 Beta 2.

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 11958                                                                                        |
| Subject: Rate for both positive and negative LL demand regardless of the sign of factored TOTAL demand |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: vinayagamoorthy, vinacs | 10/5/2012 7:19:23 PM  |
| Modified By: hlee                     | 10/23/2013 8:49:09 PM |
| Priority: High                        |                       |
| Category: Maintenance                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/5/2012 3:19:33 PM Eastern Daylight Time  
 Split out from Incident 11307.

=====  
 FROM: vinacs vinayagamoorthy DATE: 9/14/2012 10:41:14 AM Eastern Daylight Time

4/19/2016 3:09:25 PM

HRS AASHTO

2239

Complete Issue Information

(2) When we have negative moment due to live load, the rating factor should be based on "negative moment capacity" not based on positive moment demand. I checked the Flexural Rating Spec output at Span1-96.46ft location. The software is using the Phi-Mn of 13382 kip-ft when establishing the rating factor using negative moment demand. Phi-Mn of 13382 is positive moment capacity and therefore It is incorrect. It should be using the negative moment capacity. Furthermore, for some reason reported the RF as NA.

The negative moment capacity at this point is -2763.26 (Phi=0.9, Mn=3070.29). When I evaluated the rating factor for negative moment for P13 truck (#10), it came about as 2.24, which is much lower than what is established (7.67) by the software

$$RF = [-2763.26 - 1.3(1946-97.53)]/(1.3 \times 1774) = 2.24$$

See attached word document "Negative Moment Capacity for PS-I girder"  
In other words, the rating results based on negative demand is NOT properly evaluated and as a result, I resubmit this issue.

FROM: vinacs vinayagamoorthy DATE: 10/3/2012 4:55:22 PM Eastern Daylight Time  
This fix does not take care of the problem reported at 96.46ft location. RF is NOT established using negative moment. The RF at this point for P13 permit truck is given as 7.67. If we did the calculation, the RF based on negative moment 2.34.

The software is checkin whether factored TOTAL demand is positive or negative to decided whether to rate using positive, negative moment, or both. This logic needs to be modified and it should rate for both positive and negative LL demand regardless of the sign of factored TOTAL demand.

=====  
=====

FROM: Herman Lee DATE: 5/12/2013 3:40:51 PM Eastern Daylight Time  
May 2013 Beta TAG discussion:  
Vinacs indicated that this enhancement is for all girder types.

Issue ID: 11962  
Subject: Missing Vehicle Name

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Litchfield, Phil 10/9/2012 7:24:14 PM  
Modified By: mmlynarski 4/24/2013 2:34:56 PM  
Priority: High  
Category: Bug

History

4/19/2016 3:09:25 PM

HRS AASHTO

2240

### Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Lee, Herman      | New      | High     | Unknown  |
| Zhang, Bin       | Assigned |          |          |
| Ghosh, Subhadeep | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | 0090001-VIRTIS V6.3.<br>1-20121008.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/9/2012 3:30:56 PM Eastern Daylight Time

It seems sporadically the vehicle name is missing from the results when running a 3D FEM-Vehicle Path analysis with a NSG vehicle and multiple vehicle paths defined. See screenshot.

FROM: Krisha Kennelly DATE: 10/10/2012 9:15:57 AM Eastern Daylight Time

Can you attach the bridge that has the multiple vehicle paths? thanks.

FROM: Phil Litchfield DATE: 10/10/2012 11:27:10 AM Eastern Daylight Time

There were two bridges that this happened on so far. I've uploaded both.

FROM: Krisha Kennelly DATE: 10/11/2012 9:20:02 AM Eastern Daylight Time

Mehrdad - is there a limit on the length of the vehicle name in the results? I traced through the export and the correct name "Case STX 450 w/ scrapers (Centered) - Truck" does get passed through to the results object. If I shorten the truck name to "Case STX 450 w/ scrap" it works ok. Anything longer than that shows up as blank in the tabular results.

FROM: Mehrdad Ordoobadi DATE: 10/22/2012 2:47:00 PM Eastern Daylight Time

After investigating this problem I have concluded that the source code at line 6780 in AbxAashto3DEngine.cpp:

```
NewEventVehiclePtr->GetName()->SetValue((_bstr_t) plds->m_sVehicleName);
```

is causing this problem and needs to be revised. The vehicle name is limited to 40 characters. The

4/19/2016 3:09:25 PM

HRS AASHTO

2241

Complete Issue Information

source code adds some text to the vehicle name and creates a new vehicle and sets the vehicle name to something that is larger than 40 characters. This assignment of the vehicle name fails so the vehicle name stays empty.

FROM: Mehrdad Ordoobadi DATE: 1/8/2013 8:53:30 AM Eastern Standard Time  
Fixed for 6.5

FROM: Melanie Berry DATE: 4/18/2013 4:18:21 PM Eastern Daylight Time  
Verified that the vehicle name is limited to 40 characters and that it appears in the rating results.

|                                                      |
|------------------------------------------------------|
| Issue ID: 11963                                      |
| Subject: Symmetrical Truss - Unsymmetrical Dead Load |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ghosh, Subhadeep     |                       |
| Submitted By: Litchfield, Phil        | 10/9/2012 10:13:33 PM |
| Modified By: sghosh                   | 10/11/2012 8:17:22 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 10/9/2012 6:22:34 PM Eastern Daylight Time  
From consultant (Shoup):

The trusses are symmetrical but the controlling location is on the "prime" side. I thought this was odd and looked into it and it appears that the controlling prime member has more dead load then the un-prime location. I have been all through this Virtis file and could not see a reason for the difference in the dead load at this location. Can help us out with this?

4/19/2016 3:09:25 PM

HRS AASHTO

2242

Complete Issue Information

FROM: Subhadeep Ghosh DATE: 10/11/2012 4:08:48 PM Eastern Daylight Time

The truss is not symmetrical. For example the digonal members U1L0 and L0'U1' were not of the same length when computed geometrically from the X, Y co-ordinates in the design file. This makes the SelfWeight DC result from the truss analysis unsymmetrical. Also the floor beam assigned for Pier 8 and Pier 10 in the member alternative were not the same. leading to unsymmetrical loads.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 11966                                             |
| Subject: Implement Eq. 10-129d completely for Version 6.4.1 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Kennelly, Krishna       | 10/11/2012 5:51:44 PM |
| Modified By: cmcmunn                  | 12/13/2012 9:16:55 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

4/19/2016 3:09:25 PM

HRS AASHTO

2243

Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
|             | Resubmit |      |         |
|             | Resolved |      |         |
| Lee, Herman | New      | High | Unknown |
| Skow, Wayne | Assigned |      |         |
|             | Resolved |      |         |
|             |          |      | Support |
|             | Resubmit |      |         |
|             | Resolved |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 00050 - 63163172000S130.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krishna Kennelly DATE: 10/11/2012 1:52:00 PM Eastern Daylight Time  
 Issue originated in Issue 11931. For 6.4, eq 10-129d was partially implemented.

This issue is for the full implementation of eq 10-129d for version 6.4.1.

FROM: Wayne Skow DATE: 10/15/2012 8:30:04 AM Eastern Daylight Time  
 Done. Fully implemented in version 6.4.1 in LFD article 10.50.1.1.2.

FROM: Matt Kolis DATE: 10/31/2012 10:22:39 AM Eastern Daylight Time  
 Verified

FROM: Creightyn McMunn DATE: 11/15/2012 2:17:11 PM Eastern Standard Time  
 I verified that the program is correctly using eqn 10-129d when it should in continuous spans with compact composite positive moment sections and noncompact negative moments at the piers. The correct "My" is shown in the 10.50.1.1.2 spec check table ("My" pulled from First Yield Moment spec check output). I verified "A" varies for interior and end spans as shown in the table. I could not confirm "(Mu - Ms)pier" because I could not find where Ms is calculated. Please indicate how "Ms" is being calculated. It would also be helpful to include "Mu" and "Ms" in the 10.50.1.1.2 spec check table.

FROM: Wayne Skow DATE: 11/20/2012 6:58:05 AM Eastern Standard Time  
 I added another table to 10.50.1.1.2 containing Mu and Ms values for both piers.

4/19/2016 3:09:25 PM

HRS AASHTO

2244

Complete Issue Information

FROM: Matt Kolis DATE: 12/4/2012 2:20:58 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: Creightyn McMunn DATE: 12/13/2012 4:16:55 PM Eastern Standard Time  
I verified Mu & Ms in v6.4.1 Beta 2.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 11969                                       |
| Subject: Considering section with hinge as continuous |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: McMunn, Creightyn       | 10/15/2012 2:16:58 PM |
| Modified By: wskow                    | 11/19/2012 3:21:35 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 10/15/2012 10:30:19 AM Eastern Daylight Time  
Running the AASHTO LFD engine on the Typical Interior Girder gives very low rating factors. It appears as though Virtis is assuming the girders are fully continuous and is limiting the rating to the yield stress since the negative moment section over the pier is non-compact. However, there is a hinge 1.63' left of support 2 which makes the tail span simply supported and thus plastic moment should be used.

FROM: Wayne Skow DATE: 10/16/2012 8:09:09 AM Eastern Daylight Time  
The rating is lowest at the center of span 1 and capacity is controlled by 10.50.1.2 (noncompact sections). In your case, article 10.50.1.1.2 (compact sections) is disallowed because it is a builtup member.

4/19/2016 3:09:25 PM

HRS AASHTO

2245



Complete Issue Information

In version 6.3.0, 10.50.1.1.2 is disallowed for builtup sections and sections with any coverplate. This was modified in version 6.3.1 by allowing sections with coverplates on the tension flange, but not the compression flange. Issues 10828 and 11009 initiated these changes. There's a pdf file attached to issue 11009 that consolidates the discussion and reasoning.

FROM: Creightyn McMunn DATE: 11/15/2012 2:44:46 PM Eastern Standard Time  
 In this case we have a rolled section in Span 1 (the controlling location) and a built-up section in Span 2. Because we cannot mix beam types, the rolled section had to be modelled as a built-up section. There is no cover plate and therefore no holes in the tension flange so it seems as though Section 10.50.1.1.2 should still apply.

FROM: Wayne Skow DATE: 11/19/2012 8:24:59 AM Eastern Standard Time  
 I apologize that my explanation above was not as clear as it should have been. Currently, in Aashto, a built-up section is not allowed to go plastic (10.48.1 and 10.50.1.1.2 are not allowed). As a result of discussions with the TAG in June, 2011, and documented in issue 10828, built-up members are only allowed to consider 10.48.4 (and 10.50.1.2). So, your situation it is not classified as a bug. Any changes to the way built-up members are handled would need to come from the TAG.

|                       |
|-----------------------|
| Issue ID: 11971       |
| Subject: Possible bug |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Vargas, Luis            | 10/15/2012 5:22:19 PM |
| Modified By: hlee                     | 10/16/2012 3:55:19 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | lfd report.png         |             |
|      | 82195-S02_Standard.pdf |             |
|      | 6.4.1 summary.pdf      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Luis Vargas DATE: 10/15/2012 1:32:51 PM Eastern Daylight Time

We are load rating a steel bridge which has a W36X230 steel beam with a cover plate on the bottom. When the program goes to check the section of AASHTO LFD 10.50.1.1.2 (section checks if the composite section is compact) it makes the statement that the article does not apply to sections with cover plates or built-up sections and virtis uses the first yield moment in the rating as if the section is composite, non-compact. The text of the AASHTO article does not specifically exclude the before mentioned steel sections. It only excludes variable depth sections, sections with longitudinal stiffeners, and sections with holes in the tension flange. We do not believe that adding a cover plate counts as increasing the member depth since the cover plate is essentially a thickened flange for a rolled shape. This would also defeat the purpose of adding a cover plate to a rolled shape since they are already compact and can develop strength past first yielding. It seems like the intent of code is that as long as the buckling criteria of section 10.50.1.1.2 is satisfied the section whether built up or with a cover plate is stable and can develop strength past first yielding. Can you please verify if this is your intent or a bug in the program.

Attached please find a screen capture and the Virtis file.

FROM: Wayne Skow DATE: 10/16/2012 10:04:05 AM Eastern Daylight Time

In version 6.3, 10.50.1.1.2 is disallowed for builtup sections and sections with any coverplate. This was modified in version 6.3.1 by allowing sections with coverplates if they are on the tension flange only. Issues 10828 and 11009 initiated these changes. There's a pdf file attached to issue 11009 that consolidates the discussion and reasoning.

For your bridge, the coverplate is only on the tension flange. If you run the bridge in version 6.3.1, 10.50.1.1.2 is allowed and you get a better rating.

|                                     |
|-------------------------------------|
| Issue ID: 11972                     |
| Subject: LFD Overall Summary Report |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ghosh, Subhadeep     |                       |
| Submitted By: Wagner, Brad            | 10/15/2012 7:05:41 PM |
| Modified By: bwagner                  | 12/10/2012 3:45:56 PM |

Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
| Skow, Wayne       | Assigned |          |          |
| Kennelly, Krishna |          |          | Bug      |
|                   |          |          | Unknown  |
|                   |          | Critical | Bug      |
|                   | Resolved |          |          |
|                   | Verified |          |          |
|                   | Assigned |          |          |
| Skow, Wayne       | Resolved |          |          |
|                   | Verified |          |          |
|                   | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | BuiltUpStrngrBug(0606002)<br>631.xml            |             |
|      | BuiltUp Stringer Bug Output<br>(0606002)631.pdf |             |

Tasks

4/19/2016 3:09:26 PM

HRS AASHTO

2248

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brad Wagner DATE: 10/15/2012 3:10:29 PM Eastern Daylight Time

When printing the LFD Analysis Output Overall Summary report to pdf, if I uncheck "Begin each topic on a new page when printed", a page break is still included after each section. I've attached a screenshot and a pdf of the resulting printed report.

FROM: Subhadeep Ghosh DATE: 10/22/2012 1:52:21 PM Eastern Daylight Time

The issue originated from having static XSL files for output reporting from 6.4 release onward. The XSL files were modified to read page\_break tags in the XML, based on which the report was printed. The page\_break tags were inserted into XML based on user response to the format of the report printed. Fix going into 6.4.1.

FROM: Herman Lee DATE: 10/22/2012 2:35:38 PM Eastern Daylight Time

LRFR and LRFD Analysis Outputs have the same problem.

FROM: Matt Kolis DATE: 10/31/2012 3:10:27 PM Eastern Daylight Time

This issue does not appear to have been fixed. Resubmit.

FROM: Joseph Ihnat DATE: 11/6/2012 12:40:15 PM Eastern Standard Time

New XSL files aren't yet being installed by the SP. Try again after copying them from the Updates folder.

FROM: Matt Kolis DATE: 11/6/2012 3:51:39 PM Eastern Standard Time

Verified in Alpha Build 2.

FROM: Brad Wagner DATE: 11/14/2012 12:20:34 PM Eastern Standard Time

Page break between bridge member info and Rating Summary table is fixed, but there is no page break between the table and the successive bridge member info. See attached 6.4.1Summary.pdf. The same problem exists for LRFR summary.

FROM: Subhadeep Ghosh DATE: 12/4/2012 1:31:49 PM Eastern Standard Time

Issue was fixed with page break between member alternative on output report. The fix is available in 6.4.1 Beta 2 both for LFR and LRFR for verification.

FROM: Matt Kolis DATE: 12/4/2012 4:47:19 PM Eastern Standard Time

Verified in 6.4.1 Beta 2.

FROM: Brad Wagner DATE: 12/10/2012 10:45:55 AM Eastern Standard Time

Accepted - 6.4.1 Beta 2

|                               |
|-------------------------------|
| Issue ID: 11974               |
| Subject: Riveted Plate Girder |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
| Primary Contact: Skow, Wayne          |

4/19/2016 3:09:26 PM

HRS AASHTO

2249

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Submitted By: Litchfield, Phil | 10/15/2012 9:33:18 PM |
| Modified By: wskow             | 4/21/2014 1:39:12 PM  |
| Priority: Critical             |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Resolved | High     | Bug      |
|                 | Verified |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | One Cell.xml            |             |
|      | top slab spec check.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/15/2012 5:38:28 PM Eastern Daylight Time  
From consultant (Souther):

Analysis of a stringer in a floor system of a truss that was originally designed for railroad loading

4/19/2016 3:09:26 PM

HRS AASHTO

2250

## Complete Issue Information

generated HS20 inventory/operating rating factors of 0.156/0.261, far below what one would expect. The RPG stringers are made up of a 3/8"X45 3/4" web plate and four 6"X4"X7/16" flange angle (with the 4" legs being horizontal). As a result I created a substitute Welded Plate Girder Member (WPG) Alternative of the same depth made up of a 3/8" web and 7/16"X8 3/8" flanges, which has slightly smaller but comparable section properties. The HS20 rating factors for the welded plate girder alternative were 1.774/2.963, which seems reasonable for railroad stringers.

Closer investigation finds that while the section properties are similar for both sections ( $I = 10,456.06$ ,  $S = 454.61$  – RPG;  $I = 9399.52$ ,  $S = 408.67$  – WPG),  $M_u = 223.65$  ft-kips for the RPG and  $M_u = 1021.69$  ft-kip for the WPG. The  $M_u$  for the WPG appears to be correct, however I think the  $M_u$  for the RPG should be 1,136.53 ft-kips. I suspect that the top-flange restraint, entered as full-length continuous for both alternatives is being erroneously ignored for the RPG.

The Virtis model provided is for a simple-span Girder System Superstructure but this applies to Floor & Truss System Superstructures and most likely Girder, Floor & Truss Line Superstructures as well.

FROM: Wayne Skow DATE: 10/17/2012 9:34:17 AM Eastern Daylight Time

There are 3 problems revealed by this model:

1. The RPG  $I_y$  section property is being calculated with the (4") leg as horizontal rather than the 6" leg. This produces a very low  $M_r$  value from 10.48.4.1. $M_r$  ( $I_y$  top flange = 21.42 and  $M_r$  from eq. 10-103c = 223.65). When this model is imported into v6.3.1, it shows the 4" leg as horizontal and the cross-section properties are consistent with that in 10.48.4.1. $M_r$ . However, when it's imported into v6.4, the cross-section shows the 6" leg horizontal, but the cross-section properties in 10.48.4.1. $M_r$  still show as if the 4" leg is horizontal.
2. Lateral support has been specified for the entire length of the member (28.75 ft), but 10.48.4.1. $M_r$  is showing an unbraced length of 345.0 inches (28.75 ft). It should be zero. This produces a very small  $M_r$  value from eq. 10-103c.
3. In v6.3.1, the effective  $M_u$  for the WPG member is 620 k-ft. In v6.4, it's 1021 k-ft due to a bug fix (issue 11210) in January. I'm not sure the higher value is correct and needs to be revisited. For this model, the  $b/t$  ratio of the top flange is 32.86 (14.375/.4375). The limit for 10.48.2 and 10.48.4 is 24. When that value is applied to Eq. 10-99, it produces an  $M_u$  of 620 k-ft, which I think should be the controlling value.

FROM: Wayne Skow DATE: 10/17/2012 9:52:39 AM Eastern Daylight Time

Item 1 above has been moved to it's own issue (11979).

FROM: Wayne Skow DATE: 10/24/2012 8:06:06 AM Eastern Daylight Time

Three issues were identified as itemized above. Here's the resolution:

Item 1. A separate issue (11979) was created for this item. It has not been officially resolved yet, but it looks like it's a display problem in v6.4. The 4" leg is horizontal in the imported model and the properties used during analysis are consistent with that.

Item 2. Virtis is using the correct unbraced length for both 10.48.2 (0.0) and 10.48.4.1. $M_r$  (345.0 in). LFD article 10.48.4 (first paragraph) states that "Bracing shall be provided such that lateral deflection of the compression flange is restrained and the entire section is restrained against twisting." Restraining the top flange only is insufficient. 10.48.2.1(c), however, only requires the top flange to be restrained.

4/19/2016 3:09:26 PM

HRS AASHTO

2251

### Complete Issue Information

It was decided in May, 2011 (see issue 10828), that built-up sections would only consider 10.48.4. Therefore, the RPG section's Mu is low because of the 345" unbraced length compared to the WPG's Mu which qualifies under 10.48.2. Even though the cross-section properties are similar, the rating factor's are very different due to the different Mu's.

Item 3. A bug was inadvertently introduced in v6.4 which allowed the WPG's Mu to be 1021 k-ft. It should be 620 (limited by eq. 10-99) resulting in rating factors for the WPG section that are about 1/2 of what you document above. That bug has been fixed in v6.4 and an updated dll will be provided.

FROM: Herman Lee DATE: 10/25/2012 3:25:15 PM Eastern Daylight Time  
Resolved for 6.4 Service Pack (6.4.1).

FROM: Matt Kolis DATE: 11/1/2012 9:22:15 AM Eastern Daylight Time  
Verified Items 2 and 3.

FROM: Matt Kolis DATE: 11/7/2012 8:52:33 AM Eastern Standard Time  
Verified items 2 and 3 in Virtis 6.4.0.

FROM: Wayne Skow DATE: 11/16/2012 10:17:24 AM Eastern Standard Time  
Phil Litchfield disagrees with the resolution of item 2. Below is the email discussion related to his objection:

Phil,

I think Herman fixed the problem with the issue disappearing from the website. You should be able to see this issue again. If not, please let me know and I'll track down the problem.

Can you add some detail as to what your objection is and set the reviewer status accordingly?

Thanks,  
Wayne

From: Lee, Herman  
Sent: Sunday, November 11, 2012 3:33 PM  
To: Skow, Wayne  
Cc: Duray, Jim; Kennelly, Krisha  
Subject: FW: VI #11974

Wayne,

I see you stated "Restraining the top flange only is insufficient." in the incident. Please contact Phil Litchfield to find out why Illinois disagrees with your investigation.

I have switched the Folder for this incident back to /Support Center/Virtis.

Thanks,  
Herman

From: Litchfield, Phillip R [mailto:Phillip.Litchfield@illinois.gov]  
Sent: Monday, November 05, 2012 5:20 PM

4/19/2016 3:09:26 PM

HRS AASHTO

2252

Complete Issue Information

To: Lee, Herman  
Subject: VI #11974

This issue has disappeared from the VI website. We disagree with Wayne about restraining the top flange only being sufficient in this single span structure. We believe that the braced length should be zero and the Mu for the RPG should be closer to 1021 k-ft.

Thanks,

Phillip Litchfield, P.E.

Illinois Department of Transportation  
Bureau of Bridges & Structures  
2300 South Dirksen Parkway  
Springfield, IL 62764  
Phone: (217) 785-2146  
Email: Phillip.Litchfield@Illinois.gov

FROM: Phil Litchfield DATE: 11/20/2012 5:32:35 PM Eastern Standard Time  
We believe that the RPG should be considered under 10.48.2. And that bracing the top flange is sufficient for the single span.

FROM: Phil Litchfield DATE: 11/29/2012 4:51:15 PM Eastern Standard Time  
Within the spec check for 10.48.2, the summary only lists (c). (a) and (b) are figured and checked in 10.48.2.1 but not listed in the summary of 10.48.2. Are they being considered? And why were they deleted from the summary?

FROM: Wayne Skow DATE: 12/4/2012 7:51:31 AM Eastern Standard Time  
For load factor design 10.48.2.1(a) and (b) are cross-sectional property limits. When designing, its easy to pick a section that meets those requirements. When rating, however, we have to deal with the cross-section that exists. Therefore, the MBE doesn't enforce those limits. The answer to your question above, "are they being considered", is yes and no. Yes in that the b/t ratio is used to calculate Fcr in eq. 10-99 and will result in a low Mu as b/t exceeds 24. No in that eq. 10-100 is not strictly enforced. Since 10.48.2.1(a) and (b) are requirements for both 10.48.2 and 10.48.4, a strict enforcement for rating would result is both articles failing. The reason they were deleted from the summary is to more accurately reflect the MBE's requirements. However, since (a) and (b) are still important limits that the engineer should be aware of when exceeded, 10.48.2.1 continues to report the status of (a) and (b).

FROM: Matt Kolis DATE: 12/5/2012 8:12:19 AM Eastern Standard Time  
No change has been made at this time.

FROM: Phil Litchfield DATE: 4/4/2014 8:02:22 PM Eastern Daylight Time  
From Shoup:

It is interesting on the code layouts.

10.48.1 Compact Sections - Properly Braced (Bracing shall... be capable of preventing lateral displacement and twisting of the main members...)

10.48.2 Braced Noncompact Sections – If Bracing Limits not meet, limited to Mu from Article 10.48.4.1.

10.48.4 Partially Braced Members – (Bracing shall be provided such that lateral deflection of the compression flange is restrained and the entire section is restrained against twisting.)

4/19/2016 3:09:26 PM

HRS AASHTO

2253



Complete Issue Information

Therefore, I do not see this as differences in these articles, I see this as a requirement for the bracing. All bracing must be able to prevent lateral deflection of the compression flange and prevent the entire section from twisting. The article for 10.48.2 does not have this but indirectly references meeting 10.48.4 if outside the bracing limits which does have this statement of preventing twisting.

Ultimately the question is, does the bracing of the top flange (by the stringers) prevent the entire section from twisting? If the stringers frame into the floorbeam I would say it is a definite yes. However, if they are sitting on top of the floorbeam and only connected to the top flange it may be debatable. To me, if the compression flange is braced at the stringers then I do not see from a practical standpoint how the section could twist.(?) The bottom tension flange would be pulled straight and the top compression flange would be braced at the stringers. This bracing would prevent lateral displacement of the compression flange. If the tension flange and compression flange are not able to deflect laterally then how could the web deflect laterally? Therefore, this in turn would prevent the "twisting" of the member.

Based on this I do not see how it is not adequately braced for this section. Does Baker have any examples of the member twisting when the top flange was laterally braced? Do they have any evidence proving that the whole section can twist at a section that only has the compression flange laterally braced?

FROM: Wayne Skow DATE: 4/21/2014 8:06:54 AM Eastern Daylight Time  
Section 10.48.4 reads "Bracing shall be provided such that lateral deflection of the compression flange is restrained and the entire section is restrained against twisting." Initially, we took "entire" to mean both flanges needed restraint. However, we believe the issue is with the compression flange and it's unbraced length. This has been resolved in v66 where the unbraced length is taken as the unbraced length of the compression flange so that fully supported compression flanges will have an Lb of zero.

Issue ID: 11981  
Subject: Issue for the case when LL is neglected

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Lee, Herman 10/18/2012 8:43:52 PM  
Modified By: sthogaru 12/18/2012 7:30:05 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:09:27 PM

HRS AASHTO

2254

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | pic27736.jpg        |             |
|      | 04c0236 mjjmvv.xml  |             |
|      | pic27770.jpg        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 10/18/2012 4:44:18 PM Eastern Daylight Time

For the "ca" culvert alternative in the attached bridge, I got 1.016 inventory RF for a Type 3 truck. When I changed the fill depth to 11 ft, I got "Error - Unable to perform analysis!". Based on 11853, I expect to see a message saying live load is neglected and receive 0 or 99 rating.

Wayne's investigation:

=====  
The problem is caused by the program printing influence line results when there aren't any. An index goes out of range. This exception is not active in the release version, so does not create an exception.

I changed the WxBoxCulvert.engine in v6.4.1 to not print influence lines when LL's are ignored.  
=====

Resolved for 6.4.1.

FROM: Matt Kolis DATE: 10/31/2012 10:37:47 AM Eastern Daylight Time

Verified there is no longer an error message w/depth of fill set to 11 ft. Inv Rating is 0.945. Ratings are 0 w/fill >14.5 ft.

FROM: Brad Wagner DATE: 11/14/2012 11:42:19 AM Eastern Standard Time

Checked in 6.4.1 Beta 1.

Per Herman's comment above, if live load is neglected, you should receive a 0 or 99 rating. Then why do you have a rating factor of 0.945 at 11 feet, which is greater than the span length of the culvert? Since the structure is able to carry its own dead load, the rating factor should be 99.9.

The way I see it, there are three cases –

- 1)LL is not ignored – RF is reported as is.
- 2)LL is ignored, reserve capacity after dead load is positive, RF should be reported as 99.00
- 3)LL is ignored, reserve capacity after dead load is negative, RF should be reported as 0.00

When I run the attached model, I get 0.945 at 11' and 0.0 at 14.5 feet. However, at both depths, the spec check for the controlling location (0.72' at ext wall 1) shows a live load of 0.51kip. This 0.51 kip is used to determine the 0.945 rating factor for 11 feet. Shouldn't this live load be zero? Also, the RF at 11' should be 99.00, not 0.945.

When I run the attached model at 14.2 feet, I get a positive number at the controlling location when

4/19/2016 3:09:27 PM

HRS AASHTO

2255

Complete Issue Information

considering  $\langle \Phi * V_n - 1.3 * (DC + EH) \rangle$  but the rating factor given in the summary table is 0.006 and the spec check says the location fails for shear. At this depth, the live load should be zero, and the rating factor should be 99.00.

In addition, I reduced the slab thickness to 8 inches, increased the slab bottom steel spacing to 24 inches and increased the wall thickness to 24 inches so that the top slab would not pass. At a depth of 13.5 feet  $\langle \Phi * M_n - 1.3 * (DC + EH + EV) \rangle$  was a negative number and the RF was still reported as 99.00 (see attached screenshot). Note that the LL reported is still not zero. In this case, Virtis still reported the exterior wall controlling in shear.

FROM: Wayne Skow DATE: 11/19/2012 10:52:24 AM Eastern Standard Time  
The reason you're getting the .945 rating factor is due to the 2' live load surcharge (see the RC Box Culvert Loads dialog). That surcharge is considered a live load, so you'll get other than 0 and 99 rating factors, but it acts on the walls only and not the slabs. Therefore, the slabs are reporting a 99 rating. If you remove the live load surcharge, you'll see the type of behavior your expecting.

FROM: Brad Wagner DATE: 11/29/2012 10:03:49 AM Eastern Standard Time  
If surcharge is considered a live load, why is it not ignored??? This is very misleading.

FROM: Herman Lee DATE: 11/29/2012 11:25:11 AM Eastern Standard Time  
Live load surcharge height is entered by the user. Seems like some sort of data checking can be done during the analysis. Is there any case that the user would like to consider LL surcharge but the vehicle LL can be neglected due to fill height?

FROM: Matt Kolis DATE: 12/5/2012 8:59:47 AM Eastern Standard Time  
No additional changes have been made at this time.

FROM: Brad Wagner DATE: 12/10/2012 10:28:29 AM Eastern Standard Time  
Apparently I didn't get a notification when Herman posted his question on 11/29. I cannot think of a case where LL surcharge would be used when LL is ignored. I agree that this could be included in the data checking during the analysis. It says "live load neglected due to dept of fill". That should include anything that the program considers a live load - including surcharge.

FROM: Wayne Skow DATE: 12/11/2012 8:26:51 AM Eastern Standard Time  
The live load reduction due to fill depth is for vehicle wheel loads only as specified in article 3.6.1.2.6 Distribution of Wheel Loads through Earth Fills. It does not include live load surcharge (LS) loads governed by article 3.11.6.4. I changed the message to "Wheel loads neglected due to Fill Depth" to clarify that. Fixed in v6.4.1.

FROM: Srujana Thogaru DATE: 12/18/2012 1:39:57 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 3.

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 11982                                                                           |
| Subject: Missing shear rating results at 10th points in Report Tool's LFD Analysis Output |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: vinayagamoorthy, vinacs | 10/18/2012 9:18:36 PM |

Complete Issue Information

|                               |                       |
|-------------------------------|-----------------------|
| Modified By: vvinayagamoorthy | 12/17/2012 2:42:36 PM |
| Priority: High                |                       |
| Category: Bug                 |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | Floor Beam Mid Support.docx                    |             |
|      | Assertion on Floorbeam C.png                   |             |
|      | 20C0322OK.xml                                  |             |
|      | Two simple Stringer supported by Floorbeam.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/18/2012 5:20:06 PM Eastern Daylight Time  
 Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====

Attached is a three span cont steel girder bridge.

When we analyzed using AASHTO LFD this bridge using final betal version of 6.4, I am not able see

4/19/2016 3:09:27 PM

HRS AASHTO

2257

Complete Issue Information

the shear rating results at every 10th points for span 1 and span3. Could you please look into this?

Girder G1 of Span 2-4 Model.

LFD Results using BWS Report  
(Embedded image moved to file: pic27770.jpg)

However, LRFR Results using BWS report shows for all 10th points

(Embedded image moved to file: pic27736.jpg)

(See attached file: 04c0236 mjimvv.xml)

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer

=====

FROM: Wayne Skow DATE: 10/19/2012 8:05:52 AM Eastern Daylight Time  
Actually, the shear values are displayed, but they are labeled as "Interaction." The only way you can tell they are shears is by the force type, Kips rather than Kip-Ft. The reason it was originally output that way was to differentiate between the shear rating article and the MV interaction article. But when we added the filtering switches, it became more of a problem.

I changed the output to the XML file so the records show "Shear" or "Flexure" rather than "Interaction." But you'll need to compare those values with what's displayed by the MV rating article output since you might not see the same RF's if you look at the shear rating article alone. The same applies to flexure. Before, if it said "Shear", it came from the shear article (similar for flexure). If it said "Interaction", it came from the MV article. Now, you'll just look at the interaction article since it will show the values from the shear/flexure article and any changes to the RF's by the interaction article.

Changed in v64sp1.

FROM: Matt Kolis DATE: 10/31/2012 2:17:25 PM Eastern Daylight Time  
Verified. Shear rating results are now shown at 10th points for spans 1 and 3.

FROM: Matt Kolis DATE: 12/6/2012 11:25:04 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: vinacs vinayagamoorthy DATE: 12/17/2012 9:42:35 AM Eastern Standard Time  
Verified and works as expected.

Issue ID: 11984  
Subject: Floorbeam not rated properly in 6.4

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: vinayagamoorthy, vinacs 10/23/2012 9:58:40 PM

4/19/2016 3:09:27 PM

HRS AASHTO

2258

Complete Issue Information

|                               |                       |
|-------------------------------|-----------------------|
| Modified By: vvinayagamoorthy | 12/21/2012 3:15:31 PM |
| Priority: High                |                       |
| Category: Bug                 |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
| Zhang, Bin      | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | max_M_lane.pdf      |             |
|      | specchecker.docx    |             |
|      | max_M_truck.pdf     |             |
|      | 11985.pdf           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Subhadeep Ghosh DATE: 10/23/2012 6:00:21 PM Eastern Daylight Time  
 Investigated the incident and found this to be a bug in the stringer floor line superstructure analysis. The support reaction for the end support (support 3) for the stringer is used for rating the floorbeam on support 1. Also the Floorbeam C (Bent 3 (MDL 1of 1) cannot be analysed since it is throwing an exception whose screen shot is attached.

Email from the user as below:

=====

-----Original Message-----

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
 Sent: Monday, October 22, 2012 12:10 PM

4/19/2016 3:09:27 PM

HRS AASHTO

2259

Complete Issue Information

To: Lee, Herman  
Cc: George Huang  
Subject: Floor Beam Results seems to be wrong.

Herman

One of our engineer found this problem

We have a two span continuous stringer bridge that is supported on Bent cap beams, which are supported by Column members.

We have modeled the Bent cap beams as Floor beams and columns as supports of Floor beam.

When we analyzed the floor beams (attached xml) the results for Floor beam 1 and 2 came about to be the same, and we could not rate the Third floor beam.

(1) Further investigation reveals that the software ALWAYS uses the Reaction reported for the third support to rate the floorbeams.

Stringer LL Summary sheets shows this For Ben 1 Beams  
(Embedded image moved to file: pic00792.jpg)

Reaction at support 3 is 50.54 kips

The span LL Summary Txt show the following:

(Embedded image moved to file: pic12934.jpg)

Wheel load of 25.27 (1/2 of 50.54 kips) is used for the Floor beam analysis. So, it shows the demand is based on the reaction reported for NODE 21, which corresponds to the support 3.

In other words, software is using the Reaction reported at Support 3 to rate Floor beams at Support 1. If our observation is correct, software needs to be modified.

(2) Please NOTE that the Reaction due to HS20 Truck WITHOUT IMPACT at Support one, two and three should be 39.2 kips, 68.9 kips, 50.54 kips respectively.

(See attached file: 20C0322OK.xml)

Could you please look into this and see whether we made any mistake or identify whether this is a bug or not?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

=====

Complete Issue Information

FROM: Herman Lee DATE: 10/24/2012 6:07:50 PM Eastern Daylight Time  
The defect in locating the stringer support for the floorbeam being analyzed in a floor line superstructure definition is a duplicate of Incident 11373. Incident 11373 has been resolved for 6.4 Service Pack (6.4.1).

FROM: Herman Lee DATE: 10/25/2012 9:00:29 AM Eastern Daylight Time  
Fixed a defect in locating the right spacing when the floorbeam being described is the last floorbeam in a floor line superstructure definition.

Resolved for 6.4 Service Pack (6.4.1).

FROM: Matt Kolis DATE: 11/1/2012 4:01:30 PM Eastern Daylight Time  
Verified

FROM: Matt Kolis DATE: 12/6/2012 11:42:52 AM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: vinacs vinayagamoorthy DATE: 12/12/2012 10:37:11 AM Eastern Standard Time  
There exists another problem; the software continue to pick the 2nd support reaction to rate the memeber at support 1 or 3.  
I have attached a word document and model for you test and check

FROM: Herman Lee DATE: 12/17/2012 11:03:53 AM Eastern Standard Time  
Fixed an issue in determining the floorbeam being described for the case that two independent sets of stringer spans are entered in the Stringer Spans tab.

Fixed for the next 6.4.1 build. Resolved for 6.4.1 release.  
Above fix verified in Virtis 6.4.1 Beta 3.

FROM: Srujana Thogaru DATE: 12/18/2012 1:49:40 PM Eastern Standard Time

Issue ID: 11985  
Subject: Max M-V versus Max M - Conccurent V, Max V - Concurrent M

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: Thompson, Todd 10/24/2012 3:12:18 PM  
Modified By: hlee 10/30/2012 9:56:24 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:27 PM

HRS AASHTO

2261



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | TrainingBridge1.pdf   |             |
|      | Culvert Example 1.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 10/24/2012 11:35:00 AM Eastern Daylight Time

Not sure if I'm overlooking something or if we have a problem in the Spec Checker.

LF Analysis - AASHTO LF Engine

I had a designer state that when looking at Max M and V - and then looking at Max M, Concurrent V and Max V, Concurrent M in the Spec Checker - that it didn't look like it was using the correct values.

Using Training Bridge 1

Girder G2

at Location 80.5 ft

The Maximum Moment is 3885.08 k-ft (lane)

The Maximum Moment is 3634.91 k-ft (truck)

The Maximum Shear is 38.03 k (lane)

The Maximum Shear is 46.76 k (truck)

And when you go to the Spec Checker for this location -

The Maximum Moment is 3885.08 k-ft (lane)

and the concurrent Shear is 38.03 k (lane)

But the Maximum Shear is also 38.03 k (lane)

With Concurrent Moment as 3885.08 k-ft (lane)

And for truck -

The Maximum Moment is 3634.91 k-ft (lane)

and the concurrent Shear is 46.76 k (lane)

But the Maximum Shear is also 46.76 k (lane)

With Concurrent Moment as 3634.91 k-ft (lane)

It appears that the spec checker is using Max Moment and Max Shear - instead of Max Moment with concurrent shear and Max Shear with concurrent Moment.

FROM: Bin Zhang DATE: 10/30/2012 10:22:51 AM Eastern Daylight Time

Per article 10.48.8 LFD Shear Calculations ((AASHTO Standard Specifications for Highway Bridges,

4/19/2016 3:09:28 PM

HRS AASHTO

2262

Complete Issue Information

Seventeenth Edition - 2002)), shear capacity is controlled by Eq(10-113). (figure 1)

Per article (6B2.3), the combined moment and shear rating applies to the section where the shear capacity is governed by Eq 10-114 for stiffened girders (figure 2). So the combined moment and shear does NOT apply here for G2 girder. Please read the highlighted section in figure 3 for details.

You are right! The grid in figure 3 displays the Max Moment and Max Shear – instead of Max Moment with concurrent shear and Max Shear with concurrent Moment.

Please read the attached 11985.PDF for details.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 11994                                                               |
| Subject: Rating Results Summary Report - Header and Footers missing - Culvert |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Ihnat, Joseph        |                        |
| Submitted By: Thompson, Todd          | 10/29/2012 12:28:40 PM |
| Modified By: tthompson                | 12/10/2012 4:33:46 PM  |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Resolved |          |          |
|                 | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 10/29/2012 8:32:11 AM Eastern Daylight Time  
Started doing some production work and went to print my first culvert load rating and noticed there is no heading or footing for the Rating Results Summary Report.  
I've attached training bridge 1 and culvert example 1 as examples.

Not sure if this was supposed to have been as part of 6.4 and is a warranty issue? Or was just overlooked. The TAG didn't get any report mockups to review, so not sure.

FROM: Joseph Ihnat DATE: 10/29/2012 1:51:58 PM Eastern Daylight Time  
Heading and footing added for 6.4.1

FROM: Matt Kolis DATE: 11/1/2012 11:45:29 AM Eastern Daylight Time  
Header and footer on rating results summary report still does not appear to be showing up for culverts.

FROM: Joseph Ihnat DATE: 11/6/2012 7:59:07 AM Eastern Standard Time  
This wasn't fixed in 6.4.1 Alpha 1. Please reverify in Alpha 2.

FROM: Matt Kolis DATE: 11/6/2012 2:58:44 PM Eastern Standard Time  
Verified in Alpha 2.

FROM: Todd Thompson DATE: 11/13/2012 10:25:01 AM Eastern Standard Time  
Checked and fixed in Beta 1 of 6.4.1

FROM: Matt Kolis DATE: 12/6/2012 2:23:07 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 2.

FROM: Todd Thompson DATE: 12/10/2012 11:33:46 AM Eastern Standard Time  
Accepted but in Beta 2 - the summary table is filled with 0.000 when they should be blanks. Will submit a differnt incident.

|                                   |
|-----------------------------------|
| Issue ID: 11998                   |
| Subject: LRD Culvert Live Loading |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Litchfield, Phil        | 10/30/2012 2:48:31 PM |
| Modified By: hlee                     | 11/11/2012 3:36:18 PM |
| Priority: High                        |                       |
| Category: Enhancement                 |                       |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 0490058.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 10/30/2012 10:51:32 AM Eastern Daylight Time  
From consultant (Souther):

We are getting differing results when using an in-house program to check against Virtis culvert ratings at certain fill depths. We believe that it has to do with the spacing of the wheel loads. If the culvert has multiple lanes on it two wheel loads can be 4' apart. This is taken into consideration in the in-house program, but we believe it is not in the Virtis culvert module. Attached is a copy of the IDOT policy for reference.

FROM: Herman Lee DATE: 10/30/2012 10:53:09 AM Eastern Daylight Time  
AASHTO Culvert Engine does not take multiple lanes into consideration for live load distribution. Please refer to page 31 in the Culvert Method Of Solution Manual for the LFD live load distribution flowchart.

FROM: Phil Litchfield DATE: 11/5/2012 11:57:17 AM Eastern Standard Time  
Herman,  
We would prefer to have the option to consider multiple lane loading. Since in some case this will result in a lower rating. Can you please figure an estimate to make this change?

Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 12009                                        |
| Subject: Ignore Positive Moment at Supports in Ratings |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Litchfield, Phil        | 10/31/2012 10:15:47 PM |
| Modified By: hlee                     | 11/2/2012 7:43:01 PM   |
| Priority: High                        |                        |
| Category: Support                     |                        |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Assigned           |          |          |
| Trees, Geoffrey  |                    |          |          |
| Thogaru, Srujana | Resolved           |          | Bug      |
|                  | Resubmit           |          |          |
|                  | Information Needed |          |          |
|                  | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier                                 | Description |
|------|-----------------------------------------------------|-------------|
|      | AASHTO-Box Culvert Method<br>Of Solution Manual.pdf |             |
|      | LLDF for LRFR.pdf                                   |             |
|      | 05228 - 82182191000C010.xml                         |             |

Tasks

4/19/2016 3:09:28 PM

HRS AASHTO

2266

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 10/31/2012 6:22:50 PM Eastern Daylight Time  
 From consultant (Shoup):

It is appearing to me that the "Ignore positive moment at supports in ratings" under the Continuity Diaphragm in the Beam Details is not working (or there is an issue with it). When I run it with it checked or unchecked with no information in the Continuity Diaphragm I get a rating factor of 0.758 / 1.266 with a controlling point at 1 @ 100% for Flexure. However, if I put information into the table the rating goes up to 1.345 / 2.246 with a controlling point at 2 @ 1.2% for Shear (Assuming 2 - #8 bars at 2"). I get the same results if I leave the information in the table and use the check box for Ignoring the positive moment. Therefore, it appears that this check box is not working to me.

FROM: Herman Lee DATE: 11/1/2012 8:05:06 AM Eastern Daylight Time  
 The EngineHelp for the AASHTO LRF/LRFR/Std engines state that this field is not used by these engines.

FROM: Phil Litchfield DATE: 11/2/2012 3:27:00 PM Eastern Daylight Time  
 What is the propose of the check box if it doesn't work with any of the AASHTO engines?

FROM: Herman Lee DATE: 11/2/2012 3:35:17 PM Eastern Daylight Time  
 3rd-party engines could provide support for this option.

|                                              |
|----------------------------------------------|
| Issue ID: 12011                              |
| Subject: LRFR Culvert Live Load Distribution |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Thogaru, Srujana     |                       |
| Submitted By: Wagner, Brad            | 11/1/2012 5:09:03 PM  |
| Modified By: sthogaru                 | 12/18/2012 7:53:01 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:09:29 PM

HRS AASHTO

2267

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brad Wagner DATE: 11/1/2012 1:15:16 PM Eastern Daylight Time

Live load distribution for LRFR is not correct. The live load should spread at a rate of 1.15 multiplied by the fill height. See attached output, the 1.15 factor is not being used. The .xml is also attached.

This same issue was fixed for LFR under incident 11669 during beta testing. At the time, I thought the same issue was occurring for LRFR, but I commented in incident 11669 that it was not.

FROM: Srujana Thogaru DATE: 11/12/2012 9:30:08 AM Eastern Standard Time

Can you please let us know distribution rate factor 1.15 you mention is "based on NCHRP 647 LL distribution" or "based on soil type(Granular soils only have distribution rate factor of 1.15)". If it is based on NCHRP 647 LL Distribution, please check the check box for NCHRP 647 LL Distribution in control options tab.

FROM: Brad Wagner DATE: 11/13/2012 9:16:59 AM Eastern Standard Time

I have just learned that NCHRP 647 LL distribution was voted on by AASHTO SCOBS, so this will soon become a non issue. However:

The method of solution manual (page 25) makes no mention of the 1.00 factor for non-granular soils. In addition, the mockups, page 41 of 55 says "program always uses 1.15H."

Choosing the NCHRP 647 control option includes additional provisions (.06D) that are not part of the LRFD code. I don't believe that the program should require you to choose this provision in order to use the proper (1.15H) LLDF.

FROM: Srujana Thogaru DATE: 11/27/2012 8:53:34 AM Eastern Standard Time

Latest mockups on page 42 has note which says "AASHTO Spec 3.6.1.2.6 says "1.15\*depth for select granular backfill, or the depth of fill in all other cases." The WisDOT Culvert program always uses 1.15H.

Geoff can you please update the method of solution manual on page 24 to display the correct information.

FROM: Geoffrey Trees DATE: 11/27/2012 3:40:44 PM Eastern Standard Time

Updated method of solution.

FROM: Srujana Thogaru DATE: 11/28/2012 9:15:27 AM Eastern Standard Time

Fixed for 6.4.1

FROM: Matt Kolis DATE: 12/4/2012 4:12:48 PM Eastern Standard Time

Verified in 6.4.1 Beta 2.

4/19/2016 3:09:29 PM

HRS AASHTO

2268

Complete Issue Information

FROM: Brad Wagner DATE: 12/10/2012 10:12:52 AM Eastern Standard Time  
Page 24 of Method of solution was updated as noted above. However, there are still several discrepancies.

On page 24 it says "when the depth of fill is 2' or greater, the distribution is based on lfrd article....with changes proposed by NCHRP 647. However this is only used if you choose the NCHRP 647 control option.

The equations on page 26 represent the NCHRP and it implies that these equations are always used.

Sentence on page 26 says "the use of the term "D" can be controlled by "UseNCHRP647LLDistribution". This is still a reference to the way control options are used in Wisdot culvert. Also, it implies that only "D" is changed by the control option, which is incorrect.

The manual is still very misleading and does not agree with your response above.

FROM: Srujana Thogaru DATE: 12/13/2012 10:03:27 AM Eastern Standard Time  
Brad, I have made a few changes in the Method of solution manual page 24. I have attached the revised manual to the incident. Please let us know if the changes are clear. Regarding the use of distribution rate factor of 1.15, current Virtis LRFDF for culvert is inherited from wisDot Culvert program which always uses 1.0 dist. Factor rate. Any changes to this would be an enhancement. Please let me know with your suggestions.

FROM: Srujana Thogaru DATE: 12/18/2012 2:52:31 PM Eastern Standard Time  
Checked into 6.4.1 Beta 3

Issue ID: 12012  
Subject: Culvert Wall Shear Capacity - LFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Wagner, Brad 11/1/2012 5:15:22 PM  
Modified By: mkolis 12/4/2012 9:12:28 PM  
Priority: Critical  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned | Critical | Bug      |
|                 | Resolved |          |          |

4/19/2016 3:09:29 PM

HRS AASHTO

2269



## Complete Issue Information

---

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 11/1/2012 1:22:41 PM Eastern Daylight Time

The shear capacity for culvert walls is being calculated incorrectly for LFR. The width of the section (bw) should be equal to 12" in all cases but Virtis is using the wall thickness for bw. This results in unconservative results when wall thickness is greater than 12 inches, and conservative results when wall thickness is less than 12 inches.

A screen shot of the specification check at 0.5ft as well as the .xml file are attached.

It appears that the calculation for LRFR shear is correct.

FROM: Todd Thompson DATE: 11/1/2012 3:12:59 PM Eastern Daylight Time

Good catch Brad.

I confirmed same problem with LFR.

The d is calculated correctly based on wall thickness, resteel size and clear cover.

But the bw is using the wall thickness instead of 12 inches.

Same regardless of exterior wall or interior wall.

Check of top and bottom slabs - shear uses the 12 inch width.

FROM: Wayne Skow DATE: 11/2/2012 7:05:38 AM Eastern Daylight Time

The wrong property was being assigned to bw in article 8.16.6.2.2 when the cross section type was a column (wall).

Fixed in v6.4.1.

FROM: Matt Kolis DATE: 12/4/2012 4:12:28 PM Eastern Standard Time

Verified in 6.4.1 Beta 2.

Issue ID: 12013

Subject: 6.4.1 - Corrugated Deck Analysis Phase I - LFD Reports missing

Folder: /Virtis/Support Center/Virtis

Primary Contact: Ihnat, Joseph

4/19/2016 3:09:29 PM

HRS AASHTO

2270

Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Submitted By: Bhanushali, Girish | 11/1/2012 5:14:59 PM |
| Modified By: jihnat              | 1/2/2013 7:49:10 PM  |
| Priority: High                   |                      |
| Category: Support                |                      |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned           |          | Bug      |
|                    |                    | Critical |          |
| Bhanushali, Girish | Investigation      |          |          |
| Ordoobadi, Mehrdad | Assigned           |          |          |
|                    | Resolved           |          |          |
|                    | Resubmit           |          |          |
|                    | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Resolved           |          |          |
|                    | Verified           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                            | Description |
|------|------------------------------------------------|-------------|
|      | Email.pdf                                      |             |
|      | Issue 12019 - Backcheck.png                    |             |
|      | BridgeExplorerAnalysisResults-MO-6-13-2013.png |             |
|      | Muddy Creek 0.5 Bridge.xml                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Girish Bhanushali DATE: 11/1/2012 1:15:22 PM Eastern Daylight Time

4/19/2016 3:09:29 PM

HRS AASHTO

2271

## Complete Issue Information

This was produced in 6.4.1 VM

LFD analysis reports are missing for following sequence(s).

For fresh bridge first time analysis:

1. Run LRFR deck analysis  
-- only log file generated LRFR
2. Run LFD deck analysis  
--- only log file generated for LFD

Reopen the bridge:

1. Run LFD deck analysis  
--- see all the LFD reports
2. Run LRFR deck analysis  
--- see all the LFD reports  
---- See only log file for LRFR analysis
3. Run LFD deck analysis  
---- see all LFD reports missing

(Analysis output window from eye glasses icon)

FROM: Girish Bhanushali DATE: 11/1/2012 1:37:46 PM Eastern Daylight Time

FROM: Girish Bhanushali DATE: 12/26/2012 2:02:27 PM Eastern Standard Time  
Findings of my investigation are as below:

The above stated behavior is due to the fact that once user loads the vehicle template on analysis settings window, system loses the check box selections under AASHTO Engine Reports on Output tab.

User is hence obligated to do the report check box selection from the scratch, after use of templates.

These AASHTO Engine Reports check boxes are not stored in the database and hence they are not persistent.

Analysis settings window loads the defaults the first time window and the default or user selection stays as long as the BWS is open.

It makes me conclude that, scope of selection persistence is only as far as domain (layer) object is alive for BWS session (DoAnalysisEventPtr).

Analysis engine behaves as per whatever is stored in DoAnalysisEventPtr which stays as long as BWS is open.

This could be intended behavior or bug, which needs to be decided.

If there is anything further needs to be done on this, let me know.

4/19/2016 3:09:29 PM

HRS AASHTO

2272

Complete Issue Information

FROM: Joseph Ihnat DATE: 1/2/2013 2:41:18 PM Eastern Standard Time

Appears to be working as intended. Depends on whether you use a template or enter your vehicles manually. If you enter vehicles manually there will be a few reports selected by default. But our sample templates have no engine reports selected.

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
| Issue ID: 12019                                                                                             |
| Subject: Legal and Permit rating analysis does not show the critical RF for the deck in the bridge explorer |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ordoobadi, Mehrdad   |                      |
| Submitted By: Zhang, Bin              | 11/2/2012 7:21:17 PM |
| Modified By: sghosh                   | 7/8/2013 7:11:58 PM  |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 11/2/2012 3:21:24 PM Eastern Daylight Time

Please use the attached bridge to reproduce this issue, conduct the permit/ legal analysis to the bridge using the Type 3 vehicle in the bridge explorer. AASHTO engine only rated the girders but not the corrugated deck.

I tried the LRFR INV and OPR rating in the bridge explorer, it did the rating for both girders and the deck.

I submitted this issue on behalf of Dan Staton from Bureau of Land Management, please read the email in the attachment for details.

FROM: Girish Bhanushali DATE: 5/6/2013 11:37:25 AM Eastern Daylight Time

Fix has been applied to take care of permit , legal results not showing up when analysis is conducted

4/19/2016 3:09:29 PM

HRS AASHTO

2273

Complete Issue Information

from BWS.  
Code checked in.

FROM: Mehrdad Ordoobadi DATE: 5/28/2013 9:02:07 AM Eastern Daylight Time  
Fixed in 6.5.0 Beta 3.

FROM: Kane Gyovai DATE: 6/11/2013 2:40:44 PM Eastern Daylight Time  
The problem was reproduced in V 6.5 Beta 3.

See attached image file. For Type 3 vehicle, the LRFR legal rating factor for the bridge is 3.391. The factor for the deck is 2.036. The analysis was completed in both Bridge Workspace and Bridge Explorer.

FROM: Mehrdad Ordoobadi DATE: 6/13/2013 2:52:27 PM Eastern Daylight Time  
Kane, I cannot reproduce this problem. I analyzed the attached bridge with LRFR Legal Load Rating template from bridge explorer and I get the results shown in the attached screenshot  
BridgeExplorerAnalysisResults-MO-6-13-2013.png.

Please let me know if you are doing something different.

FROM: Mehrdad Ordoobadi DATE: 6/14/2013 10:50:39 AM Eastern Daylight Time  
I think you may have saved the results. I am able to reproduce this when I save the results. I will investigate this further.

FROM: Mehrdad Ordoobadi DATE: 6/14/2013 12:05:13 PM Eastern Daylight Time  
Fixed for 6.5 Beta 3.

FROM: Kane Gyovai DATE: 6/17/2013 1:51:17 PM Eastern Daylight Time  
Verified for V6.5 Beta 3.

FROM: Subhadeep Ghosh DATE: 7/8/2013 2:51:52 PM Eastern Daylight Time  
Verified for 6.5 Beta 4/Acceptance build.

|                                              |
|----------------------------------------------|
| Issue ID: 12037                              |
| Subject: Problems with 6.4.0 detailed output |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: vinayagamoorthy, vinacs | 11/9/2012 5:09:35 PM  |
| Modified By: vvinayagamoorthy         | 12/17/2012 2:44:04 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

4/19/2016 3:09:30 PM

HRS AASHTO

2274

### Complete Issue Information

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Skow, Wayne     | Assigned           | High     | Unknown  |
| Lee, Herman     | New                | High     | Unknown  |
|                 | Assigned           |          |          |
|                 | Resolved           |          | Bug      |
|                 | Assigned           |          |          |
| Skow, Wayne     | Information Needed |          |          |
|                 | Resolved           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | 28C0200 FB with Hinge.xml        |             |
|      | Capacity Calc on Floor Beam.docx |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 11/9/2012 12:10:00 PM Eastern Standard Time  
Submitted on behalf of Vinacs via email:

One of our engineer is writing an spread sheet to take the data from the BWS report to adjust the results to consider One Permit + One adjacent H20 truck scenario.

When we compared the results reported for each truck, we noticed some abnormal behavior.

- (1) Number of rows are different. Since the rating factors for each location and each force effect is considered, we anticipated same number of rows for all trucks.
- (2) In some cases, the load effect is missing or repeated twice. When we compared row by row, we noticed that in some cases, load effect is misquoted.

For example, I am showing the values reported at point for two different truck. Row 11, for one truck (left side) Interaction reported twice. However, if you compre the demands, capacities they are the

4/19/2016 3:09:30 PM

HRS AASHTO

2275

Complete Issue Information

same. We believe the load effect of Flexure is used to load rate, however, BWS report writer mis quoted it.

Can some one look into these issues for us?

If you want, I can place this in the Issuenet.

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

FROM: Wayne Skow DATE: 11/13/2012 7:17:18 AM Eastern Standard Time  
This issue is similar to 11982. Please read the resolution to that issue as it explains the difference between "Interaction", "Shear" and "Flexure" on the detailed rating results report. The report has been changed in v6.4.1 to remove the "interaction" label. This should give you the result you want.

FROM: Wayne Skow DATE: 11/26/2012 7:45:58 AM Eastern Standard Time  
After additional investigation relative to item (2) above, I did find a bug related to the fix for issue 11982 that causes the inventory and operating RF's to appear on separate lines in the LFD XML report under certain conditions and both values appear under the inventory heading rather than under their own separate headings.

Fixed in v6.4.1.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 12041                                                              |
| Subject: Effect of Hinge is NOT considered in the Floor Beam (Line) analysis |

|                                                                  |
|------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                            |
| Primary Contact: Skow, Wayne                                     |
| Submitted By: vinayagamoorthy, vinacs      11/13/2012 4:11:42 PM |
| Modified By: hlee      12/18/2012 2:55:00 PM                     |
| Priority: High                                                   |
| Category: Bug                                                    |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:09:30 PM

HRS AASHTO

2276

## Complete Issue Information

### Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | SpecCheckErrorMessage.png |             |
|      | 53 1074R mjj.xml          |             |
|      | SCSuperStructureCpp.png   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: vinacs vinayagamoorthy DATE: 11/13/2012 11:18:57 AM Eastern Standard Time

I have a floor beam with hinge. The AASHTO LFD engine do not consider the effect of hinges. Could you please check that.

Floor beam alternative: Plate Girder ... with Hinge.

FROM: Herman Lee DATE: 12/4/2012 2:38:12 PM Eastern Standard Time

Fixed defect in adding hinge locations for Floorbeam Stringer Floor System and Floor Line superstructure definitions.

Fixed for 6.4.1 Beta 2. Resolved for 6.4.1 release.

FROM: vinacs vinayagamoorthy DATE: 12/17/2012 10:38:24 AM Eastern Standard Time

Though the software analyze the girder with Hinge, the capacity calculation has some problems. The capacity at the end of cantilever end (100th point of Span 1) is underestimated. Please see the attached word document. If I remove the Hinge, the capacity reported seems to be correct.

FROM: Wayne Skow DATE: 12/18/2012 8:35:45 AM Eastern Standard Time

I examined the differences between the plate girder without a hinge and the plate girder with a hinge. The first plate girder is composite. The hinged plate girder is non-composite and the girder is composed of different plate sizes than the first girder. Both girders, however, have shear connectors specified even though the hinged girder does not have a deck specified. If you click the "validate" button for the hinged girder, you get warning messages relative to the deck and shear connector disparity.

I'd like to verify with you that you intended to model the girders as non-hinged, composite and hinged, non-composite.

There is a bug in the program causing the low capacity of the hinged section. The presence of the shear connectors in the hinged girder is causing the program to treat the girder as composite. When it computes section properties, it's expecting a deck to be present which it eliminates when calculating negative moment section properties. Because there isn't one, it wrongly eliminates the top flange instead, which causes the section properties to be low resulting in the low capacity. This is easy to see in the "LFD Steel Elastic Section Properties" spec check output. Notice there is no top flange in the component list of the Negative Flexure Elastic Section Properties table.

If the shear connectors are deleted from the hinged girder, the run produces a good rating factor.

4/19/2016 3:09:30 PM

HRS AASHTO

2277



Complete Issue Information

FROM: vinacs vinayagamoorthy DATE: 12/18/2012 9:54:03 AM Eastern Standard Time  
We want model it as "Composite with hinge". Thanks for pointing out that this error caused by the user's incorrect data entry. With the correct data, the software works properly.

I will close this incident.

|                           |
|---------------------------|
| Issue ID: 12045           |
| Subject: spec check issue |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Kennelly, Krisha     |                       |
| Submitted By: vinayagamoorthy, vinacs | 11/14/2012 5:40:25 PM |
| Modified By: vvinayagamoorthy         | 12/12/2012 4:34:53 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Unknown  |
|                  | Assigned |          |          |
|                  | Resolved | Bug      |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 11/14/2012 12:48:36 PM Eastern Standard Time  
Attached bridge model used to run on 6.3.1. However, it is NOT running on 6.4.0 or 6.4.1. Please use

4/19/2016 3:09:30 PM

HRS AASHTO

2278

Complete Issue Information

AASHTO LFR engine, HS20 vehicle to reproduce this issue (Mem alt of G1).  
I submitted this issue on behalf of Vinacs M Vinayagamoorthy from CalTran. The communication email was listed below.

\*\*\*\*\*  
\*\*\*\*\*

From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
Sent: Tuesday, November 13, 2012 2:02 PM  
To: Lee, Herman  
Subject: Fw: doesn't run in 6.4.0 (53 0174R)

Herman

Attached bridge model used to run on 6.3.1. However, it is running on 6.4.0 or 6.4.1. Could you please check this for us?

Vinacs M Vinayagamoorthy  
Senior Bridge Engineer  
916-227-2676

----- Forwarded by Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov on 11/13/2012 11:00 AM -----  
Maxine Jacoby/D04/Caltrans/CAGov  
11/08/2012 11:24 AM  
To  
Murugesu Vinayagamoorthy/HQ/Caltrans/CAGov@DOT

cc

Subject  
doesn't run in 6.4.0 (53 0174R)

(See attached file: 53 1074R mjj.xml)  
This runs in 6.3, but not 6.4; I can fiddle with some lengths and get G1 to run, but G2 seems irreconcilable, as:  
Span 1 = 136.027598 ft & Span 2 = 158.150880 ft, but the program thinks the full length of the girder is 294.178477, and not 294.178478 (span 1 + span 2).  
\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 11/14/2012 12:57:06 PM Eastern Standard Time  
I also attached the error message in the document. I think it's a bug that may be related to the fix for issue #11931.

FROM: Krishna Kennelly DATE: 11/15/2012 9:58:04 AM Eastern Standard Time  
Fixed for 6.4.1 beta 2. There is no workaround.

4/19/2016 3:09:30 PM

HRS AASHTO

2279

Complete Issue Information

FROM: Geoffrey Trees DATE: 12/4/2012 3:24:55 PM Eastern Standard Time  
Runs to completion. Verified.

FROM: vinacs vinayagamoorthy DATE: 12/12/2012 11:34:53 AM Eastern Standard Time  
I tested the same model. Works fine.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 12064                                           |
| Subject: LL DF - Zero Fill Depth (< 2 ft fill) - Culverts |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Thompson, Todd          | 11/20/2012 9:10:48 PM |
| Modified By: tthompson                | 12/10/2012 6:25:02 PM |
| Priority: Critical                    |                       |
| Category: Bug                         |                       |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Lee, Herman      | Assigned |          |          |
| Thogaru, Srujana |          |          |          |
| Lee, Herman      | Resolved |          | Bug      |
|                  |          | Critical |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Culvert_Comparison.xlsx |             |
|      | SD_11091022_641_B1.xml  |             |

Tasks

4/19/2016 3:09:31 PM

HRS AASHTO

2280

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 11/20/2012 4:27:40 PM Eastern Standard Time

Trying to confirm or figure out what the application is doing for LL DF when Fill Depth is less than 2 ft.

AASHTO 3.23.3.2 - Uses wheel loads,  $E = 4 + 0.06 * S \leq 7.0$  ft; which is what is on Page 31 of the culvert solution manual

I was comparing Virtis LF Rating with two other applications and the LL Moment in Virtis is quite smaller compared to other applications.

I think it might be related to AASTHO 3.23.3.2 uses E as Wheel Load but I think Virtis thinks it is for Axle load? The LRFD/LRFR DF's uses axle loads where Std Spec uses wheel load.

In the attached example for HS20 LF Rating  
LL Moment is about 4.44 ft-kips

Three other applications I have are 6.62 ft-kips and 7.497 ft-kips and 8.33 ft-kips for LL Moments. I get good agreement on other loads/moments but I end up with RF's being very different (RF = 0.8 vs RF = 1.5 )

I know one difference between the applications are whether one uses clear span or centerline of wall to centerline of wall - which does add some variability to the equation but doesn't produce the large LL Moment differences. (I personally think we are not using the correct span length in this equation)

FROM: Todd Thompson DATE: 11/20/2012 4:28:03 PM Eastern Standard Time  
Culverts - Forgot to add this in the Subject line

FROM: Todd Thompson DATE: 11/26/2012 10:54:03 AM Eastern Standard Time

I also checked an additional application - Texas Culvert (V2.2)

Same Culvert 3-8x6 with Zero Fill

I get a LL Moment of Top Slab (midpoint) with 6.37 Ft-Kips. Which is pretty good agreement with ET-Culvert which was 6.62 Ft-Kips.

Brass Culvert - Produced 8.33 Ft-kips (which seems too high and I can't track down why, but I do know our designers evaluated Brass Culvert and didn't like what they saw but have agreed upon ET-Culvert as one of our design tools/software packages for doing Design. - The other is Virtis Culvert once we get 6.4.1 and get some issues resolved).

FROM: Todd Thompson DATE: 11/26/2012 12:56:58 PM Eastern Standard Time

I re-ran BRASS Culvert and for HS20 truck - I'm getting 6.48 ft kips now, which agrees within 3% of ET-Culvert and Texas Culvert for HS20 Truck moment in the top slabs.

But Virtis Culvert is approximately 33% lower than the other 3 programs.

FROM: Todd Thompson DATE: 11/27/2012 9:09:32 AM Eastern Standard Time

I made a series of runs with Virtis Culvert, ET-Culvert, BRASS Culvert and Texas Culvert with fill depth varying from 0 to 5 ft for the given box culvert.

4/19/2016 3:09:31 PM

HRS AASHTO

2281

Complete Issue Information

I'll attach a spreadsheet with the numbers I got from all 4 applications.

Virtis Culvert appears to be wrong for < 2 ft of fill  
But Virtis Culvert appears to be ok for 2 ft or greater fill  
Of course - a different AASHTO Spec applies for these two different cases.

FROM: Herman Lee DATE: 11/30/2012 8:08:50 AM Eastern Standard Time  
Fixed a defect in applying concentrated loads when fill depth < 2 ft. The LL moment at Top Slab 1 midpoint is now comparable with the other applications for fill depth < 2 ft.  
I also changed the output to report just the live load pattern for the inputted fill depth, not both patterns (< 2 ft and >= 2 ft).

Fixed for 6.4.1 Beta 2. Resolved 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/5/2012 10:58:18 AM Eastern Standard Time  
Verified

FROM: Todd Thompson DATE: 12/10/2012 1:25:01 PM Eastern Standard Time  
Checked in Beta 2 - appears to be corrected and the live load cases that are not to be investigated are no longer shown in the detailed output.

Issue ID: 12065  
Subject: 2 Ft Fill - Culvert LL DF w/LFR

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Thompson, Todd 11/21/2012 2:37:32 PM  
Modified By: tthompson 12/10/2012 6:26:15 PM  
Priority: High  
Category: Bug

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Duray, Jim       | New                | High     | Unknown  |
| Lee, Herman      | Assigned           |          |          |
| Thogaru, Srujana | Information Needed |          |          |
|                  | Assigned           |          |          |
|                  | Resolved           |          |          |

Complete Issue Information

|             |                                          |      |                    |
|-------------|------------------------------------------|------|--------------------|
|             |                                          |      | Bug                |
| Lee, Herman | Verified<br>New<br>Assigned<br>Duplicate | High | Unknown<br><br>Bug |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Deadwood Gulch Bridge.xml |             |
|      | SystemError.png           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 11/21/2012 9:43:44 AM Eastern Standard Time  
 For culverts with 2 ft or more of fill - LFR, the LL DF is based on 1.75 x Fill Depth.

But when I review the output - I don't see that being considered.

Here is an excerpt from detailed output:

ehicles:  
 -----

HS 20-44 - Truck  
 Description: AASHTO H 20-S 16 Loading, 1944 Edition  
 Classification: Design, INVENTORY, OPERATING  
 Axle Minimum Maximum Current  
 Spacing Spacing Spacing Load  
 (Feet) (Feet) (Feet) (Kips)

|   | Minimum | Maximum | Current | Load |
|---|---------|---------|---------|------|
| 1 | 0.0     | 0.0     | 0.0     | 8.0  |
| 2 | 14.0    | 14.0    | 14.0    | 32.0 |
| 3 | 14.0    | 30.0    | 14.0    | 32.0 |

GVW: 72.0 (Kips)  
 CG: 18.667 (Feet)

Distributed Vehicle Load Pattern: HS 20-44 - Truck by Thru Fill  
 with Fill Depth: 2.0 (ft), Impact factor: 20.0%

Complete Issue Information

(Includes load reduction factor: 1.00)

Number of Uniform Loads: 3

| Load | Start<br>Distance<br>(Feet) | End<br>Distance<br>(Feet) | Uniform<br>Load<br>(KipsPerSquareFeet) |
|------|-----------------------------|---------------------------|----------------------------------------|
|------|-----------------------------|---------------------------|----------------------------------------|

|    |         |         |        |
|----|---------|---------|--------|
| 1  | 0.0000  | 4.4800  | 0.2392 |
| 2  | 14.0000 | 18.4800 | 0.9566 |
| 3  | 28.0000 | 32.4800 | 0.9566 |
| CG | 20.9067 |         |        |

Distributed Vehicle Load Pattern: HS 20-44 - Truck by Eqv Strip Width  
with Fill Depth: 2.0 (ft), Impact factor: 20.0%

(Includes load reduction factor: 1.00)

Number of Uniform Loads: 3

| Load | Start<br>Distance<br>(Feet) | End<br>Distance<br>(Feet) | Uniform<br>Load<br>(KipsPerSquareFeet) |
|------|-----------------------------|---------------------------|----------------------------------------|
|------|-----------------------------|---------------------------|----------------------------------------|

|    |         |         |        |
|----|---------|---------|--------|
| 1  | 0.0000  | 4.4800  | 0.2392 |
| 2  | 14.0000 | 18.4800 | 0.9566 |
| 3  | 28.0000 | 32.4800 | 0.9566 |
| CG | 20.9067 |         |        |

Part 2 -

I checked with 3 ft of fill on this culvert and it looked fine (the part thru fill).

My question is that it also has the strip method listed but how does one know which LL model was used in the analysis? I can not find in the detailed analysis output which one was used? Or maybe the question should be asked why not only output the one that was used?

Maybe I'm just missing something in the review of the output.

FROM: Srujana Thogaru DATE: 11/27/2012 9:03:43 AM Eastern Standard Time  
LLDF Uniform Load is based on min of  $\text{load}/E^2$  and  $\text{load}/(1.75 * E)^2$ . In the case of attached culvert file uniform load of  $\text{load}/E^2$  is considered. Please let us know if you agree with it.

FROM: Todd Thompson DATE: 11/27/2012 10:18:13 AM Eastern Standard Time  
For Part 2 - the Output does not indicate which live load case was used or controlled. I think this should be reflected in the output.

For Part 1 -

AASHTO 6.4.1 - States - When the depth of fill is 2 feet or more, concentrated loads shall be considered as uniformly distributed over a square with sides equal to 1.75 times the depth of fill.

So I do not agree with your statement that  $\text{load}/(1.75 * E)^2$  is correct. Replace E with h (or depth of fill) and then I agree with  $\text{load} / (1.75 * h)^2$ .

AASHTO 6.4.2 states that when the fill depth is < 2 ft - the wheel loads are distributed as in slabs with concentrated loads. and then one is referred to 3.24. For this load case it does say if  $\text{load}/(1.75 * h)^2$

4/19/2016 3:09:31 PM

HRS AASHTO

2284

Complete Issue Information

controls over load/(E^2) than that can be used instead.

But I think the way I read the spec - once the fill height is 2 ft or greater - then only 6.4.1 is in effect and then only (1.75\*h)^2 should be in play and E^2 is not to be considered. (maybe I'm wrong or reading it differently?)

I'll try to dig into this a bit more.

FROM: Todd Thompson DATE: 11/27/2012 11:20:19 AM Eastern Standard Time  
I've read and re-read this spec and I consulted one of our designers.  
We both agree that at 2 ft or greater in fill - only AASHTO 6.4.1 should be considered.  
If the fill is less than 2 ft - then the min E (or max pressure) between the two is correct.

FROM: Srujana Thogaru DATE: 12/3/2012 3:50:30 PM Eastern Standard Time  
Code for computation of LLDF has been updated to consider 6.4.1 for fill depth greater than or equal to 2ft and for filled depth less than 2ft to follow 6.4.2.  
Method of solution manual has also been updated. Fixed for 6.4.1 beta 2.

FROM: Geoffrey Trees DATE: 12/4/2012 4:59:24 PM Eastern Standard Time  
Verified

FROM: Todd Thompson DATE: 12/10/2012 1:26:15 PM Eastern Standard Time  
Checked in Beta 2  
LL for LFR looks correct  
Detailed output shows only the correct case  
Quick review of page 31 appears to be correct in the method of solution manual for LF LL DF

Issue ID: 12067  
Subject: Madero ASD engine issue for timber deck

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Zhang, Bin 11/21/2012 4:33:31 PM  
Modified By: hlee 12/4/2012 8:21:42 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | DFA error.jpg               |             |
|      | 00063 - 81181075000S092.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 11/21/2012 11:34:16 AM Eastern Standard Time

I submitted this issue on behalf of Dan Staton from Bureau of Land Management. The communication email was listed below.

\*\*\*\*\*  
\*\*\*\*\*

From: Staton, Daniel F [mailto:dstaton@blm.gov]  
Sent: Monday, November 19, 2012 5:24 PM  
To: Bridgeware,  
Subject: Analysis Module Error

I'm load rating a bridge with steel girders and a timber plank deck. When I analyze the bridge I get the error message listed below. I've gone into both the superstructure window and the deck window and changed the Engine to Madero ASD. Once I close the window, I go back in and the engine is blank (nothing is selected). Then I save the bridge and re-analyze and I get the same message. The system still performs the load rating, but I get the error message. Any ideas why?

Dan Staton  
Civil Engineer  
Architecture and Engineering Branch  
National Operations Center  
Bureau of Land Management  
Office: (303)236-0528

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 11/21/2012 11:40:05 AM Eastern Standard Time

Please use madeo asd engine to rate the timber deck in the attached bridge. The analysis report does not show the rating factor after the analysis completed. There is a system error when the analysis completed too. Please read the SystemError in the document for details.

I can also reproduce this issue using BID12TimberTrainingBridge1, I think we may break the Madero engine.

FROM: Herman Lee DATE: 11/21/2012 6:54:26 PM Eastern Standard Time

Analysis Results window doesn't display timber deck rating results is duplicate of Incident 11149.

Complete Issue Information

FROM: Herman Lee DATE: 12/4/2012 3:09:54 PM Eastern Standard Time  
 For the system error, please double check whether the Channel.mlb and Str\_asd.mlb files are in the  
 C:\Program Files\AASHTOWARE\VirtisOpis64\Engines\MADERO folder.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 12068                                         |
| Subject: Unable to perform Distribution Factor Analysis |

|                                                       |
|-------------------------------------------------------|
| Folder: /Virtis/Support Center/Virtis                 |
| Primary Contact: Kennelly, Krisha                     |
| Submitted By: McMunn, Creightyn 11/21/2012 5:33:45 PM |
| Modified By: cmcmunn 12/13/2012 2:18:42 PM            |
| Priority: High                                        |
| Category: Bug                                         |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Creightyn McMunn DATE: 11/21/2012 12:39:38 PM Eastern Standard Time  
 I get the attached error when trying to run a distribution factor analysis on the attached file. I was able  
 to run the distribution factor analysis in v6.3.1 without error.

Complete Issue Information

FROM: Krisha Kennelly DATE: 11/27/2012 2:22:21 PM Eastern Standard Time  
Fixed for 6.4.1 beta 2.

FROM: Krisha Kennelly DATE: 11/28/2012 11:48:49 AM Eastern Standard Time  
Also fixed the same problem in the 3D model generation.

FROM: Geoffrey Trees DATE: 12/5/2012 11:23:54 AM Eastern Standard Time  
Verified

FROM: Creightyn McMunn DATE: 12/13/2012 9:18:23 AM Eastern Standard Time  
Verified that the distribution factor analysis runs for the attached file. V6.4.1 Beta 2.

|                                     |
|-------------------------------------|
| Issue ID: 12070                     |
| Subject: Cb values for cover plates |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Zhang, Bin           |                       |
| Submitted By: Grime, Katy             | 11/27/2012 8:29:37 PM |
| Modified By: hlee                     | 5/1/2013 6:18:15 PM   |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Zhang, Bin       | Information Needed |          |          |
|                  | Assigned           |          | Bug      |
|                  |                    | Critical |          |
| Skow, Wayne      |                    |          |          |
| Kennelly, Krisha |                    |          |          |
| Zhang, Bin       | Resolved           | High     | Support  |

4/19/2016 3:09:32 PM

HRS AASHTO

2288

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier          | Description |
|------|------------------------------|-------------|
|      | 6B.4.1 RC Flexure Rating.pdf |             |
|      | 01609 - 74174073000C160.xml  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Katy Grime DATE: 11/27/2012 3:35:03 PM Eastern Standard Time

Hello, we are currently inputting a multi-span bridge with rolled steel beams. The beams have top and bottom cover plates over the pier. We have inputted the rolled beams and the cover plates. When we run the analysis in Virtis, the program is outputting Cb values greater than 1 at the cover plate locations between the pier and the crossframe. However, AASHTO requires non-prismatic sections to have a Cb value of 1 as stated in 6.10.8.2.3. Thank you for your time.

FROM: Herman Lee DATE: 11/27/2012 3:37:24 PM Eastern Standard Time

Please attach the bridge XML file and specify which member alternative is having problem. Thanks.

FROM: Katy Grime DATE: 11/30/2012 9:35:28 AM Eastern Standard Time

I have uploaded the XML file. When performing a LRFR rating on Beam 1, Cb values at pier 3, right hand side, are greater than 1 when they should be equal to 1. In addition, virtis is saying that it is a prismatic member when it should be non-prismatic due to the cover plates. Thank you.

FROM: Katy Grime DATE: 12/21/2012 2:14:46 PM Eastern Standard Time

Hello. I am just following up and seeing if there was any progress made on our error? Thank you.

FROM: Bin Zhang DATE: 1/9/2013 3:01:12 PM Eastern Standard Time

I am able to reproduce this incident in version 6.4.1 too, no workaround has been found.

FROM: Wayne Skow DATE: 1/25/2013 7:50:04 AM Eastern Standard Time

Krishna - The section to the right of location 101.5 (support 3) has an unbraced length of 14.5ft. The cover plates end 5ft from the left end of the segment. The segment is being classified as prismatic in article 6.10.8.2.3.Cb, but should be classified as non-prismatic.

Katy - You can work around this by inserting a small segment of W30x116 at a location to the right of support 3. I put a 3 inch segment at a location 5ft to the right of support 3. That segment then becomes non-prismatic and you get a slightly lower rating factor for 90%(truck pair + Lane) load case which then is controlled at support 3 by the strength-I limit state rather than strength-II.

4/19/2016 3:09:32 PM

HRS AASHTO

2289

Complete Issue Information

FROM: Krishna Kennelly DATE: 1/25/2013 9:12:11 AM Eastern Standard Time  
Ben - please investigate why the controller sets this point as prismatic.

FROM: Herman Lee DATE: 5/1/2013 2:08:25 PM Eastern Daylight Time  
AASHTO LRFR Engine does not consider the section as non-prismatic due to the cover plate. The BRASS LRFR Engine also doesn't take cover plate into consideration when determining whether a section is prismatic.

|                                          |
|------------------------------------------|
| Issue ID: 12075                          |
| Subject: Culvert incorrect rating factor |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Wagner, Brad            | 11/29/2012 2:41:50 PM |
| Modified By: bwagner                  | 12/10/2012 4:58:40 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Brad Wagner DATE: 11/29/2012 10:02:28 AM Eastern Standard Time  
The attached culvert is deep enough for live load to be ignored. I ran the structure with a 2' II surcharge, and got rating factors of 5.623 and 9.391 for inventory and operating respectively. Per suggestion in incident 11981, I removed the II surcharge and analyzed the structure again. The rating factors were all zeros, indicating that the structure is not sufficient to carry dead load.

My question - why does the II surcharge increase the rating?

If I go back to the 2' II surcharge case, it indicates that bottom slab moment at 0" controls. At this location, the rating factor is correctly calculated as 5.623 and 9.391.

However, if I look at the top slab at midspan (6B.4.1 RC Flexure screen shot attached), the rating factors are not calculated correctly.  $0.9 * 15.75 - 1.3 * (14.8678 + 0.9937 - 1.6031) = -4.36$ , which indicates that there is no reserve capacity for live load. The rating factor displayed is 99.00.

In addition, the 8.16.3 Flexural spec check indicates that the top slab fails at 4'.

I understand that this represents a case where the II surcharge should not be included, but the rating factors are clearly not calculated correctly, and should be investigated.

FROM: Wayne Skow DATE: 11/30/2012 10:23:53 AM Eastern Standard Time  
There is a problem with the rating factor calculation in the culvert flexural rating article when checking and comparing the sign of the DL, LL and Capacity values and checking DL's against capacity.

Fixed in v6.4.1.

FROM: Geoffrey Trees DATE: 12/5/2012 1:09:05 PM Eastern Standard Time  
Verified

FROM: Brad Wagner DATE: 12/10/2012 11:58:40 AM Eastern Standard Time  
Accepted 6.4.1 Beta 2

|                                                        |
|--------------------------------------------------------|
| Issue ID: 12076                                        |
| Subject: Error performing spec check for steel girders |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Zhang, Bin           |                       |
| Submitted By: vinayagamoorthy, vinacs | 11/29/2012 4:48:26 PM |
| Modified By: vvinayagamoorthy         | 6/20/2013 1:27:24 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:32 PM

HRS AASHTO

2291

Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
| Lee, Herman | New      | High | Bug     |
|             | Resolved |      |         |
| Lee, Herman | New      | High | Unknown |
|             | Assigned |      |         |
|             | Resolved |      | Bug     |
|             | Verified |      |         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 234.xml             |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 11/29/2012 11:49:23 AM Eastern Standard Time  
 Submitted on behalf of Vinacs Vinayagamoorthy, Caltrans.

=====  
 From: Murugesu Vinayagamoorthy [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
 Sent: Tuesday, November 27, 2012 10:16 AM  
 To: Lee, Herman  
 Subject: Fw: 10 0045 Virtis Model won't run in 6.4.0

We found another bridge, that was developed in 6.3 version, but not running on 6.4.0 or 6.4.1.

I am attaching that file here for you.

(See attached file: 53 1074R mjj.xml)

Vinacs M Vinayagamoorthy  
 Senior Bridge Engineer  
 916-227-2676

=====

Complete Issue Information

FROM: Bin Zhang DATE: 11/29/2012 11:54:01 AM Eastern Standard Time  
I am able to reprpduce this issue in Version6.4.0 (SpecCheckErrorMessage.PNG). However, this issue has been fixed in the Version 6.4.1 development version (6.4.1.2001) with the latest code on 11/28/2012.

The rating summary was attached in the document. (12076RatingSummary.png)

FROM: vinacs vinayagamoorthy DATE: 6/20/2013 9:27:24 AM Eastern Daylight Time  
This one was fixed sometime back. I am just closing as part of 6.5Test

|                                               |
|-----------------------------------------------|
| Issue ID: 12078                               |
| Subject: Timber Deck on Built-Up Steel Girder |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Lee, Herman          |                        |
| Submitted By: Jackson, Amanda         | 11/29/2012 10:11:33 PM |
| Modified By: ajackson                 | 12/7/2012 9:25:34 PM   |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amanda Jackson DATE: 11/29/2012 5:17:19 PM Eastern Standard Time  
Our consultant is working on this bridge, and every time he tries to do an analysis, he gets the following error:  
Error computing haunch dead load!  
03:13:08 PM - Line 28300 in source file DoGirderMbrAlt.cpp.



Complete Issue Information

Cannot compute haunch dead load if concrete material not assigned to cross section slab!  
03:13:08 PM - Line 1173 in source file DoSteelBeamDef.cpp.

The bridge has a timber deck. Why is the program trying to calculate a concrete haunch dead load?

We tried rebuilding the member without any concrete defined so that there wasn't a type of concrete in the default materials, but we got the same error.

For now, we will try entering a thin concrete deck just for dead load purposes as a work-around.

FROM: Herman Lee DATE: 12/3/2012 1:54:59 PM Eastern Standard Time  
Add haunch load for concrete deck only.

Fixed for 6.4.1 Beta 2. Resolved for 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/5/2012 1:03:22 PM Eastern Standard Time  
Verified

FROM: Amanda Jackson DATE: 12/7/2012 4:25:34 PM Eastern Standard Time  
Bug fixed.

|                                           |
|-------------------------------------------|
| Issue ID: 12085                           |
| Subject: Inconsistency Culvert Spec Check |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Skow, Wayne          |                        |
| Submitted By: Wagner, Brad            | 12/3/2012 5:14:48 PM   |
| Modified By: hlee                     | 12/20/2012 12:57:56 PM |
| Priority: High                        |                        |
| Category: Bug                         |                        |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |

### Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
|             | Resubmit  |      |             |
|             | Resolved  |      |             |
| Skow, Wayne | New       | High | Unknown     |
|             | Suspended |      | Enhancement |
| Lee, Herman |           |      | Maintenance |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | VI_12091_writeup.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 12/3/2012 12:22:35 PM Eastern Standard Time

Virtis says the attached structure is failing in shear at 1.75' of the bottom slab (summary attached). When I look at the spec checks, "6A.4.2.1.BoxCulvert.Concrete Shear General Load Rating Equation - Concrete Shear" passes, but "5.8.3.3.Boxculvert Nominal Shear Resistance" fails. How can this be? Shouldn't the output be based on the General Load Rating Equation check?

FROM: Brad Wagner DATE: 12/3/2012 3:13:28 PM Eastern Standard Time

I also just noticed - the permit rating factor for this structure is 0.931, and the corresponding permit load rating is 257.63 tons. The vehicle only weighs 69.2 Tons.

I also noted this for hl-93 inventory on this same bridge. (RF = 0.986, and Tons = 142.02!)

FROM: Wayne Skow DATE: 12/6/2012 8:01:41 AM Eastern Standard Time

This incident has two parts:

- (1) - Why 6A.4.2.1...shear passes, but 5.8.3.3 fails.
- (2) - The capacity reported with the rating factor appears to be incorrect.

### Resolutions:

(1) - The difference between 6A.. and 5.8.. is that 6A only includes STR-II load cases where 5.8 include both STR-I and STR-II. It's the STR-I load case that's failing, not STR-II. Since permit vehicles are the only vehicles in the analysis, and the permit level does not involve STR-I, STR-I load cases should not appear in any of the articles. The program is currently unable to make that distinction. Presently, if a permit vehicle is specified, STR-II is added to the load cases considered, but there is no logic to

4/19/2016 3:09:33 PM

HRS AASHTO

2295

## Complete Issue Information

remove STR-I if there's no inventory or operating load case. An enhancement request has been added to VI as issue 12091.

(2) - The capacity was being improperly converted between kips and tons in two places: article AppC.6.1 and when the capacity result was handed to the result dialog. This resulted in the capacity being overstated by a factor of 2 or 4 depending on whether AppC.6.1 controlled or not. Fixed in v6.4.1.

FROM: Brad Wagner DATE: 12/10/2012 11:54:39 AM Eastern Standard Time  
(1) Agreed

(2) Works properly for LRFR. However, when I analyze the same culvert per LFR, all tonnages are 1/2 of what they are supposed to be.

FROM: Herman Lee DATE: 12/10/2012 1:28:12 PM Eastern Standard Time  
Resubmitted (2) for Brad Wagner.

FROM: Wayne Skow DATE: 12/11/2012 9:07:45 AM Eastern Standard Time  
There were two similar problems with LFR as with LRFR, but they were compensating. So, before the LRFR fix, LFR capacities were correct. The LRFR fix only fixed one of the LFR bugs causing LFR capacities to become 1/2. Both bugs are now fixed in v6.4.1.

FROM: Srujana Thogaru DATE: 12/18/2012 2:25:38 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 3.

FROM: Todd Thompson DATE: 12/19/2012 2:49:39 PM Eastern Standard Time  
This this was a duplicate of mine (VI 12104) - I decided to check the part (2) - RF times Truck Weight = Tons not being correct. Load Factor Analysis

In Beta 3, using the Truck and Culvert from my incident  
RF = 2.85  
SD Type 3 Truck = 24 Tons  
So Correct Value should be 68.4 tons  
But the report in Spec Check has 71.3 tons  
Same with Rating Summary (RF = 2.85 and tons = 71.3)  
From Bridge Explorer - Bridge Rating is RF = 2.831 and tons = 67.94)

It almost seems like everything is messed up now.  
Spec Check and Rating Summary - tonnage is computed wrong  
Bridge Rating - tonnage is computed correctly, but wrong RF is passed on

FROM: Todd Thompson DATE: 12/19/2012 3:01:05 PM Eastern Standard Time  
Beta 3 Continued  
Attached 3 screen shots displaying what I'm seeing  
Confirmed that SD Type 3 Truck does weight 24 tons (48 kips).  
What is odd - yesterday with Beta 2 - the RF = 2.831  
but today in Spec Check and Rating Summary = RF = 2.85

FROM: Todd Thompson DATE: 12/19/2012 3:17:55 PM Eastern Standard Time  
And a quick check with LRFR Rating with SD Type 3 - Legal rating --

4/19/2016 3:09:33 PM

HRS AASHTO

2296

Complete Issue Information

I also get the same issues as with LF Analysis  
wrong tonnage computed in those two cases.  
right tonnage computed in other case - but wrong RF pulled and used....

FROM: Todd Thompson DATE: 12/19/2012 4:27:47 PM Eastern Standard Time  
I was wrong - grabbed AASHTO Type 3 instead of SD Type 3 truck. All looks good. (as far as RF times  
truck = tons)

|                                                                                                      |
|------------------------------------------------------------------------------------------------------|
| Issue ID: 12091                                                                                      |
| Subject: STR-I limit state removed from box culvert analysis when permit vehicles only are specified |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Wagner, Brad            | 12/6/2012 5:08:53 PM  |
| Modified By: hlee                     | 10/23/2013 8:49:50 PM |
| Priority: High                        |                       |
| Category: Maintenance                 |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 12/6/2012 12:10:19 PM Eastern Standard Time  
I'm submitting this on behalf of Brad Wagner. Brad raised a question in issue 12085 resulting in this enhancement request.

When only permit trucks are specified in box culvert, the analysis includes STR-I, STR-II and SER-I limit states. and STR-I results will be reported in the LRFD spec check article reports. The LRFR code, however, only requires STR-II and SER-I limit states for permit vehicles.

The final rating results as displayed by the Analysis Report dialog filters out the STR-I results. So

Complete Issue Information

those results do not affect the final rating. However, the presence of STR-I limit states can be confusing and misleading. For example, article 5.8.3.3 can show up as "failed" in the spec check results because the STR-I case failed within an article even though all STR-II cases passed.

Please enhance the box culvert analysis so that only the appropriate limit states are displayed.

See the attached pdf file for additional information.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 12095                                                                     |
| Subject: Summary Report - extra 0.000 values when it should be blank (culvert only) |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Thompson, Todd          | 12/10/2012 4:34:06 PM |
| Modified By: mmlynarski               | 8/7/2013 4:34:36 PM   |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Ihnat, Joseph   | Assigned |          |          |
| Trees, Geoffrey |          |          | Bug      |
| Skow, Wayne     |          |          |          |

### Complete Issue Information

|               |           |      |             |
|---------------|-----------|------|-------------|
| Ihnat, Joseph |           |      |             |
| Skow, Wayne   |           |      |             |
| Lee, Herman   | New       | High | Enhancement |
|               | Suspended |      |             |
|               | Resolved  |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | EmailPrint.pdf      |             |
|      | 10 0045.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 12/10/2012 11:42:59 AM Eastern Standard Time

Ok - was confirming VI 11994 was fixed.

But a new issue has popped up - When doing legal rating, or permit rating, or inventory or operating rating - the columns/rows that are not used are now filled with 0.000 instead of being blank.

Checked back and Beta 1 was looking ok, as did previous 6.3.X versions.

Appears to be ok for bridge structures. This only happens with culvert structures and is probably related to the fix in VI 11994 or some other fix.

FROM: Joseph Ihnat DATE: 12/10/2012 1:53:55 PM Eastern Standard Time

This is a different report than 11994. This report looks to be run from the bridge explorer, and it's always been this way.

The report in 11994 is run from the BWS, and it's still fixed.

FROM: Joseph Ihnat DATE: 12/10/2012 3:52:02 PM Eastern Standard Time

Some of the culvert results aren't coming back from the Domain as expected.

For instance, the template "LRFR Design Load Rating" has no Permit or Legal vehicle. So when CDoCulvertSegmentRatingSummary::GetMinRatingResultsSummaryLegalPermit() is called, seems like the flags bNoPermitData and bNoLegalData should contain True.

FROM: Todd Thompson DATE: 12/11/2012 10:06:04 AM Eastern Standard Time

My mistake - 11994 was run from the bridge and summarized.

This bug is related to analysis run from the bridge explorer.

4/19/2016 3:09:33 PM

HRS AASHTO

2299

Complete Issue Information

Bridge structures are ok.

Culvert structures are not ok. Not sure if it is new to 6.4 or 6.4.1 Beta 1 or Beta 2 - but looks like you guys have the bug identified.

FROM: Todd Thompson DATE: 12/11/2012 4:04:08 PM Eastern Standard Time  
This pertains to both LF and LRFR analysis.

FROM: Geoffrey Trees DATE: 3/15/2013 4:50:31 PM Eastern Daylight Time  
I just looked at this. I think Wayne worked on populating the results object so I am going to have him verify his code to make sure it is populated with the flags set.

FROM: Wayne Skow DATE: 3/28/2013 10:57:43 AM Eastern Daylight Time  
There are calls to the IDoCulvertSegmentRatingSummary::AddRow in BoxCulertApp::SetCulvertLRFRCriticalLoads and BoxCulertApp::SetCulvertLRFRCriticalLoads. The last argument in AddRow is a null bit mask and, currently, it's a 0. This may be the source of the problem. However, I'm not sure how to set that bit mask.

FROM: Joseph Ihnat DATE: 3/28/2013 12:35:44 PM Eastern Daylight Time  
See, for example, DoMemberDetailedRatingResults and CABxEngineResultGen::MemberRatingSummary. Set a breakpoint at CDoMemberRatingSummary::AddRow() and run LRFR on TB1 from the BE to see how it's handled for a girder member analysis.

FROM: Wayne Skow DATE: 4/1/2013 1:17:56 PM Eastern Daylight Time  
The error was in DoCulvertRatingResultsSummary.cpp. Fixed in v65.dev.

FROM: Steve Salata DATE: 4/24/2013 2:40:02 PM Eastern Daylight Time  
Ran a few bridges from the Bridge Explorer and still see the 0.000 values for the Culvert Example (see "Bridge Rating Results Report\_verify.pdf" attached).

FROM: Wayne Skow DATE: 4/30/2013 9:53:20 AM Eastern Daylight Time  
The initial fix only considered LRFR. Fix added to LFR.

FROM: Steve Salata DATE: 5/23/2013 2:32:43 PM Eastern Daylight Time  
Fixed.

Issue ID: 12098

Subject: Conservative Estimation of Fcr for the Rolled Beam with Thin/Wide Cover Plates

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: vinayagamoorthy, vinacs 12/11/2012 8:50:36 PM

Modified By: hlee 7/7/2013 5:04:04 PM

Priority: High

Category: Enhancement

4/19/2016 3:09:34 PM

HRS AASHTO

2300

Complete Issue Information

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | ProposedAASHTOMBE_LRFR<br>_Culvert.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 12/11/2012 3:50:53 PM Eastern Standard Time  
 I submitted this enhancement request on behalf of CalTran regarding the Fcr calculation for rolled beam with cover plates. Please read the EmailPrint.PFD in the document for details. The bridge model was also attached in the document.

FROM: Herman Lee DATE: 12/12/2012 1:44:51 PM Eastern Standard Time  
 E-mail from George Huang, Caltrans:

=====

Hi Herman,

Caltrans does not have any standard procedure regarding how to calculate the cover plate capacity. However we would like to use total flange thickeners (original flange and the cover plate) with the original flange width (largest width). Please check with other States see which method they prefer.

Thanks.

George Huang  
 Senior Bridge Engineer

4/19/2016 3:09:34 PM

HRS AASHTO

2301



Complete Issue Information  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance

=====

FROM: Herman Lee DATE: 7/7/2013 12:58:43 PM Eastern Daylight Time  
 For section with cover plates, AASHTO Engine in 6.5 release will compute the t/b term in Fcr using the total thickness (flange thickness plus all the cover plate thicknesses) and the average of the widths (average of flange width and all the cover plate widths).

|                                               |
|-----------------------------------------------|
| Issue ID: 12104                               |
| Subject: Culvert - LRFR Rating - Legal Trucks |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Thompson, Todd          | 12/13/2012 7:58:16 PM |
| Modified By: tthompson                | 12/20/2012 6:13:32 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 12/13/2012 3:02:30 PM Eastern Standard Time  
 I believe I found an issue when analyzing culverts, LRFR Analysis, with Legal Trucks. The LL Factor is 2.0 as recently adopted by SCOBS in 2012. But we missed the part that the 1.2 multi presence factor should not be included with the 2.0 LL Factor.

I noticed this in the detailed output, that the multi-presence factor of 1.2 is included -

Complete Issue Information

Vehicles:

-----

SD Type 3S2 - Truck

Description: SD Type 3S2 truck for posting

Classification: Legal

| Axle | Minimum Spacing (Feet) | Maximum Spacing (Feet) | Current Spacing (Feet) | Load (Kips) |
|------|------------------------|------------------------|------------------------|-------------|
|------|------------------------|------------------------|------------------------|-------------|

|   |      |      |      |      |
|---|------|------|------|------|
| 1 | 0.0  | 0.0  | 0.0  | 12.0 |
| 2 | 11.0 | 11.0 | 11.0 | 17.0 |
| 3 | 4.0  | 4.0  | 4.0  | 17.0 |
| 4 | 22.0 | 22.0 | 22.0 | 17.0 |
| 5 | 4.0  | 4.0  | 4.0  | 17.0 |

GVW: 80.0 (Kips)

CG: 22.100 (Feet)

Vehicle Load Pattern: SD Type 3S2 - Truck by Thru Fill with Fill Depth: 8.0 (ft), Impact factor: 0.0% (Includes multiple presence factor: 1.20)

Number of Uniform Loads: 3

| Load | Start Distance (Feet) | End Distance (Feet) | Uniform Load (KipsPerSquareFeet) |
|------|-----------------------|---------------------|----------------------------------|
|------|-----------------------|---------------------|----------------------------------|

|    |         |         |        |
|----|---------|---------|--------|
| 1  | 0.0000  | 8.8333  | 0.1041 |
| 2  | 11.0000 | 23.8333 | 0.2029 |
| 3  | 37.0000 | 49.8333 | 0.2029 |
| CG | 26.5167 |         |        |

We need to confirm that the multi-presence factor should be removed for Legal Loads.

We also need to review the Permit Loads and if the appropriate LL Factors and MP 1.2 is being applied (or not being applied) correctly.

FROM: Todd Thompson DATE: 12/13/2012 4:40:18 PM Eastern Standard Time For Permit Loads - currently it appears that the MP factor of 1.2 is being used when it should not be after checking various cases.

Still checking if the Live Load Factors are correct for Permit Loads, but at first glance - appears that the Routine/Annual/Unlimited permits are using the wrong factors - but I'm still checking or confirming that. The new spec states that the Multiple trip load factors given in this table (6A.4.5.4.2a-1) would be appropriate for routine permits. Do NOT use routine permit load factors from this table as they have specially calibrated for two lanes loaded conditons.

FROM: Wayne Skow DATE: 12/17/2012 9:34:25 AM Eastern Standard Time The spec states in 6A.5.12.10.3 that legal and permit loads should not use a multiple presence factor. I changed box culvert to use MPF = 1.0 for legal and permit loads.

Complete Issue Information

Fixed in v6.4.1.

FROM: Todd Thompson DATE: 12/18/2012 11:12:02 AM Eastern Standard Time  
Was the wrong Load Factors for Routine Permit Loads also fixed for 6.4.1?

FROM: Wayne Skow DATE: 12/18/2012 12:53:12 PM Eastern Standard Time  
What did you find wrong? Legal LL factor is 2.0. Permit LL factor is taken from table 6A.4.5.4.2a-1 for single trip special or limited crossing. I checked the program and it is working accordingly.

FROM: Srujana Thogaru DATE: 12/18/2012 2:31:46 PM Eastern Standard Time  
Legal Load MPF is taken as 1.0. Verified in Virtis 6.4.1 Beta 3.

FROM: Todd Thompson DATE: 12/19/2012 9:47:06 AM Eastern Standard Time  
Beta 3

I used a 170K Permit Load with ADTT left blank (unknown value)  
When I choose an Unlimited Crossing permit – I'm getting LL Factor of 1.3 - which appears to come from the Do Not Use section.

Single Trip Mixed –LL Factor of 1.5 – Which is correct  
Single Trip Escorted – LL Factor of 1.15 – Which is correct  
Multi-Trips – LL Factor of 1.85 – Which is correct

I was expecting the Unlimited Crossing to also use the MultiTrips and use LL Factor of 1.85 and not the 1.3 from the Do Not Use Section.

As best as I can tell – the Multi Presence Factor is 1.0 for all the Permit Loads now. Thanks for that fix.

Maybe you can review the Unlimited Crossing LL Factors again? I'll make the update in VI

From: Skow, Wayne [mailto:WSkow@mbakercorp.com]  
Sent: Wednesday, December 19, 2012 6:38 AM  
To: Thompson, Todd  
Subject: RE: issue 12104

Here's how we think spec article 6A.5.12.10.3 should be interpreted for permit vehicles. This is how it currently works:

\*Image unavailable\*

FROM: Herman Lee DATE: 12/19/2012 9:48:02 AM Eastern Standard Time  
We agree with your interpretations. We are fixing it now and will send you an updated Beta 3 DLL to fix this issue. Thanks.

FROM: Herman Lee DATE: 12/19/2012 1:49:23 PM Eastern Standard Time  
Wayne Skow verified the fix with the updated Beta 3 DLL.

FROM: Herman Lee DATE: 12/19/2012 3:27:46 PM Eastern Standard Time  
Updated Beta 3 BoxCulvertApp.dll sent to Todd for verification.

4/19/2016 3:09:34 PM

HRS AASHTO

2304

Complete Issue Information

FROM: Todd Thompson DATE: 12/19/2012 4:17:36 PM Eastern Standard Time  
LL Factors for Permit Loads are working correctly with unlimited crossings.

I'll double check to make sure nothing else got broke along the way.

FROM: Todd Thompson DATE: 12/20/2012 1:13:32 PM Eastern Standard Time  
I tried to test all the possible combinations and things look correct now with the patch supplied after Beta 3 was released.

|                                     |
|-------------------------------------|
| Issue ID: 12105                     |
| Subject: LFD Effective Flange Width |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Zhang, Bin           |                       |
| Submitted By: Litchfield, Phil        | 12/14/2012 4:51:07 PM |
| Modified By: bzhang                   | 12/27/2012 8:22:37 PM |
| Priority: High                        |                       |
| Category: Support                     |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Zhang, Bin      | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 016-0700.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

4/19/2016 3:09:34 PM

HRS AASHTO

2305

Complete Issue Information

FROM: Phil Litchfield DATE: 12/14/2012 11:56:03 AM Eastern Standard Time  
When using the "Compute from Typical Section" button, we're getting an answer that we don't agree with. Is there somewhere that you can view the calcs. for this?

FROM: Herman Lee DATE: 12/14/2012 2:28:09 PM Eastern Standard Time  
Ben, please do a hand calculation for the computed LFD effective flange width. Thanks.

FROM: Bin Zhang DATE: 12/14/2012 2:40:54 PM Eastern Standard Time  
AASHTOWare does not provide the details calculation to the user regarding the effective flange width calculation. I manually checked the calculations for the interior and exterior girders of Span1 superstructure, they all look good.

Please note that "The web thickness is now included in the std. eff. flange width for PS I beams with Narrow top flanges. It is not included for PS Box beams, steel beams or PS I beams with Wide Top flanges (Article 9.8.3 is followed for Wide Top Flanges)". Please read incident #4946 in the VI for details. Please let me know if this does not answer your question.

Issue ID: 12106  
Subject: RC T-Beam Shear rating factor is zero

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Withers, Richard 12/18/2012 3:40:47 PM  
Modified By: ssalata 4/25/2013 5:37:56 PM  
Priority: High  
Category: Bug

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description                 |
|------|------------------------------------|-----------------------------|
|      | NSGTruck_InListWithOtherTrucks.PNG | Non Standard gage Error.png |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Withers DATE: 12/18/2012 10:55:34 AM Eastern Standard Time

When rating this reinforced concrete t-beam bridge using the AASHTO LFR engine, the shear capacity is zero at the end of the span (location = 0.0 and 25.4167). There is a vertical shear steel stirrup located at these locations. AASHTO LRFR engine does not have this issue. This issue also happens when rating other RC t-beam bridges we have model in VIRTIS.

I have attached the bridge.

Thanks,  
Richard

FROM: Richard Withers DATE: 1/4/2013 2:46:46 PM Eastern Standard Time

This is still an issue in 6.4.1. Has there been any resolution?

Thanks,  
Richard

FROM: Srujana Thogaru DATE: 1/10/2013 11:48:22 AM Eastern Standard Time

Yes, above mentioned issue has not been resolved for 6.4.1.

One of the reasons of the above issue is may be due to insufficient reinforcement in the cross-section defined. This error also exists in LRFR analysis.

To reproduce this error in LRFR analysis uncheck Ignore design & legal load shear and Ignore permit load shear under LRFR control options, then run the analysis.

Code has been corrected to handle such kind of errors. This fix will be available for 6.5 release.

FROM: Steve Salata DATE: 4/25/2013 10:04:31 AM Eastern Daylight Time

For LFR analysis the shear capacity at locations 0.0 and 25.4167 is greater than zero.

4/19/2016 3:09:35 PM

HRS AASHTO

2307

Complete Issue Information

|                                           |
|-------------------------------------------|
| Issue ID: 12113                           |
| Subject: NSG Trucks show up in wrong list |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Trees, Geoffrey      |                       |
| Submitted By: Thompson, Todd          | 12/19/2012 6:41:54 PM |
| Modified By: tthompson                | 5/31/2013 12:39:22 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Trees, Geoffrey | Assigned           | High     | Unknown  |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
| Lee, Herman     |                    |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | b001018.dat         |             |
|      | b001011.dat         |             |
|      | b001063.dat         |             |
|      | b001050.dat         |             |
|      | BRASS-Vehicles.BLV  |             |
|      | b001016.dat         |             |
|      | b001031.dat         |             |
|      | b001010.dat         |             |
|      | b001012.dat         |             |
|      | BRASS-Sections.BLS  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Complete Issue Information

Description

FROM: Todd Thompson DATE: 12/19/2012 1:43:29 PM Eastern Standard Time

I noticed today -  
using 6.4.1 Beta 3

I have two NSG Trucks in my library but when I pull up a LF Analysis and doing a line girder - that the two NSG trucks show up along with all the other Agency "Normal" trucks.  
And if you pic one of those NSG trucks - it does crash the analysis.

I'm wondering why the NSG trucks don't show up under the NSG Vehicles anymore?

FROM: Geoffrey Trees DATE: 2/27/2013 1:35:41 PM Eastern Standard Time

Resolved for 65.

FROM: Subhadeep Ghosh DATE: 4/24/2013 6:32:41 PM Eastern Daylight Time

The NSG vehicles does not appear for Analysis Type: Line Girder but I found that they appear for other Analysis Types. Hence resubmitting.

I checked in debug and 6.5 Beta 1:

For Analysis Type: 3D FEM and Superstructure Definition the NSG vehicles appear under Vehicles:  
Standard: Agency. Attached is the screen shot for 3D FEM

For Analysis Type: Distribution Factor-Line Girder and 3D FEM - Vehicle Path NSG appears under  
Non-Standard Gage Vehicles: Agency which is right.

FROM: Geoffrey Trees DATE: 4/25/2013 11:15:09 AM Eastern Daylight Time

Other cases are resolved

FROM: Subhadeep Ghosh DATE: 4/25/2013 3:44:27 PM Eastern Daylight Time

Verified for 6.5 Beta 1.

FROM: Todd Thompson DATE: 5/31/2013 8:39:22 AM Eastern Daylight Time

Appears to be fixed in my review of Beta 2 - 6.5.0

5/31/2013

Issue ID: 12118

Subject: Issue with importing multiple BRASS data files

Folder: /Virtis/Support Center/Virtis

Primary Contact: Lee, Herman

Submitted By: Teal, Dean

12/24/2012 1:34:54 AM

Modified By: hlee

4/19/2013 8:23:47 PM

Priority: High

Category: Unknown

4/19/2016 3:09:35 PM

HRS AASHTO

2309



Complete Issue Information

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Bhanushali, Girish |          |          |          |
| Lee, Herman        | Resolved |          |          |
| Bhanushali, Girish |          |          | Bug      |
|                    | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/23/2012 8:35:24 PM Eastern Standard Time  
Submitted on behalf of Dean Teal, Kansas DOT.

=====

Using BRASS Import on my XP 32 bit production PC to import into Virtis 6.4.0

If I have a group of brass data files I need to import it will always skip a structure. When a group is selected it will always import the last file first, skip the first file and then import the rest of the files in the list. Every time I have to go back and import the first file by itself.

=====

Geoff, sample BRASS data files for reproducing the problem are available in G:\PROJ\VIRTIS\LONGTERM\Verification\BRASS files.

FROM: Geoffrey Trees DATE: 2/27/2013 3:33:43 PM Eastern Standard Time  
Dean, I began investigating this and I have a few questions. I am not able to exactly reproduce what you said above but I want to investigate this further.

- Do you select each file individually while holding down the Ctrl key?
- Does this occur all the time?
- Do you select all the files in the folder and does this occur if you select all of the files?
- Do all the files appear in same order you selected the files in the Filename text box?
- Does this occur if you select files with the mouse selection box? (Holding down the left button and

4/19/2016 3:09:35 PM

HRS AASHTO

2310

Complete Issue Information

dragging the mouse will allow you to select all the files inside the box).

-- Would you be able to provide me with the files this is happening to?

Thanks,  
Geoff

FROM: Dean Teal DATE: 3/1/2013 7:34:47 AM Eastern Standard Time

Note – I am using XP and it acts this way everytime I import a batch of file. I have not tried this on windows 7.

-- Do you select each file individually while holding down the Ctrl key?

Yes

-- Does this occur all the time?

Yes, as long as I'm doing a group of files

-- Do you select all the files in the folder and does this occur if you select all of the files?

No, I am do not usually select all files in the folders but I have at times selected all files in the folder

-- Do all the files appear in same order you selected the files in the Filename text box?

Don't know, didn't pay any attention to it

-- Does this occur if you select files with the mouse selection box? (Holding down the left button and dragging the mouse will allow you to select all the files inside the box).

I don't follow what you just said?????

I usually select files from a folder that contains a lot of files by using the mouse and the ctrl key

Note: Attached brass .dat files

Each file contains both WSD and LFD

Each file will generate and 2 errors for an "include file", simply ignore the error, the include file does not effect the imported file.

I had to also attached the BRASS-Sections and BRASS-Vehicles files so can import our files

Before selecting files to import, sort them by file name

FROM: Geoffrey Trees DATE: 3/28/2013 11:23:44 AM Eastern Daylight Time

Dean,

For this issue we do see the files being imported out of order. For some reason the Windows open file dialog opens files this way. It is not just with this BRASS Import utility but other products that can open multiple files at a time do this as well. We are not sure why this is.

Regarding the import itself, we tested it and all of the files we selected were imported successfully. I am going to reassign this to Herman. He mentioned that he will see you at an upcoming meeting so perhaps it would be good to show him in person since we can't reproduce it with your dat files.

FROM: Herman Lee DATE: 4/19/2013 4:10:57 PM Eastern Daylight Time

We tried using the Brass Import utility opened from within Virtis and also the standalone Brass Import utility. All the selected files were imported into Virtis. We are not able to reproduce the "skip a structure" problem when importing a group of Brass data files.

---

4/19/2016 3:09:35 PM

HRS AASHTO

2311

### Complete Issue Information

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 12120                                                                     |
| Subject: Truss - Single Angle Built up section should not allow connection command. |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Bhanushali, Girish   |                       |
| Submitted By: Bhanushali, Girish      | 12/28/2012 3:43:27 PM |
| Modified By: sghosh                   | 4/25/2013 1:47:36 PM  |
| Priority: High                        |                       |
| Category: Bug                         |                       |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
| Lee, Herman      |          |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Girish Bhanushali DATE: 12/28/2012 10:44:14 AM Eastern Standard Time  
Help indicates not to enter the connection command for single angle while code allows it.  
This bug was discovered during the resolution of VI#11861.  
Incident was originated as a side effect of fix that was applied for VI# 11861 on 10/11/2012 (as a part of VI#11903).

FROM: Girish Bhanushali DATE: 12/28/2012 11:39:50 AM Eastern Standard Time  
This is fixed for next release.  
Help is updated and checked in.

4/19/2016 3:09:35 PM

HRS AASHTO

2312

Complete Issue Information

FROM: Herman Lee DATE: 12/28/2012 12:54:58 PM Eastern Standard Time  
Resolved for 6.5 release.

FROM: Subhadeep Ghosh DATE: 4/25/2013 9:31:26 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                          |
|------------------------------------------|
| Issue ID: 12121                          |
| Subject: Culvert LL DF w/LFR - See 12065 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Kemna, Aaron            | 12/28/2012 4:33:30 PM |
| Modified By: hlee                     | 5/17/2013 8:41:00 PM  |
| Priority: High                        |                       |
| Category: Unknown                     |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 12/28/2012 11:35:26 AM Eastern Standard Time  
I think there may be some problems with the live load calculated for LFR culverts. The dead load

4/19/2016 3:09:35 PM

HRS AASHTO

2313

Complete Issue Information

calculations appear to be correct so I am assuming it has to do with the distribution of the live load. I looked over 12065 and I disagree with the conclusions. Here is how I understand the distribution of live loads to culverts.

Fill less than 2'

Distribute loads like slab. Distribute wheel line loading across E in transverse direction. No distribution in longitudinal direction.

Fill greater than 2'

Use patch loading equal to 1.75h unless the loading is larger than that produced by 1/E. In that case the smaller load should be used. Live Loading through fill should not create live loads larger than that produced from concentrated loads.

12065 mentions a patch loading of E^2 which I cannot find in the code. Plus, a patch loading is considered for fills less than 2' with the greater effect being used. A 1' fill depth would produce a 1.75' by 1.75' patch load which would easily control. A patch loading should not be considered for fills less than 2'.

For the culvert I was looking at, I was getting similar loads at midspan of top slab, but the load over the walls was smaller than I get using BRASS Culvert. I would like to make sure that the distribution of loads is being done correctly before I look any further into the differences.

FROM: Aaron Kemna DATE: 5/16/2013 4:30:18 PM Eastern Daylight Time

While beta testing I looked at this issue again. The live load distribution for culverts (LFR) is incorrect according to the method of solution I am looking at. It is incorrect to distribute the load over E^2 for fills less than two feet. It is also incorrect to apply a distributed patch load (1.75h^2) for fills under 2'. For fills over 2' the same loading calculated for fills under 2' should be compared to the patch loading and the lesser of the two loads should be applied. The logic is simple. For small fills, culverts are designed like slabs. When the fill gets over two feet the designer can take advantage of the fill, but in no case should a culvert with higher fill have larger live loads than a culvert with a smaller fill height. I lay out the appropriate distribution above. I would like to see this fixed for this upcoming version. Note this contradicts Incident 12065.

Issue ID: 12122  
Subject: LFR DF Error for Girder under Median

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Kennelly, Krisha  
Submitted By: Kemna, Aaron 12/28/2012 9:26:03 PM  
Modified By: akemna 6/5/2013 6:49:52 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:36 PM

HRS AASHTO

2314

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
| Lee, Herman      | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      |         |
| Lee, Herman      | New      | High | Unknown |
| Skow, Wayne      | Assigned |      | Support |
|                  | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 01190 - 13091.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Aaron Kemna DATE: 12/28/2012 4:31:12 PM Eastern Standard Time

I have a bridge where the Shear at Supports ML DF is too big. Value should be 1.22, but if you use the calculate button you get 2.64. The girder is G5 and is located underneath a median. I am attaching the bridge.

FROM: Krisha Kennelly DATE: 1/11/2013 11:15:08 AM Eastern Standard Time

This bug was already resolved for version 6.4. I've attached a screenshot of the distribution factors computed in 6.4. Version 6.4.1 also computes the same values.

FROM: Aaron Kemna DATE: 6/5/2013 2:49:52 PM Eastern Daylight Time

Checked 6.5 Beta and it is working fine. Accepted.

Issue ID: 12124

Subject: Significant difference in RF for continuous steel rolled shape between AASHTO LFD

4/19/2016 3:09:36 PM

HRS AASHTO

2315

Complete Issue Information

and VIRTIS LFD

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Withers, Richard        | 1/2/2013 9:41:42 PM  |
| Modified By: wskow                    | 1/10/2013 6:40:51 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Mlynarski, Mark  | Assigned | High     | Unknown  |
| Thogaru, Srujana |          |          | Bug      |
|                  |          | Critical |          |
|                  | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 28809d.xml                  |             |
|      | rating_results.docx         |             |
|      | spec_check_screen_shot.docx |             |
|      | spec_check_calcs.docx       |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Richard Withers DATE: 1/2/2013 4:46:18 PM Eastern Standard Time  
 When load rating the attached bridge using the VIRTIS LFD engine in VIRTIS 6.2, the HS-20 Axle load inventory rating factor is 0.5 and the operating is 0.84. The same analysis using the AASHTO LFD engine in VIRTIS 6.4.1 yields 0.23 and 0.387. Members 2 and 3 in superstructure definition Spans #1-7

4/19/2016 3:09:36 PM

HRS AASHTO

2316

Complete Issue Information

control. The limit state is negative flexure at 0% of span 2. The DL and LL moments are each less than 2% different between the versions. However, the LL moment capacity is 33% lower in version 6.4.1. What is causing this significant difference?

The export of the bridge is from version 6.2.

Thanks,  
Richard Withers

FROM: Wayne Skow DATE: 1/9/2013 10:17:51 AM Eastern Standard Time  
The difference is due to different Mu's. At support 2, Aashto is using an Mu of 257 where Virtis is using 314.7 for lane load and 257 vs 386 for truck load. Since the unbraced length of the compression flange is 360", Mu from 10.48.4.1 controls in 10.48.2. The transition article, 10.48.3, is using the full value from 10.48.2 (Mu of 256.88) since 360" unbraced length doesn't fall between the interpolation limits of 150.854" (for 10.48.1) and 111.792" (for 10.48.2).

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 12128                                                     |
| Subject: Ignore longitudinal reinforcement in rating control option |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Silvis, Bryan           | 1/7/2013 7:18:49 PM  |
| Modified By: bsilvis                  | 7/26/2013 5:57:17 PM |
| Priority: Critical                    |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 1/7/2013 2:19:14 PM Eastern Standard Time  
Submitted on behalf of Bryan Silvis, VDOT.

4/19/2016 3:09:36 PM

HRS AASHTO

2317



Complete Issue Information

Received Bridgeware e-mail:

=====

I looked this over and looks like a bug unless I am missing something.

Bryan

Bryan J. Silvis, P.E.  
Virginia Department of Transportation  
Structure and Bridge Division - Engineering Services

---

From: Shepard, Bruce (VDOT)  
Sent: Monday, January 07, 2013 9:37 AM  
To: Silvis, Bryan J., P.E. (VDOT)  
Subject: Virtis question for Baker

As we discussed.....

My question has to do with the effect of the LRFR Control Options box for "Ignore long. Reinf. in rating".

The subject bridge is a single span, prestressed voided slab with a composite concrete deck overlay.

In the attached xml, the box is NOT checked.

Here is the spec check screen shot. Note the red failed X for 6A.5.9

Now look at the yellow highlighted section on page 2 of the spec check calcs in the file below.

Based on the yellow highlighted section above, I would expect to see a rating factor of less than 1 for the HL-93 in the rating results screen shot (see below). But the RF's for all vehicles (except the NRL) are all greater than 1. So why does the spec calcs indicate that something fails for HL-93, yet the rating results don't seem to reflect that?

Also, the rating results for having this Control Options box checked are identical when this box is NOT checked. The only difference seems to be that Spec Reference 6A.5.9 shows up when the box is NOT checked. But 6A.5.9 seems to simply invoke 5.8.3.5, which is already being done whether the box is checked or not. So what is the difference in the program operation/results between having the box checked and not having it checked?

Bruce Shepard, PE  
Structural Engineer Section Manager  
VDOT - Structure & Bridge Division  
bruce.shepard@vdot.virginia.gov

=====

FROM: Mark Mlynarski DATE: 1/10/2013 1:39:05 PM Eastern Standard Time  
The value in the article is being calculated but does not appear to be critical results.  
Srujana, can you look at this to and implement the 'save\_critical\_results' similar to the other specifications that calculation rating factors.

4/19/2016 3:09:36 PM

HRS AASHTO

2318

Complete Issue Information

FROM: Srujana Thogaru DATE: 1/24/2013 9:16:10 AM Eastern Standard Time  
Reason for values not appearing in critical results is due to improper saving of critical results table in abanspec rating article. This critical results table is not included in the filter for determining the minimum rating factor. Code corrected in abaSpecctrl and abxaashtoengine.  
All the related spec versions (LRFD 5th and 4Th, MBE 1st and 2nd) are corrected to save proper critical results in abanspec.

Fixed for 6.5 release (for internal testing fixed for 6.5 alpha build 1).

FROM: Subhadeep Ghosh DATE: 4/25/2013 9:52:14 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 12130                                                      |
| Subject: Ignore shear control option for the AASHTO Steel LFR engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Hasan, Mac              | 1/10/2013 2:52:11 PM |
| Modified By: hlee                     | 5/16/2014 7:56:25 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 1/10/2013 9:52:38 AM Eastern Standard Time  
Submitted on behalf of John Gregory, Colorado DOT.

4/19/2016 3:09:36 PM

HRS AASHTO

2319

Complete Issue Information

Part of the Bridgeware e-mail received on 1/3/2013:

=====  
First, we really need a way to ignore shear for an LFD/LFR analysis on a Steel girder bridge for batch processing. On a individual rating we can look into the output and the engineer can easily ignore or not let shear control. However when batch processing for a permit route that adds time and our permit writers are not engineers so we can't put that responsibility on them. We would like to request an ignore shear toggle for the AASHTO Steel engine.  
=====

FROM: Herman Lee DATE: 5/16/2014 3:55:50 PM Eastern Daylight Time  
Ignore shear control option for the AASHTO Steel LFR engine implemented for 6.6 release.

Issue ID: 12150  
Subject: Missing description for "AASHTO Std Superstructure Method Of Solution Manual"  
when MCEB Article 6.7.2.2 is used

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: Huang, George 1/21/2013 9:47:30 PM  
Modified By: hlee 2/4/2013 7:35:28 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Unknown        |
| Zhang, Bin      | Assigned |          | Bug<br>Unknown |

4/19/2016 3:09:37 PM

HRS AASHTO

2320

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 12157_workaround.png |             |
|      | 00030 - 070005.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 1/21/2013 4:50:52 PM Eastern Standard Time

I submitted this incident on behalf of George Huang from CalTran.

Missing description for "AASHTO Std Superstructure Method Of Solution Manual" when AASHTO Manual for Condition Evaluation of Bridges Article 6.7.2.2 is used. The comments / questions from CalTran was listed below:

\*\*\*\*\*  
\*\*\*\*\*

1) Missing description of live load placement for road way between 9 and 10 feet, or 18 to 20 feet when AASHTO Manual for Condition Evaluation of Bridges Article 6.7.2.2 is used.

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 1/21/2013 4:54:23 PM Eastern Standard Time

When using AASHTO Standard Specifications for Highway Bridges, Article 3.6.3:

Roadway widths from 20 to 24 feet have two design lanes, each equal to one half the roadway width.

When using AASHTO Manual for Condition Evaluation of Bridges, Article 6.7.2.2

Roadway widths from 18 to 24 feet have two design lanes, each equal to one half the roadway width.

The statement above showed the only difference between 3.6.3 and 6.7.2.2.

For both 3.6.3 and 6.7.2.2, the design lane number is 1 for road way between 9 and 10 feet.

For 3.6.3, the design lane number is 1 for road way between 18 and 20 feet.

For 6.7.2.2, the design lane number is 2 for road way between 18 and 20 feet.

FROM: George Huang DATE: 1/25/2013 6:16:26 PM Eastern Standard Time

The one important issue for narrow road way is the width of live load and the edge distance. I'm assuming 9 feet wide live lane load will be used for road way between 9 and 10, and 18 and 20. For the truck wheel line, wheel spacing is still 6 feet, the edge distance will be 1.5 feet (instead of 2 feet), and the wheel spacing between adjacent trucks will be 3 feet (instead of 4 feet).

FROM: Bin Zhang DATE: 1/31/2013 2:55:31 PM Eastern Standard Time

In fact, if the user defined road way is between 9 and 10 feet or 18 and 20, Virtis will still place the traffic loads in a 12 feet wide traffic lanes, wheel spacing is 6 feet, the edge distance is 2 feet, and the wheel spacing between adjacent trucks is 4 feet.

4/19/2016 3:09:37 PM

HRS AASHTO

2321

Complete Issue Information

In my opinion, this rule is kind of conservative for the narrow road way bridge. Please read article 3.6 traffic lanes in "AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002" for details.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 12157                                                                 |
| Subject: Virtis showed zero shear capacity beyond the hinge for the RC Tee beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Huang, George           | 1/29/2013 2:23:21 PM |
| Modified By: sghosh                   | 4/25/2013 3:22:19 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 1/29/2013 9:23:30 AM Eastern Standard Time

I submitted this incident on behalf of George Huang from CalTran.

Virtis showed zero shear capacity beyond the hinge for the RC Tee beam. The communication email was listed below.

\*\*\*\*\*  
 \*\*\*\*\*

4/19/2016 3:09:37 PM

HRS AASHTO

2322

Complete Issue Information

From: George Huang [mailto:george.huang@dot.ca.gov]  
Sent: Friday, January 25, 2013 4:57 PM  
To: Lee, Herman  
Cc: Murugesu Vinayagamoorthy  
Subject: Fw: Shear Capacity at the centerline of Hinge - Br#07 0005

Hi Herman,

Virtis give zero shear capacity at the hinge location (center line to 0.5ft beyond) for RC T-beam bridge. Since the hinge is at 0.2 point, and Virtis gives 0.0 rating. In this case we can use defined point of interest to skip 0.2 point. This case will be resolved in V6.5 where user can specify member capacity. However since the Virtis also give zero capacity beyond hinge, which may need to be modified.

I am wondering if Virtis calculate the ratings at hinge location for steel girder bridge?

Thanks,

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Office: (916) 227-8769  
Cell: (916) 802-0949  
Fax: (916) 227-8357

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 01/24/2013 01:10 PM -----  
Devinder Sandhu/HQ/Caltrans/CAGov  
01/24/2013 12:48 PM  
To  
George Huang/HQ/Caltrans/CAGov@DOT

cc

Subject  
Shear Capacity at the centerline of Hinge - Br#07 0005

The bridge is 6-Span continuous with hinge at 2/10 point in Span 4 (6-ft from centerline of Bent 4). VIRTIS checks the shear capacity at the 2/10 point of Span 4, which is the centerline of the hinge and calculates it to be 0, therefore the RF=0. Adding additional reinforcement at this location does not help.

Capacity remains 0 when checked at every 2-inches past the centerline of hinge until at point 6.5-ft from centerline of Bent 4 (0.5-ft past the centerline of hinge). The shear capacity 2-inches before the centerline of hinge is calculated and is good.

Please see attached file.

(See attached file: 00030 - 070005.xml)

4/19/2016 3:09:37 PM

HRS AASHTO

2323

Complete Issue Information

Devinder Sandhu  
Bridge Load Rating and Analysis Branch  
Office of Structures Maintenance and Investigation  
(916)227-8035

\*\*\*\*\*  
\*\*\*\*\*

FROM: Bin Zhang DATE: 1/29/2013 9:28:07 AM Eastern Standard Time  
Please use AASHTO LFD engine, mem alt of G2 to reproduce this issue. There is a workaround for this incident. Please check the "Ignore shear" option for the POI, then the shear won't be in control any more for the rating. Both the bridge XML model and the workaround snapshot were attached in the document.

FROM: Wayne Skow DATE: 2/18/2013 2:06:27 PM Eastern Standard Time  
The problem was due to the zero moment at that point. A moment is needed to determine whether the top of bottom fiber is in compression. Since  $\mu = 0.0$  at the hinge, the program was using 0.0 as the distance to the extreme fiber. This produced a zero shear capacity. It now uses the minimum distance to either the top or bottom fiber from the centroid of the rebar. This may not be an optimum approach as illustrated by your bridge which now calculates a rating factor at the 96' location, but it is much less than 1.0 and much less than the next point over which has a moment and, therefore, a much larger De value.

Fixed in v6.5.

FROM: Subhadeep Ghosh DATE: 4/25/2013 10:49:35 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 12168<br>Subject: Traffic load placement for the narrow way bridges |
|-------------------------------------------------------------------------------|

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Huang, George           | 2/1/2013 7:03:26 PM  |
| Modified By: hlee                     | 3/4/2013 12:32:04 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:37 PM

HRS AASHTO

2324

Complete Issue Information

|             |          |      |             |
|-------------|----------|------|-------------|
| Lee, Herman | New      | High | Enhancement |
|             | Assigned |      |             |
| Lee, Herman | New      | High | Unknown     |
|             | Resolved |      | Support     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | BridgeRatingResults.png |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 2/1/2013 2:03:53 PM Eastern Standard Time  
 I submitted this enhancement request on behalf of George Huang from CalTran. The communication email was listed below:

\*\*\*\*\*

Ben,

Maybe I should say ". I think it should may be revised"

In the floor beam analysis, the 4 feet wheel spacing between two trucks will produce lower moment than 3 feet wheel spacing. Actually I don't have too much concern, since it's unlikely to having 3 feet spacing in real live for heavy trucks with normal speed. The wheel load could also be place on, or beyond the edge of road way with current method in Virtis. This will create more shear on the floor beam, and more live load on truss, which need to be avoided for bridges with low ratings.

Thanks,

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance  
 MS 9 - 1/9I  
 Office: (916) 227-8769  
 Cell: (916) 802-0949  
 Fax: (916) 227-8357

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 02/01/2013 07:41 AM -----  
 George Huang/HQ/Caltrans/CAGov

4/19/2016 3:09:37 PM

HRS AASHTO

2325



Complete Issue Information

02/01/2013 07:36 AM

To

"Zhang, Bin" <Bin.Zhang@mbakercorp.com>

cc

"Lee, Herman" <HLee@mbakercorp.com>

Subject

RE: Some Questions for Narrow Bridge and Virtis 3D Analysis

Ben,

It seems to me the method Virtis using for narrow bridge is very questionable. I think it should be revised.

Thanks,

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/91  
Office: (916) 227-8769  
Cell: (916) 802-0949  
Fax: (916) 227-8357  
"Zhang, Bin" <Bin.Zhang@mbakercorp.com>

"Zhang, Bin" <Bin.Zhang@mbakercorp.com>  
02/01/2013 06:18 AM  
To  
George Huang <george.huang@dot.ca.gov>

cc

"Lee, Herman" <HLee@mbakercorp.com>

Subject

RE: Some Questions for Narrow Bridge and Virtis 3D Analysis

George,

4/19/2016 3:09:37 PM

HRS AASHTO

2326

Complete Issue Information

This situation is kind of tricky.

For example, when the user defined road way is 9 feet wide, Virtis will set the road way to be 12 feet to produce the maximum stress in the member under consideration. In other words, Virtis consider the situation when some of the truck wheels are beyond/off the 9 feet road way.

Please feel free to let me know if you still have questions about this. This is really a very good question.

Thanks!  
Ben

From: George Huang [mailto:george.huang@dot.ca.gov]  
Sent: Thursday, January 31, 2013 6:39 PM  
To: Zhang, Bin  
Cc: Lee, Herman  
Subject: RE: Some Questions for Narrow Bridge and Virtis 3D Analysis

Ben,

Here is my respond to your comments of Question 1:

In fact, if the user defined road way is between 9 and 10 feet or 18 and 20, Virtis will still place the traffic loads in a 12 feet wide traffic lanes, wheel spacing is 6 feet, the edge distance is 2 feet, and the wheel spacing between adjacent trucks is 4 feet.

In my opinion, this rule is kind of conservative for the narrow road way bridge. Please read article 3.6 traffic lanes in "AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002" for details. Above live load dimensions won't work for narrow bridge:

one live load lane: 2 feet (edge) + 6 feet (vehicle)+ 2 feet (edge) = 10 feet > 9 feet.

two live load lanes: 2 feet +6 feet + 4 feet( spacing between truck)+ 6 feet (vehicle) + 2 feet = 20 > 18 feet.

Thanks,

George Huang  
Senior Bridge Engineer  
Bridge Rating and Analysis Branch  
Division of Structures Maintenance  
MS 9 - 1/9I  
Office: (916) 227-8769  
Cell: (916) 802-0949  
Fax: (916) 227-8357

\*\*\*\*\*

Q : Missing description of live load placement for road way between 9 and 10 feet, or 18 to 20 feet when AASHTO Manual for Condition Evaluation of Bridges Article 6.7.2.2 is used.

A : When using AASHTO Standard Specifications for Highway Bridges, Article 3.6.3: Roadway widths from 20 to 24 feet have two design lanes, each equal to one half the roadway width.

When using AASHTO Manual for Condition Evaluation of Bridges, Article 6.7.2.2 Roadway widths from 18 to 24 feet have two design lanes, each equal to one half the roadway width.

4/19/2016 3:09:37 PM

HRS AASHTO

2327

Complete Issue Information

The statement above showed the only difference between 3.6.3 and 6.7.2.2.

For both 3.6.3 and 6.7.2.2, the design lane number is 1 for road way between 9 and 10 feet.

For 3.6.3, the design lane number is 1 for road way between 18 and 20 feet.

For 6.7.2.2, the design lane number is 2 for road way between 18 and 20 feet.

I created the incident #12150 on your behalf, the fix will be available for version 6.5.

Q : I add following comments to VI#12150:

The one important issue for narrow road way is the width of live load and the edge distance. I'm assuming 9 feet wide live lane load will be used for road way between 9 and 10, and 18 and 20. For the truck wheel line, wheel spacing is still 6 feet, the edge distance will be 1.5 feet (instead of 2 feet), and the wheel spacing between adjacent trucks will be 3 feet (instead of 4 feet).

A : In fact, if the user defined road way is between 9 and 10 feet or 18 and 20, Virtis will still place the traffic loads in a 12 feet wide traffic lanes, wheel spacing is 6 feet, the edge distance is 2 feet, and the wheel spacing between adjacent trucks is 4 feet.

In my opinion, this rule is kind of conservative for the narrow road way bridge. Please read article 3.6 traffic lanes in "AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002" for details.

\*\*\*\*\*

|                                       |
|---------------------------------------|
| Issue ID: 12174                       |
| Subject: Bridge Rating Results Report |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Teal, Dean              | 2/5/2013 4:01:15 PM |
| Modified By: dteal                    | 2/5/2013 8:34:54 PM |
| Priority: High                        |                     |
| Category: Support                     |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

4/19/2016 3:09:38 PM

HRS AASHTO

2328

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 2/5/2013 11:04:15 AM Eastern Standard Time

When rating (say 50 bridges) from the bridge explorer

When completed you can view the Bridge Rating Results Report

You can View, Print or save to a print file

Can this be sent to excel or word so the data can be used in in-house reports?

Can I only view it or print it?

FROM: Herman Lee DATE: 2/5/2013 2:55:37 PM Eastern Standard Time

Option 1: Copy and paste to Excel or Word.

a. Click on the first column in the first row and drag the mouse down to highlight all the rows (see attached BridgeRatingResults.png).

b. Hit Ctrl+C to copy all the rows and Ctrl+V to paste to Excel or Word.

Option 2: Print to PDF file and use Adobe Acrobat Save As function to Excel or Word.

FROM: Dean Teal DATE: 2/5/2013 3:34:54 PM Eastern Standard Time

Thanks

Sure would be nice to have the rt click for a menu to do that :)

|                                                   |
|---------------------------------------------------|
| Issue ID: 12177                                   |
| Subject: Timber Deck Rating Results - not working |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Thompson, Todd          | 2/6/2013 7:20:48 PM |
| Modified By: hlee                     | 2/7/2013 3:04:47 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

4/19/2016 3:09:38 PM

HRS AASHTO

2329

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | lane width reference.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 2/6/2013 2:23:25 PM Eastern Standard Time  
Using Virtis 6.4.1  
with SQL Server sample DB

I have a timber bridge - deck with stringers.

When I analyze it - I can see the rating results for the stringers but the deck rating is not being displayed and I'm getting an error message for each truck in the analysis.

I'll attach the screenshot I'm getting, along with the bridge XML

FROM: Todd Thompson DATE: 2/6/2013 2:25:17 PM Eastern Standard Time  
The Madero output files are available, along with the log file - everything looks ok with no errors.  
For some reason - the application is not being able to read and display those results.

FROM: Herman Lee DATE: 2/7/2013 9:43:07 AM Eastern Standard Time  
Todd, this issue is a duplicate of Incident 11149. We believe the problem is within the Madero engine since an older version of Madero doesn't have this problem. BridgeTech is in the process of providing us a stripped down version of the Madero engine for us to pinpoint the cause. Before this is fixed, users have to retrieve the rating results at the end of the Madero output text file.

4/19/2016 3:09:38 PM

HRS AASHTO

2330

Complete Issue Information

|                                                            |
|------------------------------------------------------------|
| Issue ID: 12178                                            |
| Subject: Change rating DF reference to MBE instead of MCEB |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ghosh, Subhadeep     |                      |
| Submitted By: Kennelly, Krisha        | 2/7/2013 8:41:35 PM  |
| Modified By: sghosh                   | 4/25/2013 9:39:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Duplicate          |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Virtis_Library-fixed.xml |             |
|      | OH_Culvert_Example1.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 2/7/2013 3:42:03 PM Eastern Standard Time  
 See attached screenshot for the Preferences window.

The MCEB is not supported by the AASHTO engines and is no longer an active publication by AASHTO.

This reference should be changed to 'AASHTO Manual for Bridge Evaluation Article 6B.6.2.2'.

4/19/2016 3:09:38 PM

HRS AASHTO

2331

Complete Issue Information

FROM: Subhadeep Ghosh DATE: 2/11/2013 10:20:54 AM Eastern Standard Time  
Preference window text was modified as indicated above.

FROM: Subhadeep Ghosh DATE: 4/25/2013 5:37:00 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 12180                                             |
| Subject: Culvert rating runs in LFR but gives error in LRFR |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Waheed, Amjad           | 2/8/2013 7:58:23 PM  |
| Modified By: hlee                     | 2/13/2013 1:54:18 AM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 2/8/2013 3:03:08 PM Eastern Standard Time  
Attached culvert file runs in LFR but crashes in LRFR. XML files of data and library are attached.

4/19/2016 3:09:38 PM

HRS AASHTO

2332

Complete Issue Information

FROM: Herman Lee DATE: 2/8/2013 3:28:40 PM Eastern Standard Time  
Amjad, we are not able to reproduce the crash. Please attach a screen capture of the error message.  
This may be related to Incident 12032.

FROM: Amjad Waheed DATE: 2/9/2013 10:25:10 AM Eastern Standard Time  
Yes, I get similar error screens as the ones attached to 12032 and we use Oracle DB. I have not tested  
it on the standalone machine yet.

FROM: Herman Lee DATE: 2/11/2013 7:59:09 AM Eastern Standard Time  
I emailed Amjad the package for fixing Incident 12032.

AASHTOWare Bridge Design and Rating 6.4.1 Update for Incident 12032 and 12141

FROM: Herman Lee DATE: 2/12/2013 8:52:04 PM Eastern Standard Time  
Email from Amjad on 2/11/2013:

=====  
Herman,  
  
This patch worked for us. Thank you.  
=====

Issue ID: 12182  
Subject: Incorrect Rating Factors for Built-Up Floorbeams with Thickness Loss

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Pichura, Mike 2/13/2013 6:19:46 PM  
Modified By: sghosh 4/25/2013 3:31:13 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:09:39 PM

HRS AASHTO

2333



Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
| Skow, Wayne | Assigned  |      |             |
|             | Resolved  |      |             |
| Lee, Herman | New       | High | Unknown     |
|             | Assigned  |      |             |
|             | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 02444 - 44144044000C020.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Mike Pichura DATE: 2/13/2013 1:26:32 PM Eastern Standard Time  
For the Truss Floorbeam Stringer Bridge, one of the floorbeams (FB3) had 90% thickness loss to the bottom flange angles from 0.00ft to 5.00ft from support 1. It produced 0.00 ratings. I then changed the thickness loss to 89%. The ratings dramatically improved. When the 90% loss is used, the program uses 0.00 kip-ft for Mu when calculating the rating factor instead of the correct value of 457.12 kip-ft.

FROM: Wayne Skow DATE: 2/19/2013 7:22:25 AM Eastern Standard Time  
When 90% is reached, article 10.48.4 fails due to inadequate member proportions. Since 10.48.4 is the last capacity article, ALFD\_17E\_General\_Stl\_Flexural\_Results reported a zero capacity. This is not proper behavior for LFR. I changed ALFD\_17E\_General\_Stl\_Flexural\_Results to use 10.48.4 even though it technically failed under LRD provisions. Now, the output shows 10.48.4 failing, but still using 10.48.4's capacity value allowing a non-zero rating factor.

Fixed in v6.5.

FROM: Subhadeep Ghosh DATE: 4/25/2013 11:27:43 AM Eastern Daylight Time  
Verified for 6.5 Beta 1

|                                       |
|---------------------------------------|
| Issue ID: 12202                       |
| Subject: Bottom Slabs of Box Culverts |

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

### Complete Issue Information

|                              |                      |
|------------------------------|----------------------|
| Primary Contact: Lee, Herman |                      |
| Submitted By: Wagner, Brad   | 2/20/2013 8:33:38 PM |
| Modified By: hlee            | 3/19/2013 2:09:47 PM |
| Priority: High               |                      |
| Category: Enhancement        |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Support  |
|                 | Assigned |          | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                             | Description |
|------|-----------------------------------------------------------------|-------------|
|      | 10.48.8 Shear Error - With Bearing stiffeners - 016-2565.txt    |             |
|      | 0162565 (Unit-1 Only).xml                                       |             |
|      | 10.48.8 Shear Error - With transverse stiffeners - 016-2565.txt |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 2/20/2013 3:41:52 PM Eastern Standard Time  
AASHTO LFD Section 16.7.4.3 includes provisions for a wider distribution of live loads for analysis of the bottom slab of a cast in place culvert as a function of the culvert height. It appears that Virtis is applying this provision for fill heights greater than 2'. However, it does not include the provision for fill

4/19/2016 3:09:39 PM

HRS AASHTO

2335

Complete Issue Information

heights less than 2'.

In my opinion, this should be incorporated. On a few cases that I've looked at, including the attached, the live load moment on the bottom slab of the culvert is almost the same as the top slab, which seems unrealistic.

For a fill height of 1.1' as attached, the strip width for the bottom slab should equal  $1.1' + 2 \times 10' = 21.1'$

FROM: Herman Lee DATE: 3/19/2013 8:18:10 AM Eastern Daylight Time  
AASHTO Culvert Engine only considers LFD 16.6.4.3 for fill depth greater than and equal to 2 feet. This is documented in the flowchart in the Method of Solution manual and reviewed by the TAG during Beta testing. We would need TF and TAG agreements to consider LFD 16.6.4.3 for fill depth less than 2 feet. Making this change will see less live load at the bottom slab for fill depth less than 2 feet.

|                                 |
|---------------------------------|
| Issue ID: 12203                 |
| Subject: LFD Bearing Stiffeners |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Litchfield, Phil        | 2/21/2013 5:06:28 PM |
| Modified By: pcampisi                 | 8/13/2013 3:36:10 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 2/21/2013 12:08:46 PM Eastern Standard Time  
From consultant (Shoup):

After defining bearing stiffeners, the rating was controlled by shear at the bearing with an inventory

4/19/2016 3:09:39 PM

HRS AASHTO

2336

Complete Issue Information

rating factor of 0.983. After further investigation in the spec check, I noticed in the 10.48.8 input that transversely stiffened = No. Once the bearing stiffeners were deleted and defined as transverse stiffeners, the rating increased to 1.127 with a different controlling point. Why are bearing stiffeners not being considered as a transverse stiffener? Also, the "Include Bearing Stiffeners in Rating" option was checked and I can't find anything in the spec check regarding the rating of the bearing stiffeners.

FROM: Herman Lee DATE: 2/21/2013 12:17:31 PM Eastern Standard Time  
The "Include bearing stiffeners in rating" control option is not supported by the AASHTO Engine.

FROM: Wayne Skow DATE: 3/27/2013 12:58:23 PM Eastern Daylight Time  
For modeling purposes, you can add a lateral stiffener to the girder at the same location (3" from support 1) and it'll treat it for shear as you are expecting. I tried it and didn't notice any problems even though the stiffeners are on top of each other.

FROM: Phil Litchfield DATE: 4/1/2013 10:29:25 AM Eastern Daylight Time  
So will the issue with the bearing stiffener not being considered as stiffening the section be corrected in the next version?

FROM: Wayne Skow DATE: 4/1/2013 1:21:54 PM Eastern Daylight Time  
Yes, in version 6.5.

FROM: Herman Lee DATE: 5/12/2013 4:06:56 PM Eastern Daylight Time  
Please disregard above Wayne Skow's statement on 4/1/2013.

As discussed at the May 2013 Beta TAG meeting, bearing stiffeners should not be considered as stiffened.

Issue ID: 12207  
Subject: Duplicate of incidents 12032 and 12123 in Virtis 6.4.1

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Thogaru, Srujana  
Submitted By: Withers, Richard 2/22/2013 7:57:00 PM  
Modified By: sthogaru 3/4/2013 3:43:19 PM  
Priority: High  
Category: Unknown

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Lee, Herman     | New       | High     | Unknown  |
|                 | Duplicate |          | Bug      |
|                 | Assigned  |          | Unknown  |

Complete Issue Information

Thogaru, Srujana

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 090-0001.zip        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Richard Withers DATE: 2/22/2013 3:00:26 PM Eastern Standard Time

I am having the same issues as incidents 12032 and 12123. I have installed the 6.4.1 patch, but it still throws the same error. I have attached a screenshot of the error and a copy of the culvert.

As with the other incidents, the program will run on the stand alone database, but not our production database.

Our production database is a combined Oracle Pontis/Virtis database.

Thanks,  
Richard

FROM: Herman Lee DATE: 2/22/2013 3:22:15 PM Eastern Standard Time

I emailed Richard the package for fixing Incident 12032.

AASHTOWare Bridge Design and Rating 6.4.1 Update for Incident 12032 and 12141

FROM: Herman Lee DATE: 2/22/2013 5:00:40 PM Eastern Standard Time

Email from Richard Withers:

=====

Herman,

It says the DL exceeds capacity in the exterior walls. I logged incident 12049 concerning the low wall RF in LFD, but Wayne Skow investigated and said the program is doing the analysis correctly. The box culvert in the analysis is what we have built on our interstates for the past 40 years. We have never had a structural issue with any of these boxes, so getting a DL exceeds capacity issue from the analysis doesn't pass the smell test to me. I attached an export of the bridge to incident 12207. Could you take a look and see if you find any issues?

Thanks,  
Richard

=====

4/19/2016 3:09:40 PM

HRS AASHTO

2338

Complete Issue Information

FROM: Srujana Thogaru DATE: 3/4/2013 10:42:04 AM Eastern Standard Time  
Email from Richard Withers:

=====  
Srujana,

I am investigating this now. We do design for LL surcharge in our current designs, but I am not sure about our older ASD box culverts. The box culvert you are investigating is one of the old ASD boxes.

Thanks,  
Richard

From: Thogaru, Srujana [mailto:SThogaru@mbakercorp.com]  
Sent: Wednesday, February 27, 2013 10:51 AM  
To: Withers, Richard  
Cc: Lee, Herman  
Subject: Regarding VI 12207

Hello Richard,

We have gone through issue 12207 and found no errors in the rating factor computations. One of the tests we have done is making LS Moment and LS Axial as zero and then run the rating analysis. This has drastically changed the rafting factor and culvert now does not fail.

We want confirm with you whether all load types shown in Virtis are considered in your culvert model design. Can you please check and confirm which would help us in the investigation.

Thanks,  
-Srujana

Issue ID: 12212  
Subject: Truss Model Crash

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Litchfield, Phil 2/26/2013 5:35:02 PM  
Modified By: mmlynarski 4/24/2013 6:58:42 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Unknown  |

4/19/2016 3:09:40 PM

HRS AASHTO

2339

### Complete Issue Information

|             |          |      |         |
|-------------|----------|------|---------|
|             | Assigned |      |         |
|             | Resolved |      | Bug     |
| Lee, Herman | New      | High | Unknown |
| Zhang, Bin  | Assigned |      |         |
|             |          |      | Bug     |
|             | Resolved |      |         |
|             | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | TrsErrorU4L4(641).xml |             |
|      | 12219.pdf             |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/26/2013 12:38:56 PM Eastern Standard Time  
From Consultant (Shoup):

After opening the West truss in this model, when you try to verify, view member cross sections or close the truss window virtis crashes.

FROM: Herman Lee DATE: 2/26/2013 1:19:37 PM Eastern Standard Time  
Attached the bridge XML file for this issue.

FROM: Herman Lee DATE: 2/26/2013 3:13:22 PM Eastern Standard Time  
Fixed the crash while truss verification. Resolved for 6.5 release.

Verifying the L39 user defined support is causing the crash. I'm not able to find a workaround for this issue.

FROM: Mark Mlynarski DATE: 4/24/2013 2:28:02 PM Eastern Daylight Time  
Tested in 6.5 (beta 1). OK with Verify, View Member Cross Sections, and closing.

|                             |
|-----------------------------|
| Issue ID: 12219             |
| Subject: Truss Rating Error |

4/19/2016 3:09:40 PM

HRS AASHTO

2340

## Complete Issue Information

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Zhang, Bin           |                     |
| Submitted By: Litchfield, Phil        | 3/4/2013 3:37:33 PM |
| Modified By: sghosh                   | 7/8/2013 7:21:41 PM |
| Priority: High                        |                     |
| Category: Bug                         |                     |

## History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Lee, Herman     | Assigned         | High     | Unknown  |
| Skow, Wayne     | Not Reproducible |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 01310 - 25125132000B050.xml |             |
|      | Michigan Legal Loads.xml    |             |
|      | error message.pdf           |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Phil Litchfield DATE: 3/4/2013 10:44:54 AM Eastern Standard Time  
From consultant (Souther):

This truss rating is not matching the hand computes rating using the capacity and load forces generated by the model.

FROM: Bin Zhang DATE: 4/19/2013 9:49:35 AM Eastern Daylight Time  
I am able to reproduce this incident for both version 6.4.1 and version 6.5 Alpha2. The rating factor calculation does not match my hand calculation for member U4L4. My hand calculation was listed below.  
I think it's a bug for the truss structure with the counters, although member U4L4 is NOT the counter member.

4/19/2016 3:09:40 PM

HRS AASHTO

2341



Complete Issue Information

I also checked the counter member U3L4, the RF matched my hand calculation very well.

Table 1. Hand calculation for U4L4

| U4L4 | C       | A1  | D    | A2   | L     | I    | alpha | beta | RF       |     |
|------|---------|-----|------|------|-------|------|-------|------|----------|-----|
|      | -167.38 | 1.3 | -7.4 | 1.3  | -7.83 | 1.18 | 0.75  | 1    | 17.51251 | Opr |
|      | -167.38 | 1.3 | -7.4 | 2.17 | -7.83 | 1.18 | 0.75  | 1    | 10.49137 | Inv |
|      | -167.38 | 1.3 | -7.4 | 1.3  | -7.83 | 1.18 | 1.05  | 1    | 12.50894 | Opr |
|      | -167.38 | 1.3 | -7.4 | 2.17 | -7.83 | 1.18 | 1.05  | 1    | 7.493834 | Inv |
|      | -167.38 | 1.3 | -7.4 | 1.3  | -7.83 | 1    | 0.75  | 1    | 20.66477 | Opr |
|      | -167.38 | 1.3 | -7.4 | 2.17 | -7.83 | 1    | 0.75  | 1    | 12.37981 | Inv |
|      | -167.38 | 1.3 | -7.4 | 1.3  | -7.83 | 1    | 1.05  | 1    | 14.76055 | Opr |
|      | -167.38 | 1.3 | -7.4 | 2.17 | -7.83 | 1    | 1.05  | 1    | 8.842725 | Inv |

Table 2. Hand calculation for U3L4

| U3L4 | C      | A1  | D     | A2   | L     | I    | alpha | beta | RF       |     |
|------|--------|-----|-------|------|-------|------|-------|------|----------|-----|
|      | 196.02 | 1.3 | 31.71 | 1.3  | 38.31 | 1.21 | 0.75  | 1    | 3.424999 | Opr |
|      | 196.02 | 1.3 | 31.71 | 2.17 | 38.31 | 1.21 | 0.75  | 1    | 2.051842 | Inv |
|      | 196.02 | 1.3 | 31.71 | 1.3  | 38.31 | 1.21 | 1.05  | 1    | 2.446428 | Opr |
|      | 196.02 | 1.3 | 31.71 | 2.17 | 38.31 | 1.21 | 1.05  | 1    | 1.465602 | Inv |
|      | 196.02 | 1.3 | 31.71 | 1.3  | 38.31 | 1    | 0.75  | 1    | 4.144248 | Opr |
|      | 196.02 | 1.3 | 31.71 | 2.17 | 38.31 | 1    | 0.75  | 1    | 2.482729 | Inv |
|      | 196.02 | 1.3 | 31.71 | 1.3  | 38.31 | 1    | 1.05  | 1    | 2.960177 | Opr |
|      | 196.02 | 1.3 | 31.71 | 2.17 | 38.31 | 1    | 1.05  | 1    | 1.773378 | Inv |

FROM: Bin Zhang DATE: 5/1/2013 5:29:15 PM Eastern Daylight Time

For trusses with tension-only members (counters) the member actions are determined by performing a nonlinear analysis using the AASHTO Finite Element engine. The linear superposition principle does not apply any more. AASHTOWare shall conduct 2 separate calculations for Inv and Opr ratings. So the live load (LL Force) will be different between Inv and Opr loading.

The rating factors in the report are still correct, but we need to update the report to display the LL Force for both Inv and Opr loading. Each line in the report will be divided into 2 lines to show the different LL Force for both Inv and Opr loading.

FROM: Bin Zhang DATE: 5/31/2013 10:18:04 AM Eastern Daylight Time

I revised the fix per Herman's advice.

For the regular truss (no counters), the rating results report remains the same;

For truss with counters, the report will show both the Inv and Opr live load if they are different from each other, the report will only show the Inv live load if the Inv load and the Opr live load are the same.

I attached a copy of the example rating results report in the document (12219.PDF).

This fix will be available for version 6.5 beta 3.

FROM: Kane Gyovai DATE: 6/11/2013 3:33:03 PM Eastern Daylight Time

Verified for Version 6.5 Beta 3.

FROM: Jim Duray DATE: 6/14/2013 10:40:00 AM Eastern Daylight Time

4/19/2016 3:09:40 PM

HRS AASHTO

2342

Complete Issue Information

FROM: Subhadeep Ghosh DATE: 7/8/2013 3:12:52 PM Eastern Daylight Time  
Verified for 6.5 beta 4/Acceptance build

|                                              |
|----------------------------------------------|
| Issue ID: 12221                              |
| Subject: Analysis failed after multiple runs |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Wagner, Brad            | 3/5/2013 9:34:53 PM  |
| Modified By: wskow                    | 3/15/2013 7:31:32 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/5/2013 4:35:16 PM Eastern Standard Time  
Submitted on behalf of Daniel Yalda (YaldaD@michigan.gov), Michigan DOT.

Bridgeware email:

=====

Herman,  
I've just ran the structure on one of my Co-Worker and got the same error as I'd sent you.  
Dan

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Friday, March 01, 2013 1:16PM  
To: Yalda, Daniel (MDOT)  
Subject: RE: Bug

4/19/2016 3:09:41 PM

HRS AASHTO

2343

Complete Issue Information

Dan,

I changed the unit tolerances to what you have and used the Michigan legal loads trucks to perform LFR analysis in version 6.4.1. I'm still not able to reproduce the error. Could you ask one of your coworker to see whether he or she can reproduce the error?

Thanks,  
Herman

From: Yalda, Daniel (MDOT) [mailto:YaldaD@michigan.gov]  
Sent: Friday, March 01, 2013 7:28 AM  
To: Bridgeware,  
Subject: RE: Bug

Herman,  
This is the tolerance that we have in our database  
Ft = 0.010'  
In = 0.0001"  
The attachment is few of our Michigan legal loads trucks that I used, try it and see it might give you the error that I got. Thanks

Dan

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Thursday, February 28, 2013 4:15PM  
To: Yalda, Daniel (MDOT)  
Subject: RE: Bug

Dan,

I'm not able to reproduce the error you are getting. I'm using the default tolerance settings. What are the tolerances set for feet and inch in your database?

Thanks,  
Herman

From: Yalda, Daniel (MDOT) [mailto:YaldaD@michigan.gov]  
Sent: Thursday, February 28, 2013 3:09 PM  
To: Bridgeware,  
Subject: Bug

Hello,  
I thought this bug was resolved with Virtis 6.4.1. BUT apparently not. Please see the attachment error and the xml file that I am using checked the girder B only.  
Dan

Daniel Yalda , P.E.  
Load Rating Engineer  
Design Division

=====

## Complete Issue Information

I'm able to reproduce the error message after repeating the analysis with different vehicles.

FROM: Wayne Skow DATE: 3/15/2013 1:53:03 PM Eastern Daylight Time

I'm unable to reproduce the problem after trying a number of variations of vehicles and spec versions. I'm at a loss as to where to go from here, so will close the issue. Dan, if you can supply a specific set of steps to reproduce the problem, we can reopen it.

|                                            |
|--------------------------------------------|
| Issue ID: 12223                            |
| Subject: Culvert Rating - No Factor Output |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Purto, Brian            | 3/8/2013 6:04:09 PM  |
| Modified By: hlee                     | 3/18/2013 1:10:14 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Support  |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Culvert.xml         |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

4/19/2016 3:09:41 PM

HRS AASHTO

2345

Complete Issue Information

FROM: Brian Purto DATE: 3/8/2013 1:17:47 PM Eastern Standard Time

Hello- I am trying to rate the attached culvert. I can not get any rating factor or capacity in the output. Can you please provide some idea as to why the culvert is not rating? I have compared it to the example file and previous culverts I have worked on and can not figure out the discrepancy. Thanks!

FROM: Wayne Skow DATE: 3/15/2013 5:12:20 PM Eastern Daylight Time

For an LRFR rating, the controlling location is reported to be the bottom of wall 1. Go to the spec check articles and open article "APPC.6.1 P-M Interaction Diagram" at that point. It reports that dead load forces exceed capacity. Therefore, the rating factor is zero. I also tried releasing the moment at the bottom of the wall, but the controlling location moved to the top of wall 1 with the same problem - dead load forces exceed capacity. Check your loads, wall thicknesses and rebar to make sure they are correct.

|                                        |
|----------------------------------------|
| Issue ID: 12225                        |
| Subject: Truss - Rating Results Report |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Litchfield, Phil        | 3/11/2013 3:38:37 PM |
| Modified By: mmlynarski               | 4/24/2013 9:55:31 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

4/19/2016 3:09:41 PM

HRS AASHTO

2346

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | lfd dist factor.png |             |
|      | test.xml            |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 3/11/2013 11:42:44 AM Eastern Daylight Time  
Can the rating factor in the Detailed Truss Member Rating Results table be changed to display three decimals?

FROM: Herman Lee DATE: 3/11/2013 12:36:34 PM Eastern Daylight Time  
Changed to output 3 decimals for detailed RF.  
Resolved for 6.5 release.

FROM: Mark Mlynarski DATE: 4/24/2013 5:55:08 PM Eastern Daylight Time  
Verified in Version 6.5 (beta 1).

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 12242                                                        |
| Subject: Computation of LFD distribution factors for adjacent PS beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Kennelly, Krisha        | 3/14/2013 1:27:30 PM |
| Modified By: sghosh                   | 7/8/2013 7:26:19 PM  |

4/19/2016 3:09:41 PM

HRS AASHTO

2347

## Complete Issue Information

Priority: High  
Category: Bug

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Case 1.xml          |             |
|      | Case 2.xml          |             |
|      | Query Sketches.pdf  |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Krisha Kennelly DATE: 3/14/2013 9:27:54 AM Eastern Daylight Time  
Submitted by David Wolfe, Moffat Nichol, via email:

"The LFD LL DF for moment and shear away from supports for single lane and multi-lane should have different numerical values instead of identical values. Though the difference is likely minor."

See attached output file for G1. The values shown don't appear to be correct.

FROM: Srujana Thogaru DATE: 6/4/2013 10:31:08 AM Eastern Daylight Time  
LFD LL DF for moment and shear have same distribution factors because of VI 10254 (One lane should equal the multilane since the number of lanes is the number of design lanes not the loaded lanes)

AbaLfdAdjacentBeamDistFactors.cpp line 353 has fix for VI 10254.

Error in the display of output text file has been fixed. Fixed for 6.5 Beta 3

FROM: Kane Gyovai DATE: 6/11/2013 3:57:33 PM Eastern Daylight Time  
Verified for Version 6.5 Beta 3.

4/19/2016 3:09:41 PM

HRS AASHTO

2348

## Complete Issue Information

FROM: Subhadeep Ghosh DATE: 7/8/2013 3:26:34 PM Eastern Daylight Time  
Verified for 6.5 Beta 4/Acceptance build

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12276                                                           |
| Subject: LL distribution factors for exterior beam with cantilevered deck |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Nakrani, Navnit         | 3/27/2013 2:51:49 PM |
| Modified By: hlee                     | 3/27/2013 6:15:16 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

## History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Navnit Nakrani DATE: 3/27/2013 11:01:49 AM Eastern Daylight Time

Hello,

I am doing a loading rating of prestressed butted box beams with a cantilevered deck slab/mountable sidewalk on right side of the bridge. I am trying to run live load for two cases on the exterior beam with the cantilevered slab/sidewalk.

Case 1 - By defining the travelway between curb and sidewalk.

Case 2 - By defining the travelway between the bridge rail systems i.e. the travelway is over the sidewalk.

For both the cases Virtis uses simple lever rule to calculate the distribution factor and appears to use the centerline of beams as a reference (see attached sketches).

4/19/2016 3:09:42 PM

HRS AASHTO

2349



Complete Issue Information

The Virtis calculated distribution factor for Case 1 is 0, which has the travelway limits excluded from being directly over box beam G7. For Case 2 the DF is 1.28, where the travelway extends to face of the bridge rail which results in outer wheel load being located beyond the outside face of fascia box beam G7. But Virtis is using a "DF = 0.50 Wheels" for moment in both the cases and is computing the same LL moments in both the cases. In Case 2, it appears that Virtis is ignoring the outer wheel load.

Can you suggest how I can resolve this problem?

Thank you,  
 Naveen Bitla  
 Prime Engineering, Inc.

FROM: Herman Lee DATE: 3/27/2013 11:37:08 AM Eastern Daylight Time  
 A workaround is to manually enter the LL distribution factors.

|                                  |
|----------------------------------|
| Issue ID: 12297                  |
| Subject: Concentrated load error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ghosh, Subhadeep     |                      |
| Submitted By: Grime, Katy             | 4/1/2013 6:15:48 PM  |
| Modified By: sghosh                   | 5/10/2013 4:45:44 PM |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact  | Status           | Priority | Category |
|------------------|------------------|----------|----------|
| Lee, Herman      | New              | High     | Unknown  |
| Zhang, Bin       | Assigned         |          |          |
| Lee, Herman      | Not Reproducible |          |          |
| Zhang, Bin       | Assigned         |          |          |
| Ghosh, Subhadeep | Not Reproducible |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:09:42 PM

HRS AASHTO

2350

Complete Issue Information

Documents

| Name | Resource Identifier | Description                         |
|------|---------------------|-------------------------------------|
|      | Control Bridge.xml  | Synopsis of things to be tested.txt |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Katy Grime DATE: 4/1/2013 2:20:39 PM Eastern Daylight Time

Hello. We are trying to perform an LRFR rating. Whenever we click analyze for Beam 1, we get the error message that I have attached. We do not have any concentrated loads on the superstructure and are unsure of what it is going on; it also seems to happen for the other beams. I have also attached the Virtis file. Thank you.

FROM: Herman Lee DATE: 4/7/2013 12:18:05 PM Eastern Daylight Time

I am able to complete a LRFR rating for Beam 1 using the "LRFR Design Load Rating" analysis template.

Please provide more information on how to reproduce the error message.

FROM: Katy Grime DATE: 4/8/2013 9:12:32 AM Eastern Daylight Time

First we select LRFR rating method, then choose HL-93 truck for operating and inventory rating vehicles. The error message then appears during the analysis at the "Building Spec Check Domain Objects. Beam 1 - Stage 2"

FROM: Subhadeep Ghosh DATE: 5/10/2013 11:25:27 AM Eastern Daylight Time

I analyzed Beam 1 and Beam 2 with the attached analysis settings (attached under "Documents" as a screenshot) in versions 6.4.0 and version 6.4.1, but could not reproduce the error. Can you please verify whether the analysis settings that you are using matches the one I provided? Did you change any of the control options?

Can you please reproduce the error if possible, save the bridge and then export it to be attached to this incident.

|                                                   |
|---------------------------------------------------|
| Issue ID: 12300                                   |
| Subject: Input ly not used in LFR article 10.48.4 |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Ghosh, Subhadeep     |                      |
| Submitted By: Huang, George           | 4/2/2013 11:19:44 AM |
| Modified By: ghuang                   | 12/9/2013 4:30:17 PM |
| Priority: High                        |                      |

4/19/2016 3:09:42 PM

HRS AASHTO

2351

Complete Issue Information

Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 4/2/2013 7:23:38 AM Eastern Daylight Time  
This is entered on behalf of George Huang from an email he sent to Herman Lee:

=====  
 During my rating of stringers of a truss bridge, I found the following problems:  
 1. Input  $I_y$  is not taken, and a default value of the standard shape was used, instead.  
 Stringers (historic shape S18x55) of Br 24 0053 span 1 is a non-compact partial braced section, and the input  $I_y=21.19\text{in}^4$   
 in Spec. checking details of 10.48.4, it shows:  
 Top flange  $I_{yt} = 12.4 (\text{in}^4)$   
 Bot flange  $I_{yb} = 12.4 (\text{in}^4)$   
 Section  $I_y = 25.0 (\text{in}^4)$   
 and when a different  $I_y$  is input, the same values are given.  $I_y$  matters when  $M_r$  is controlled by (Eq 10-103c), see belows.  
 =====

Article 10.48.4 is using the  $I_y$  value calculated from the cross-section properties. For rolled sections, properties are often directly input and the article needs to use those when available.

FROM: Subhadeep Ghosh DATE: 7/12/2013 11:07:37 AM Eastern Daylight Time  
Resolved for 6.5.1. Synopsis of the changes and the method of testing have been compiled in Synopsis of things to be tested.

FROM: Kane Gyovai DATE: 11/14/2013 10:50:06 AM Eastern Standard Time

Complete Issue Information

Verified for 6.5.1.

FROM: George Huang DATE: 12/9/2013 11:30:16 AM Eastern Standard Time  
 Verified in 6.5.1 beta 1. The issue is resolved.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 12301                                             |
| Subject: LFD reporting the wrong controlling article for Mu |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Huang, George           | 4/2/2013 11:30:04 AM |
| Modified By: wskow                    | 5/13/2013 3:25:45 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 4/2/2013 7:30:14 AM Eastern Daylight Time  
 This is entered on behalf of George Huang from an email he sent to Herman Lee:

=====

3. For this specific bridge, the governing Resistance Article is wrong.  
 in Spec. checking details of LFR General Steel Flexural Results

| Limit State | Load Comb   | Flexure Type | Capacity Type | Governing Resistance |        | Code |
|-------------|-------------|--------------|---------------|----------------------|--------|------|
|             |             |              |               | Article              | Mu     |      |
| Inv         | 1, INV, MAX | Pos          | Moment        | 10.48.2              | 162.47 | Pass |
| Inv         | 1, INV, MIN | Pos          | Moment        | 10.48.2              | 162.47 | Pass |

4/19/2016 3:09:43 PM

HRS AASHTO

2353

Complete Issue Information

The red # should be 4

=====

"The red # should be 4" (color did not transfer) => 10.48.2 should be 10.48.4.

This is a side effect of some changes made to 10.48.2 where it now fetches Mu from 10.48.4 under certain conditions. Previously, 10.48.2 would fail and 10.48.4 would report the Mu value. It's more helpful to the engineer for the reported article to be 10.48.4, rather than 10.48.2.

FROM: Wayne Skow DATE: 5/13/2013 7:42:20 AM Eastern Daylight Time  
Fixed in v6.5.

|                                         |
|-----------------------------------------|
| Issue ID: 12338                         |
| Subject: Truss Rating Calculation error |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Litchfield, Phil        | 4/9/2013 2:17:12 PM  |
| Modified By: bzhang                   | 5/20/2013 6:27:48 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
| Zhang, Bin      | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Assigned           |          |          |
|                 | Information Needed |          | Support  |
|                 | Resolved           |          |          |

Contacts

4/19/2016 3:09:43 PM

HRS AASHTO

2354

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Phil Litchfield DATE: 4/9/2013 10:34:05 AM Eastern Daylight Time  
from consultant (Mertz):

We noticed a discrepancy with the operating ratings of the continuous three-span girder units. There are negligible differences between the two units (Spans 9-11 and Spans 12-14) which is reflected in the near identical inventory ratings. However, two things caught our attention: first, the operating ratings were significantly different between the two units; and second, the critical location of the operating rating was different than that of the inventory rating. In order to confirm the BrR output and determine the reason for the differences, we looked at the exterior girders for both of the units loaded with the permit vehicle.

I attached the Rating Results Summary Report for both units and an excel file containing information pulled from the Detailed Rating Results Report. In the columns adjacent to the inventory and operating ratings calculated by BrR as shown in the excel sheet, we recalculated the inventory and operating rating factors using the reported capacity, DL and LL. In a couple of instances our calculated operating ratings do not agree with those calculated by the software (they are highlighted in yellow). These errors affect the critical ratings that should be reported. The information highlighted in green corresponds to the critical ratings shown in the Rating Results Summary Report. Note that the corrected operating ratings occur at the same critical locations as the inventory ratings.

FROM: Bin Zhang DATE: 4/23/2013 9:06:11 AM Eastern Daylight Time  
Could you please send us the library file for vehicle 120K-6 Axle, Type3(IL),Type3S-1(IL) and Type3S-2 (IL) to reproduce this issue?Thanks!

FROM: Phil Litchfield DATE: 4/23/2013 10:43:21 AM Eastern Daylight Time  
Uploaded the library file for the trucks.

FROM: Bin Zhang DATE: 5/1/2013 4:45:37 PM Eastern Daylight Time  
I am able to reproduce these rating factors that Phil reported.  
First, I would like to explain why the critical location of the operating rating was different than that of the inventory rating. The short answer is that the moment capacity that is used for calculating the inventory and operating factor could be different even at the same location. Please read the revised excel ("Added\_Henry Rating - Virtis Calculation Errors.xlsx" ) and figure 1 for details. For Structure Definition Name: Span 9-11 (3-Sp. Cont. WF), the moment capacity is -637.5kip-ft other than -544.09kip-ft at span2-43.0 feet for the operating factor calculation.

Figure 1 Rating factor calculation for Span9-11 at the span 2-43 ft location  
The moment capacity relies on the M1 (Article 10.48.1.1 compactness requirements) value. Inv load and

4/19/2016 3:09:43 PM

HRS AASHTO

2355

Complete Issue Information

Opr load generated different M1 values, so the moment capacity could be different for the 2 loading conditions. If Eq10-96 (Article 10.48.1.1) failed, the 10.48.1 does not apply any more. The moment capacity will go into 10.48.2 (figure 2). So Inv loading and Opr loading may have different moment capacities.

Figure 2 Eq 10-96

Secondly, I will answer the question why the operating ratings were significantly different between the two units. For span 9-11, it has a span length of 41.75ft, 43 ft and 42.23 ft. For span 12-14, it has a span length of 42.23 ft, 43 ft and 41.5 ft. Generally speaking, span 9-11 is almost a reverse symmetric copy of span 12-14. So theoretically speaking, both of the 2 superstructures should have very similar rating factors. However, we observed very different rating factors between the 2 structures in AASHTOWare 6.4.1. The short answer is that the diaphragms distribution is not a reverse symmetric copy of each other.

Figure 3 Span 9-11 diaphragms

Figure 4 Span 12-14 diaphragms

Then I will explain how the different diaphragms affect the rating factors for the 2 structures. Let's use vehicle 120K-6Axle for an example. The Opr RF is 1.555 for span 9-11, while the number is 1.881 for span 12-14. The 1.555 RF occurred at the location of span1-41.75 ft (figure 5). The equivalent critical location in span12-14 should be span3-0.0ft (figure 6). By comparing figure 5 and 6 we can see that the different rating factors happened due to the different moment capacities. Then we look at figure 7 and 8, and find out how does Lb affect the moment capacity.

Please read the attached "12338.docx" and "Added\_Henry Rating - Virtis Calculation Errors.xlsx" for details. Please let me know if you still have questions about this issue.

FROM: Bin Zhang DATE: 5/20/2013 2:27:25 PM Eastern Daylight Time  
I changed the status to be resolved.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 12341                                         |
| Subject: Madero engine: Locating max and min LL actions |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Goodrich, Brian      |                      |
| Submitted By: Lee, Herman             | 4/10/2013 2:40:26 PM |
| Modified By: hlee                     | 5/12/2013 7:50:44 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

4/19/2016 3:09:43 PM

HRS AASHTO

2356

Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
| Lee, Herman     | Suspended | High | Enhancement |
| Goodrich, Brian |           |      |             |
| Lee, Herman     | New       | High | Unknown     |
| Skow, Wayne     | Assigned  |      |             |
|                 | Resolved  |      |             |
|                 |           |      | Support     |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | CtDOTArrigoni.xml   |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/10/2013 10:40:31 AM Eastern Daylight Time  
Submitted on behalf of Alex Pence, WisDOT (Alex.Pence@dot.wi.gov).

Received Bridgeware email:

=====

OK, thanks Herman. I have found that the max live load moments don't match the values in Table C6B-1 of the Manual for Bridge Evaluation. The Madero output is about 2% lower than the actual max LL moment for the bridge I was evaluating. Not a major difference, but it is non-conservative, so finding the actual location and value of maximum moment should perhaps be prioritized in future development of the Madero engine.

Thanks,

Alex

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Wednesday, April 10, 2013 6:13 AM  
To: Pence, Alex W - DOT  
Subject: RE: Timber - Points of Interest

Alex,

I looked at the Engine Related Help for Madero. The Madero ASD Engine only supports points of interest at tenth points.



Complete Issue Information

Herman Lee

From: Pence, Alex W - DOT [mailto:Alex.Pence@dot.wi.gov]
Sent: Tuesday, April 09, 2013 4:24 PM
To: Bridgeware,
Subject: Timber - Points of Interest

I'm using Virtis and trying to look at a point of interest on a timber slab strip (girder line superstructure), other than a tenth point, but I can't figure out how to analyze it. I went to the member alternative definition, in the Control Options tab, checked the box under Points Of Interest to "Generate at User-Defined Points," and then created a couple additional Points of Interest. However, the output still only has data for the tenth points. Can you tell me what I'm doing wrong, or is it only possibly to analyze at tenth points?

Thanks

Alex Pence, PE, SE
Structural Development Engineer
WisDOT Bureau of Structures
4802 Sheboygan Ave, Rm 601 | Madison, WI 53707-7916

Table with 2 columns: Issue ID: 12351, Subject: Riveted girder unbraced length: LFD/ASD

Table with 2 columns: Folder: /Virtis/Support Center/Virtis, Primary Contact: Skow, Wayne, Submitted By: McCaffrey, Brian, Modified By: hlee, Priority: High, Category: Support

History

Table with 4 columns: Primary Contact, Status, Priority, Category

Contacts

Table with 4 columns: Name, Company, Email 1, Phone 1

Documents

Table with 3 columns: Name, Resource Identifier, Description

Tasks

4/19/2016 3:09:43 PM

HRS AASHTO

2358

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian McCaffrey DATE: 4/14/2013 12:24:07 PM Eastern Daylight Time  
Greetings,

I have a non-composite Girder-Floorbeam-Stringer bridge with riveted main girders that are laterally supported the entire length by the deck and at two intermediate floorbeam locations but the spec check says it is fully unbraced ( $L_b = \text{span length}$ ) and limits  $\mu$  to  $M_r$  - see attached 6.4.1 xml.

This results in very low flexure ratings being incorrectly reported as controlling but the correct controlling shear ratings are ignored which are very low and indicates that load posting of the bridge is required. I performed hand calcs to recalculate the actual flexural ratings using  $\mu$  instead of  $M_r$  (flexure RF's > 1.0) and got the RF's for shear (shear RF's << 1.0) from the Stage 3 LFD/ASD specification check output.

INPUT:

Section type : Noncomposite  
Longitudinal stiffener: No  
Unbraced length,  $L_b$  : 817.8 (in)  
 $J$  : 4.73 (in<sup>4</sup>)  
 $I_y$  top flange : 843.78 (in<sup>4</sup>)  
Sxc top flange: 4043.77 (in<sup>3</sup>)  
 $I_y$  bot flange : 843.78 (in<sup>4</sup>)  
Sxc bot flange: 4043.77 (in<sup>3</sup>)

Any assistance would be greatly appreciated  
Brian McCaffrey, P.E.  
HAKS  
860-632-5122  
bmccaffrey@haks.net

FROM: Wayne Skow DATE: 4/15/2013 7:08:59 AM Eastern Daylight Time  
Your model has lateral support specified the entire length of the top flange. However, bracing requirements for 10.48.4 are more stringent than that. The requirement in article 10.48.4 says "Bracing shall be provided such that lateral deflection of the compression flange is restrained and the entire section is restrained against twisting." Restaining the entire section against twisting requires bottom flange restraint also. This happens at diaphragm locations which your model does not have. Note, this requirement is more restrictive than the lateral bracing requirement of 10.48.2(c). Applying lateral bracing to the top flange does satisfy that requirement.

|                                                    |
|----------------------------------------------------|
| Issue ID: 12355<br>Subject: Stringer Deterioration |
|----------------------------------------------------|

|                                       |
|---------------------------------------|
| Folder: /Virtis/Support Center/Virtis |
|---------------------------------------|

4/19/2016 3:09:44 PM

HRS AASHTO

2359

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Zhang, Bin    |                      |
| Submitted By: Litchfield, Phil | 4/15/2013 3:35:32 PM |
| Modified By: b Zhang           | 5/20/2013 6:27:14 PM |
| Priority: High                 |                      |
| Category: Support              |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | RE_Error running 3D FEM analysis.pdf |             |
|      | 3D FEM Error.jpg                     |             |
|      | MP69.85NO.xml                        |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 4/15/2013 11:42:15 AM Eastern Daylight Time  
From (Beisner):

We're trying to model a stringer with web loss. But if the input web loss is greater than 87%, the attached error is generated. How can web loss greater than 87% be modeled?

FROM: Bin Zhang DATE: 4/15/2013 11:56:39 AM Eastern Daylight Time

I tried to analyze the whole bridge with the AASHTO LFR engine, the analysis completed successfully (12355\_Completed.PNG).

The web thickness for beam "10" CB 26#" is 0.26 inch. If you want a web thickness loss of 87%, please make sure that the tolerance setting for inch is less than  $0.26 \times (1 - 87\%) = 0.0338$  inch.

If you want a web loss of 90%, please make sure that the tolerance setting for inch is less than  $0.26 \times (1 - 90\%) = 0.026$  inch. Please let me know if this does not answer your question. Thanks!

4/19/2016 3:09:44 PM

HRS AASHTO

2360

Complete Issue Information

FROM: Bin Zhang DATE: 5/20/2013 2:26:15 PM Eastern Daylight Time  
I changed the status to be resolved.

|                                                    |
|----------------------------------------------------|
| Issue ID: 12378                                    |
| Subject: 3D FEM analysis with Lane-Type Legal Load |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Cavanaugh, Scott        | 4/23/2013 8:45:44 PM |
| Modified By: hlee                     | 5/11/2013 1:48:08 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/23/2013 4:46:21 PM Eastern Daylight Time  
Submitted on behalf of Scott Cavanaugh, HNTB.

See attached PDF file for the issue.

I'm able to reproduce the error with the Analysis Settings specified in the email. The 3D FEM analysis completed successfully if the Lane-Type Legal Load is removed from the analysis.

4/19/2016 3:09:44 PM

HRS AASHTO

2361

Complete Issue Information

FROM: Wayne Skow DATE: 5/1/2013 7:14:38 AM Eastern Daylight Time  
The problem was in AbanLmLiveLoader. Duplicate lane loads were being produced for legal vehicles that specified a lane load.

Tester - Do a 3D LRFR analysis and include the "Lane-Type Legal Load" vehicle spec under "Legal/Routine". Set the analysis settings to fastest run time to minimize the 3D model size since it has no bearing on this problem.

FROM: Subhadeep Ghosh DATE: 5/9/2013 10:51:43 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 12381                                             |
| Subject: Incorrect corrugated deck load applied on stringer |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Lee, Herman          |                       |
| Submitted By: Lee, Herman             | 4/24/2013 10:53:08 AM |
| Modified By: sghosh                   | 4/26/2013 12:55:27 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:09:44 PM

HRS AASHTO

2362

Complete Issue Information

---

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00050 - 06C0348.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/24/2013 6:53:59 AM Eastern Daylight Time  
Submitted on behalf of Keith Wetter (kwetter@hwlochner.com), Lochner.

Bridgeware email:

=====

Mr. Lee,  
When I was verifying the loads I was looking at an interior stringer that has 2' tributary.  
The service DL moment due to corrugated deck & fill shows 2.1 k-ft at midspan. (see attached)  
Total load =  $2.1 \times 8 / 16^2 = .0656$  k/ft.  
At 2' trib,  $q = .0656 / 2 = 0.0328$  k/ft<sup>2</sup>.  
This is quite a bit less than your calculated 0.051 k/ft<sup>2</sup> below.  
Please review stringer loading.  
Thanks you.

Keith L. Wetter, P.E.  
Associate, Project Manager-Structures | LOCHNER  
kwetter@hwlochner.com  
www.hwlochner.com

From: Bridgeware, [mailto:Bridgeware@mbakercorp.com]  
Sent: Monday, April 22, 2013 3:00 PM  
To: Wetter, Keith  
Subject: RE: Virtis 6.4 Issue

Keith,

Virtis only supports concrete and corrugated decks in Truss system. Please see below for the computed deck load on the truss.

Length per corrugated deck unit =  $2A + B + C = 0.5$  ft  
Fill weight per unit =  $(0.25 \times 0.5 + (0.0521 + 0.1979) \times 0.1667) \times 0.12 = 0.02$   
Plank weight per unit =  $0.5 \times 0.011 = 0.0055$   
Total weight =  $(0.02 + 0.0055) / 0.5 = 0.051$  k/ft<sup>2</sup>  
Truss trib. width = 10 ft  
Apply deck load on truss = 0.51 k/ft

Herman Lee

4/19/2016 3:09:44 PM

HRS AASHTO

2363

Complete Issue Information

From: Wetter, Keith [mailto:kwetter@hwlochner.com]  
Sent: Monday, April 22, 2013 1:25 PM  
To: Bridgeware,  
Subject: Virtis 6.4 Issue

I am using Virtis to rate truss and 2-girder systems. It only allows concrete decks or corrugated decks. I am have 2 problems with this.

- 1) Many of these bridges actually have timber decks. What do I use for deck input?
- 2) When a truss has a corrugated metal deck it is not determining the dead load correctly. Under deck definition it appears to ignore the deck input "Load \_\_\_ psf". It also appears that it is not adding in any fill weight between corrugations. (See attached file.) Please check how the weight is calculated.

If you have any questions regarding this, please call me.

Keith L. Wetter, P.E.  
Associate, Project Manager-Structures | LOCHNER  
kwetter@hwlochner.com  
www.hwlochner.com

Resolved for 6.5 release.

FROM: Subhadeep Ghosh DATE: 4/26/2013 8:55:13 AM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12385                                     |
| Subject: Check and return truss configuration issue |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Zhang, Bin           |                      |
| Submitted By: Huang, George           | 4/24/2013 9:36:41 PM |
| Modified By: sthogaru                 | 7/8/2013 6:51:33 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Zhang, Bin       | Assigned | High     | Bug      |
| Ghosh, Subhadeep |          |          |          |
| Zhang, Bin       | Resolved |          |          |

4/19/2016 3:09:44 PM

HRS AASHTO

2364

Complete Issue Information

|          |
|----------|
| Verified |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/24/2013 5:37:02 PM Eastern Daylight Time  
 Submitted on behalf of George Huang, Caltrans.

Received email:

=====  
 Hi Herman,

We have problem with this truss model and could not make it work. Could you help us to find the problem? Thanks.

George Huang  
 Senior Bridge Engineer  
 Bridge Rating and Analysis Branch  
 Division of Structures Maintenance  
 MS 9 - 1/9I

----- Forwarded by George Huang/HQ/Caltrans/CAGov on 04/24/2013 02:16 PM -----

Jack Hu/HQ/Caltrans/CAGov  
 04/24/2013 10:00 AM  
 To  
 George Huang/HQ/Caltrans/CAGov

cc

Subject  
 Virtis truss model - crushed!

(See attached file: 00050 - 06C0348.xml)

When running the Virtis truss model, it is crushed before completion.  
 (1) There is no any error indicated in the truss model as it is saved.

4/19/2016 3:09:44 PM

HRS AASHTO

2365



Complete Issue Information

(2) The only place could be the issue is the section property.

Jack Hu

I'm able to complete the analysis after I changed the Main member configuration from Half Deck to Through. The analysis should return with an error message instead of crashing the application.

FROM: Bin Zhang DATE: 6/4/2013 3:46:45 PM Eastern Daylight Time  
I added the error message saying " The travel way points were not defined...". This error message meant to remind the user to input the travel way points for the half-deck truss. The program won't crash any more.  
This fix will be available for version 6.5 beta3.

FROM: Kane Gyovai DATE: 6/11/2013 4:49:59 PM Eastern Daylight Time  
Verified for Version 6.5 Beta 3.

The program remains stable and the error message is displayed during the analysis

FROM: Srujana Thogaru DATE: 7/8/2013 2:48:07 PM Eastern Daylight Time  
Re-Verified for Version 6.5 Beta 4.

|                                   |
|-----------------------------------|
| Issue ID: 12388                   |
| Subject: Fixed Ends on Floorbeams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Litchfield, Phil        | 4/25/2013 3:49:57 PM |
| Modified By: hlee                     | 4/25/2013 4:07:33 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:09:45 PM

HRS AASHTO

2366

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 4/25/2013 11:57:36 AM Eastern Daylight Time  
From consultant(Shoup):

Can the ability to fix the ends of floorbeams be added? This option is available for girders in a girder system and stringers in a girder-floorbeam system but not available for floorbeams.

FROM: Herman Lee DATE: 4/25/2013 12:04:55 PM Eastern Daylight Time  
This option is also available for floor truss.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12419                                                |
| Subject: MBE Table 6A.4.5.4.2a-1 Routine/Annual Permit Factors |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: McCaffrey, Brian        | 4/30/2013 5:33:23 PM |
| Modified By: hlee                     | 4/30/2013 6:07:40 PM |
| Priority: High                        |                      |

4/19/2016 3:09:45 PM

HRS AASHTO

2367

### Complete Issue Information

Category: Support

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Thogaru, Srujana | Assigned |          |          |
|                  | Discard  |          |          |
|                  | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 2013-04-26_LOR-301-2349 |             |
|      | Stage 3.pdf             |             |
|      | 4706730_PS_Conti.xml    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian McCaffrey DATE: 4/30/2013 1:44:51 PM Eastern Daylight Time

The MBE 2013 Interims reworked Table 6A.4.5.4.2a-1 but Virtis 6.4.1 was not updated to reflect the new categories for permit weight ratios.

Will these be incorporated in a future release?

Regards,  
Brian McCaffrey  
HAKS Engineers  
860-632-5155 (232)

FROM: Herman Lee DATE: 4/30/2013 1:46:13 PM Eastern Daylight Time

Brian, nice to hear from you.

The upcoming 6.5 release at the end of June will support the new MBE 2013 Interims spec. The new LL factors will be available in 6.5.

4/19/2016 3:09:45 PM

HRS AASHTO

2368

Complete Issue Information

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12420                                                |
| Subject: Low rating at piers of continuous prestressed I beams |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Waheed, Amjad           | 4/30/2013 7:01:46 PM |
| Modified By: hlee                     | 5/1/2013 7:27:18 PM  |
| Priority: High                        |                      |
| Category: Unknown                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Amjad Waheed DATE: 4/30/2013 3:06:37 PM Eastern Daylight Time  
One of our consultants (MV) brought to my attention that the attached bridge gives low load rating factors for Service III at Inventory Level. The capacity calculations seem in doubt. Please check.

FROM: Amjad Waheed DATE: 4/30/2013 4:45:18 PM Eastern Daylight Time  
Please ignore this. I figured it out myself. Thank you.

Complete Issue Information

|                                              |
|----------------------------------------------|
| Issue ID: 12468                              |
| Subject: Issue with negative moment capacity |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Duray, Jim           |                     |
| Submitted By: Lee, Herman             | 5/7/2013 7:14:38 PM |
| Modified By: hlee                     | 5/7/2013 7:47:54 PM |
| Priority: High                        |                     |
| Category: Unknown                     |                     |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | D-03-018 (2U0) Virtis.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Herman Lee DATE: 5/7/2013 3:15:40 PM Eastern Daylight Time  
Submitted on behalf of Michael Taylor, MassDOT.

Received Bridgeware email:

=====

Hi

A couple of Virtis 6.4 issues/questions. The first has to do with a 3 span continuous slab bridge.

We have the exact same cross section at the max positive moment location (0.4L) and max negative moment location (1.0L). Virtis gives different moment capacities at each location. Hand calcs confirm the positive moment capacity. I have attached the xml file. As always, thanks for your assistance.

I will send the second question in a separate email to avoid potential confusion.

Michael Taylor  
Ratings and Overloads

=====

The positive and negative moment capacities at 0.4L is the same as 1.0L.

The section is symmetry about the horizontal x-axis. Top rebar configuration (number, size and location) is the same as the bottom rebar configuration but the resulting positive moment capacity is different than the negative moment capacity.

Issue ID: 12482  
Subject: BWS Report for PS-I girder with and without considering long. reinforcement option

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: vinayagamoorthy, vinacs 5/8/2013 1:03:03 PM  
Modified By: vvinayagamoorthy 12/13/2013 9:00:13 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

4/19/2016 3:09:46 PM

HRS AASHTO

2371

Complete Issue Information

|             |           |      |             |
|-------------|-----------|------|-------------|
| Skow, Wayne | Assigned  |      |             |
|             | Resolved  |      |             |
| Duray, Jim  | New       | High | Unknown     |
| Lee, Herman | Assigned  |      | Enhancement |
|             | Suspended |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: vinacs vinayagamoorthy DATE: 5/8/2013 9:06:57 AM Eastern Daylight Time  
 I have analyzed a PS-I beam bridge with and without "Ignore long. Reinf. In rating" option within LRFR method.

Results are not improperly displayed. See attached word document.

Member: Exterior girder

FROM: Wayne Skow DATE: 5/10/2013 7:12:28 AM Eastern Daylight Time  
 There are two different shear rating factors calculated for RC and PS girders when the "Ignore long. Reinf." switch is off (6A.5.9 Evaluation for Shear and 6A.4.2.1 General Load Rating Equation - Concrete Shear). They're both labeled "shear" in the Detailed Rating Results report. That accounts for duplicate records at each point. If you go to spec check results at one of those points, both articles are present. If the switch is on, only one shear value appears in the report at each point. It does seem a little confusing, but it is correct.

FROM: Kane Gyovai DATE: 5/22/2013 11:38:07 AM Eastern Daylight Time  
 Verified for Version 6.5 Beta Build 2.

When the switch is on to ignore long. reinf., the spec check results only display one shear value. When the switch is off (long. reinf. NOT ignored), both shear values appear in the report.

FROM: vinacs vinayagamoorthy DATE: 6/21/2013 10:34:47 AM Eastern Daylight Time  
 1. "Detailed Rating" result should list only the critical rating. When the user choose the "logn. Reinf. in Rating", software should establish the rating considering the long. reinf only. It should not report the

Complete Issue Information

values established without considering the reinforcement, even if it is established internally.  
2. The capacity, DL and LL should reflect the values used to establish the RF. When the long Reinf is considered, the Capacity, DL and LL are reported as -1.00. This is wrong.

Screen shot is attached in the word document.

FROM: Wayne Skow DATE: 8/6/2013 1:56:04 PM Eastern Daylight Time  
Addressing point 2. above: The values being reported as -1.00 on the xml reports were not being properly stored by article 6A.5.9. That has been fixed in v6.5.1.

FROM: Bin Zhang DATE: 11/14/2013 4:47:06 PM Eastern Standard Time  
Verified for 6.5.1 Alpha2, the values being reported as -1.00 on the xml reports have been fixed.  
Vinacs, you may uncheck the "Shear" option in the report, so the report will list only the critical rating.  
Please read the attached "12482.png" for details.

|                                   |
|-----------------------------------|
| Issue ID: 12497                   |
| Subject: LFD RC Slab Dist. Factor |

|                                       |                     |
|---------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Virtis |                     |
| Primary Contact: Lee, Herman          |                     |
| Submitted By: Teal, Dean              | 5/8/2013 8:11:07 PM |
| Modified By: hlee                     | 8/2/2013 4:01:13 PM |
| Priority: High                        |                     |
| Category: Enhancement                 |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 5/8/2013 4:12:23 PM Eastern Daylight Time  
I am looking at a 36-48-36 RC Slab  
If I use the LFD Dist. Factor calculation button for a 12" strip I get a moment DF = 0.156

4/19/2016 3:09:46 PM

HRS AASHTO

2373



Complete Issue Information

I had calculated a DF = 0.162

The difference is BrR is using S = 40 (40' is the avg of the 3 spans)  
The way Kansas calculates this is S = 36 (36' is the short span)  
This has been our understanding of the std Spec. and what has been used on 100% of all our slab structures.

FROM: Dean Teal DATE: 5/8/2013 4:33:36 PM Eastern Daylight Time  
Talking with the TAG, some use short span (36) which is conservative, some use avg (40), some use 36 for span 1 & 3 and 48 for span 2.  
I seems we need to let the agency enter the value??

Issue ID: 12517  
Subject: Truss Counter Question

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Zhang, Bin  
Submitted By: Litchfield, Phil 5/13/2013 7:56:04 PM  
Modified By: bzhang 5/14/2013 4:56:09 PM  
Priority: High  
Category: Support

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Zhang, Bin      | Assigned |          |          |

4/19/2016 3:09:46 PM

HRS AASHTO

2374

## Complete Issue Information

|          |         |
|----------|---------|
| Resolved | Support |
|----------|---------|

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name           | Resource Identifier | Description |
|----------------|---------------------|-------------|
| Screenshot.jpg |                     |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Phil Litchfield DATE: 5/13/2013 3:59:30 PM Eastern Daylight Time  
From consultant (Shoup):

The truss has two bays of counters (2-3 & 3-4). When I ran the file with the counters the controlling rating is 0.459 / 0.768 with a controlling location at U21-L22 in Compression. If I take the counters out and rerun to find the controlling rating I get 0.660 / 1.102 with a controlling rating at U21-L22 in Compression. I do not understand this. How can the counters affect this rating when it is so far away from the counters and the controlling member should have little to no effect from the counters?

I was also wondering why analyzing this structure with the counters takes about 10-15 minutes but without the counters is about 30 seconds? Why does limiting these members to tension take so much more time to analyze?

Attached is a zipped copy of the xml.

FROM: Bin Zhang DATE: 5/14/2013 11:33:01 AM Eastern Daylight Time

For a longitudinal truss without counters, once the finite element model geometry and model loads are generated, a 2-D linear is performed and the member forces, reactions and displacements due to dead loads are generated. Forces for each member from each load case are summed up and used in the rating calculations.

For a longitudinal truss with counters, the dead load is analyzed together with live load by using non-linear analysis. Total dead loads due to all dead load cases are summed up, factored and applied as one load cases. When non-linear analysis is complete, member forces are divided by the dead load factor, and will be used in regular rating calculations.

Non-linear analysis with counters has much more output files than the regular truss members. This is also one of the reasons that slow it down.

Please read page 8 in the "Virtis Truss Method of Solution" for details regarding the live load analysis of a longitudinal truss with counters.

|                 |
|-----------------|
| Issue ID: 12523 |
|-----------------|

4/19/2016 3:09:46 PM

HRS AASHTO

2375

### Complete Issue Information

Subject: Superstructure Alternatives and NSG analysis question

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Lee, Herman  
Submitted By: Litchfield, Phil 5/14/2013 4:30:12 PM  
Modified By: hlee 5/14/2013 10:22:57 PM  
Priority: High  
Category: Support

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 5/14/2013 12:51:25 PM Eastern Daylight Time

If a structure is defined as shown in the attached screenshot. During a NSG analysis, only Span 1 and Spans 2 & 3 will be analyzed, correct?

FROM: Herman Lee DATE: 5/14/2013 6:10:44 PM Eastern Daylight Time

Yes, only the superstructure alternative marked as Existing will be analyzed.

Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 12525                |
| Subject: Adjacent Lane Loading |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Litchfield, Phil        | 5/15/2013 4:28:48 PM |
| Modified By: hlee                     | 5/15/2013 4:40:11 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 5/15/2013 12:30:57 PM Eastern Daylight Time  
From consultant (Mertz):

Can an adjacent vehicle be defined for a truss span?

4/19/2016 3:09:47 PM

HRS AASHTO

2377

Complete Issue Information

FROM: Herman Lee DATE: 5/15/2013 12:34:54 PM Eastern Daylight Time  
No. This capability will be available in next year 6.6 release.

|                                                   |
|---------------------------------------------------|
| Issue ID: 12535                                   |
| Subject: Distribution Factor-Line Girder Analysis |

|                                       |                        |
|---------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Virtis |                        |
| Primary Contact: Zhang, Bin           |                        |
| Submitted By: Litchfield, Phil        | 5/16/2013 9:39:07 PM   |
| Modified By: hlee                     | 10/24/2013 12:58:04 PM |
| Priority: High                        |                        |
| Category: Unknown                     |                        |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Unknown  |
|                 | Information Needed |          |          |

4/19/2016 3:09:47 PM

HRS AASHTO

2378

### Complete Issue Information

|                  |          |      |         |
|------------------|----------|------|---------|
|                  | Assigned |      |         |
| Zhang, Bin       |          |      |         |
| Duray, Jim       | New      | High | Unknown |
| Kennelly, Krisha | Assigned |      | Bug     |
|                  | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | K0524_POI_Issue.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 5/16/2013 5:44:09 PM Eastern Daylight Time

When running a Distribution Factor-Line Girder analysis on this structure from with the Bridge workspace, the results are not viewable. And if you try to view the results of a specific member the program crashes.

FROM: Herman Lee DATE: 5/17/2013 7:44:12 AM Eastern Daylight Time

I tried LFR and LRFR from the Bridge Workspace and Bridge Explorer. The rating results are available and I'm not able to reproduce the crash.

Could you describe the steps to reproduce the issue? What are the tolerance settings you used?  
Thanks.

FROM: Herman Lee DATE: 6/2/2013 10:58:55 AM Eastern Daylight Time

Information Needed E-mail sent on 6/2/13.

FROM: Phil Litchfield DATE: 6/3/2013 5:09:20 PM Eastern Daylight Time

Running the LFR analysis from the bridge workspace using the attached vehicle. The analysis completes without any problems. But the LFR report is blank and the member results are blank if you look at an individual member (screenshot attached).

FROM: Phil Litchfield DATE: 6/3/2013 5:14:43 PM Eastern Daylight Time

Tolerances are as follows:

ft 0.01  
in 0.125  
m 0.003048

4/19/2016 3:09:47 PM

HRS AASHTO

2379

Complete Issue Information

mm 3.175  
mi 0.01  
km 0.01

FROM: Bin Zhang DATE: 7/16/2013 9:15:17 AM Eastern Daylight Time

I run the LFR analysis using the attached vehicle and the same tolerances. I am not able to reproduce this issue in version 6.4.1. I attached the rating summary and advanced rating report in the document. Please let me know if there is something else I need to look at to reproduce this issue. Thanks!

|                                                   |
|---------------------------------------------------|
| Issue ID: 12547                                   |
| Subject: Points being Reported when not Requested |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krishna    |                      |
| Submitted By: Kemna, Aaron            | 5/21/2013 3:01:29 PM |
| Modified By: hhu                      | 4/17/2014 3:22:50 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 5/21/2013 11:24:04 AM Eastern Daylight Time

I have a girder where the Points of Interest is set only to Generate at user-defined points. One POI was created at midspan of Span 2. The tabular summary shows ratings controlling at the adjacent piers, too. The spec check shows multiple locations reported around Span 2, but only the midspan and adjacent supports have ratings. The report tool only gives the ratings at midspan. It's my understanding that if you request only user-defined POIs that you should only see these ratings reported in the tabular summary. I would assume the same would go for the spec-check, but maybe there are reasons for reporting more? I have an override set for the POI, but this does not seem to affect the reporting other than the midspan. Attaching bridge. G1 has the POI set.

4/19/2016 3:09:47 PM

HRS AASHTO

2380

Complete Issue Information

FROM: Krisha Kennelly DATE: 5/22/2013 11:17:01 AM Eastern Daylight Time  
The moment capacity at the middle of span 2 is dependent on the moment capacity at the pier locations (Std eq 10-129d). The moment capacity at the pier is dependent on the stresses at the adjacent brace points and mid brace points. That is why so many locations are evaluated.

The pier locations need all of the articles to be considered to compute the moment capacity there. But the rating articles should not be processed at the pier locations.

Folder changed to Support Center since this is not related to development of 6.5.

FROM: Krisha Kennelly DATE: 4/4/2014 10:33:34 AM Eastern Daylight Time  
Fixed for version 6.6 (under the VI 12114 issue).

Now the only point that has rating articles performed is 47.5' which is the user point of interest.

Note that more articles are being processed now because as part of 12114 it was found that the safest way to ensure that a girder would run for a POI in any span is to process all piers to compute the moment capacity at the pier. Computing the moment capacity at a pier requires processing the brace pt and mid brace pt to each side of the pier. So you'll see a lot of locations in the spec check details window but only the point you specified will be rated.

FROM: Krisha Kennelly DATE: 4/4/2014 11:02:24 AM Eastern Daylight Time  
i've added a version 6.6 alpha 4 file to this issue for testing. Previous file was a beta file from 6.5 that can't be imported.

FROM: Krisha Kennelly DATE: 4/4/2014 11:05:43 AM Eastern Daylight Time  
IssueNet is locked so I couldn't attach a file, tester can contact me for a file.

FROM: Hanjin Hu DATE: 4/17/2014 10:02:40 AM Eastern Daylight Time  
Backchecked for V6.6.0 Beta Build 1.

Issue ID: 12562  
Subject: Clarification on LFR Culvert Output Requested

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Skow, Wayne  
Submitted By: Murgoitio, Shanon 5/24/2013 8:22:49 PM  
Modified By: hlee 6/10/2013 2:09:24 PM  
Priority: High  
Category: Enhancement

History

4/19/2016 3:09:47 PM

HRS AASHTO

2381



### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Duray, Jim      | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | 12569_EH_Input_in_Output.docx             |             |
|      | HorizEarthPress.docx                      |             |
|      | 17855_TestCulvert.xml                     |             |
|      | EH loads max and min lateral pressure.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Load Rater Shanon Murgoitio DATE: 5/24/2013 4:36:56 PM Eastern Daylight Time  
 Attached is an excerpt from the LFR output at midspan of the top slab of the attached culvert (Culvert Definition = Pox. M. Culvert Module). I am having difficulty determining if the proper load factors are being applied for the horizontal earth pressure. A beta factor of 0.5 should be used at this location for the EH loads per Article 3.20. The output does not indicate if the loads are factored or not, and the

4/19/2016 3:09:48 PM

HRS AASHTO

2382

Complete Issue Information

output for the LL does not indicate if impact is included or not. I would like clarification on how the AASHTO engine is applying the LFR load factors for horizontal earth pressure and request that labels be added to the output file to clarify the results.

Thank you,  
Shanon Murgoitio

FROM: Wayne Skow DATE: 5/29/2013 7:45:54 AM Eastern Daylight Time

See the attached word document for explanation details.

The beta factor is specified in the soil material. Loads shown in the rating articles (6B.4) include impact, but are otherwise unfactored. The applied impact factor can be seen in the detailed output file (Click on the eye glasses. Select Detail Output. Search for impact). The three lines in the Envelope report show the max/min of each action with the corresponding values of the other two actions (note that max and min are not algebraic, but refer to the most positive and most negative values.)

Adding labels can be accomplished through an enhancement request.

FROM: Load Rater Shanon Murgoitio DATE: 5/29/2013 11:56:11 AM Eastern Daylight Time  
Wayne,

Thank you for the clarification on the AASHTO LFR Culvert output. I would like to request an enhancement to add meaningful labels to the engine output.

Thank you,  
Shanon Murgoitio

FROM: Herman Lee DATE: 6/10/2013 10:07:50 AM Eastern Daylight Time  
I changed the Category to this incident to Enhancement.

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 12569                                                                             |
| Subject: Horizontal Earth Pressure is Not Being Applied Properly to the Top Slab of Culvert |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Murgoitio, Shanon       | 5/29/2013 7:07:27 PM |
| Modified By: kgyovai                  | 7/9/2013 1:20:40 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Virtis_Solid_PSB_Glitch.pdf |             |
|      | 3904334_Solid_PS_Box.xml    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Load Rater Shanon Murgoitio DATE: 5/29/2013 3:15:31 PM Eastern Daylight Time

This problem also exists in V6.4.1.

Per the response to incident 12562, and the help item for "Bridge Materials – Soil" the maximum and minimum soil pressures should be entered on the "Bridge Materials – Soils" tab in BrR.

So for the attached xml, the following soil properties were input for an LFR analysis.

Maximum lateral soil pressure = 55 pcf x 1.3 = 71.5 pcf

Minimum lateral soil pressure = 55 pcf x 0.5 = 27.5 pcf

However, when the analysis is run only the maximum lateral soil pressure is shown in the input section of the detailed output. In addition, the EH moment being used in the rating calculation at the corner and midspan of the top slab are the same. The rating calculation at the corner (0 ft) should be using a moment based on the maximum lateral soil pressure (-0.42 k-ft) and the rating factor at midspan (10 ft) should be using a moment based on the minimum lateral soil pressure (-0.16 k-ft). It does not appear that the AASHTO Engine is using the minimum lateral soil pressure for any calculations. Also, the loads shown in the detailed output do not show maximum and minimum EH moments, indicating only the maximum lateral soil pressure is being used.

The attached word document has screen prints of output to help illustrate the issue.

Thank you,  
Shanon Murgoitio

FROM: Wayne Skow DATE: 6/10/2013 9:28:17 AM Eastern Daylight Time

Only the max EH load pressure was being used. Fixed in v6.5b3.

FROM: Kane Gyovai DATE: 6/12/2013 11:37:28 AM Eastern Daylight Time

Maximum and minimum soil pressures appear to be used in determining max and min EH Moment values however max and min soil pressures are not reported as input in the Detail Output file. Only the max soil pressure is being reported.

FROM: Wayne Skow DATE: 6/18/2013 9:50:00 AM Eastern Daylight Time

It now reports both for LFR.

FROM: Load Rater Shanon Murgoitio DATE: 6/19/2013 4:39:52 PM Eastern Daylight Time

Thank you for incorporating the use of the minimum soil pressure. It appears to be working correctly in 6.5 Beta 3. However, the input in the Detail Output file shows the maximum pressure twice and does

4/19/2016 3:09:48 PM

HRS AASHTO

2384

Complete Issue Information

not show the minimum pressure (see attached word document titled "12569\_EH\_Input\_in\_Output"). When this is fixed it would be helpful to add "max" and "min" labels. Thank you.

FROM: Wayne Skow DATE: 6/25/2013 8:06:39 AM Eastern Daylight Time  
That output change had already been made. Not sure why you weren't seeing it. But I changed the program flow slightly to prevent the EH input information from printing twice. I also noticed LFR Appendix G6.1 had not been updated to handle EH max/min, so I made that change.

Fixed in the latest builds of AbanSpec.dll and WxBoxCulvert.dll.

FROM: Kane Gyovai DATE: 6/27/2013 8:27:07 AM Eastern Daylight Time  
Verified for V6.5 Beta 3.

FROM: Subhadeep Ghosh DATE: 7/1/2013 12:29:16 PM Eastern Daylight Time  
Fixed for 6.5, the next release to Beta 3. Please see the attached section EH loads max and min lateral pressure.png from the detailed report

FROM: Subhadeep Ghosh DATE: 7/1/2013 1:10:37 PM Eastern Daylight Time

FROM: Kane Gyovai DATE: 7/9/2013 9:17:27 AM Eastern Daylight Time  
Verified for V6.5 Beta 4/Acceptance Build

|                                    |
|------------------------------------|
| Issue ID: 12576                    |
| Subject: Solid PS Box Beams Rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Waheed, Amjad           | 5/30/2013 1:02:54 PM |
| Modified By: awaheed                  | 5/30/2013 7:31:47 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Thogaru, Srujana | Assigned           |          |          |
|                  | Information Needed |          |          |
|                  | Resolved           |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 02306 - 11695.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Amjad Waheed DATE: 5/30/2013 9:07:59 AM Eastern Daylight Time

We are trying to code solid box beams in the BrR. We got error while coding solid beams and trying to find the best way to code them. One of our engineer discovered a workaround that requires leaving a void. What is the best way to code them? Please see the attached file for further explanation.

FROM: Srujana Thogaru DATE: 5/30/2013 10:27:53 AM Eastern Daylight Time

Best way to code a solid box beam is using circular void beam with zero number of voids.

As mentioned in your PDF attached to the issue; your bridge xml file once worked correctly and having trouble completing the analysis now. Please attach the bridge xml file so we can locate the error.

Also please let us know the version it worked. Thanks

FROM: Srujana Thogaru DATE: 5/30/2013 3:17:34 PM Eastern Daylight Time

xml file sent in the email (attached to issue) completes analysis correctly. If you want to create a sold box beam please use circular void beam with zero number of voids.

FROM: Amjad Waheed DATE: 5/30/2013 3:31:17 PM Eastern Daylight Time

We have not tried PS box beams with circular voids yet.

This issue is not resolved as of now.

Issue ID: 12582

Subject: Full capacity of welded steel cover plates not developed

Folder: /Virtis/Support Center/Virtis

Primary Contact: Skow, Wayne

Submitted By: Withers, Richard

5/31/2013 1:57:47 PM

Modified By: hlee

6/18/2013 2:51:27 PM

Priority: High

Category: Enhancement

4/19/2016 3:09:48 PM

HRS AASHTO

2386

## Complete Issue Information

---

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | B-16-019=C-09-005(383).xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Richard Withers DATE: 5/31/2013 10:01:17 AM Eastern Daylight Time

The attached bridge consists of a wide flange girder with welded cover plates. The issue is with the 70-100-100-100-70 Spans#10-14 superstructure definition. When input into Virtis as-built (wide flange section with cover plates), the moment capacity is significantly lower than we were getting with our older load rating software. We "dummied" the section in as a plate girder and the results are on par with our legacy software. It appears Virtis will not fully develop the capacity of the cover plates. What is the reason for this difference?

Under each member, the "Wizard Alternative" is the as-built section and the "Dummied Plate Girder" is exactly what it says it is.

Thanks for the help,  
Richard Withers

FROM: Wayne Skow DATE: 6/10/2013 1:19:00 PM Eastern Daylight Time

This has been fixed in v6.5b2 where the flange and cover plates are now treated as an equivalent single plate with  $(t) = \text{sum of the plate thicknesses}$  and  $(b) = \text{Total area}/(t)$ . This improves  $b/t$  in 10.48.2.1 resulting in a higher allowable. Also, if you select the new Allow Plastic Cover Plate switch, the section will be eligible for compactness which will (if qualified) improve section capacity even more.

Fixed in v6.5.b2

FROM: Herman Lee DATE: 6/18/2013 10:42:27 AM Eastern Daylight Time

This is the same as the Allow Plastic Analysis for Cover Plates enhancement in 6.5.

4/19/2016 3:09:48 PM

HRS AASHTO

2387

Complete Issue Information

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 12585                                                               |
| Subject: AASHTO ASD engine failed to calculate the allowable stress correctly |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Skow, Wayne          |                      |
| Submitted By: Zhang, Bin              | 5/31/2013 6:20:57 PM |
| Modified By: hlee                     | 6/18/2013 2:53:12 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 5/31/2013 2:21:08 PM Eastern Daylight Time  
 I submitted this incident on behalf of Francisca Karyadi from Jacobs. The communication email with the user was listed below. Please use "South Approach (Spans 2 to 7)" – "Exterior/Outside Girder", using ASD method (trucks Type 3) to reproduce this problem. I think it's a bug for the AASHTO ASD engine when the user picked "Generate at user-defined points". The calculated tension flange allowable stress is 0.0, which caused the 0 rating factor. We need fix the allowable stress computation.

\*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

From: Karyadi, Fran [mailto:Fran.Karyadi@jacobs.com]  
 Sent: Thursday, May 30, 2013 2:10 PM  
 To: Bridgewater,  
 Subject: Simple question...

To whom it may concern,  
 Herman Lee is the one who always helps me with questions, and I really appreciated your help. I remember in your earlier email that you only provided limited support for installation, but I don't know

4/19/2016 3:09:49 PM

HRS AASHTO

2388

Complete Issue Information

who to ask about this problem I am having with the output. I asked my coworkers who were familiar with this software, but nobody could solve it. Please take a look quickly what is the problem with my input.

Could you run "South Approach (Spans 2 to 7)" – "Exterior/Outside Girder", using ASD method (trucks H20, HS20, 3, 3S2)? Select "Control Options", and check the last box "Generate at user-defined points". It would give 0 ratings, then when you check all 3 boxes in "Control Options", it would give the governing values for shear ratings (well above 0 for Rating Factors).

I have been trying so many different ways, but still could not solve the problem.

Your help is really appreciated.

Thank you so much.

Regards,

Fran

Francisca Karyadi, PE  
JACOBS | Bridge Group  
617.532.4254 direct | 617.242.9222 main | 617.242.9824 fax  
343 Congress Street, 2nd Floor  
Boston, MA 02210  
www.jacobs.com  
fran.karyadi@jacobs.com

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

FROM: Wayne Skow DATE: 6/10/2013 1:51:20 PM Eastern Daylight Time  
There was a variable that wasn't initialized properly under all situations. When POI's are generated at 10th pts (most of the time), it did not affect results. But when the only POI's were in the middle of the girder, the first POI would exhibit a zero RF.

Fixed in v6.5.b3.

Issue ID: 12613  
Subject: Error in closing the combinations.dat file after a failed LRFR analysis

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Trees, Geoffrey  
Submitted By: Zhang, Bin 6/4/2013 1:34:47 PM  
Modified By: hlee 6/8/2013 12:31:17 PM  
Priority: High  
Category: Unknown

History

4/19/2016 3:09:49 PM

HRS AASHTO

2389



Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
| Lee, Herman     | Assigned  | High     | Bug         |
|                 | Resolved  |          |             |
|                 | Suspended |          | Enhancement |
|                 | Rejected  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/4/2013 9:51:02 AM Eastern Daylight Time  
 Error in closing the combinations.dat file after a failed LRFR analysis  
 I submitted this incident on behalf of Sean Hart from Baker (SHart@mbakercorp.com). The communication email was listed below. The error message and the bridge XML file were attached in the document.

\*\*\*\*\*

From: Hart, Sean  
 Sent: Thursday, May 30, 2013 12:26 PM  
 To: Lee, Herman  
 Subject: Virtis Help

I'm getting the attached errors when running the attached file for G6 & G7. I messed around with the diaphragm locations to move some of the concentrated loads around and I'm still getting the errors.

Any insight as to what the issue is?

\*\*\*\*\*

Please use AASHTO LRFR, member alternative of G6 to reproduce this issue. When I run the bridge at the 1st time, the error message was listed in figure 1. When I tried to run the same mem alt at 1 2nd time, the error message was listed in figure 2. I think Virtis failed to close the combinations.dat file after the 1st analysis failed, so Virtis is not able to open this file for the 2nd analysis (figure 3).

Figure 1 Error message for AASHTO LRFR, G6 – 1st time running

Figure 2 Error message for AASHTO LRFR, G6 – 2nd time running

4/19/2016 3:09:49 PM

HRS AASHTO

2390

Complete Issue Information

Figure 3 OpenCombinationsFile in AbaLcLrfdCombinationsEx project

Please read the attached WORD document for details (12613-Error in closing the combinations.docx).

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 12644                                                                    |
| Subject: Issue with Lane-Type Legal Load Model (Figure D6A-5) with only axle loads |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Lee, Herman             | 6/7/2013 6:55:11 PM  |
| Modified By: hlee                     | 6/30/2014 6:18:23 PM |
| Priority: High                        |                      |
| Category: Enhancement                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/7/2013 2:55:35 PM Eastern Daylight Time

The application of the Lane-Type Legal Load Model (Figure D6A-5) with only axle loads should be the same as the Lane-Type Legal Load Model. i.e. Apply for negative moment and interior reaction for all span lengths.

FROM: Herman Lee DATE: 4/9/2014 11:03:20 AM Eastern Daylight Time

Fixed for 6.6 Beta 1.

FROM: Hanjin Hu DATE: 4/18/2014 8:58:17 AM Eastern Daylight Time

Backchecked for V6.6.0 Beta Build 1.

4/19/2016 3:09:49 PM

HRS AASHTO

2391

Complete Issue Information

FROM: Herman Lee DATE: 5/8/2014 2:44:13 PM Eastern Daylight Time

The implementation causes problem in truck only legal load since currently there is no unique way to identify different Lane-Type Legal Load Model.

Removed above implementation in 6.6 Beta 1.

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 12662                                                                       |
| Subject: AASHTO LFD engine failed to report the RF at some POI points for the PS beam |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Pierce, Jim             | 6/13/2013 6:19:55 PM |
| Modified By: sthogaru                 | 6/26/2013 8:25:25 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Zhang, Bin       | Assigned |          |          |
| Thogaru, Srujana |          |          | Bug      |
|                  | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

4/19/2016 3:09:49 PM

HRS AASHTO

2392

Complete Issue Information

Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | Straight2Span no oh.zip |             |
|      | Straight2Span.zip       |             |
|      | Straight_2_Span.xml     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 6/13/2013 2:20:20 PM Eastern Daylight Time

I submitted this incident on behalf of Jim Pierce from MNDOT.

The communication email was listed below. Please use AASHTO LFR, HS20 vehicle to reproduce this issue. The user checked "Generate at the user-defined points" in the Control Options, but the POI 73.8829 ft is not reported in the Spec Check.

\*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

Dear Virtis Support,

Attached are 6 XML Virtis files. We have been comparing BRASS engine with AASHTO engine in Virtis 6.3.1. Most of them are in agreement. These are typical of some that don't agree well. We don't know if the difference is in the AASHTO or BRASS engine. Could you look at this for us and try to find where the difference lies. Below is some info about each bridge, and the Operating Rating from each engine.

| BR NO | TYPE              | BRASS O. R. | AASHTO O.R. |
|-------|-------------------|-------------|-------------|
| 36011 | Steel Simple Span | 3.23        | 2.48        |
| 79503 | Steel Simple Span | 0.87        | 1.16        |
| 9131  | Steel Continuous  | 2.05        | 0.61        |
| 07512 | Steel Continuous  | 1.39        | 1.73        |
| 03009 | Prestressed Beam  | 1.64        | 0.31        |
| 18001 | Prestressed Beam  | 1.16        | 1.74        |

Please let me know if you have any questions. Thank you.

Jim Pierce, P.E.  
 MNDOT Bridge Office  
 Office: 651-366-4555  
 Fax: 651-366-4497

\*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

I have a workaround for this incident. The user can pick all the 3 options for the POI in the Control

4/19/2016 3:09:49 PM

HRS AASHTO

2393

Complete Issue Information

Options, so the user defined POI will be reported in the Spec Check.  
This workaround was sent to the user on 6/13/2013.

FROM: Bin Zhang DATE: 6/17/2013 9:03:06 AM Eastern Daylight Time

FROM: Srujana Thogaru DATE: 6/26/2013 3:15:16 PM Eastern Daylight Time  
Above mentioned issue cannot be reproduced in 6.5 development. Tested in 6.4.1 release and found to be fixed in 6.4.1 release.

|                                          |
|------------------------------------------|
| Issue ID: 12713                          |
| Subject: Straight bridge won't run in 3d |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Skow, Wayne             | 6/26/2013 1:36:33 PM |
| Modified By: kkennelly                | 4/4/2014 3:13:25 PM  |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Bug      |
|                  | Assigned |          |          |
|                  | Rejected |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 6/26/2013 9:39:01 AM Eastern Daylight Time  
I created a straight, 2-span bridge to parallel a 2-span curved girder with large radius so I could

4/19/2016 3:09:50 PM

HRS AASHTO

2394

Complete Issue Information

compare results expecting them to be fairly close. The straight bridge generates a lot of exception messages during FE analysis.

FROM: Krisha Kennelly DATE: 6/26/2013 10:39:29 AM Eastern Daylight Time  
I get the same bad results for this bridge in 6.4.1. The STAAD file we create in 6.4.1 also fails, it says 'problems in solver'.

I changed the width of the deck by 1' on each side to allow for an overhang of 1'. Then it runs ok.

FROM: Krisha Kennelly DATE: 6/26/2013 11:21:17 AM Eastern Daylight Time  
attached the zip file for 6.4.1 with no overhangs and with overhangs

FROM: Krisha Kennelly DATE: 4/4/2014 11:06:26 AM Eastern Daylight Time  
I don't think we have to support generating a FE model for the attached structure that has the concrete deck stopping at the exterior girders' webs resulting in the steel flange only having a deck over 1/2 of the flange. I also don't think it's necessary to add validation for this extreme case.

Issue ID: 12737  
Subject: LRFR NSG Rating Results Differ When Run From BE or BW

Folder: /Virtis/Support Center/Virtis  
Primary Contact: Ordoobadi, Mehrdad  
Submitted By: Silvis, Bryan 7/3/2013 5:24:27 PM  
Modified By: sghosh 5/12/2014 5:52:56 PM  
Priority: High  
Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Zhang, Bin         | Assigned |          |          |
| Ordoobadi, Mehrdad |          |          | Bug      |

4/19/2016 3:09:50 PM

HRS AASHTO

2395

Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Resolved  |      |             |
|            | Verified  |      |             |
| Duray, Jim | New       | High | Unknown     |
|            | Suspended |      | Maintenance |
|            | Resolved  |      |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bryan Silvis DATE: 7/3/2013 1:33:44 PM Eastern Daylight Time  
 Using the 24DollyRigCrabA NSG vehicle found in the attached vehicle library, we get varying LRFR NSG rating results whether it is run from the Bridge Explorer or Bridge Workspace (file attached). In the attached pdf the first two sheets show rating results run from the Bridge Explorer. The final sheet of the Specification Check shows the results run from the Bridge Explorer for the controlling span and girder. They do not match. They did not match when I tried them for the 24DollyRigCrabB either. Advanced settings for the vehicles were set at 0 impact and escorted.

Also as previously forwarded to support (rating results are not available from the Bridge Workspace for each member). Believe Herman said this bug was already input as Incident 12690. I am forwarding this incident for Jonathan Mallard.

FROM: Herman Lee DATE: 7/3/2013 3:10:39 PM Eastern Daylight Time  
 More information from Bryan:

=====

I input Incident 12737 this afternoon about getting different LRFR NSG results when rating from the Bridge Explorer and Bridge Workspace. Wanted to forward a little extra information. I get the same ratings from the BE and BW when I set the advanced settings for the NSG vehicle to 0 impact and escorted from the BE and no adjustments from inside the BW (i.e. I leave the NSG vehicle with the defaults for impact and loading condition, mixed with traffic). From the BW, I get much higher ratings after I switch the impact to 0 and loading condition to escorted.

Bryan

=====

FROM: Krisha Kennelly DATE: 7/9/2013 4:24:53 PM Eastern Daylight Time

4/19/2016 3:09:50 PM

HRS AASHTO

2396

## Complete Issue Information

FROM: Bin Zhang DATE: 7/9/2013 2:12:34 PM Eastern Daylight Time

I am able to reproduce this issue in Beta4. I think the rating factor displayed in the bridge explorer is not correct. For member G2, the BE is using the RF of G3.

Bryan, please use the AdvancedRatingResultsSummary report to view the RF for each member in the bridge workspace (AdvancedRatingResultsSummary.png, attached in the document).

FROM: Mehrdad Ordoobadi DATE: 7/16/2013 11:16:02 AM Eastern Daylight Time

The analysis of Girders are performed but everything is recorded under the linked member alts. For example G3, G4,... G8 are linked to G2 and G9 is linked to G1. All of the results for G3, ... G9 are recorded for Member alts G1 and G2. When we do an analysis in the BWS we open the bridge and we associate each results to the linked member alt and also we provide additional information to indicate which member is analyzed. For example the results for G3 go to G2 member alt but we can figure out which member it belongs to (G3). The association is done by saving the object ID for the member (G3) in the analysis event. This works fine as long as the bridge is open because we use object IDs for this association.

Since doing a bridge explorer analysis does not keep the bridge open we cannot find out which member an analysis results for a linked member belongs to. What the window currently shows is the minimum rating results for each member alt. So since we have multiple results for members G1 and G2 it finds the minimum rating results for each of them and reports it.

There is no quick and easy way to fix this issue fast and include it in 6.5. We need to revise the analysis event and also the analysis engine(s) and the bridge explorer windows to fix this issue. I suggest that we do that in 6.5.1 or later.

From: Duray, Jim

So has this problem existed for a few years (for LFR)?

From: Ordoobadi, Mehrdad

Yes this has been like this for a while (for linked members).

From: Duray, Jim

I think we should change it to the support center for both LFR and LRFR and fix it for 6.6.

FROM: Mehrdad Ordoobadi DATE: 5/1/2014 3:46:08 PM Eastern Daylight Time  
Fixed in 6.6 Beta 2.

FROM: Subhadeep Ghosh DATE: 5/12/2014 11:16:37 AM Eastern Daylight Time  
Verified for 6.6 beta 2.

Issue ID: 12757

Subject: Refined Analysis - LRFR, MBE update - some incorrect LL factors

4/19/2016 3:09:50 PM

HRS AASHTO

2397



## Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Duray, Jim           |                      |
| Submitted By: Thompson, Todd          | 7/10/2013 4:49:53 PM |
| Modified By: hlee                     | 6/22/2015 7:48:22 PM |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                                 | Description |
|------|-----------------------------------------------------|-------------|
|      | Snapshot of Maiden Rock Virtis<br>135pm 7-12-13.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Todd Thompson DATE: 7/10/2013 12:54:39 PM Eastern Daylight Time

In a separate incident - the actual Moment for live load is being calculated incorrectly by dividing 1.2 (taking out the multi-presence factor) but has been fixed for Beta 4.

As I was working through the various combinations of different permit types and the load factors for the permit vehicle, it appears there are some inaccuracies possibly.

Unlimited/Annual - appears to correctly follow 6A.4.5.4.2c - in which the table value is used plus 0.10

But for escorted and unescorted special permits - it appears to use only the table values - when it

4/19/2016 3:09:50 PM

HRS AASHTO

2398

Complete Issue Information

should use 1.1 (escorted) and 1.0 (unescorted).

I could not find if this was reported (and fixed) yet.

FROM: Todd Thompson DATE: 7/11/2013 8:11:38 AM Eastern Daylight Time

In addition -

For the same 2013 Interim Spec -

when Special Permits - mixed with traffic are evaluated using refined analysis - a live load factor of 1.0 is used for permit vehicle AND a 1.1 live load factor is applied on the governing AASHTO legal truck placedd in the adjacent lane. - I don't see where we are applying two live load factors and adding the truck moments together. We are only using the load effect with live load factor for the permit truck.

FROM: Jim Duray DATE: 7/12/2013 3:39:41 PM Eastern Daylight Time

We missed this when we planned and budgeted this spec update task. I'm changing this issue to a maintenance issue.

FROM: Herman Lee DATE: 6/22/2015 3:34:17 PM Eastern Daylight Time

The Adjacent vehicle enhancement in 6.6 release allows users to specify an adjacent vehicle with a user-defined live load factor.

|                                         |
|-----------------------------------------|
| Issue ID: 12763                         |
| Subject: Concrete Haunch Error on Truss |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Jackson, Amanda         | 7/12/2013 7:51:28 PM |
| Modified By: hhu                      | 3/14/2014 3:10:26 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

4/19/2016 3:09:50 PM

HRS AASHTO

2399

## Complete Issue Information

### Description

FROM: Amanda Jackson DATE: 7/12/2013 3:55:23 PM Eastern Daylight Time

Our consultant is working on the attached truss. When trying to analyze the truss, we get the following error:

Cannot compute haunch dead load if concrete material not assigned to cross section slab!  
01:53:03 PM - Line 1173 in source file DoSteelBeamDef.cpp.

The truss has a corrugated steel deck. It shouldn't be looking for concrete material to calculate a haunch load. I think this is similar to incident 12078.

FROM: Herman Lee DATE: 7/16/2013 7:30:18 AM Eastern Daylight Time

Seems like this problem only exists in cross section based input.

Resolved for 6.5.1 release.

FROM: Joseph Ihnat DATE: 11/15/2013 10:35:19 AM Eastern Standard Time

Verified truss analysis runs to completion in 6.5.1 Alpha Build 2.

FROM: Hanjin Hu DATE: 3/14/2014 11:10:26 AM Eastern Daylight Time

The BrDR (Version 6.6.0 Alpha Build 2) ended up during analysis of the "Right (Upstream) Truss" under "Maiden Rock Truss System Bridge". The rating method used was LFR. The attached screen shot "error 12763" shows the place it stopped.

Issue ID: 12767

Subject: Question about Virtis Negative Moment capacity over the pier

Folder: /Virtis/Support Center/Virtis

Primary Contact: Skow, Wayne

Submitted By: Silvis, Bryan

7/15/2013 1:06:51 PM

Modified By: bsilvis

7/26/2013 3:15:32 PM

Priority: Critical

Category: Bug

### History

4/19/2016 3:09:51 PM

HRS AASHTO

2400

Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Skow, Wayne        | Assigned | High     | Unknown  |
| Ihnat, Joseph      | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Resolved |          |          |
|                    | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/15/2013 9:07:24 AM Eastern Daylight Time  
Submitted on behalf of Bryan Silvis, VDOT.

Received Bridgeware email:

=====  
File is attached at the bottom of this email chain.

---

From: Mallard, Jonathan C., P.E. (VDOT)  
Sent: Tuesday, July 09, 2013 5:08 PM  
To: Silvis, Bryan J., P.E. (VDOT)  
Cc: Zhou, Yingmin, P.E. (VDOT)  
Subject: FW: Question about Virtis Negative Moment capacity over the pier

Bryan,

I've verified Yingmin's numbers below, and I agree with her position: Br|R should pick the lower of the two capacity values from A6.1.1 and A6.4.4 since both sections would apply to a continuous girder over an interior support. I confirmed her numbers in both 6.4 and the latest 6.5 beta.

It looks like selecting the toggle in the Control Options to Ignore long. reinf in negative moment capacity causes the program to incorrectly pick one or the other code sections instead of selecting the minimum value which should apply.

Could you please forward this to the incident net?

4/19/2016 3:09:51 PM

HRS AASHTO

2401

Complete Issue Information

Thanks!

Jcm

Thanks for the information on phone. I copied more numbers below. You can see that Myt (A6.1.4) numbers are always bigger than Mnc (A6.1.1). My opinion is that we need to meet both A6.1.1 and A6.1.4 since we have Discretely Braced Compression Flanges and Continuously Braced Tension Flanges. The smaller number of them shall control.

Virtis picked Myt to calculate the RF for situation Without negative steel while it picked Mnc to calculate the RF for situation With negative steel. That is possibly why we got bigger RFs for situation without negative steel.

I could be wrong, please let me know if you find any more information.

Thanks.

Hi, Jonathan:

I just tried a 2 span continuous plate girder bridge and came across some questions about the negative moment capacity. It seems to me that Virtis messed up something with or without negative reinforcing steel in the deck. Here is a summary of my run both ways.

Without Negative Steel:

Exterior Girder: RF = 1.57 Myt = 11272 kip\*ft Mnc = 10207 kip\*ft Mp = 11280 kip\*ft  
Interior Girder: RF = 1.58 Myt = 11141 kip\*ft Mnc = 10160 kip\*ft Mp = 11280 kip\*ft

With Negative Steel:

Exterior Girder: RF = 1.49 Myt = 11471 kip\*ft Mnc = 10913 kip\*ft Mp = 12614 kip\*ft  
Interior Girder: RF = 1.54 Myt = 11713 kip\*ft Mnc = 10938 kip\*ft Mp = 12899 kip\*ft

Jonathan C. Mallard, P.E.  
Load Rating Program Manager  
VDOT - Central Office Structure & Bridge  
Jonathan.Mallard@VDOT.Virginia.gov

=====

FROM: Wayne Skow DATE: 7/15/2013 10:05:19 AM Eastern Daylight Time  
This is a bug in articles A6.1.2 through A6.1.4. Those articles were using the compression phi factor instead of the flexure phi factor. That caused Article A6.1.4 (phi=.9) to control where A6.1.1 (phi=1.0) would have controlled if A6.1.4's phi had been 1.0.

Fixed in v6.5.b4 AbanSpec.dll dated after 7/16/2013 at 10am.

FROM: Srujana Thogaru DATE: 7/22/2013 10:55:12 AM Eastern Daylight Time

4/19/2016 3:09:51 PM

HRS AASHTO

2402

Complete Issue Information

Fix verified with 6.5 Beta 4 updates.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 12800                                                      |
| Subject: Issue with copying truss in truss line structure definition |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Ordoobadi, Mehrdad   |                       |
| Submitted By: Lee, Herman             | 7/31/2013 3:54:01 PM  |
| Modified By: jihnat                   | 11/14/2013 3:59:37 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/31/2013 11:54:03 AM Eastern Daylight Time  
Submitted on behalf of Bruce Peterson (Bruce.Peterson@jacobs.com), JACOBS.

Received BrDR email:

=====

Another question for you.

I was copying my trusses by right clicking on the existing truss and pasting it to the trusses folder to run them with different distribution factors for the truck trains. When I did this, and modified the copy of the truss to the new distribution factors, it changed all 3 of the copies I had made instead of just the one I was working in. Is this the way it is supposed to work?

I went around it by double clicking on the trusses folder, created new ones and copied the text file into it. Then it seemed to save them as individual files and not link them. However this causes me to wonder what other changes have been linked.

4/19/2016 3:09:51 PM

HRS AASHTO

2403

Complete Issue Information

Thanks  
Bruce

=====

FROM: Joseph Ihnat DATE: 8/7/2013 10:32:34 AM Eastern Daylight Time  
Mehrddad, can you take a look at this? I checked in some GUI code that I think was missing (abgbrdg), but it seems like DoTrussLineMbr::CompileObjectIdList() may not be working correctly.

FROM: Mehrddad Ordoobadi DATE: 8/9/2013 1:38:42 PM Eastern Daylight Time  
I am able to reproduce this problem. Looking into it.

FROM: Mehrddad Ordoobadi DATE: 8/9/2013 5:17:53 PM Eastern Daylight Time  
Fixed for 6.5.1.

FROM: Joseph Ihnat DATE: 11/14/2013 10:54:01 AM Eastern Standard Time  
Verified fixed in 6.5.1 Alpha Build 2.

|                                                      |
|------------------------------------------------------|
| Issue ID: 12803                                      |
| Subject: Spec check error for AASHTO ASD/ LFD engine |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Zhang, Bin              | 8/2/2013 2:23:26 PM  |
| Modified By: hlee                     | 8/12/2013 1:11:37 PM |
| Priority: High                        |                      |
| Category: Support                     |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          | Bug      |
| Lee, Herman     | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:09:51 PM

HRS AASHTO

2404

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 4PW.xml             |             |
|      | 00057 - H-03-AY.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/2/2013 10:24:13 AM Eastern Daylight Time  
 I submitted this incident on behalf of Joshua Colella from Michael Baker Corporation.  
 The communication email was listed below.  
 Please use G1 in superstructure "Span 1", HS20 vehicle, AASHTO ASD / LFD to reproduce this issue.  
 The bridge model was attached in the document.  
 \*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

From: Colella, Joshua  
 Sent: Thursday, August 1, 2013 3:15 PM  
 To: Lee, Herman  
 Cc: Gill, Peter A  
 Subject: Spec Check Error in Virtis (ASD/LFD)

Good Afternoon Herman,

One of our team members is getting the following error when trying to run a superstructure in LFD/ASD:

Have you seen this error before, any idea what is causing it? I have attached the XML file for your consideration.

Thanks again,  
 Josh

Joshua Colella, PE | Structural Engineer | Michael Baker Corporation |  
 500 Enterprise Drive, Suite 2B | Rocky Hill, CT 06067 | 860.257.2412 (ofc) | 860.874.2158 (cell) |  
 jcolella@mbakercorp.com | www.mbakercorp.com  
 \*\*\*\*\*  
 \*\*\*\*\*  
 \*\*\*\*\*

FROM: Wayne Skow DATE: 8/7/2013 7:11:24 AM Eastern Daylight Time  
 The error was a consequence of entering zero for the "n" value on the Deck Concrete tab of the Deck Profile dialog. This caused some NaN's (not-a-number due to divide by zero) to enter the speck check artilces.



Complete Issue Information

Herman - This is probably an input validation issue rather than a speck check issue.

FROM: Herman Lee DATE: 8/12/2013 9:06:26 AM Eastern Daylight Time  
Ben, please let the user know. Thanks.

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 12805                                                         |
| Subject: AASHTO LFR 10.48.4 returns higher moment capacity than 10.48.2 |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Zhang, Bin              | 8/2/2013 9:20:42 PM   |
| Modified By: gtrees                   | 11/15/2013 7:13:50 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Skow, Wayne     | New      | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Bin Zhang DATE: 8/2/2013 5:21:39 PM Eastern Daylight Time  
Please use member G2 in "WGCK Superstructure unit 4; Span 11 only" to reproduce this incident.

FROM: Wayne Skow DATE: 8/8/2013 10:39:24 AM Eastern Daylight Time  
The problem was that 10.48.4 was not reflecting the reduced flange allowable stress (Fcr) due to a too high flange b/t ratio, thus, reporting a slightly higher allowable moment. However, 10.48.2's allowable is correct and was used to produce the rating factor. 10.48.2 and 10.48.4.Mr were modified to more

4/19/2016 3:09:52 PM

HRS AASHTO

2406

Complete Issue Information

clearly display Fcr when flange b/t or web D/tw ratios are too large requiring a reduction in allowable flange stresses. 10.48.4 will no longer report a higher allowable moment than 10.48.2.

Fixed in v6.5.1.

|                                               |
|-----------------------------------------------|
| Issue ID: 12806                               |
| Subject: Curved Steel Bridge Web Shear Rating |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srjana      |                      |
| Submitted By: Sharp, Rachel           | 8/6/2013 3:09:25 PM  |
| Modified By: hlee                     | 8/21/2013 1:04:35 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | New      | High     | Unknown  |
| Thogaru, Srjana | Assigned |          |          |
|                 | Resolved |          | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

4/19/2016 3:09:52 PM

HRS AASHTO

2407

Complete Issue Information

| Name | Resource Identifier                             | Description |
|------|-------------------------------------------------|-------------|
|      | 00030 - 18113-Stiff.xml                         |             |
|      | web shear lfr 6.3 stiffened vs unstiffened.docx |             |
|      | 00030 - 18113-Stiff.xml                         |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Rachel Sharp DATE: 8/6/2013 11:20:43 AM Eastern Daylight Time

The rating factor summary shows 0.467 for OL11 and 0.522 for OL4 Operating at 186.98 ft. This is below 1.0 and when viewing the spec checks for this location, it is not flagged with an "X" at Span 2 - 89.20 ft, but rather checked as if it passed. Refer to 6B.4 Shear Rating report at 186.98 ft left that show the ratings that correspond with the summary table.

The adjacent section which fails is okay and flagged with an "X".

FROM: Mark Mlynarski DATE: 8/7/2013 9:46:04 AM Eastern Daylight Time

Srujana,

I think we need to determine if this is an existing issue or occurred in previous versions.

FROM: Srujana Thogaru DATE: 8/20/2013 3:14:46 PM Eastern Daylight Time

Fixed for 6.5.1 release

|                                                       |
|-------------------------------------------------------|
| Issue ID: 12807                                       |
| Subject: Curved Steel Girder Bridge - LFR Specs Shear |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Sharp, Rachel           | 8/6/2013 8:33:55 PM  |
| Modified By: rsharp                   | 8/29/2013 8:19:29 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Maintenance |
|                 | Assigned  |          |             |
|                 | Suspended |          |             |
|                 | Resolved  |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Fatigue not Controlling.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rachel Sharp DATE: 8/6/2013 4:40:57 PM Eastern Daylight Time

The bridge is a two span continuous bridge but for Girder 2 Span 1 at 97.7828ft, it reports it is at a simple support so it limits do to be less than 0.5 D so it treats the section as unstiffened.

FROM: Srujana Thogaru DATE: 8/20/2013 3:17:39 PM Eastern Daylight Time

Fixed for 6.5.1 release

FROM: Rachel Sharp DATE: 8/29/2013 4:19:29 PM Eastern Daylight Time

Backcheck is okay.

### Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 12810                          |
| Subject: AASHTO Engine and Fatigue (LFD) |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Lee, Herman          |                      |
| Submitted By: Teal, Dean              | 8/7/2013 5:27:06 PM  |
| Modified By: dteal                    | 5/14/2014 1:41:46 PM |
| Priority: High                        |                      |
| Category: Maintenance                 |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Thogaru, Srujana | Assigned |          |          |
| Ihnat, Joseph    |          |          |          |
| Thogaru, Srujana | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 07812_MAV.xml       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 8/7/2013 1:34:06 PM Eastern Daylight Time  
Herman and I had worked on the first part of this issue. I had imported a BRASS data file (girder line steel). In our Steel commands in the data set we had set allowable fatigue at 16 ksi. See the bridge model and Superstructure Def. named BRASS Import – W/Fatigue.  
HS 20 Axel Load Inv = 0.943 controlled by Fatigue

I built a girder system model called K-79 HWY ..... Using girder #2 and entered one POI at 27.5 feet (the spot that controlled in the BRASS data set). I entered the same data on the Fatigue tab that the Brass girder line had – Category B and 16 ksi allowable fatigue. I selected in the control options to only

4/19/2016 3:09:52 PM

HRS AASHTO

2410

Complete Issue Information

evaluate at the entered user POI. Fatigue did not control using the BRASS engine, flexure controlled with an HS20 Axel load Inv = 1.634

1.634 is not correct so I had Brian Goodrich help me find out why fatigue did not control. He had me uncheck all POI selections in the control options. Now the Inv. Ratings match at 0.943.

Now change the engine to the AASHTO engine – HS20 Axel Load Inv = 1.473 with flexure controlling. This is a long way from the 0.943 I got from BRASS and fatigue controlling. Why is the AASHTO engine different than BRASS? How do I get fatigue to control when I limit fatigue allowable = 16 ksi?

FROM: Herman Lee DATE: 8/12/2013 8:47:18 AM Eastern Daylight Time  
The AASHTO Engine doesn't use the Allowable Fatigue Stress entered in the POI. I'm changing this to a Maintenance issue.

FROM: Dean Teal DATE: 8/12/2013 1:59:27 PM Eastern Daylight Time  
Does it use allowable fatigue at all? Where/how is it enter?  
Was this just a BRASS feature that we missed putting into the AASHTO Engine?

FROM: Bin Zhang DATE: 8/13/2013 10:56:10 AM Eastern Daylight Time  
BRASS LFD is using "Allowable Fatigue Stress / Stress Ranges" to calculate the fatigue rating factor. Stress Range means "Moment Range/Section Modulus" here. AASHTO ASD and LFD do not perform the fatigue rating.

FROM: Herman Lee DATE: 1/24/2014 12:38:01 PM Eastern Standard Time  
The Task Force made the decision to hide the data fields in the input window. The API will also be modified to remove access to this data element.

Implemented in the 6.5.1 release.

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| Issue ID: 12812                                                                                 |
| Subject: Missing data in article: "9.16.2.1 - Prestress Losses" - Validating for incorrect data |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Virtis |                      |
| Primary Contact: Thogaru, Srujana     |                      |
| Submitted By: Thogaru, Srujana        | 8/8/2013 2:10:44 PM  |
| Modified By: hhu                      | 4/16/2014 6:46:41 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

4/19/2016 3:09:53 PM

HRS AASHTO

2411

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                                | Description |
|------|------------------------------------------------------------------------------------|-------------|
|      | LRFR SPECS Curved Steel<br>steel shear not flagged.docx<br>00028 - 18113-Stiff.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Srujana Thogaru DATE: 8/8/2013 10:19:07 AM Eastern Daylight Time

=====  
 Incident submitted behalf of : Raybeau William Richardson [raybeau@unm.edu]  
 =====

Bridgeware,

We got this error while rating a bridge and cannot figure out what is wrong:

Missing data in article: "9.16.2.1 - Prestress Losses - General" - stage 2, round 2  
 Missing data in article: "9.16.2.1 - Prestress Losses - General" - stage 2, round 2  
 Fatal error occurred while computing Prestress Losses.  
 Error - Error performing prestress loss LFR specification checking!

Error - Analysis failed!

Can you please explain to us what the problem is? Thanks!

Raybeau Richardson  
 UNM Bridge Load Rating Project

=====  
 Reason for the error is that while computing Prestress losses computation stage one does not perform analysis at 36.33ft and stage 2 requires ALFD\_IndexPsStageTables.PsLoss in Article 9.16.2.13 from stage 1 at this location, which results in missing data error.

Bridge xml file from the email attached.

FROM: Srujana Thogaru DATE: 3/17/2014 11:18:17 AM Eastern Daylight Time  
 In Beam details window under continuous support detail tab at a given support if the distance on left and distance on the right are entered unequal then the span lengths and span numbers are saved incorrectly in stress limit ranges tab causing the above error. Even if the correct data is entered manually and saved, when we reopen the window incorrect data is populated. This error also happens with PCITraninigBridge6 (BID 9) LFR and LRFR analysis.

4/19/2016 3:09:53 PM

HRS AASHTO

2412

Complete Issue Information

FROM: Joseph Ihnat DATE: 4/9/2014 1:42:01 PM Eastern Daylight Time  
On the Continuous Support Detail tab, two of the distances are less than the corresponding beam projections. I added validation to this window to prevent that.  
Now after reentering the data (according to the suggestions from the validation), I receive System Error after analysis:

Error getting stress limit from PS stress limit ranges to right of 213.8750000 ft!  
Current tolerance for ft is 0.0010000.  
12:19:41 PM - Line 287 in source file c:\builds\2  
\virtisopis\virtisopis66buildwin32debug\sources\source\domain\abognrl\dorangesetcmdtarget.cpp.

Srujana, please investigate this message.

FROM: Krisha Kennelly DATE: 4/16/2014 10:14:59 AM Eastern Daylight Time  
Fixed for 6.6 Beta 1.

The data entered for the Continuous Support Details and Beam Projections are not consistent. As noted above, the support distance on the Continuous Support Detail tab cannot be less than the corresponding Beam Projections on the Span Detail tab.

1. Validation has been added to the Continuous Support Detail tab to not allow the continuous supports to be less than the beam projection.
2. An internal check has been added to prevent the error message noted on 4/9 from appearing.

FROM: Krisha Kennelly DATE: 4/16/2014 11:38:08 AM Eastern Daylight Time  
Subject text has been modified to indicate this issue is related to validating for incorrect user data and not really related to article 9.16.2.1.

FROM: Hanjin Hu DATE: 4/16/2014 1:21:12 PM Eastern Daylight Time  
Backchecked for V6.6.0 Beta Build 1.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12816                                     |
| Subject: Curved Steel Girder LRFR Specs not flagged |

|                                       |                       |
|---------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Virtis |                       |
| Primary Contact: Skow, Wayne          |                       |
| Submitted By: Sharp, Rachel           | 8/15/2013 1:09:58 PM  |
| Modified By: bzhang                   | 11/15/2013 5:09:52 PM |
| Priority: High                        |                       |
| Category: Bug                         |                       |

History

4/19/2016 3:09:53 PM

HRS AASHTO

2413



### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Rachel Sharp DATE: 8/15/2013 9:25:14 AM Eastern Daylight Time  
Steel Shear check (6A.4.2.1) not flagged as below 1.0 and it is for Span 2 (87.32 ft). LRFR 3D OL4 and OL11 used.

FROM: Wayne Skow DATE: 8/23/2013 8:48:42 AM Eastern Daylight Time  
Fixed in v6.5.1. Because of issue 12808 you cannot expect to see the same action values during testing. This will be particularly true in span 2. You might want to make the web thinner so the shear RF will drop below 1.0.

This fix will also be included in a special v65 patch.

FROM: Rachel Sharp DATE: 8/29/2013 4:18:52 PM Eastern Daylight Time  
Backcheck is okay.

FROM: Bin Zhang DATE: 11/15/2013 12:06:16 PM Eastern Standard Time  
Verified for version 6.5.1 alpha 2.

## Issue - Complete Information

### Complete Issue Information

|                                                                                                              |
|--------------------------------------------------------------------------------------------------------------|
| Issue ID: 1033                                                                                               |
| Subject: Confusion over calculation of live load distribution factors - need a wizard for LRFD dist. factors |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 3/30/1999 12:27:52 PM |
| Modified By: hlee                   | 10/13/2009 5:19:08 PM |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Assigned  |          |             |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name            | Company                        | Email 1                  | Phone 1       |
|-----------------|--------------------------------|--------------------------|---------------|
| Dean Teal       | Kansas Dept. of Transportation | teal@ksdot.org           | (785)291-3001 |
| George Colgrove |                                | gcolgrove@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

|            |           |                                                                                                     |
|------------|-----------|-----------------------------------------------------------------------------------------------------|
| 1033.10346 | Suspended | Confusion over calculation of live load distribution factors - need a wizard for LRFD dist. factors |
| 1133.10246 | Closed    | Two spec-check references are incorrect                                                             |

Description

3/30/99 D Teal

The calculated Dist. Factors may be different for Pos. and Neg moment areas in multi span structures. AASHTO Table C4.6.2.2.1-1 is used to find "L" for use in the Live Load Dist. Factor equation. In place of making 2 runs, how can this be worked around this portion of the AASHTO Spec?

4/7/99 D Teal

Another factor that the Dist Factor is dependent on is "K" . Which is dependant on the beam cross sectional area and it's moment of inertia.

To make Opis a friendlier design tool the LRFD Live Load Dist. Factor should most definitely be computed internally.

4/12/99 D Teal

I was comparing notes with the designer we sent to Mpls training. This question arose. When doing a Girder System, do we have to calculate and enter the Live Load Dist. Factors or can we leave them blank and let Opis calculate them. If Opis calculates them, where are they recorded? Why isn't there a "compute from typ. Section" button like on the LFD tab. The "compute from typ section" button in the LFD tab and lack of one in the LRFD tab leads you to believe you have to manually calculate it.

FROM:dteal DATE:Tuesday, August 28, 2007 10:39:47 AM

Comments from the Opis group in 07 UG Meeting - they put this in there top 5 on the enhancement list.

VI Incident #1033 category "DESIGN FLAW" -- Wizard for LRFD Dist. Factors.

The consensus from our discussion was:

Initially, with a new bridge the LRFD dist. factors are blank. It would be nice to get an idea of what they will be after you run BRASS. So, for a first estimate of the dist. factors Virtis/Opis could make an assumption with a value of "1" for the stiffness (K value). Then, at the very least, after a BRASS run was made, the values could be populated with the actual values calculated.

FROM: Dean Teal DATE: 8/7/2008 2:07:12 PM Eastern Daylight Time

In my opinion, this incident has been "Over come by events" and should be closed

FROM: Herman Lee DATE: 10/13/2009 1:16:44 PM Eastern Daylight Time

Resolved in 6.1 Release.

|                                                  |
|--------------------------------------------------|
| Issue ID: 1133                                   |
| Subject: Two spec-check references are incorrect |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center/Opis |
|-------------------------------------|

1/5/2016 11:06:37 AM

HRS AASHTO

2

### Complete Issue Information

|                                  |                      |
|----------------------------------|----------------------|
| Primary Contact: Goodrich, Brian |                      |
| Submitted By: Teal, Dean         | 5/3/1999 12:13:26 PM |
| Modified By: administrator       | 6/19/2008 3:59:41 PM |
| Priority: High                   |                      |
| Category: Bug                    |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     |          |
| Goodrich, Brian |          | Urgent   |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | Urgent   | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 1143.10236 | Closed        | LRFD Live Load Distribution: |

### Description

FROM:jduray DATE:05/03/1999 08:12:25  
From Dean Teal:

Spec. Checker - I found several of the AASHTO references wrong.  
For an Interaction Equation you are told to go to 6.10.5.2.3d-1 and should be 6.10.4.1.6.b-1

In another spot you are told to go to 6.10.5.2.2b and should be 6.10.4.2.2b.

It appears to reference 6.10.5 when it should be referencing 6.10.4.

1/5/2016 11:06:37 AM

HRS AASHTO

3

Complete Issue Information

FROM: bgoodrich DATE: 5/4/1999 3:10 PM  
What AASHTO LRFD specification are you using: First Edition, 1994 or Second Edition 1998? BRASS is current with the 1994 spec.

FROM: dteal DATE: 8/13/1999 8:48 AM  
Second Edition 1998

FROM: jduray DATE: 08/13/1999 15:20:55  
This is scheduled for update in 3.0

FROM: bgoodrich DATE: 8/17/1999 7:15 AM  
Correct.

|                                       |
|---------------------------------------|
| Issue ID: 1143                        |
| Subject: LRFD Live Load Distribution: |

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Opis             |
| Primary Contact: Goodrich, Brian                |
| Submitted By: Teal, Dean 5/4/1999 12:16:53 PM   |
| Modified By: administrator 6/19/2008 3:59:40 PM |
| Priority: Urgent                                |
| Category: Bug                                   |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: jduray DATE: 05/04/1999 08:16:37  
Received the following e-mail from Dean:

I believe there is a bust in calculating the LRFD Distribution Factors.

Complete Issue Information

For the Exterior Girder - all is OK (except some differences in the moment of inertia)  
Interior Girder - My hand calc's disagree on Beam Distribution for moment at End of Span #1 & beginning of Span #2 for both single & multi lanes.

|         |            |            |
|---------|------------|------------|
| Moment: | 1 lane     | Multi Lane |
|         | .426 (.44) | .623 (.64) |
|         | .426 (.41) | .623 (.61) |

My numbers are in brackets. I realize that these numbers are close - but.  
I found that our Moment of Inertia (mm<sup>4</sup>) are not the same. Moment Distribution Factors in the exterior girder is not a function of the Moment of Inertia, but for interior girders it is. We agree on Area mm<sup>2</sup> and X-Bar mm, it is the moment of inertia we differ.  
Virtis -----I=10164835E3 mm<sup>4</sup>  
Hand Calc's - I=10207767E3 mm<sup>4</sup>

Also, in the Interior Girder, I found the Dist Factors for Deflection to be wrong. The Dist Factor for Deflection is (# of Lanes/# of Girders) So on my 11 m roadway we could have 3 full lanes. Following is the comparison between Virtis and what it should be.  
Single Lane - Sh/As 0.24 Sh/Be 0.20  
Multi Lane - Sh/As 0.40 Sh/Be 0.60

FROM: dteal DATE: 5/5/1999 7:31 AM  
I erred in the moment of inertia calcs. So the Distribution Factors for moment are OK. There is still a problem with the DF's for deflection.

FROM: bgoodrich DATE: 6/30/1999 6:52 AM  
I suspect the export generated the DIST-CONTROL-LL command with 2-lanes loaded. Therefore, BRASS used this value for the DF comps, so for a single lane, 1/5\*1.2 gives 0.24 and for multiple-lanes, 2/5\*1.0 gives 0.4. Note that BRASS included the multiple presence factor. I will investigate the structure definition engine data for LRFD where this value is controlled by the user. I will check the export to see if it sets the number of lanes to two by default.

FROM: dteal DATE: 8/13/1999 10:37 AM  
See incident #1420

FROM: bgoodrich DATE: 11/29/1999 2:38 PM  
This incident is resolved.

FROM: jihnata DATE: 12/27/1999 08:12:21  
Accepted by dteal via email.

FROM: bgoodrich DATE: 12/27/1999 1:11 PM

|                                                                |
|----------------------------------------------------------------|
| <p>Issue ID: 1144</p> <p>Subject: Analysis Progress window</p> |
|----------------------------------------------------------------|

|                                                                                                                       |                            |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------|
| <p>Folder: /Virtis/Support Center/Opis</p> <p>Primary Contact: Ordoobadi, Mehrdad</p> <p>Submitted By: Teal, Dean</p> | <p>5/4/1999 3:08:30 PM</p> |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------|

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 3:59:40 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Duray, Jim      | New    | High     |             |
|                 | Closed |          |             |
| Duray, Jim      | Closed | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 1157.10223 | Closed        | Haunch definition |

### Description

FROM:jduray DATE:05/04/1999 09:58:02

From Dean Teal:

In the Analysis Progress window - why are the Distribution Factor Schedules listed here for an exterior girder and not an interior girder. I used the new design wizard and let the program find the factors for both. The DF for both are included in the BRASS output.

FROM:kkennelly DATE:06/22/1999 09:33:25

Mehrdad, Jim said to assign this to you since I haven't worked on the Analysis Progress window at all.

FROM:mordoobadi DATE:06/23/1999 11:20:11

If you rate a whole girder system structure definition Analysis Progress window will rate the current member alternatives of all of the girders one by one. So the text you see in this window at the end of the analysis corresponds to the last girder (an exterior girder). If you want to see the progress report for another member alternative you can select that member alternative in the tree control and then hit "View Rating Log".

FROM:jihnat DATE:12/27/1999 08:12:42

Accepted by dteal via email.

Complete Issue Information

|                            |
|----------------------------|
| Issue ID: 1157             |
| Subject: Haunch definition |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Duray, Jim            | 5/12/1999 12:10:27 PM |
| Modified By: administrator          | 6/19/2008 3:59:39 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jduray DATE:05/12/1999 08:09:20

The following is from an e-mail from Ken Hurst:

Jim probably needs to get started on the "haunch" codes "top web to of top deck" as a constant. That way us lazy designers won't have to go back and recalculate the haunch or width everytime we change the top flange.

FROM:jduray DATE:06/08/1999 10:18:27

We do have this capability.



Complete Issue Information

|                     |
|---------------------|
| Issue ID: 1227      |
| Subject: Stiffeners |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:29:05 PM |
| Modified By: administrator          | 6/19/2008 3:59:35 PM  |
| Priority: Medium                    |                       |
| Category: Change Request            |                       |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | Medium   | Change Request |
|                 | Assigned |          |                |
|                 | Resolved |          |                |
|                 | Accepted |          |                |
|                 | Closed   |          |                |
| Duray, Jim      | Closed   | Medium   | Change Request |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

|           |                                |                |               |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 1228.10153 | Duplicate     | LRFD Dist. Factors |

Description

FROM: dteal DATE: 6/22/1999 7:34 AM

Put a stiffener at every x-frame location.  
Stiffeners need to be displayed on the framing plan and displayed as a different color.

FROM:jihnate DATE:12/27/1999 08:13:03  
Accepted by dteal via email.

|                             |
|-----------------------------|
| Issue ID: 1228              |
| Subject: LRFD Dist. Factors |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:30:15 PM |
| Modified By: administrator          | 6/19/2008 4:38:35 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

1/5/2016 11:06:39 AM

HRS AASHTO

9

Complete Issue Information

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Duray, Jim      | New       | High     |                |
| Duray, Jim      | New       | Medium   |                |
|                 | Assigned  |          |                |
|                 | Suspended |          |                |
|                 | Resolved  |          |                |
|                 | Closed    |          |                |
| Duray, Jim      | Closed    | Medium   | Change Request |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 1229.10152 | Closed        | Impact Factor |

Description

FROM: dteal DATE: 6/22/1999 7:35 AM

Why can't we have a "Compute from Typ. Section" for the LRFD like in LFD. Someplace in the LRFD tab window it should say "If left blank, Opis will calculate the distribution factors for you. If you wish to review them, see the .DST file."

FROM:kkennelly DATE:7/2/01 9:06:28 AM  
Duplicate of 1033

## Complete Issue Information

|                        |
|------------------------|
| Issue ID: 1229         |
| Subject: Impact Factor |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:32:22 PM |
| Modified By: administrator          | 6/19/2008 3:59:35 PM  |
| Priority: Medium                    |                       |
| Category: Change Request            |                       |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Medium   |             |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | Medium   | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 1230.10151 | Suspended     | Copy & Paste |

## Description

FROM: dteal DATE: 6/22/1999 7:37 AM

Used incorrectly in LRFD, should be "Load Intensity Factor."

FROM: dteal DATE: 3/20/2000 7:27 AM

Actually it should be "Dynamic Load Allowance". LRFD has no such thing as Impact Factor.

FROM:jihnat DATE:03/24/2000 15:06:51

1/5/2016 11:06:40 AM

HRS AASHTO

11

Complete Issue Information

Changed to "Impact / Dynamic Load Allowance".

|                       |
|-----------------------|
| Issue ID: 1230        |
| Subject: Copy & Paste |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:33:32 PM |
| Modified By: administrator          | 6/19/2008 3:59:35 PM  |
| Priority: Medium                    |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: 6/22/1999 7:39 AM

1/5/2016 11:06:40 AM

HRS AASHTO

12

Complete Issue Information

Contents of one window to another, ie: Girder Profile from an Ext. Girder to an Int. Girder.  
Use Right mouse to copy/paste window, row, column or cell

FROM:kkennelly DATE:7/2/01 9:08:15 AM  
Similar to 498

|                           |
|---------------------------|
| Issue ID: 1231            |
| Subject: Bridge Workspace |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:34:20 PM |
| Modified By: administrator          | 6/19/2008 3:59:35 PM  |
| Priority: Medium                    |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | Medium   |          |

1/5/2016 11:06:40 AM

HRS AASHTO

13

### Complete Issue Information

|            |           |  |        |             |
|------------|-----------|--|--------|-------------|
|            | Suspended |  |        |             |
| Duray, Jim | Suspended |  | Medium | Enhancement |
| Duray, Jim | New       |  | High   |             |
|            | Suspended |  |        |             |
| Duray, Jim | Suspended |  | High   | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 1233.10148 | Suspended     | Opis as a Design Tool |

### Description

FROM: dteal DATE: 6/22/1999 7:40 AM

Right mouse click to open a bridge

|                                |
|--------------------------------|
| Issue ID: 1233                 |
| Subject: Opis as a Design Tool |

Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Folder: /Virtis/Support Center/Opis             |
| Primary Contact: Duray, Jim                     |
| Submitted By: Teal, Dean 6/22/1999 12:36:05 PM  |
| Modified By: administrator 6/19/2008 3:59:34 PM |
| Priority: High                                  |
| Category: Enhancement                           |

History

| Primary Contact  | Status    | Priority | Category |
|------------------|-----------|----------|----------|
| Duray, Jim       | New       | High     |          |
|                  | Assigned  |          |          |
|                  | Suspended |          |          |
|                  | Open      |          |          |
| Kennelly, Krisha | Assigned  |          |          |
|                  | Resolved  |          |          |
|                  | Closed    |          | Help     |
| Kennelly, Krisha | Closed    | High     | Help     |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 1234.10147 | Closed        | Deck profile – Reinforcement |

Description

FROM: dteal DATE: 6/22/1999 7:41 AM

Opis can be used to RATE or as a Design Review tool. But to create an economical design from scratch is by trial and error only. Very time consuming.

There needs to some iteration process to find economical solutions. Plus there needs to be a cost

1/5/2016 11:06:41 AM

HRS AASHTO

15



Complete Issue Information

estimator (by weight/mass) to make comparisons.

Web Thickness or Flange

After a web height is decided, we should be able to give it the thickness and have Opis iterate on flanges. Or the other way around. We should be able to lock one in and iterate on the other. Intermediate Stiffeners should be located and sized based on the web thickness and height. Bearing stiffeners should be sized on the same bases. Trial and error wastes much time and usually will not result in economical designs.

|                                       |
|---------------------------------------|
| Issue ID: 1234                        |
| Subject: Deck profile – Reinforcement |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Kennelly, Krisha   |                       |
| Submitted By: Teal, Dean            | 6/22/1999 12:36:47 PM |
| Modified By: administrator          | 6/19/2008 3:59:34 PM  |
| Priority: High                      |                       |
| Category: Help                      |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: 6/22/1999 7:42 AM

“Distance” needs more explanation in the help file. Is this distance ACTUAL or STRUCTURAL?

FROM: dteal DATE: 8/11/1999 9:08 AM

But, but, but what was the answer? Is the Distance requested here "Actual or Structural"?

## Complete Issue Information

FROM: dteal DATE: 8/11/1999 10:27 AM The current help for this window states that:

### Distance

Enter the distance from the centroid of the deck reinforcing steel described in this row to the location selected in the "Row" column.

### Row

Select whether the deck reinforcing steel described in this row is measured from the top of slab or bottom of slab.

My question is – when measuring from the top of the slab are we to use actual or structural thickness. It is never stated.

FROM: jduray DATE: 08/12/1999 07:48:00

Sorry - the answer is...

E-mail from Brian...

Ken Wilson and I discussed this issue a long time ago and, as I recall, decided the rebar distance should be measured from the effective thickness. The reasoning was because the actual thickness was not a required field. If the user inputs the actual thickness, the export tries to export the dead load from the slab.

We could measure the rebar distance from the top of the actual slab thickness, and require users to enter the actual slab thickness. They would just have to make sure the actual slab width was null or zero, so the slab DL does not get exported if they don't want it to be. Let me know if you want any changes made to the export to address this issue.

----end of e-mail

Revise Help to indicate it is measured from the effective thickness.

FROM: jduray DATE: 08/16/1999 14:45:00

BRASS import doesn't know ACTUAL thickness.

Need to find out what BARS data contains.

Possible solution is to use ACTUAL if not null or use STRUCTURAL if ACTUAL is null.

Right now this is undefined.

Changes to the export would be minor.

FROM: dteal DATE: 9/30/1999 3:23 PM

In answer to the e-mail from Brian - The Actual thickness is recorded in the Structural Typical Section – Deck (cont'd). With these two windows we have both actual and structural thickness.

FROM: jduray DATE: 10/03/2000 09:08:41

Krishna - please check on the status of this. Can we close it?

FROM: kkennelly DATE: 10/10/2000 09:29:02

Help says it is measured from effective deck thickness so we can close this.

FROM: dteal DATE: 11/15/2000 1:32 PM

1/5/2016 11:06:42 AM

HRS AASHTO

17

## Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 1271                             |
| Subject: OPIS Charts have multiple entries |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Best, Richard         | 7/9/1999 4:14:58 PM  |
| Modified By: administrator          | 6/19/2008 3:59:32 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     |          |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Not Reproducible   |          |          |
| Goodrich, Brian | Not Reproducible   | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State    | Summary             |
|------------|------------------|---------------------|
| 1272.10112 | Not Reproducible | Extra weight factor |

## Description

FROM: rmbest DATE: 7/9/1999 11:23 AM

OPIS - output charts show the 0.1 point multiple times for moments, apparently one 0.1 point for each moment shown

FROM:mordoobadi DATE:10/21/1999 12:52:37

1/5/2016 11:06:42 AM

HRS AASHTO

18

Complete Issue Information

I already know about this and it is resolved.

FROM:mordoobadi DATE:10/27/1999 10:42:48  
Please download TN0006 from our website.

|                              |
|------------------------------|
| Issue ID: 1272               |
| Subject: Extra weight factor |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Best, Richard         | 7/9/1999 4:16:17 PM  |
| Modified By: administrator          | 6/19/2008 3:59:32 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: rmbest DATE: 7/9/1999 11:26 AM

1/5/2016 11:06:42 AM

HRS AASHTO

19

Complete Issue Information

OPIS - when I set the extra weight factor to 20%. It does not appear that the extra weight was added based on the moments that appeared in the output.

FROM: bgoodrich DATE: 8/12/1999 8:16 AM

I am unable to duplicate this incident. Please review the BRASS data file to see if the 20% additional weight was exported to Parameter #8 on the LOAD-DEAD-CONTROL command. Note that a new load case is not generated for this additional weight, but rather its effect is included in the Girder Self-weight load case.

|                                |
|--------------------------------|
| Issue ID: 1505                 |
| Subject: Load Case Description |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Teal, Dean            | 9/21/1999 12:51:21 PM |
| Modified By: dteal                  | 8/7/2008 6:09:51 PM   |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     |          |

### Complete Issue Information

|                    |           |      |             |
|--------------------|-----------|------|-------------|
| Ordoobadi, Mehrdad | Assigned  |      |             |
|                    | On Hold   |      |             |
| Duray, Jim         | New       | High |             |
|                    | Suspended |      |             |
| Duray, Jim         | Suspended | High | Enhancement |
|                    |           |      | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name      | Current State | Summary                                     |
|-----------|---------------|---------------------------------------------|
| 1864.9528 | Suspended     | PS Beam Temporary Supports - Transportation |

### Description

FROM: dteal DATE: 9/21/1999 7:55 AM

I populated the Wearing Surface tab in the Structure Typical Section window. I selected load case - DL3 from the pull down. I had made load case DL3 available in the Load Case Description window as Load Case DL3, Stage 2, Type = D,DW.

After an analysis I looked in the "Analysis Results" for Dead Load Actions, Stage 2. But instead of seeing DL3 in the Dead Load Case pull-down, I see "Superimposed Uniform Dead Load (DW). Is this supposed to overwrite a load case name with this?

FROM:jduray DATE:10/19/1999 16:29:38

This results from the way Virtis and BRASS communicate. I think this can be changed but it needs some investigation.

FROM: Dean Teal DATE: 8/7/2008 2:09:51 PM Eastern Daylight Time

I think this has been "Over come by events" and should be closed

|                                                      |
|------------------------------------------------------|
| Issue ID: 1864                                       |
| Subject: PS Beam Temporary Supports - Transportation |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 12/2/1999 7:17:30 PM |
| Modified By: administrator          | 6/19/2008 3:58:53 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     |             |
| Goodrich, Brian | Assigned  |          |             |
| Duray, Jim      | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name      | Current State | Summary                  |
|-----------|---------------|--------------------------|
| 1865.9527 | Suspended     | Strand Hold Down Devices |

### Description

FROM: dteal DATE: 12/2/1999 1:17 PM

The following needs to be checked.

During transportation, prestressed beams may be subjected to dynamic forces. This "bouncing" of the beam can reduce the dead load on the member which could result in critical tension stresses in the top of the beam. The designer should check these stresses by assuming support points for beam transportation at 5'-0" from the end of the beam or to the first tenth point of the span, whichever is greater. Check tension in the top of the beam over the temporary support due to the cantilevered moment. To approximate the dynamic load effects, assume a beam dead load of "3g" on the cantilevered portion (PCI Design Handbook, 3rd Edition, Chapter 5).

1/5/2016 11:06:43 AM

HRS AASHTO

22

Complete Issue Information

Also check the tension in the top of the beam at the harp point of the strands using the reduced span length due to the temporary supports. Again, use 3g for the overhang force, but use the normal beam dead load "g" when computing forces between the supports. Allow a maximum temporary tension stress of  $6(f'c)^{1/2}$ .

FROM:jduray DATE:6/29/01 4:31:29 PM  
This incident was originally entered during 3.0 beta testing.

|                                   |
|-----------------------------------|
| Issue ID: 1865                    |
| Subject: Strand Hold Down Devices |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 12/2/1999 7:18:09 PM |
| Modified By: administrator          | 6/19/2008 3:58:53 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: 12/2/1999 1:18 PM  
Either limits or actual forces need to be reported for the hold down devices. The strand hold down points on PS beams should normally be at the .4 and .6 points. The vertical force required to deflect the strands downward in the beam shall be limited to 4 kips per strand ( 1/2" sevenwire) and 38 kips per hold down device.

FROM:jduray DATE:12/04/1999 10:08:27



Complete Issue Information

Brian - is this information available in BRASS?

FROM: bgoodrich DATE: 12/4/1999 12:18 PM  
There are no limits on the hold down forces in BRASS.

FROM: jduray DATE: 6/29/01 4:33:53 PM  
This incident was originally entered during 3.0 beta testing.

Issue ID: 1878  
Subject: Deck Profile – Deck Concrete – Effective Width Compute Button

Folder: /Virtis/Support Center/Opis  
Primary Contact: Kennelly, Krisha  
Submitted By: Teal, Dean 12/3/1999 3:52:49 PM  
Modified By: administrator 6/19/2008 4:38:35 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact  | Status      | Priority | Category    |
|------------------|-------------|----------|-------------|
| Duray, Jim       | New         | Medium   |             |
|                  | Suspended   |          |             |
|                  | Duplicate   |          | Enhancement |
| Kennelly, Krisha | System Test | High     |             |

Complete Issue Information

|                 |           |      |      |             |
|-----------------|-----------|------|------|-------------|
|                 | Resolved  |      |      |             |
| Duray, Jim      | New       |      | High |             |
| Goodrich, Brian | Assigned  |      |      |             |
| Duray, Jim      | Suspended |      |      |             |
|                 |           |      |      | Enhancement |
| Duray, Jim      | Suspended | High |      | Enhancement |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name      | Current State | Summary                                            |
|-----------|---------------|----------------------------------------------------|
| 1923.9471 | Suspended     | "Spec check detail for rating factor computations" |

Description

FROM: dteal DATE: 12/3/1999 9:53 AM

By the time user input gets to this point in a girder system, Opis has all the information it needs to calculate the Eff. Width. A compute Button here would be helpful.

The reinforcement in the deck is related to effective width. Therefore if it was calculated in the first tab we would have the value to use when doing the reinforcement

FROM:kkennelly DATE:03/29/2000 09:37:27  
Duplicate of 1522

FROM:kkennelly DATE:1/4/2002 3:14:27 PM

FROM:kkennelly DATE:1/4/2002 3:36:27 PM

Compute button added to Deck Concrete tab for girder system only for Version 4.2.

Question for programmer: Should we add BWS messaging to the ComputeDeckProfile in case user changes something in Virtis while the Deck Profile window is open?

FROM:dteal DATE:Thursday, January 09, 2003 1:14:03 PM

|                |
|----------------|
| Issue ID: 1923 |
|----------------|

1/5/2016 11:06:44 AM

HRS AASHTO

25

Complete Issue Information

|                                                             |                      |
|-------------------------------------------------------------|----------------------|
| Subject: "Spec check detail for rating factor computations" |                      |
| Folder: /Virtis/Support Center/Opis                         |                      |
| Primary Contact: Duray, Jim                                 |                      |
| Submitted By: Generated, jmckool                            | 12/8/1999 4:35:07 PM |
| Modified By: administrator                                  | 6/19/2008 3:58:50 PM |
| Priority: High                                              |                      |
| Category: Enhancement                                       |                      |

History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | Medium   |             |
|                 | Information Needed |          |             |
|                 | Suspended          |          | Enhancement |
|                 |                    | High     |             |
| Duray, Jim      | Suspended          | High     | Enhancement |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 2293.11068 | Suspended     | Structure Framing Plan Details – Diaphragms – Temporary |

Description

FROM:jmckool DATE:12/08/1999 11:31:43

This spec check window calculates a Design Ratio or a Rating Factor based on a resistance stress and dead load and live load stresses. However, it does not say where the stress occurs, i.e. top flange or bottom flange. Is it possible to add that information to this window? I essentially had to work backwards through the stress calculation windows to determine what these stresses are.

Also, is it possible to add what the resistance stress is? For example, initial allowable compression or

1/5/2016 11:06:44 AM

HRS AASHTO

26

Complete Issue Information

final allowable slab compression.

FROM: bgoodrich DATE: 12/14/1999 8:01 AM

The spec check details are written inside general tools that do not know where they are being called from. They were not intended to be used as a stand alone tool that gave a lot of information about the computation. The BRASS output illustrate these comps where one or more sections above a rating comp gives the information about the resistance, stress locations, etc. However, it is possible to add the requested information, but it will take some time. This should be a task force directed task.

Jim - How should we proceed?

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 2293                                                   |
| Subject: Structure Framing Plan Details – Diaphragms – Temporary |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 2/10/2000 4:25:42 PM |
| Modified By: administrator          | 6/19/2008 4:02:32 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: 2/10/2000 10:24 AM

How are "Temporary" Diaphragms handled? They are commonly used.

FROM:jduray DATE:02/10/2000 15:57:13

1/5/2016 11:06:44 AM

HRS AASHTO

27

Complete Issue Information

Please describe what you mean by this.

FROM: dteal DATE: 2/10/2000 3:50 PM

WE (Kansas) use Temporary metal diaphragms that are removed after the deck is poured. The contractor has the option of using CIP diaphragms (seldom used). The only choices given by Opis are either you have them or you don't. We need a choice for using them only in non-composite stage 1.

FROM: dteal DATE: 3/6/2000 12:40 PM

FROM: dteal DATE: 3/15/2000 1:27 PM

Are you waiting for more information? Please advise.

FROM:jduray DATE:03/23/2000 09:54:04

This is an enhancement.

FROM:jduray DATE:7/3/01 4:14:19 PM

This incident was originally entered during 3.0 beta testing.

|                               |
|-------------------------------|
| Issue ID: 2331                |
| Subject: Opis Design Features |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Shah, Shyam           | 2/16/2000 1:59:47 PM |
| Modified By: administrator          | 6/19/2008 4:02:30 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     |           |
|                 | Resolved |          |           |
| Duray, Jim      | Resolved | High     | Education |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 2363.10999 | Discard       | Shear - P/S beam design using LRFD |

### Description

FROM: snshah DATE: 2/16/2000 7:45 AM

Will OPIS 3.0 have any design capabilities? Currently, the user has to go through a trial and error process in order to select the appropriate shape. The user should be allowed to fix certain values (eg. flange width, web height, etc.) while OPIS selects an appropriate, economical shape (eg. flange thickness, web thickness, etc.)

Is this planned for the 3.0 release? If not, when could we expect to see this option?

FROM: jduray DATE: 02/18/2000 16:10:43

Opis substructure will have "design" capability. Opis superstructure (versions 2 and 3) support "design/review". This approach to the superstructure is based on two factors: money and user survey. We surveyed the user community to better the kind of design tools they are currently using and what they would like to see in the future. The response was overwhelmingly in favor of design/review so the design engineer could control the design iterations. They wanted tools to do the analysis and spec-checking and prefer to make the engineering decisions themselves. Also, we didn't have sufficient funds to develop a new analysis engine and BRASS LRFD was available. BRASS does not support design as you refer to it, only design/review.

Issue ID: 2363

Subject: Shear - P/S beam design using LRFD

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

1/5/2016 11:06:45 AM

HRS AASHTO

29

### Complete Issue Information

|                                   |                      |
|-----------------------------------|----------------------|
| Submitted By: Generated, bbeerman | 2/23/2000 2:08:47 PM |
| Modified By: administrator        | 6/19/2008 4:02:28 PM |
| Priority: High                    |                      |
| Category: Enhancement             |                      |

### History

| Primary Contact    | Status | Priority | Category |
|--------------------|--------|----------|----------|
| Ordoobadi, Mehrdad | Closed | Urgent   | Bug      |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Deans.bbd                  |             |
|      | Missing Rating Factors.zip |             |
|      | MLL PS.zip                 |             |

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 2603.10774 | Closed        | Rating Factor |

### Description

FROM: bbeerman DATE: 2/23/2000 8:52 AM

1. [PS Shear reinforcement ranges] - consider changing the "Horizontal" tab title to "Interface" (for interface reinforcement) and adding a "Longitudinal" tab for item No. 2. I thought I was entering longitudinal reinforcement in this tab.
2. There needs to be a window where Longitudinal reinforcement can be entered so that the correct tables can be used in order to select beta and theta (LRFD 5.8.3).
3. Question(s) - Does BRASS calculate shear capacities base on LRFD 5.8.3 criteria? Is there anyway to view the shear contributions due to the beam, stirrups and prestressing force ( $V_c, V_s, V_p$ )?

FROM: jduray DATE: 02/23/2000 10:55:07

1 & 2 are enhancement requests.

1/5/2016 11:06:45 AM

HRS AASHTO

30

Complete Issue Information

Brian - please answer 3.

FROM: bbeerman DATE: 2/23/2000 12:16 PM

Disregard No. 3, I can see it in the spec. checks in VirtisOpis.

I still think there should be a place to enter longitudinal reinforcement.

FROM: bgoodrich DATE: 2/23/2000 12:30 PM

Item 3: Ben found the spec checks results shown in Opis and/or the detailed intermediate output from BRASS that illustrate all the input parameters and computed results for shear.

FROM:jduray DATE:02/25/2000 13:25:43

FROM: bbeerman DATE: 3/20/2000 1:56 PM  
"resubmit" for item No. 1

FROM:jduray DATE:03/22/2000 17:13:18

This is the only request and we are not changing it without a concensus from several testers.

FROM:kkennelly DATE:03/29/2000 08:42:08

I think this is a very important enhancement. BRASS must not be checking LRFD 5.8.3.5 but we have to let user enter an area of long. steel for the ps beam.

FROM:hlee DATE:4/30/2008 2:21:10 PM

Discarded by TAG 12/07.

|                        |
|------------------------|
| Issue ID: 2603         |
| Subject: Rating Factor |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 4/7/2000 3:27:14 PM  |
| Modified By: administrator          | 6/19/2008 4:02:17 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3011.12337 | Discard       | Shrinkage/Time window suggestions |

Description

FROM: dteal DATE: 4/7/2000 10:23 AM

Please investigate the attached P/S structure and tell me why I don't get any Rating Factors. I have incidences #'s 1416, 2540 & 2541 also waiting on this.

FROM:jduray DATE:04/07/2000 14:10:13

The rating factor graph for an LRFD analysis of TrainingBridge1 is ok.

The rating factor graph for an LRFD analysis of P/S beam does not display data for the Min. Envelope. The Tabular results lists Limit State Summary but there is no information displayed - why?

FROM: dteal DATE: 4/10/2000 11:03 AM

It appears that the problem was due to not having defined the deck reinforcement over the pier. This may have resolved this incident.

FROM: dteal DATE: 4/11/2000 7:52 AM

Still nothing appears in the rating factor graph.

FROM:jduray DATE:04/11/2000 09:04:40

There was a problem in the graph code. It will be fixed by a service pack that should be available on our web site later today.

FROM: dteal DATE: 4/19/2000 3:34 PM

After installing the service pack, it still doesn't work.

FROM: dteal DATE: 4/19/2000 3:36 PM

I was using the newly attached file.

FROM:jduray DATE:04/20/2000 10:05:30

FROM:mordoobadi DATE:04/20/2000 14:02:58

I imported MLLPS.bbd file. I did an LRFD analysis and I was able to see rating factors in the graph (not in stage 1 because BRASS does not report rating factors in stage 1).

FROM: dteal DATE: 4/20/2000 1:29 PM

I do not get any rating factors in the graph in stage 3 for member 2. I am using the HL(# Design truck and the LRFD fatigue truck. All I get when the Rating Factor in the graph is checked for either Moment or Shear is columns for Location and Distance and the graph is empty. There is no plus sign in front of rating factor, indicating that only one stage at most is available. The only place I can find output for Rating Factors is in the Spec Checker.

1/5/2016 11:06:46 AM

HRS AASHTO

32

Complete Issue Information

FROM: dteal DATE: 4/20/2000 1:56 PM  
Attached is the Results Graph with the "Missing" graph output for rating factors.

FROM:mordoobadi DATE:04/20/2000 16:54:01  
Accepted by Dean Teal.

|                                            |
|--------------------------------------------|
| Issue ID: 3011                             |
| Subject: Shrinkage/Time window suggestions |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Opis                 |
| Primary Contact: Duray, Jim                         |
| Submitted By: Goodrich, Brian 12/12/2000 5:26:16 PM |
| Modified By: administrator 6/19/2008 4:06:13 PM     |
| Priority: High                                      |
| Category: Enhancement                               |

History

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Duray, Jim      | Discard | High     | Enhancement |
| Duray, Jim      | Discard | High     | Enhancement |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: bgoodrich DATE: 12/12/2000 10:15 AM  
This issues/suggestions were brought up during a discussion with Anousone Arounpradith of Missouri DOT.

1. The "Curing time" field on the Time tab of the Shrinkage/Time window is the time between the end of

Complete Issue Information

curing and the initial prestressing of the beam. The name seems misleading and would be more accurate if changed changed to "Drying time". BRASS-GIRDER(LRFD) needs to be changed too.

2. The "Consider deck differential shrinkage loads" checkbox would be more appropriate if placed at the top of the tab. If the box is not checked, the Beam and Deck fields should be disabled.

3. The "Consider deck differential shrinkage loads" should be renamed to read "Consider differential shrinkage loads". The help should be changed to read:

"Check this box if you want to consider differential shrinkage between the deck and concrete beam at the time of analysis."

FROM:hlee DATE:4/30/2008 2:23:14 PM  
Discarded by TAG 12/07.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 3158                                                                             |
| Subject: Report Tool not including composite DL in Flexure Analysis Summary for PS Girders |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Kennelly, Krisha      | 3/9/2001 8:45:45 PM  |
| Modified By: administrator          | 6/19/2008 4:06:03 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Accepted | High     | Bug      |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

1/5/2016 11:06:46 AM

HRS AASHTO

34

## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                            |
|------------|---------------|----------------------------------------------------|
| 3165.12184 | Closed        | Cannot access the BRASS-LRFD engine help from Opis |

## Description

FROM:kkennelly DATE:3/9/01 3:44:25 PM  
LRFD Report Tool not including composite DL in Flexure Analysis Summary for PS girders.  
Submitted on behalf of Derek Harth through email (dharth@gbutler.com).

FROM:kkennelly DATE:5/14/01 11:11:11 AM  
Report Tool uses DoMemberCriticalLoadsLrfd to report the total DL moments in the Flex Analysis Summary. For PS concrete, BRASS LRFD puts composite DL into Stage 3 which also contains LL. So Report Tool reports DoMemberCriticalLoadsLrfd for Stage 1 since it thinks Stage3 is just the LL stage and there is no Stage 2. Could try to use DoConcreteLimitStateSummary to report the DL's but then wouldn't have a max and min DL moment using max and min DL factors.

FROM:kkennelly DATE:5/15/01 9:49:01 AM  
Change DL column heading in Flexure Analysis Summary and Shear Analysis Summary reports to reflect what is currently being reported. Functions "UseAlternateDLColHeading()" has been added to UiLrfdOutputReport.cpp. Call this function after InitReport is called for LRFD report in UiReportToolVw to determine which heading to use.  
Current heading now for Flexure Analysis Summary report is "Total DL Moment". If UseAlternateDLColHeading() returns FALSE, leave heading as is. If it returns TRUE, use "Stage 1 DL Moment". Similar thing for Shear Analysis Summary report except its title says Shear instead of Moment.

Want to include this in Service Pack 3.

FROM:jihnata DATE:5/15/01 1:19:22 PM  
Krisha, Virtis crashes now (in UseAlternateDLColHeading()) if "Generate Report" is clicked when there are no current results.

FROM:kkennelly DATE:5/16/01 12:01:46 PM  
Crash fixed. Headings for Flexure Analysis Summary and Shear Analysis Summary are now hardcoded into XML file since different members may need different DL headings within the same report.

FROM:jihnata DATE:5/17/01 8:27:11 AM  
Report fixed for Version 4.0 Patch 3 and for Version 4.1.

FROM:jduray DATE:5/25/01 4:19:17 PM  
From Gale (testing)

I tried using pci training bridge 4 to check the supposed malfunction and fix.

1/5/2016 11:06:46 AM

HRS AASHTO

35

Complete Issue Information

in 4.0.2, I get DL results in the Flexure Analysis Summary report. The numbers don't seem to change if I change the magnitude of the FWS load.

in 4.0.3 all I get is \*\* in both columns of

Total  
DL  
Moment

FROM:jihnat DATE:5/29/01 7:46:22 AM

FROM:bgoodrich DATE:05/29/2001 11:36:43

I was able to duplicate the issue described, however, I don't think the export is at fault. When the export gets the number of load scenarios from the domain (LoadScenarioPtr->GetCount()), it returns zero. Therefore, no member dead loads are exported. I repeated this process for PCITrainingBridge3 and the export generated the member dead loads just fine, so there is not a problem with the export or the domain. I checked the database and found that abw\_super\_load\_scenario contains records for both PCITrainingBridge3 and PCITrainingBridge4. However, when I checked abw\_super\_load\_scenario\_item, there were only records for PCITrainingBridge3. There are missing records in abw\_super\_load\_scenario\_item for some other bridges also. I mentioned this problem in a past incident or e-mail, but the Visual Intercept query tool cannot find any reference to it and I have since changed e-mail systems.

FROM:kkennelly DATE:5/29/01 1:17:17 PM

Report fixed, don't get \*\* in DL columns for PCI Training bridge 4.

FROM:gbarnhill DATE:05/31/2001 12:03:24

The headings in the Report Tool now indicate what moment is reported. Due to the limitations of the connection between BRASS results and the report tool, Stage 2 moments are not being reported. Should include this explanation in the SP3 readme file.  
OK in Service Pack 3 for version 4

Issue ID: 3165  
Subject: Cannot access the BRASS-LRFD engine help from Opis

Folder: /Virtis/Support Center/Opis  
Primary Contact: Ihnat, Joseph  
Submitted By: Goodrich, Brian 3/21/2001 8:27:36 PM  
Modified By: administrator 6/19/2008 4:06:03 PM  
Priority: High  
Category: Bug - GUI 2

History

1/5/2016 11:06:47 AM

HRS AASHTO

36

### Complete Issue Information

| Primary Contact   | Status   | Priority | Category      |
|-------------------|----------|----------|---------------|
| Ihnat, Joseph     | Assigned | High     | Bug - GUI 2   |
| Kennelly, Krishna | Resolved | High     | Documentation |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3171.12178 | Resolved      | Update training manuals for LRFD fields |

### Description

FROM:bgoodrich DATE:03/21/2001 16:27:39

When running Opis during the Oklahoma City traing, I pressed F1 for any window to get BRASS-LRFD related help. I then selected the Engine Related Help hot-text and the engine help for BRASS-LFD was opened. There appears to be no way for the user to get BRASS-LRFD help short of manually copying BRASSLRFDENGINE.HLP to ENGINEHELP.HLP. The Help menu needs to be modified to permit the user to change this help like the Engine Help Configuration menu items in the combined Virtis/Opis UI. This problem is due to the EngineHelp.hlp file being installed as that for LFD.

FROM:jduray DATE:4/12/01 11:28:23 AM

It sounds like the installation needs to copy the BRASSLRFDENGINE.HLP help file to EngineHelp.hlp if we are installing Opis and BRASSLFDENGINE.HLP to EngineHelp.hlp if installing Virtis. I think installation of VirtisOpis is ok.

FROM:jihnmat DATE:7/14/2005 3:04:44 PM

The installation already does what Jim suggested (and the LFD engine help doesn't ship with Opis). I was able to reproduce this by installing VirtisOpis, then running the Opis exe. In this case EngineHelp.hlp contained the LFD engine help, and as Brian observed Opis has no way to reset the engine help to LRFD.

Changed Opis program startup to always force LRFD engine help, instead of defaulting to whatever happened to be in the EngineHelp.hlp.

Fixed for 5.4.0

FROM:xli DATE:9/20/2005 9:57:23 AM

works for 5.4.0

1/5/2016 11:06:47 AM

HRS AASHTO

37

## Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 3171                                   |
| Subject: Update training manuals for LRFD fields |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Goodrich, Brian       | 3/23/2001 6:53:48 PM |
| Modified By: administrator          | 6/19/2008 4:06:02 PM |
| Priority: High                      |                      |
| Category: Documentation             |                      |

## History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Suspended | High     | Enhancement |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3172.12177 | Suspended     | P/S design tool will harp strands through void |

## Description

FROM:bgoodrich DATE:03/23/2001 14:53:49

1. The following training manual pages need updated to show the effective width of the deck: PS1-31, PS2-32, PS6-32, and RC1-21.

2. Training manual page RC2-11 needs updated to illustrate the distribution factors for LRFD because BRASS does not compute them for a slab bridge.

3. The training manual page PS2-13 shows the Framing Plan View, however, the deck geometry on page PS2-14 has not been input. The schematic needs to be moved to page PS2-14 under the Structure Typical Section window.

1/5/2016 11:06:47 AM

HRS AASHTO

38

Complete Issue Information

4. Update all examples to have a page similar to pages STL1-10 or STL2-8. Users may not look at the steel examples right before looking at prestress or R/C.

5. On pages PS2-15, PS5-13, and PS6-16, the Sustained Modular Ratio Factor needs to be changed from 3.0 to 2.0.

FROM:kkennelly DATE:5/18/01 9:57:56 AM

- 1. Done
- 2. Not done. This example already has the LRFD distribution factors and the results of an LRFD analysis at the end of the example.
- 3. Not done. You can view the framing plan schematic before you input the structure typical section. If you view this schematic before inputting the structure typ section, the structure definition reference line is placed under the first girder. Span lengths are referenced along this line in the schematic. This schematic correctly shows the struc def ref line under the first girder since we haven't entered the structure typ section yet.
- 4. Done for some examples. All of the examples have the text that tells the user how to do this, some of them just don't have the associated screen snapshot. If I had to modify the example for other reasons, then I added the snapshot. Snapshot added for PS1,PS2,PS5,PS6. It was already in RC1.
- 5. Done

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3172                                          |
| Subject: P/S design tool will harp strands through void |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Kennelly, Krishna  |                       |
| Submitted By: Goodrich, Brian       | 3/26/2001 12:45:47 PM |
| Modified By: administrator          | 6/19/2008 4:06:02 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



Complete Issue Information

Description

FROM:bgoodrich DATE:03/26/2001 08:45:48

Entered for Jay Puckett:

The P/S design tool will harp strands through the void of a box beam.

FROM:jduray DATE:3/27/01 9:40:44 AM

Krishna - we need to discuss how we can make the strand arrangement logic available to the tool.

Issue ID: 3175

Subject: User should not be allowed to enter a zero for distribution factors

Folder: /Virtis/Support Center/Opis

Primary Contact: lhnat, Joseph

Submitted By: Goodrich, Brian

3/26/2001 12:58:11 PM

Modified By: administrator

6/19/2008 4:06:02 PM

Priority: High

Category: Bug - GUI 2

History

1/5/2016 11:06:48 AM

HRS AASHTO

40

### Complete Issue Information

| Primary Contact | Status  | Priority | Category    |
|-----------------|---------|----------|-------------|
| Ihnat, Joseph   | On Hold | High     | Bug - GUI 2 |
| Goodrich, Brian | Closed  | High     | Bug - BRASS |
| Goodrich, Brian | Closed  | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | PossibleFatigueBug.zip |             |

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3186.12163 | Closed        | possible Opis/BRASS bug in fatigue check for steel beam |

### Description

FROM:bgoodrich DATE:03/26/2001 08:58:12

Entered for Jay Puckett:

The grid on the LRFD tab of the Live Load Distribution window permits entering a zero for a distribution factor. Check all.

## Complete Issue Information

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3186                                                   |
| Subject: possible Opis/BRASS bug in fatigue check for steel beam |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Goodrich, Brian       | 4/13/2001 7:00:14 PM |
| Modified By: administrator          | 6/19/2008 4:06:01 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Resolved | High     | Bug      |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Wizard_Alternative.dat              |             |
|      | 07112327_sd.bbd                     |             |
|      | Wizard_Alternative<br>(105.000).OUT |             |
|      | Wizard_Alternative.out              |             |
|      | Wizard_Alternative.log              |             |

## Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3224.12125 | Resolved      | Fatigue Limit State question(s) - Fatigue Requirments for Webs |

## Description

FROM:bgoodrich DATE:04/13/2001 15:00:15

E-mail from Chad Edward Grinsteiner, P.E., Project Engineer, White Engineering Associates, Inc.:

I believe we have uncovered a possible bug in the fatigue output for a simple-span rolled beam design

1/5/2016 11:06:49 AM

HRS AASHTO

42

Complete Issue Information

we are working on.

Before I get into the details, it may help to understand the nature of the project we are using Opis with: The Oklahoma DOT has contracted our office to develop standard LRFD designs and drawings. As part of the contract, we are to develop original designs using a design program and then confirm the design using a second program. In this instance, the original design was performed using Merlin-DASH (version 7.2) and the confirmation is being done with Opis/BRASS (version 4.0.2). This is a rather unique position to see how programs compare side-by-side.

In the design of a 98.5' simple span, 8" composite deck, 40' roadway with two 13" wide barriers, 4 - W40x324 beam system at 11'-10" spacing (3'-4" overhangs), Merlin-DASH shows that fatigue controls on the exterior girders due the weld of diaphragm connection plates to the top of the bottom flange (category C', fatigue resistance = 6 ksi). Merlin-DASH shows the fatigue stress to be approximately 6.0 ksi at the BOTTOM of the bottom flange (Merlin-DASH does not have a feature to compute stress at a location between the extreme fibers). In confirming the design, we found BRASS to show a fatigue stress of 7.44 ksi at the BOTTOM of the bottom flange (for comparison).

After some investigation and confirmation with programs developed internally by our office and Oklahoma DOT's office, we found the stress computed by Merlin-DASH to be more accurate. We suspect the following possible problems could be the source of the differences:

1. We entered user-specified distribution factors into Opis. It appears that the multi-lane distribution factor is being divided by the multiple presence factor of 1.2, rather than the single-lane distribution factor. This was confirmed by changing the single-lane distribution factor with no change in fatigue results, while changes to the multi-lane distribution factor does affect fatigue results. It is unknown if this a Opis issue or that of BRASS.
2. It also appears the analysis of the fatigue truck is based upon a variable rear axle spacing (14' minimum) rather than the constant axle spacing of 30' specified in LRFD article 3.6.1.4.1. Analysis results for a 14' rear axle spacing, when combined with the effects of point #1, seem to approximately correlate to the BRASS results.

FROM:bgoodrich DATE:04/13/2001 15:04:41  
E-mail from Chad Edward Grinsteiner:

Here's the information you asked for. I've double-checked my input into Opis and cannot find a problem there. I've included runs for a 30'(nominal, 28.5' brg./brg.) simple span and a 100' (98.5' brg./brg.) simple span. The \*.res files are the Merlin-DASH output.

In my email to Jim, I had concluded that if I had used a 14' rear axle spacing on the fatigue truck (combined with the distribution factor problem) with the 100' span, my results were close to BRASS. However, I have since looked at the 30' span and cannot reproduce the BRASS results using the same algorithm I had used on the 100' span. So my idea is suspect.

Our spreadsheet and hand calcs produced the following results:

|                                              | 30' span | 100' span |
|----------------------------------------------|----------|-----------|
|                                              | -----    | -----     |
| distribution factor for fatigue -            | 0.774    | 0.774     |
| fatigue dynamic load allowance factor -      | 1.15     | 1.15      |
| unfactored fatigue moment (g=1.0,IM=0,kft) - | 228.4    | 1236.8    |

1/5/2016 11:06:49 AM

HRS AASHTO

43

Complete Issue Information

|                                            |       |        |
|--------------------------------------------|-------|--------|
| bottom section modulus (in3) -             | 328.5 | 1649.6 |
| fatigue stress at bottom of flange (ksi) - | 5.57  | 6.01   |

I found close correlation with BRASS concerning section properties, so no problems there. I cannot match the fatigue moment, however.

FROM:bgoodrich DATE:04/16/2001 11:08:02

There is a problem with the export of the distribution factors when the fatigue truck is specified for a girder system. Currently, the export only checks if the single lane option is specified using the Advanced button of the Analysis settings window. I have modified the export (BrassLrfdLoadControl.cpp) to also detect if a fatigue truck is specified, so the single lane distribution factors will be exported. Originally, some users did not want to have to enter both single- and multiple-lane distribution factors, so the export was modified to export just the multiple-lane distribution factors when there where multiple lanes and only the single-lane distribution factors when there was only one lane. However, the fatigue truck was overlooked in this regard.

The work-around until the next service pack is to adjust some fields using the Advanced button of the Analysis settings window for the fatigue truck.

1. Check the Single Lane Loaded checkbox.
2. Set the Scale Factor to 0.8333, i.e., 1.0/1.2 to remove the multiple presence factor of 1.2 from the single-lane loaded distribution factors.

FROM:kkennelly DATE:5/31/01 3:38:21 PM

Patch test ok for what Brian wrote about the distribution factors. Didn't test anything about fatigue truck with varying axle spacing submitted by user.

FROM:bgoodrich DATE:06/04/2001 09:39:04

For Fatigue vehicles, BRASS uses a rear axle spacing as specified in the vehicle definition (usually 30 feet). I found nothing wrong with the axle spacing. Additionally, Mr. Grinsteiner's comments entered on 04/13/2001 indicate that he believes the rear axle spacing comments were "suspect."

FROM:bgoodrich DATE:Tuesday, January 28, 2003 3:29:16 PM

Track field marked as "patch test OK". Incident closed.

Issue ID: 3224  
 Subject: Fatigue Limit State question(s) - Fatigue Requirments for Webs

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Thompson, Todd 5/31/2001 7:26:28 PM  
 Modified By: administrator 6/19/2008 4:05:59 PM  
 Priority: High  
 Category: Bug

History

1/5/2016 11:06:49 AM

HRS AASHTO

44

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 3230.12119 | Closed        | Stud Shear Connector Design - Fatigue Limit State |

## Description

FROM:ttompson DATE:05/31/2001 15:26:28

We have a designer that has 3 questions/concerns:

Simple span, steel rolled girder, composite bridge 07112237 Alternative tjo\_wizard\_w30\_x\_148,  
Member 2 (Interior Girder)  
Fatigue Limit State is our question, Stage 3 at Spant Point 1.5

1) AASHTO LRFD Code 6.10.6.2 states that "The live load flexural stress and shear stress resulting from the fatigue load, as specified in Article 3.6.1.4, shall be taken as twice that calculated using fatigue load combination in Table 3.4.1-1." It appears that Opis (BRASS) is using only one times the fatigue load.

2) AASHTO LRFD Code 6.10.6.3 references 6.10.3.1.4a in the commentary for calculating Dc. And this Dc is used to calculate fcf (max compress flexural stress). The description for fcf states to include "due to the unfactored permanent load and the fatigue loading as specified in Article 6.10.6.2". In reviewing the output of Brass(Opis), it appears that it uses only the fatigue live load (and no permanent (dead) loads). This appears to be in error. A review of "Four LRFD Design Examples of Steel Highway Bridges (VOL. II, Chap 1B Highway Structures Design Handbook)" in pages 1-39 thru 1-42 also supports this interpretation of the specification. I believe Jay's LRFD text book also includes permanent loads in the calculation of Dc and then fcf. Appears the values of Dc and Fcf are both incorrect.

3) This bridge also includes a pedestrian live load of some 154.959 lb/ft. The designer thought that this load should also be included in the Live Load Moment effects for the Fatigue Limit State. But it's not used.

## Note:

We did do the "workaround" as required in Incident 3186 as provided by B Goodrich.

We are using in production Virtis 3.0 Plus all patches/updates. We did check using 4.0.2 and got the same results.

1/5/2016 11:06:49 AM

HRS AASHTO

45

Complete Issue Information

I've included the Virtis 3.0.4a bbd export file.  
I've also included the .dat, .log, .out, and the (105.000).out file

=====

PERFORMING AASHTO SPECIFICATION CHECKS - 6.10.3.1.4 Depth of Web in Compression

Point of Interest : 105.00

Construction Stage: 3

Input Parameters:

Depth = 30.670 in Distance to Web Bot = 1.180 in f bot = 3.129 ksi  
Distance to Web Top = 29.490 in f top = -0.182 ksi

x-bar Computation: (Similar Triangles)

x-bar = Depth \* f bot / (f bot - f top) = 28.981 in

Depth of Web in Compression:

Dc = 0.509 in

Notes:

=> The above flange stresses are due to the combined effect of loads in this stage and previous stages.

=> The x-bar computed above is the effective distance to the centroid of the section.

PERFORMING AASHTO SPECIFICATION CHECKS - 6.10.6 Fatigue Requirements for Webs

Point of Interest : 105.00

Construction Stage: 3

AASHTO REFERENCE: 6.10.6.3 Flexure

EQUATION NO. : 6.10.6.3-1

Input Parameters:

Dc = 0.509 in E = 29000.000 ksi phi = 1.000  
tw = 0.650 in Fyw = 50.000 ksi

Calculated Value:  $2 * Dc / tw = 1.566$

AASHTO Limit :  $5.70 * \text{SQRT}(E / Fyw) = 137.274$

Flange Stress: fcf = 0.375 ksi

AASHTO Limit : phi \* Fyw = 50.000 ksi

Result Code : PASS

=> Note: Result Code lists PASS if the flange stress (fcf) is less than the limiting stress.

FROM:bgoodrich DATE:06/04/2001 09:48:54

BRASS requires the dead load factors for the Fatigue limit state to be set 1.0, which does differ from the AASHTO load factor table (Table 3.4.1-1). BRASS-GIRDER(LRFD) was developed in the specification's infancy, so to prepare for any future changes, the term "unfactored" was interpreted as factored by 1.0. Therefore, BRASS requires the dead load factors for the Fatigue limit state to effectively produce "unfactored" effects. I don't believe this has been conveyed to the users.

## Complete Issue Information

Until the load factor issue is resolved, I suggest copying the LRFD Factors from the library to your bridge. Then, change the dead load factors for the Fatigue limit state to 1.0. Next, you will need to set these factors as the override factors for each structure definition in the bridge. This should address questions 1 and 2.

Regarding question 3, AASHTO 3.6.1.4 does not indicate that the Fatigue vehicle should be combined with any other loading. Therefore, BRASS does not combine it with lane loads. Also, be aware that BRASS-GIRDER(LRFD) does not combine the pedestrian load with the design trucks as outlined in the specification.

FROM:bgoodrich DATE:06/04/2001 16:06:28  
E-mail from Todd Thompson:

For our Question 1) You didn't seem to address the fatigue load being taken times 2 as in 6.10.6.2. [and this hasn't changed since the 1994 Edition] It appears that this is the only spec check for this limit state that needs the load applied times 2. It also is the only place that we noticed that the fatigue limit state included permanent loads. So we did modify the LRFD factors as you suggested and did get results as we expected. (modified the DL factors to be 1.0 and modified the LL to be 1.5 (0.75 times 2))

Except we do think that we should include the Pedestrian Load (PL) for this specific code check. While we agree that one doesn't normally include PL (or other loads like permanent loads) in this limit state, we think that we probably should include PL for calculating Dc and Fcf. (albeit the PL load is pretty small in our case and doesn't really affect the results)

I guess if we make two separate runs, with the corrected load factors, we can get results pretty much as we expect.

FROM:bgoodrich DATE:06/04/2001 17:10:28  
BRASS internally multiplies the factored live load stresses by 2.0 as outlined by AASHTO 6.10.6.2 and has been doing so since before Version 3.0. By inputting 1.5 for the live load factor, the 2.0 factor is double accounted for, which will result in fatigue stresses that are too high. I analyzed the interior girder in TrainingBridge1 and reviewed the fcf value reported by BRASS. It matches my hand comps and is less than 2% different from the result shown in Four LRFD Design Examples... where this bridge was taken. This fatigue stress difference is due to a difference in dead loads. Note that BRASS does not multiply the live load by the 2.0 factor when determining Dc. I will work on getting this part fixed.

Also, I will forward the pedestrian load issue to Jay for comments.

FROM:bgoodrich DATE:06/08/2001 13:56:47  
I have modified BRASS-GIRDER(LRFD) to utilize the 2.0 factor in the fatigue computations for the depth of web in compression (Dc). I believe my previous comments and this one address issues 1 and 2.

Regarding question 3, Jay does not agree that the pedestrian load should be considered in the fatigue computations.

FROM:bgoodrich DATE:06/08/2001 14:01:00  
Jim - We need to address the Fatigue dead load factors. We have a couple options:

1. Change the Standard LRFD Factors in the database. This is option is preferred, but it the table would not look exactly like what is in the spec.

1/5/2016 11:06:49 AM

HRS AASHTO

47



Complete Issue Information

2. Add another item to the Standard LRFD Factors folder in the database. It would just contain Fatigue dead load factors of 1.0. This seems like the a good compromise between options 1 and 3. Jay suggested this option.

3. Ignore any user-input Fatigue dead load factors during the export and hard-code them as 1.0. This takes control away from the user.

FROM:jduray DATE:6/22/01 2:35:57 PM

I think the values in the database are correct or should be changed to NULL for the load factors that AASHTO spec lists as a hyphen.

Either the export to the engine or the engine should handle the load combination and related spec checks appropriately.

FROM:bgoodrich DATE:07/06/2001 16:37:41

I will modify the export to ignore the dead load factors for the fatigue limit state. The export will set these dead load factors to 1.0.

FROM:bgoodrich DATE:07/07/2001 12:21:59

I modified the export (BrassLrfdFactors.cpp) to ignore the LRFD dead load factors for the fatigue limit state. The export now sets these dead load factors to 1.0.

Krishna - Please update the "Factors - LRFD: Load Factors (BRASS LRFD)" help topic with the following:

DC Min, DC Max, DW Min, DW Max

BRASS LRFD uses these dead load factors for all limit states except Fatigue. The Fatigue limit state requires, in some cases, that unfactored dead load actions be combined with factored live load actions. BRASS LRFD considers the term "unfactored" to mean "factored by 1.0". Therefore, dead load factors of 1.0 are exported to the BRASS LRFD engine.

FROM:kkennelly DATE:7/16/01 10:42:29 AM

BRASS LRFD Engine help updated for 4.1. Not updated for 4.0 since source code was not changed in 4.0Maintenance.

FROM:kkennelly DATE:7/16/01 11:14:35 AM

Assigned back to Brian to verify incident is complete.

FROM:bgoodrich DATE:07/25/2001 11:41:39

The export for 4.1 has been updated.

Issue ID: 3230

Subject: Stud Shear Connector Design - Fatigue Limit State

Folder: /Virtis/Support Center/Opis

Primary Contact: Kennelly, Krishna

Submitted By: Thompson, Todd

6/7/2001 7:12:56 PM

Modified By: administrator

6/19/2008 4:05:59 PM

1/5/2016 11:06:50 AM

HRS AASHTO

48

### Complete Issue Information

|                       |
|-----------------------|
| Priority: Urgent      |
| Category: Enhancement |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug - BRASS    |
|                 | Resolved |          |                |
|                 | Accepted |          |                |
|                 | Closed   |          |                |
| Goodrich, Brian | Closed   | High     | Bug - Export 2 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | sd_x_07112327.bbd                      |             |
|      | Wizard_Alternative.out                 |             |
|      | Wizard_Alternative.dat                 |             |
|      | Wizard_Alternative(105.000)<br>(1).OUT |             |

### Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 3242.12107 | Closed        | Wrong Material Property for Stud Shear Connector calculations |

### Description

FROM:ttompson DATE:06/07/2001 15:12:56

We have a designer who thinks there is a problem with the fatigue limit state calculations for Stud Shear Connector Design.

In AASHTO 6.10.7.4.2 (and then 6.6.1.2.5, and then 3.6.14) you are required to calculate ADTT sl based on ADTT times a factor in 3.6.14.

We tried to compare TrainingBridge2 with the AISI Design Example calcs.

1/5/2016 11:06:50 AM

HRS AASHTO

49

## Complete Issue Information

Our designer originally thought that BRASS (OPIS) was not using this factor times the ADTT to calculate ADTT sl.

In reviewing TrainingBridge2, it originally appears to calculate the correct value for N. But further review showed that the data input for ADTT was actually the ADTT sl value.

I guess the question is, is the ADTT value the ADTT value OR is it the ADTT sl value. Based on the help description for this field it appears to be ADTT. AND if so, then ADTT sl is not being calculated correctly.

FROM:tthompson DATE:06/08/2001 07:57:18

Follow up information for the TrainingBridge2.

In the AISI LRFD Example Manual, on page 2-2 it lists the ADTT with 2000.

And on page 2-43 it applies the fraction in a single lane of 0.85 to produce an ADTT sl of 1700. And on page 2-70 you get the result for N = 46,537,500 cycles.

As shipped, the TrainingBridge2 has the ADTT entered as 1700. And in reviewing the Spec Checker for 6.10.7.4 produces the N = .465 E 08 which is the correct answer. But if you enter ADTT of 2000 as in the Example, then you get a different N value (.547 E 08).

In final review, BRASS (or OPIS) is NOT applying the factor for fraction of truck traffic in a single lane (AASHTO Table 3.6.1.4.2-1).

FROM:bgoodrich DATE:06/08/2001 12:54:14

Todd's observations are correct. The export is placing the ADTT from Opis on the a BRASS command parameter for ADTT SL. The fraction of truck traffic in a single lane could be obtained from the number of lanes, but this could vary by structure definition. For girder systems we can get the number of lanes, however, for girder lines, we only know if they are one or multiple lanes loaded. To give the user ultimate control, I suggest adding a new field to girder system and girder line structure definitions to obtain the fraction from Table 3.6.1.4.2-1. For girder systems, this could be an optional entry because the number of lanes is known.

FROM:jduray DATE:6/12/01 10:54:39 AM

Add this for 4.1.

Mehrdad - pass this incident on to Krishna when you get the database, db,de,dm finished.

Krishna - and to the domain and make the changes to the gui and help. Check with Ed, Brian and Mehrdad (NY Migration) about and the imports.

Brian - modify the export.

FROM:mordoobadi DATE:8/3/01 3:29:16 PM

Added truck\_traffic\_fraction to tables abw\_gline\_struct\_def and abw\_girder\_sys\_struct\_def

FROM:mordoobadi DATE:8/6/01 3:16:48 PM

Db, De, Dm classes updated.

Krishna, please update the domain.

FROM:bgoodrich DATE:01/30/2002 15:35:41

I just realized I had not updated this incident. The export was updated for 4.1. Krishna, please add your

1/5/2016 11:06:50 AM

HRS AASHTO

50

Complete Issue Information

comments.

FROM:kkennelly DATE:5/15/2002 12:31:30 PM

Changes were made to the gui and help for 4.1. I don't think there was anything needed in the imports because this new value is very specifically only in the LRFD spec.

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 3242                                                         |
| Subject: Wrong Material Property for Stud Shear Connector calculations |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Thompson, Todd        | 6/11/2001 2:42:37 PM |
| Modified By: administrator          | 6/19/2008 4:05:58 PM |
| Priority: High                      |                      |
| Category: Bug - Export 2            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tthompson DATE:06/11/2001 10:42:38

OPIS

6.10.7.4.4c Nominal Shear Resistance Specifications Check lists under the Input parameters an Ec of 3625 ksi. But the concrete properties for the concrete we selected has an Ec of 3865.20.

I've attached the bbd (Virtis 3.0 with all Service Packs) and it is for structure definition tjo wizard w30 x 148, member 2, Wizard Alternative at Span Point 1.5 where the incorrect concrete material property is being used in the calculations for Shear Connectors (Studs).

1/5/2016 11:06:50 AM

HRS AASHTO

51

Complete Issue Information

FROM:ttompson DATE:06/11/2001 11:31:53

Follow-up. I did check this Design Review on my test machine for 4.0.3 and got the same erroneous result for Ec of concrete.

FROM:bgoodrich DATE:06/11/2001 13:48:56

For steel structures, there is no BRASS command parameter for directly inputting Ec for the deck. BRASS computes Ec as Es / n. The modular ratio could be set accordingly to obtain the correct Ec.

FROM:jduray DATE:7/10/01 9:15:11 AM

Does the export warn of this? I don't think the user should have to adjust n (which is usually an integer isn't it?) so as to get the desired Ec.

FROM:bgoodrich DATE:02/04/2002 17:44:21

This issue is a limitation of the engine and the export does not currently warn the user of this. I plan on adding a "medium" level warning to the export unless I hear otherwise.

FROM:jduray DATE:2/5/02 9:37:57 AM

Sounds good to me.

FROM:bgoodrich DATE:02/11/2002 10:26:58

I have updated the export file (BrassLrfdMaterials.cpp) to output a medium level warning regarding the Ec for the deck. Fixed for Version 4.1 Service Pack 1.

FROM:dteal DATE:Monday, April 08, 2002 2:13:05 PM

I found the medium level warning displayed as stated.

FROM:bgoodrich DATE:Tuesday, April 09, 2002 5:24:12 PM

Closed.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 3310                                        |
| Subject: transformed section instead of gross section |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:42:56 PM |
| Modified By: administrator          | 6/19/2008 4:05:55 PM |
| Priority: High                      |                      |
| Category: Enhance BRASS             |                      |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | Suspended | High     | Enhance BRASS |
| Duray, Jim      | Suspended | High     | Enhance BRASS |

## Complete Issue Information

### Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3311.12039 | Duplicate     | Diagphram wizard should ask for wt |

### Description

FROM:jpuckett DATE:08/11/2001 11:42:56

In the CO training with consultants, it was suggested that the engine compute prestressed cross section properties based upon the transformed rather than gross section. This should not be lost as an enhancement and option with Virtis/Opis.

Issue ID: 3311

Subject: Diagphram wizard should ask for wt

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

1/5/2016 11:06:51 AM

HRS AASHTO

53

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: puckett, jay | 8/11/2001 3:45:12 PM |
| Modified By: administrator | 6/19/2008 4:38:35 PM |
| Priority: High             |                      |
| Category: Unknown          |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | Accepted | High     | Change Request |
|                 | Closed   |          |                |
| Lee, Herman     | Closed   | High     | Change Request |

### Contacts

| Name        | Company                        | Email 1                   | Phone 1       |
|-------------|--------------------------------|---------------------------|---------------|
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |
| jay puckett | BridgeTech, Inc.               | puckett_bt@compuserve.com | 307-766-2223  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3312.12038 | Closed        | warning message on schmatic |

### Description

FROM:jpuckett DATE:08/11/2001 11:45:12

This may be an existing request. Diagphram wizard should ask for wt.

FROM:kkennelly DATE:8/13/01 10:55:35 AM

Duplicate of 2073

Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 3312                       |
| Subject: warning message on schmatic |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:46:59 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: High                      |                      |
| Category: Change Request            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jpuckett DATE:08/11/2001 11:47:00

For R/C, a warning seems to appear quite often regarding schmatic limitations. This seems overkill. Please review.

FROM:hlee DATE:8/30/2001 11:15:17 AM

Revised in 4.1 Development. The warning message will now display only one time.

FROM:jihnath DATE:10/16/2001 1:03:36 PM

Accepted via email by Brian Goodrich.



Complete Issue Information

FROM:dteal DATE:11/01/2001 16:39:20  
Accepted

|                 |
|-----------------|
| Issue ID: 3313  |
| Subject: RC1-27 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:48:33 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Resolved | High     | Bug      |

Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

Documents

1/5/2016 11:06:52 AM

HRS AASHTO

56

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3314.12036 | Duplicate     | Add old AISC shapes to the library |

Description

FROM:jpuckett DATE:08/11/2001 11:48:33

Please review manual page RC1-27. The page requires update -- bottom graphic n/a.

FROM:kkennelly DATE:8/15/01 7:53:47 AM

The new version of RC1-27 only has 1 graphic on it so I think this has already been addressed. Example problem was modified on 5/18/01, I think maybe Jay didn't have newest version of RC1.

|                                             |
|---------------------------------------------|
| Issue ID: 3314                              |
| Subject: Add old AISC shapes to the library |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:51:36 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: High                      |                      |

### Complete Issue Information

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | Medium   | Enhancement |

### Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 3316.12034 | Suspended     | strand layout |

### Description

FROM:jpuckett DATE:08/11/2001 11:51:37

We have the old AISC shapes from NYDOT and others. These shapes have not yet been loaded into the database, but it has been a long-standing (I think) request. Please try to get this into 4.1, if possible. Thanks.

FROM:kkennelly DATE:10/9/01 3:51:25 PM

Electronic file from Texas is on G:\proj\virtis\longterm\userdb. They have a First Year Rolled and a Last Year Rolled, we don't have these in Virtis db.

FROM:jduray DATE:5/23/02 11:54:54 AM

Duplicate of 3340.

Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 3316<br>Subject: strand layout |
|------------------------------------------|

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:56:39 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: Medium                    |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jpuckett DATE:08/11/2001 11:56:40

The strand layout window should have a section symmetry check box, and then only operate on half of the section - the otherside is mirrored automatically. Alternatively, no check box, just do it this way.

FROM:kkennelly DATE:10/25/2001 10:33:14 AM

Doesn't it already have a symmetry checkbox?

Complete Issue Information

|                                           |
|-------------------------------------------|
| Issue ID: 3317                            |
| Subject: strand layout window -- behavior |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: puckett, jay          | 8/11/2001 3:58:38 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State      | Summary                      |
|------------|--------------------|------------------------------|
| 3318.12032 | Information Needed | strand layout window -- note |

Description

FROM:jpuckett DATE:08/11/2001 11:58:39

If the user windows on strands that are both "on" and "off", then right mouse is gray, i.e., it does not know what to do. In this case:

1. Issue a suggestions.
2. Or better, perform operations as requested. For example, turn all marked strands on (if off), and keep on strands on as well. Conversely, turn off all marked strands.
3. Select all/clear all should work on the marked strands in the manner outlined in no. 2.

Perhaps a reset button would be good to reset the state as they entered the window, i.e., they have messed it up badly.

Thanks.

FROM:hlee DATE:4/30/2008 2:25:26 PM

Discarded by TAG 12/07.

|                                       |
|---------------------------------------|
| Issue ID: 3318                        |
| Subject: strand layout window -- note |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Kennelly, Krisha   |                       |
| Submitted By: puckett, jay          | 8/11/2001 4:03:16 PM  |
| Modified By: hlee                   | 10/26/2012 1:18:48 PM |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Complete Issue Information

|                  |                    |      |                |
|------------------|--------------------|------|----------------|
| Kennelly, Krisha | Information Needed | High | Bug<br>Unknown |
| Ihnat, Joseph    | Discard            | High | Enhancement    |
| Ihnat, Joseph    | Discard            | High | Enhancement    |

### Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 3319.12031 | Discard       | diagphram thickness and wt. |

### Description

FROM:jpuckett DATE:08/11/2001 12:03:17

Please review the note on debonding in the strand layout graphic. Language might be improved/corrected.

FROM:kkennelly DATE:9/12/01 8:49:01 AM

I'm not sure what needs revised. Can you tell me exactly which note needs revised?

|                                      |
|--------------------------------------|
| Issue ID: 3319                       |
| Subject: diagphram thickness and wt. |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ihnat, Joseph      |                      |
| Submitted By: puckett, jay          | 8/11/2001 4:04:37 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | Medium   | Enhancement |
| Duray, Jim      | Suspended | Medium   | Enhancement |

### Contacts

| Name        | Company          | Email 1                   | Phone 1      |
|-------------|------------------|---------------------------|--------------|
| jay puckett | BridgeTech, Inc. | puckett_bt@compuserve.com | 307-766-2223 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 3320.12030 | Suspended     | new P/S sections |

### Description

FROM:jpuckett DATE:08/11/2001 12:04:38

Default the diagphragm thickness to the entry above in the grid, ditto wt.

FROM:hlee DATE:4/30/2008 2:25:32 PM

Discarded by TAG 12/07.



Complete Issue Information

|                           |
|---------------------------|
| Issue ID: 3320            |
| Subject: new P/S sections |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: puckett, jay          | 8/11/2001 4:05:51 PM |
| Modified By: administrator          | 6/19/2008 4:05:54 PM |
| Priority: Medium                    |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jpuckett DATE:08/11/2001 12:05:52

We should review the P/S sections and for those that we do not have templates for, we could create equivalent box or I sections. This could suffice in the near-term. For example, the Texas tub could be entered as a box. The dimensions would be close to the actual, but not the same.

FROM:jduray DATE:8/14/01 4:46:43 PM

I don't agree with this since it has been our philosophy all along to model the bridge.

1/5/2016 11:06:54 AM

HRS AASHTO

64

## Complete Issue Information

Issue ID: 3321

Subject: properties override

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Submitted By: puckett, jay

8/11/2001 4:08:11 PM

Modified By: administrator

6/19/2008 4:05:54 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Goodrich, Brian | Suspended | High     | Enhancement |
|                 | Discard   |          |             |
| Goodrich, Brian | Discard   | High     | Enhancement |

### Contacts

1/5/2016 11:06:54 AM

HRS AASHTO

65

### Complete Issue Information

| Name        | Company                        | Email 1                   | Phone 1       |
|-------------|--------------------------------|---------------------------|---------------|
| jay puckett | BridgeTech, Inc.               | puckett_bt@compuserve.com | 307-766-2223  |
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org            | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 3329.12021 | System Test   | PS Design Tool - Ext beam shear df incorrect |

### Description

FROM:jpuckett DATE:08/11/2001 12:08:11

I think that I'm convinced that we should have a generic P/S section where the Stop/Sbot, I, A, etc. are user-defined. BRASS engines should accomodate this directly. The primary issue is inelastic properties. I think that this could be handled with an inelastic effective width. Most cases, the slab is composite, the neutral axis remains in the deck. In cases where the stress block enters the section, we could use the inelastic width. Generally, this is the actual dimension. In the case, where the na drop into the fillet, etc. the inelastic width could be modified as necessary. Most of the time the deck and the top part of the beam will handle balancing the steel. Again, for elastic computations, the elastic properties are used. I will forward to WYDOT for consideration as well. jp

FROM:jduray DATE:12/12/2007 9:58:11 AM  
Could BRASS use section properties from V/O?

FROM:hlee DATE:4/30/2008 2:25:39 PM  
Discarded by TAG 12/07.

Issue ID: 3329

Subject: PS Design Tool - Ext beam shear df incorrect

Folder: /Virtis/Support Center/Opis

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha

8/28/2001 7:31:57 PM

Modified By: administrator

6/19/2008 4:05:53 PM

1/5/2016 11:06:55 AM

HRS AASHTO

66

Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Resolved | High     | Unknown  |

Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 3366.11984 | Resolved      | System Error |

Description

#####

FROM:dteal DATE:11/01/2001 16:41:32  
NO problem description or resolution to test against version4.1 beta 2

FROM:kkennelly DATE:11/5/2001 8:04:04 AM  
This was originally submitted by Jeff Smith of FHWA. There was a bug in calculating the shear df for an exterior beam in the Prestress Design Tool. It occured for both an lbeam and a box beam. Code has been fixed.

Complete Issue Information

|                       |
|-----------------------|
| Issue ID: 3366        |
| Subject: System Error |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Waheed, Amjad         | 9/12/2001 3:19:16 PM |
| Modified By: administrator          | 6/19/2008 4:05:51 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:awaheed DATE:09/12/2001 11:19:17

Each time I start a new bridge or new folder, I get system error window with the following error messages:

Summary:

Unable to retrieve Parameters!  
Error requerying database recordset.  
Error opening database record set.

Detail:

Unable to retrieve Parameters!  
  
Error requerying database recordset.

1/5/2016 11:06:55 AM

HRS AASHTO

68

### Complete Issue Information

State:S0002,Native:942,Origin:[Oracle][ODBC][Ora]  
ORA-00942: table or view does not exist

Error opening database record set.

State:S0002,Native:942,Origin:[Oracle][ODBC][Ora]  
ORA-00942: table or view does not exist

Debug:

Unable to retrieve Parameters!

11:05:20 AM - Line 378 in source file D:\Virtis\GUI\ABGBRDG\UiBridgeDescContDlg.cpp.

Error requerying database recordset.

11:05:20 AM - Line 369 in source file D:\Virtis\data management\abmcfg\DmParamtrsList.cpp.  
State:S0002,Native:942,Origin:[Oracle][ODBC][Ora]  
ORA-00942: table or view does not exist

Error opening database record set.

11:05:20 AM - Line 140 in source file D:\Virtis\data management\abmcfg\DmParamtrsList.cpp.  
State:S0002,Native:942,Origin:[Oracle][ODBC][Ora]  
ORA-00942: table or view does not exist

After I close "System Error" window while creating new bridge, bridge description window which is already opened, gives me error message that "Bridge ID is not unique."

FROM:awaheed DATE:09/12/2001 11:30:06

When I tried to make a copy of the existing bridge, I get the following errors:

Error occurred while checking for uniqueness of Structure Id!

Unable to retrieve row count.

Unable to retrieve row count.

Error occurred while checking for uniqueness of Structure Id!

Unable to retrieve row count.

Unable to retrieve row count.

Error occurred while checking for uniqueness of Structure Id!

11:24:21 AM - Line 284 in source file D:\Virtis\gui\abgdtop\UiCopyBridgeDlg.cpp.

SQLExecDirect failed.

11:24:21 AM - Line 456 in source file D:\Virtis\system\absgnr\SysDeDataFunctions.cpp.

Unable to retrieve row count.

11:24:21 AM - Line 455 in source file D:\Virtis\system\absgnr\SysDeDataFunctions.cpp.

SQLExecDirect failed.

11:21:54 AM - Line 456 in source file D:\Virtis\system\absgnr\SysDeDataFunctions.cpp.

1/5/2016 11:06:55 AM

HRS AASHTO

69

### Complete Issue Information

Unable to retrieve row count.

11:21:54 AM - Line 455 in source file D:\Virtis\system\absgrnl\SysDeDataFunctions.cpp.

FROM:mordoobadi DATE:9/18/01 9:00:22 AM

Also reported by e-mail. This is resolved. Their Oracle database was missing some public synonyms.

|                                                      |
|------------------------------------------------------|
| Issue ID: 3386                                       |
| Subject: Control Prestress Strand Development Length |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Goodrich, Brian       | 9/21/2001 7:27:29 PM |
| Modified By: administrator          | 6/19/2008 4:05:50 PM |
| Priority: High                      |                      |
| Category: Enhance BRASS             |                      |

### History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | Suspended | High     | Enhance BRASS |
|                 | Discard   |          |               |
| Duray, Jim      | Discard   | High     | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 3386.11964 | Discard       | Control Prestress Strand Development Length |

### Description

FROM:bgoodrich DATE:09/21/2001 15:27:31

Anousone Arounpradith from Missouri DOT would like to control the P/S strand development length using Opis, instead of relying on the BRASS default (165 times the nominal strand diameter). An

1/5/2016 11:06:56 AM

HRS AASHTO

70

## Complete Issue Information

analysis has to be run to get the average and effective prestress so the AASHTO LRFD equations can be utilized. This seems like an iterative process that the user should be involved in.

BRASS does calculate a development length and provide a summary, but only if the mid-span POI is entered. However, BRASS does not automatically use the development length it calculates, primarily because the mid-span POI may not be present and also because it may not be the first POI analyzed. BRASS provides a command for entering this length (by row), which defaults to 165 times the nominal strand diameter (documented in Technical Manual). In short, the BRASS the user is responsible for entering the development length from their own calculations or from the summary provided by BRASS. I don't think addressing this issue in the engine data would work because the strand rows are controlled from the Opis UI. If there were any changes to the strand row configuration, the engine data would be invalid. Furthermore, the export generates the strand row numbers, which is not available to the user until an analysis is performed.

FROM: bgoodrich DATE: 09/24/2001 12:55:32

The development length is dependent on the strand configuration and its relationship to the plastic neutral axis of the section. Therefore, the development length entry field(s) should be located somewhere within the member alternative. Possible GUI locations could be:

1. Span Detail tab of Beam Details window (add another column to the grid)
2. Strand Layout window (add an edit box)

FROM: kkennelly DATE: 9/27/01 3:35:51 PM

For debonded strands, each row of debonded strands could technically have a different development length so I don't think you could add it to the Beam Details window. The PennDot PS program will calculate this for you so I think BRASS should either be enhanced to compute it or this info should be put on an engine tab.

FROM: hlee DATE: 4/30/2008 2:25:46 PM

Discarded by TAG 12/07.

Issue ID: 3482

Subject: Opis Educational Version - BRASS LRFD factors

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

11/5/2001 1:30:14 PM

Modified By: administrator

6/19/2008 4:05:45 PM

Priority: High

Category: Unknown

## History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |

1/5/2016 11:06:56 AM

HRS AASHTO

71



### Complete Issue Information

|            |           |      |         |
|------------|-----------|------|---------|
| Duray, Jim | Duplicate | High | Unknown |
|------------|-----------|------|---------|

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3521.11829 | Resolved      | "r" value in LRFD eq. 6.10.4.1.9-1 |

### Description

FROM:kkennelly DATE:11/5/2001 8:20:14 AM

Submitted for Shri Bhide via email. Opis Educational version can't run PCI Training Bridge 6 in sample database or other user input PS bridge. Get the following error when try to run:

Error generating LRFD Factors command!

Error generating LRFD Factors command!

Unknown exception in the BRASS LRFD Analysis module.

This incident originally submitted around 10/3/01 via phone call and email. I looked into and Brian also looked into it. We couldn't find anything. Can't reproduce in the full release version.

Full text of email 11/1/01 3:24 pm:

Krishna:

As you are aware, on July 31, 2001 PCA was granted a one year license for the educational version of the AASHTOWARE's OPIS computer program. I have not yet been able to use the software.

As we discussed a few weeks ago, for certain input files the program does not function properly. I receive an error message (enclosed) when I try to run the sample problem PCITrainingBridge6 supplied with the software. A similar error was also generated when I tried to analyze a simple span precast prestressed concrete bridge.

Your assistance will be greatly appreciated.

Regards,

Shri.

Shri Bhide, SE, PE

1/5/2016 11:06:56 AM

HRS AASHTO

72

Complete Issue Information

Program Manager, Bridges  
Portland Cement Association  
5420 Old Orchard Road  
Skokie IL 60077-1083

Voice 847.966.6200 x 385  
Fax 847.966.9781  
sbhide@portcement.org <mailto:sbhide@portcement.org>  
www.portcement.org/br <http://www.portcement.org/br>

FROM:bgoodrich DATE:12/14/2001 17:09:35  
This is a duplicate of Incident 1050.

FROM:jihnat DATE:1/3/2002 3:10:30 PM  
This was traced to an uninitialized member variable in DoLibLrfdFactor.cpp that only affected Release builds on certain PCs. It has been fixed in version 4.1.0.

|                                             |
|---------------------------------------------|
| Issue ID: 3521                              |
| Subject: "r" value in LRFD eq. 6.10.4.1.9-1 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Christian, George     | 11/15/2001 8:37:10 PM |
| Modified By: administrator          | 6/19/2008 4:05:42 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 3525.11825 | Resolved      | error message when beginning Opis |

Description

FROM:gchristian DATE:11/15/2001 15:37:11

The spec. check output for Art. 6.10.4.1.9, Noncompact Sect. compression flange bracing indicates that the program is calculating the radius of gyration of the compression flange only and not the compr. flange plus 1/3 the depth of web in compression as per the spec. This was noted on a section in pos. bending under the construction condition (stage 1, top flange). Not including the web portion can be unconservative.

FROM:bgoodrich DATE:11/16/2001 10:14:18

Please review Section 6.3 regarding the notation of "rt" (page 6-9). This definition indicates "rt" is calculated differently for composite and non-composite sections, which differs from the definition in Article 6.10.4.1.9. BRASS calculates "rt" based on the definition in Section 6.3, which is why "rt" for the non-composite stage is only considering the web. The specification should be modified to clarify this definition. I have submitted this issue to Jay Puckett who will forward it to AASHTO.

FROM:gchristian DATE:11/19/2001 10:21:26

I assume you meant that "rt" for the non-comp. stage is only considering the flange. The Specs are confusing, considering that rt is defined explicitly in 6.10.4.1.9 and well as in Arts. 6.10.4.2.5 and 6.10.4.2.6, where the difference in definitions for composite and non-comp. lateral tors. buckling checks is noted. These 2 latter definitions are consistent with the Art. 6.3 definitions for comp. and non-comp. but 6.10.4.2.6 is not mentioned in the Art. 6.3 definition. I have seen published LRFD examples with both definitions of "rb" used for 6.10.4.1.9 for the pos. mom. constructibility check. I also talked with Mike Grubb who said that whether or not to include the web in the "rt" term in this article has come up as an issue and is under review by the researchers.

|                                            |
|--------------------------------------------|
| Issue ID: 3525                             |
| Subject: error message when beginning Opis |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Ordoobadi, Mehrdad |                       |
| Submitted By: Frantz, Gregory       | 11/21/2001 2:49:15 AM |
| Modified By: administrator          | 6/19/2008 4:05:42 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Complete Issue Information

|                    |          |      |         |
|--------------------|----------|------|---------|
| Duray, Jim         | New      | High | Unknown |
| Ordoobadi, Mehrdad | Assigned |      | Bug     |
| Duray, Jim         | New      | High | Unknown |
| Goodrich, Brian    | Assigned |      |         |
|                    | Resolved |      |         |
| Goodrich, Brian    | Resolved | High | Unknown |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 3527.11823 | Resolved      | Longitudinal Stiffener distance to flange |

### Description

FROM:gfrantz DATE:11/20/2001 21:49:15

Today when I phoned for help in installing OPIS, I mentioned that I got an error message when I first started up Opis. I am using Access 2000 and was opening virtis40s. You said to email you with the error message the next time it occurred. Tonight I was installing Opis on my home computer. The same error occurred as at school this afternoon. The error box said "System error", and the whole message is listed below. When I close the error box, the "bridge explorer" screen is visible. If I click on "Sample Bridges" or "Deleted Bridges", the same error message appears. I can open "LRFD Sample Bridges" and look at the samples, but I do not yet know enough about the software to be able to tell if samples are working ok.

This is the message

Error opening database record set.

Error opening database record set.

State:37000,Native:-3101,Origin:[Microsoft][ODBC Microsoft Access Driver]

Cannot include Memo, OLE, or Hyperlink Object when you select unique values (abw\_bridge.descr).

Unable to open m\_pDbBridgeListSet in CDmBridgeList::OpenRecordset!

09:38:59 PM - Line 586 in source file D:\Virtis\data management\ABMSYS\DmBridgeList.cpp.

1/5/2016 11:06:57 AM

HRS AASHTO

75

Complete Issue Information

Error opening database record set.  
09:38:59 PM - Line 583 in source file D:\Virtis\data management\ABMSYS\DmBridgeList.cpp.  
State:37000,Native:-3101,Origin:[Microsoft][ODBC Microsoft Access Driver]  
Cannot include Memo, OLE, or Hyperlink Object when you select unique values (abw\_bridge.descr).

FROM:jduray DATE:11/21/2001 08:07:20

FROM:mordoobadi DATE:11/21/2001 9:26:43 AM  
I have seen this before. This is because of the DISTINCT keyword used in some of the database views in the database. The error happens only in some new versions of Access 2000. This didn't happen on my old machine but it is happening on my new PC (with a different version of Access 2000).  
Resolution: If an attribute has data type text(2000) and it is present in a view with DISTINCT selection it should be changed to text(255).

FROM:mordoobadi DATE:11/21/2001 9:39:47 AM  
This is considered in 4.1 version. The view that has this problem is abw\_sql\_bridge\_group.

One resolution for 4.0 version is to go to the Access database and change the size of the descr field in the abw\_bridge table from Text(2000) to Text(255).

|                                                    |
|----------------------------------------------------|
| Issue ID: 3527                                     |
| Subject: Longitudinal Stiffener distance to flange |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Christian, George     | 11/23/2001 8:15:36 PM |
| Modified By: administrator          | 6/19/2008 4:05:42 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gchristian DATE:11/23/2001 15:15:36

When inputting the distance from the longit. stiffener to the top of the bottom flange using a percent of the web depth, if a percent value (eg. 20 for 20 percent) the spec check for art. 6.10.8.3.3.1 shows an absurd calculation for dist. from stiffener to top flange. Note the help says to input it as a percent value. If a fraction is used (e.g. 0.2 for 20%) a reasonable result is produced in this calculation, however the calculation does not seem to be exactly the fraction of the web depth input.

FROM:kkennelly DATE:11/26/2001 8:41:55 AM

PreparePlateStiffener() in CBrassStifLongScheduleGroupCmd is not getting the vertical distance from the domain correctly. Line 702 in BrassStifLongScheduleGroupCmd.cpp is calling GetVertDistance with a unit of U\_UNITLESS. It should use the "iLength" unit. Then dFractionOfWeb should be divided by 100 since we tell the user in the gui to enter the distance as a percentage.

FROM:bgoodrich DATE:11/29/2001 12:20:21

I corrected the export of the longitudinal stiffener distance (as described by Krishna above) when the "% of Web" options is used in functions PreparePlateStiffener and PrepareAngleStiffener. I sent Joe updated export source. Fixed for version 4.1.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3532                                                     |
| Subject: Specification Checks_Strength I limit state (load rating) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Christian, George     | 12/3/2001 9:17:24 PM |
| Modified By: administrator          | 6/19/2008 4:05:42 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Assigned  |          |             |
|                 | Resolved  |          |             |
| Lee, Herman     | Resolved  | High     | Enhancement |

### Contacts

| Name          | Company                 | Email 1                 | Phone 1       |
|---------------|-------------------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech              | gale.barnhill@aecom.com | (402)363-9515 |
| Jim Duray     | Michael Baker Jr., Inc. | jduray@mbakercorp.com   |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 3547.11803 | Resolved      | Results Graph for Critical Rating/Design Factors needs attention |

### Description

FROM:gchristian DATE:12/03/2001 16:17:25

For the following case: Composite section in positive flexure, Strength I limit state, Strength is controlled by first yielding, and less than  $F_y$  in the top flange due to web load shedding, due to it being a deep girder. The Load rating calculation spec check after determining the pos. moment flexural resistances based on flange stresses only checks that based on the bottom flange stresses. We had a case where the top flange stresses controlled the resistance due to situation described above. The load rating calc. is the only case where a spec check comparing load vs. resistance is directly made without paging through the individual spec check pages to find and compare appropriate stresses. Since the top flange rating check was not made, an 'under-design' situation is missed by the spec checks.

FROM:jduray DATE:12/16/2001 23:09:15

FROM:bgoodrich DATE:12/18/2001 11:31:04

Please attach the BBD file.

FROM:bgoodrich DATE:12/20/2001 10:19:28

I received the BBD file (AlcoaRd.bbd) and attached it.

1/5/2016 11:06:58 AM

HRS AASHTO

78

Complete Issue Information

FROM: bgoodrich DATE: 01/07/2002 11:03:33

BRASS adjusts the sign of the stress resistance before computing design ratios and rating factors. In some instances, the sign was incorrectly set, thereby causing the DR or RF to be high or not applicable (and therefore not critical). I corrected this issue for the final build of BRASS-GIRDER(LRFD) 1.5.0 and Opis 4.1.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 3547                                                            |
| Subject: Results Graph for Critical Rating/Design Factors needs attention |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Barnhill, Gale        | 12/17/2001 7:15:32 PM |
| Modified By: administrator          | 6/19/2008 4:05:41 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gbarnhill DATE: 12/17/2001 14:15:35

This is a followup to Incident 3217. Although the VERSION shows as 4.0 release, the problem also occurs in V410 Rel Candidate 1.

The graph seems to be limited to showing only flexure and shear rating factors (and these are only for the strength limit states). If Force(Bearing) governs, there is no category in the graph to display that. Also, there are no values displayed for Service levels even though they are present. Each rating factors is written to the spec check object, which show up as a fail when less than zero. The graph should be modified, so the rating factors are not tied to an action (moment, shear, etc.). There should be new tree items specifically for Design Ratios and Rating Factors, with the appropriate sub-tree items.

1/5/2016 11:06:58 AM

HRS AASHTO

79



Complete Issue Information

FROM:jduray DATE:12/17/2001 20:45:06  
Task Force to assign priority.

FROM:jduray DATE:7/19/2003 9:36:17 AM  
Scheduled for 5.1.

FROM:hlee DATE:8/1/2003 4:07:50 PM  
Resolved in 5.1.

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| Issue ID: 3616<br>Subject: Incorrect moment of inertia used in shear connector fatigue checks |
|-----------------------------------------------------------------------------------------------|

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Opis                |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Western, Kevin 2/20/2002 10:59:44 PM |
| Modified By: administrator 6/19/2008 4:05:37 PM    |
| Priority: Urgent                                   |
| Category: Bug - BRASS                              |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | Urgent   | Bug - BRASS |
| Goodrich, Brian | Assigned |          |             |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | Urgent   | Bug - BRASS |

Contacts

1/5/2016 11:06:59 AM

HRS AASHTO

80

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | sugarcreek.bbd      |             |

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 3699.11652 | Closed        | PS Conc initial stress data unavailable |

### Description

FROM:bgoodrich DATE:Wednesday, February 20, 2002 5:59:44 PM  
Submitted on behalf of Ed Lutgen (Asst. Ratings Engineer MN/DOT):

I have a bridge I am working on with Kevin Western. It is an example for our new MN LRFD Bridge design Manual. I am using Opis as a check to a consultant design. It is a 2 span continuous plate girder. I have a problem with either my input or the program. At the first abutment only, when it checks fatigue on the shear studs the program incorrectly uses the wrong Inertia for AASHTO Equation 6.10.7.4.1b-1. The program uses stage 1 moment of inertia when it should use stage 3. The resistance is then artificially low and fails. This only happens at the first abutment. Everywhere else the program does it correctly. I checked and rechecked Opis. I even tried adding a line in the shear stud input box that starts at zero and ends at zero (You have to do this for the diaphragm spacing and prestress stirrups) but to no avail. The only way to avoid this is to enter it in composite and not the size and spacing of the studs so the program does not make that check. I hope I explained it enough for you to understand. If I am inputting the bridge incorrectly then what areas should I look to debug the file?

FROM:jduray DATE:Thursday, February 21, 2002 2:27:35 PM

FROM:bgoodrich DATE:Friday, February 22, 2002 3:31:26 PM

The moments at the 100 point are extremely small and cause BRASS to use the negative flexure properties instead of those for positive flexure. I will address this issue for Opis 4.1 Service Pack 1 if at all possible. I cannot think of any way to get around this issue until you get the new engine. Fixed for BRASS-GIRDER(LRFD) 1.5.1.

|                                                  |
|--------------------------------------------------|
| Issue ID: 3699                                   |
| Subject: PS Conc initial stress data unavailable |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Hurd, Mike            | 4/19/2002 6:10:29 PM |
| Modified By: administrator          | 6/19/2008 4:05:32 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

### History

| Primary Contact  | Status   | Priority | Category    |
|------------------|----------|----------|-------------|
| Duray, Jim       | New      | Medium   | Bug         |
| Kennelly, Krisha | Assigned | High     |             |
| Ihnat, Joseph    |          |          | Bug - GUI 2 |
|                  | On Hold  |          |             |
|                  | Resolved |          |             |
| Ihnat, Joseph    | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | LRFD_Factors_Steel.bbd |             |

### Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 3724.11628 | Resolved      | LRFD factor overrides |

### Description

FROM:mhurd DATE:Friday, April 19, 2002 2:10:29 PM

I am modeling a 3-span prestressed concrete bridge. The service pack for Opis 4.1 has been installed. After making an analysis run, I have attempted to review concrete stresses using both the Report Tool and Concrete Stress Summary in the Analysis Results.

In the Report Tool under LRFD Analysis Output: when the various stress boxes are checked and

1/5/2016 11:06:59 AM

HRS AASHTO

82

Complete Issue Information

computed, the report is blank. Other options, such as moment summary, do display output.

In the Analysis Report under Concrete Stress Summary: final stresses appear, but when initial stresses is selected, "no data available" is displayed.

I have checked the model input and it seems to be complete. The report tool was functioning prior to installation of the service pack. None of the input has been changed since the service pack was installed. I would appreciate it if you would check this out. Thanks.

FROM:mhurd DATE:Friday, April 19, 2002 2:15:02 PM

FROM:jduray DATE:4/22/02 4:41:16 PM

When BRASS was modified to not generate duplicate results (VI 3692) , the change inadvertently caused the initial stresses to not be written to the results object.

The BRASS DLL has been fixed and is available for dirtribution.

FROM:jduray DATE:5/7/02 2:27:38 PM

This will be released in July with 4.2.

FROM:bgoodrich DATE:Friday, June 28, 2002 12:36:45 AM

Closed.

|                                |
|--------------------------------|
| Issue ID: 3724                 |
| Subject: LRFD factor overrides |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ihnat, Joseph      |                      |
| Submitted By: Kemna, Darren         | 5/9/2002 7:38:24 PM  |
| Modified By: administrator          | 6/19/2008 4:05:31 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3730.11622 | System Test   | Prestress Creep Losses |

### Description

FROM:dkemna DATE:Thursday, May 09, 2002 3:38:24 PM

When attempting to hand input LRFD factors for a steel plate girder bridge I am unable to analyze the definition or member alternative. I have used factor overrides at both the definition and member alternative levels.

One thing that I have noticed is that the input for load factors contains one more row of data than the default Library factors (1998 AASHTO LRFD).

Before a copy from library is performed the load factors tab contains a row for construction. If a copy from library is attempted after the hand input factors are saved an error will occur that will terminate the program.

I was able to duplicate this error in matrixbridge04. Attached is a bbd file that shows the manual input factors that cause the error.

FROM:kkennelly DATE:5/17/2002 8:12:09 AM

I ran your bridge and got the following error from BRASS:

\*\* ERROR: Parameter 7 on the FACTORS-RESIST-STEEL command must be greater than zero.

When I look at the BRASS LRFD command help in Virtis/Opis for this command, I see that parameter 7 is the resistance factor for flexure and tension for reinforced concrete in a steel structure. The Concrete tab in your LRFD Load Factors window is blank. Enter a value for the first item in the table (Flexure and tension: reinforced concrete) and your member will run.

I am able to reproduce the copy from library terminating the program and will investigate that.

FROM:kkennelly DATE:5/17/2002 8:36:54 AM

Problem is due to when user inputs their own load factors, the Construction row exists and DoLrfdLimitStateSet->GetCount() is 12. When user picks Copy from Library over the factors they've entered, the Construction row is not copied over so there are only 11 rows in the grid. When data is applied, GDX\_Cell() gets called on row 12 but only 11 exist so program exits.

FROM:dkemna DATE:Friday, May 17, 2002 9:17:47 AM

Sorry about the trivial input error. I did not input this bridge myself, but rather used a plate girder bridge that another designer had previously input to check the upgrade to 4.1. The designer said that the bridge was running fine the last time he used it in 4.0.4., but he could not be sure that he did not make a change prior to his last save. Is it possible that this input got lost in the upgrade, our database has been upgraded so I can't check whether the input was there for 4.0.4.

Issue ID: 3730

Subject: Prestress Creep Losses

1/5/2016 11:07:00 AM

HRS AASHTO

84

Complete Issue Information

|                                                    |
|----------------------------------------------------|
| Folder: /Virtis/Support Center/Opis                |
| Primary Contact: Goodrich, Brian                   |
| Submitted By: Obeidat, Khalid 5/16/2002 9:24:40 PM |
| Modified By: administrator 6/19/2008 4:05:31 PM    |
| Priority: High                                     |
| Category: Enhance BRASS                            |

History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Bug         |
| Goodrich, Brian | Assigned   |          | Bug - BRASS |
| Duray, Jim      |            |          |             |
| Goodrich, Brian | Patch Test |          |             |
|                 | Duplicate  |          | Bug - GUI 2 |
| Goodrich, Brian | Duplicate  | High     | Bug - GUI 2 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | report tool live load error.bmp |             |
|      | report tool live load.bbd       |             |

Tasks

| Name       | Current State | Summary                                                                                         |
|------------|---------------|-------------------------------------------------------------------------------------------------|
| 3767.11588 | Duplicate     | 4.1.1 release and 4.1.0 academic - report tool shows HL93 load when other vehicles are analyzed |

Description

FROM:bgoodrich DATE:Thursday, May 16, 2002 5:24:40 PM  
 E-mail from Khalid Obeidat (5/14/02):  
 Bridge Automation/Standards Engineer  
 Offices of Bridges and Structures

1/5/2016 11:07:01 AM

HRS AASHTO

85

Complete Issue Information

3485 Hadley Avenue North  
Oakdale, MN 55128  
Office: 651-747-2149

OPIS use the noncomposite instead of the composite section properties to compute creep losses. How can I make use the composite section properties?

FROM:bgoodrich DATE:Thursday, May 16, 2002 5:31:04 PM

Please send me your computations for the creep losses, so I can compare them to BRASS. Also, include the BBD file of your bridge. BRASS computes creep losses in stage 1 when AASHTO losses are specified. Therefore, the stage 1 (non-composite) section properties are applied.

FROM:bgoodrich DATE:Thursday, May 16, 2002 5:31:33 PM

E-mail from Khalid Obeidat (5/16/02):

Here is a the bbd file in addition to our mathcad sheet for the same bridge. Thanks for your help

FROM:bgoodrich DATE:Thursday, May 23, 2002 10:45:46 AM

To get BRASS to more accurately calculate the creep losses for your structure, you must enter the "Percentage DL" on the Prestress Properties window. The BRASS definition of this field is:

"the percentage by which the total Stage 1 actions due to permanent dead load, excluding girder weight, should be adjusted to obtain the effective total actions due to permanent loads from all stages."

The BRASS command manual also contains the following note regarding this input field:

"The creep loss of AASHTO 5.9.5.4.3 is dependent on the change in concrete stress (fcdp) at the center of gravity of the prestressing steel due to permanent loads, excluding girder weight. BRASS computes AASHTO losses during the Stage 1 analysis, so actions due to dead loads from any subsequent stages are not known. Therefore, the dead load percentage parameter is provided so creep losses may be more accurately computed."

Hopefully, this explanation addresses your concerns with the creep calculation. If you don't care for the way BRASS calculates the creep losses or any other losses, you can always input lump-sum losses.

FROM:elutgen DATE:Thursday, May 30, 2002 9:54:42 AM

FROM:bgoodrich DATE:Thursday, May 30, 2002 11:59:00 AM

E-mail from Khalid Obeidat (5/30/02):

It seems to me from usability point of view that the %DL field should be computed by OPIS and BRASS automatically since all the information to compute that fudge factor are there. It is a more efficient to be computed automatically since inputting it manually require running the software twice in addition to the risk of misinterpretation of %DL factor. I am attaching notes I sent to our designers about this matter. Please let me know your thoughts.

FROM:bgoodrich DATE:Thursday, May 30, 2002 3:20:48 PM

1/5/2016 11:07:01 AM

HRS AASHTO

86

### Complete Issue Information

It's good that you are informing the designers of the %DL issue. Your notes (documents) and e-mail discussions describe the issue well. I believe the prestress loss windows were developed using the data required to fill the BRASS commands. The %DL "fudge factor" should have never been added to the Virtis/Opis as a general entry. The %DL is strictly a BRASS issue. Due to the computational flow of BRASS, the %DL method for modifying fcdp was chosen over performing two internal runs to get the stage 2 section properties and moments before computing the losses and applying them to the stage 1 model. It was felt the users would input lump-sum losses if this method was unacceptable to them. Opis should not be responsible for computing the %DL because that is an engine-dependent field. This field should probably be moved to the engine properties window on the member alternative. I will discuss this issue further with Jim Duray and Jay Puckett.

FROM:elutgen DATE:Tuesday, June 18, 2002 1:32:54 PM

FROM:bgoodrich DATE:Tuesday, August 13, 2002 1:25:03 PM  
WYDOT, BridgeTech, and MNDOT engineers discussed the %DL method issue at the 2002 users group meeting in Lincoln. The %DL method does work, but MNDOT has a large number of bridges that would have to be modified. Additionally, ignoring the %DL parameter, i.e., leaving it as zero, makes a large difference in results when high composite dead loads are present. Therefore, BridgeTech will investigate how to address this issue once they receive a work-order from WYDOT.

FROM:bgoodrich DATE:Monday, November 04, 2002 1:12:13 PM  
WYDOT assigned this issue to BRASS Problem Log 367.

FROM:bgoodrich DATE:Saturday, January 25, 2003 10:16:28 AM  
This issue has been addressed in both BRASS engines for the Version 5.0 release.

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| Issue ID: 3767                                                                                           |
| Subject: 4.1.1 release and 4.1.0 academic - report tool shows HL93 load when other vehicles are analyzed |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Barnhill, Gale        | 5/30/2002 4:04:59 PM |
| Modified By: administrator          | 6/19/2008 4:05:29 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

1/5/2016 11:07:01 AM

HRS AASHTO

87



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 3780.11575 | Duplicate     | Limitation on the number of distributed loads allowed by BRASS |

### Description

FROM:gbarnhill DATE:Thursday, May 30, 2002 12:04:59 PM  
I analyzed an LRFD PS girder with HS20 vehicle.

The report tool for spec check articles shows an HL-93(SI) vehicle name regardless of the vehicle used for analysis.

I've attached a BBD file from the 4.1.1 release.

FROM:bgoodrich DATE:Wednesday, June 05, 2002 5:50:31 PM  
Jim - I don't believe the BRASS export or engine are causing the wrong vehicle to be reported. The error seems to reside in the spec check reporting logic. The correct truck shows up in the LRFD summary reports. Is the vehicle name being obtained from the library or the event?

Refer to incident 3817 for the resolution.

FROM:gbarnhill DATE:Tuesday, February 18, 2003 3:35:11 PM  
Checked OK in 5.0.0 beta 4

Issue ID: 3780

Subject: Limitation on the number of distributed loads allowed by BRASS

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Submitted By: Lutgen, Ed

6/5/2002 3:42:36 PM

1/5/2016 11:07:02 AM

HRS AASHTO

88

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:05:28 PM |
| Priority: High             |                      |
| Category: Enhance BRASS    |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Accepted  | Urgent   |             |
|                 | New       |          |             |
| Goodrich, Brian | Suspended |          | Enhancement |
| Duray, Jim      |           |          |             |
| Duray, Jim      | Suspended | Urgent   | Enhancement |

### Contacts

| Name      | Company                                | Email 1                           | Phone 1      |
|-----------|----------------------------------------|-----------------------------------|--------------|
| Ed Lutgen | Minnesota<br>Department of<br>Transpor | edward.lutgen@dot.state.mn.<br>us | 651-747-2124 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 3781.11574 | Suspended     | Temporary construction loads (load staging) are not handled |

### Description

FROM:elutgen DATE:Wednesday, June 05, 2002 11:42:42 AM

It was very difficult for our designers to analyze long bridges with many cross sections due to the limitations from BRASS on the number of distributed loads (Maximum= 38). Each cross section generate a load.

FROM:bgoodrich DATE:Monday, June 24, 2002 4:43:43 PM

Duplicate of Incident 3662.

## Complete Issue Information

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 3781                                                       |
| Subject: Temporary construction loads (load staging) are not handled |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Lutgen, Ed            | 6/5/2002 3:49:15 PM  |
| Modified By: administrator          | 6/19/2008 4:05:28 PM |
| Priority: Urgent                    |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:elutgen DATE:Wednesday, June 05, 2002 11:49:15 AM

There is no way now to input temporary construction loads to be used only on stage 1 and to be removed on the following stages.

Complete Issue Information

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 3782                                              |
| Subject: Slab span edge beam live load distribution factors |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Lutgen, Ed            | 6/5/2002 3:55:15 PM  |
| Modified By: administrator          | 6/19/2008 4:05:28 PM |
| Priority: Low                       |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Accepted  | Low      |             |
|                 | New       |          |             |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | Low      | Enhancement |

Contacts

| Name      | Company                    | Email 1                           | Phone 1      |
|-----------|----------------------------|-----------------------------------|--------------|
| Ed Lutgen | Minnesota<br>Department of | edward.lutgen@dot.state.mn.<br>us | 651-747-2124 |

Complete Issue Information

|          |
|----------|
| Transpor |
|----------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 3783.11572 | Resolved      | Improvement (graphing) |

Description

FROM:elutgen DATE:Wednesday, June 05, 2002 11:55:21 AM

We need to tabs in the input part for live load distribution factors. One for truck and the other for lane.

|                                 |
|---------------------------------|
| Issue ID: 3783                  |
| Subject: Improvement (graphing) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Lutgen, Ed            | 6/5/2002 3:58:33 PM  |
| Modified By: administrator          | 6/19/2008 4:05:28 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category       |
|------------------|----------|----------|----------------|
| Duray, Jim       | New      | High     | Bug            |
| Kennelly, Krisha | Assigned |          |                |
|                  | Open     |          |                |
| Goodrich, Brian  | Assigned |          | Bug - Export 1 |
|                  | Resolved | Urgent   |                |
| Goodrich, Brian  | Resolved | Urgent   | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | C17BD_version411.bbd |             |
|      | PSBoxBeam.jpg        |             |
|      | C17BD.bbd            |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 3784.11571 | Resolved      | Prestressed Girder Spec. Check - LRFD) |

### Description

FROM:elutgen DATE:Wednesday, June 05, 2002 11:58:33 AM

It will be nice to have a graphic representation of the girder showing (design) rating factors across the bridge or at critical sections. This will show the overstressed/understressed areas "at a glance" instead of digging through the output files.

FROM:jduray DATE:6/6/02 8:43:12 AM

There is a graph of the rating factors across the length of the member. It is available in the graph tool.

### Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 3784                                  |
| Subject: Prestressed Girder Spec. Check - LRFD) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Hasan, Mac            | 6/7/2002 3:26:27 PM  |
| Modified By: administrator          | 6/19/2008 4:05:28 PM |
| Priority: Urgent                    |                      |
| Category: Bug - Export 1            |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
| Goodrich, Brian  | Resolved |          |          |
| Goodrich, Brian  | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                 | Description |
|------|-------------------------------------|-------------|
|      | Incident_3812_Current_Beta3.<br>bbd |             |
|      | Incident_3812_Beta3.bbd             |             |
|      | Girder_Line.bbd                     |             |

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 3812.11543 | Resolved      | Plate Girder/ Girder Line/ BRASS - "GetBracingData" error |

### Description

FROM:mhasan DATE:Friday, June 07, 2002 11:26:27 AM

1/5/2016 11:07:04 AM

HRS AASHTO

94

## Complete Issue Information

When the LFD method is used to perform a rating analysis, this structure (C17BD-Prestressed non-voided girder 16"x72" bridge) runs okay. But, it won't run when the LRFD method is used to perform the specifications check.

We encountered similar error messages when using the example templates contained in the database.

FROM:kkennelly DATE:6/10/2002 2:06:57 PM

When I run Member G1 in BRASS LRFD I get the following errors: Parameters 4,5,7 of the Conc-I-Section command cannot be zero. Parameters 2,5 of the Span-General-Segment command cannot be zero. It appears the user is trying to model a solid rectangular precast using the rectangular voided box section. Looks like BRASS LRFD doesn't like the commands generated by the export. Shouldn't Conc-Box-Section commands be generated by the export instead of conc-i-section commands? I've attached a 4.1.1 version of the bbd file to this incident.

FROM:bgoodrich DATE:Wednesday, June 12, 2002 12:08:14 PM

The error checking in the BRASS-GIRDER(LRFD) engine is more thorough than the BRASS-GIRDER engine. Error messages were issued because the web thickness, bottom flange thickness, and web depths were zero. Because the I-section command is used, all parameters must be non-zero. When the Virtis/Opis shapes were mapped to the BRASS commands, only a prestress I-shape and the box shapes were available. BRASS internally converts any box or voided slab shape to an I shape anyway, so the CONC-I-SECTION command was chosen for the export of all prestress shapes. Additionally, CONC-BOX-GIRDER commands were not generated because the Virtis/Opis shape is more general than the BRASS command, e.g., Virtis/Opis allows the top flange to be smaller than the bottom flange while the BRASS command does not. The CONC-VOIDED-SLAB command was also not used because Virtis/Opis allows a three-hole void, which the BRASS command does not directly support.

When the shapes are exported to the BRASS commands, very little error checking is performed. This was done to allow the user to input shapes for which there is no Virtis/Opis beam shape. For the shape in question, a new "Solid Beam" beam shape should be added to Virtis/Opis in which just the width and depth of the shape would be entered. Then, the export would generate the CONC-RECT-SECTION command. Until more beam definitions are added to Virtis/Opis, the user must massage the entry fields for the I or box shapes to get the desired section. For this solid shape, the user must enter a top and bottom flange thickness (as well as a web width (1/2 the shape width). I modified the Virtis/Opis shape as shown in the attached file (PSBoxBeam.jpg) and successfully analyzed the bridge with Opis.

FROM:kkennelly DATE:6/17/2002 1:32:20 PM

Since the "solid beam" shape is not one of the templates asked for by the users, I think it may be better for users to enter a Virtis concrete box with circular voids and input # of voids = 0 then the beam shape will be a solid rectangle.

FROM:dkoenig DATE:Friday, July 05, 2002 12:07:45 PM

A solid rectangular prestressed beam shape without voids is one of the templates that has been asked for by users. We (MoDOT) submitted one of these with the other prestress shapes that we use and were not covered by Virtis. It may have been lost in the shuffle somewhere, but we did submit one of these as an addition to the templates. Our common use for these is on non-state owned structures. They will take precast prestressed slab sections (3 to 4 feet wide) and set them side by side to make a bridge. We also have a similar thing used for reinforced concrete structures. We also submitted that one as an addition for the templates. For the prestressed one, I agree that you can model the prestressed shape using a voided gox girder without any voids. The reinforced concrete one is not as

1/5/2016 11:07:04 AM

HRS AASHTO

95



Complete Issue Information  
easily modeled in Virtis.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 3812                                                     |
| Subject: Plate Girder/ Girder Line/ BRASS - "GetBracingData" error |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 7/16/2002 8:05:40 PM |
| Modified By: administrator          | 6/19/2008 4:05:26 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Tuesday, July 16, 2002 4:05:40 PM  
I am having problems getting the attached plate girder to run with a girder line analysis. I am trying to run the girder at the member alternative level. I have entered two member alternatives, one cross section based and one schedule based, and neither will run. The error that I am receiving is the following:

```
////////////////////////////////////
Internal Errors (1) - Incorrect use of a subroutine or function
```

```
----- Contents of BRASS Error File -----
File: d:\AASHTO BridgeWare\VirtisOpis41\Copy_of_LRFD342Ex\Structure_Definition_1\G1
\Schedule_based\BRASS_LRFD\Schedule_based.ERR
Fatal Error Encountered - Unexpected Termination
Data File: d:\AASHTO BridgeWare\VirtisOpis41\Copy_of_LRFD342Ex\Structure_Definition_1\G1
\Schedule_based\BRASS_LRFD\Schedule_based.DAT
```

Complete Issue Information

-----  
Error No.: 1  
Type : Programmer Error  
Location : GetBracingData

Range number 1 cannot equal zero for bracing schedule.

----- End of Contents of BRASS Error File -----

////////////////////////////////////

I tried to delete the diaphragm placed at the CL of Bent #1 but that did not change the results (and is not what i want to do anyway). I then entered in a new structure definition using a girder system. I had no problems with the girder system analysis at the member alternative level. What am I doing wrong for the girder line runs?

The attached file contains all three member alternatives.

FROM:kkennelly DATE:7/17/2002 8:07:57 AM

I tried to analyze girder line mbr "Plate Girder Shape" and get the same error. I noticed that this member does not have a diaphragm located at the start of span 1 so I added a row to the Bracing Ranges window for a diaphragm at Start Dist = 0, Spacing = 0, 1 space. I still get this BRASS error message. The tolerances in my System Defaults are 0.1 for feet and 0.1 for inches. I get the following BRASS commands generated:

BRACING-SCHEDULE 1, 279.9996, 0.0000, 1679.9976  
BRACING-SCHEDULE 2, 300.0000, 0.0000, 2100.0000  
BRACING-SCHEDULE 3, 279.9996, 0.0000, 1679.9976

If I change the diaphragm spacing for spans 1 and 3 from 23.3333' to 23.333333' I get the following BRASS commands and BRASS runs:

BRACING-SCHEDULE 1, 280.0000, 0.0000, 1680.0000  
BRACING-SCHEDULE 2, 300.0000, 0.0000, 2100.0000  
BRACING-SCHEDULE 3, 280.0000, 0.0000, 1680.0000

Brian, can the export do something using the tolerances to generate these commands without the user changing the diaphragm spacing?

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:16:47 PM  
I uploaded the BBD files for Version 5.0 Beta 3 (Current and Final).

FROM:bgoodrich DATE:Thursday, January 30, 2003 1:35:31 PM

The export does not assume there is a brace at the beginning of a span. This was a decision by the management of the development team. If a bracing range is missing, BRASS-GIRDER(LRFD) will conservatively use the span length as the unbraced length.

Note the following message in the export LOG file:

WARNING (High):

The export detects that a diaphragm does not exist at the 'start' of Span 1! This may affect the BRASS section analysis.

Complete Issue Information

The member alternatives all run with BRASS-GIRDER(LRFD) on Version 5.0 with my tolerances set to 0.1 ft and 0.01 inches. This issue has apparently been fixed.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 3817                                         |
| Subject: Spec Check Filter. Vehicles Tab is misaligned |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kemna, Darren         | 7/18/2002 1:45:20 PM |
| Modified By: administrator          | 6/19/2008 4:05:26 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 1               |                      |

History

| Primary Contact    | Status     | Priority | Category    |
|--------------------|------------|----------|-------------|
| Duray, Jim         | New        | High     | Bug         |
| Kennelly, Krisha   | Assigned   |          |             |
| Ordoobadi, Mehrdad |            |          | Bug - GUI 1 |
|                    | Resolved   |          |             |
|                    | Patch Test |          |             |
|                    | Closed     |          |             |
| Ordoobadi, Mehrdad | Closed     | High     | Bug - GUI 1 |

Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 3817.11538 | Closed        | Spec Check Filter. Vehicles Tab is misaligned |

Description

## Complete Issue Information

FROM:dkemna DATE:Thursday, July 18, 2002 9:45:20 AM

### Incident

I am currently analyzing a plate girder system (it is attached to incident 3812, structure definition 2). I have used the "HL-93 Design Review Template" for my bridge analysis settings. This template applies a "HL-93 (US)" to the Design Loads and a "LRFD Fatigue Truck (US)" to the Fatigue Loads. I am running the analysis at the member alternative level for G1.

1. The Vehicles tab located underneath the Spec Check Filter appears to be misaligned. If I only check the "LRFD Fatigue Truck (US)", no spec checks will appear in the listing for Stage III loads. If I only check the "HL-93 (US)" vehicle, then the fatigue checks will appear, but only the fatigue checks. To get the HL-93 spec checks I have to check the "HL-93 (SI)" vehicle. I have not attempted to try other analysis settings to see whether any of the other check boxes are misaligned.

### 2. Enhancement Request

Also, as an enhancement request, I would like to see the Stage III spec checks further organized. Currently, the user has to click into a specific spec check to see what type of live loads have been used. Even then the user is only given a designation of "LL Combo no. 1, 2, or 3." It appears the spec checks are organized with all of the LL Combo 1 cases grouped together, followed by LL 2 and then 3. I think it would be beneficial to group these in sub folders or at least have the live load given in another column that can be viewed when the spec checks are listed. In addition, I would like to see explanations in the Help menu for Live Load cases 1, 2, and 3. Are they not explained because they are BRASS designations? Maybe this enhancement request is not feasible, but I thought I would throw it out there.

Please let me know if you need further clarification on either of the above topics. Thanks.

FROM:kkennelly DATE:7/19/2002 4:02:33 PM

1. Appears to be a bug.

### Notes for programmer:

The spec check window stores the library vehicle ids in the list control list on the Spec Check Filter Vehicles tab. It then compares these vehicle ids to an id returned by the results. The id returned by the results is no longer the library vehicle id, it is just the number representing the order in which the vehicle was processed. This change was made to enable users to analyze vehicles that were not stored to the database. The spec check filter should use the vehicle dispatch now not the id.

2. I agree with you that we should be able to see the live load when the spec check is listed. I've entered that as a separate incident, Incident 3821. You are correct that the Opis help does not explain Live Load 1,2,3 because those are internal BRASS designations.

FROM:mordoobadi DATE:7/23/2002 5:34:30 PM

The code updated to compare right vehicle IDs with the IDs that come from the results objects.

Temporary vehicles also included in the Vehicles tab.

Writing to the Registry updated to avoid repeated rows for filters.

Fixed in version 5.0.

FROM:mordoobadi DATE:7/25/2002 12:00:02 PM

|                |
|----------------|
| Issue ID: 3820 |
|----------------|

1/5/2016 11:07:05 AM

HRS AASHTO

99

### Complete Issue Information

|                                       |                      |
|---------------------------------------|----------------------|
| Subject: Report Tool for P/S-I Design |                      |
| Folder: /Virtis/Support Center/Opis   |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: Kemna, Darren           | 7/19/2002 1:46:37 PM |
| Modified By: administrator            | 6/19/2008 4:05:26 PM |
| Priority: High                        |                      |
| Category: Bug - Export 2              |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Discard   |          |             |
| Duray, Jim      | Discard   | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 3822.11533 | Discard       | List the vehicle name with the spec check article title |

### Description

FROM:dkemna DATE:Friday, July 19, 2002 9:46:37 AM

I have not been able to get added features to the Report Tool to show up in Internet Explorer. The last five checkboxes under the "LRFD Analysis Output" do nothing, basically. If all the boxes are checked then I will not receive the following:

1. Initial Stresses at transfer of prestress.
2. Final Stresses under Dead Load and Prestress
3. Final Compressive stresses - Design Loads
4. Final Tensile Stresses - Design Loads
5. Final Stresses in Slab

If I only check these five, then nothing will be generated. Checking the P/S intermediate output options under the engine tab of the bridge analysis settings does not appear to matter for this problem. Am I

1/5/2016 11:07:05 AM

HRS AASHTO

100

Complete Issue Information

missing something?

FROM:kkennelly DATE:7/19/2002 2:53:02 PM

In Opis version 4.1.1 the BRASS files are not writing the prestress stress results to the results object in Opis. So you cannot view the prestress stresses in Opis. You can however open the actual BRASS output text files and view the prestress stresses in there. This has been fixed for Opis Version 4.2 which should be released any day now.

(Duplicate of VI3699)

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 3822                                                   |
| Subject: List the vehicle name with the spec check article title |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Kemna, Darren         | 7/19/2002 8:11:55 PM |
| Modified By: administrator          | 6/19/2008 4:05:26 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:7/19/2002 4:09:18 PM

Submitted on behalf of dkemna from incident 3817:

Enhancement Request

Also, as an enhancement request, I would like to see the Stage III spec checks further organized.

1/5/2016 11:07:05 AM

HRS AASHTO

101

Complete Issue Information

Currently, the user has to click into a specific spec check to see what type of live loads have been used. Even then the user is only given a designation of "LL Combo no. 1, 2, or 3." It appears the spec checks are organized with all of the LL Combo 1 cases grouped together, followed by LL 2 and then 3. I think it would be beneficial to group these in sub folders or at least have the live load given in another column that can be viewed when the spec checks are listed. In addition, I would like to see explanations in the Help menu for Live Load cases 1, 2, and 3. Are they not explained because they are BRASS designations? Maybe this enhancement request is not feasible, but I thought I would throw it out there.

FROM:kkennelly DATE:7/19/2002 4:12:18 PM

You are correct that the Opis help does not explain Live Load 1,2,3 because those are internal BRASS designations.

FROM:hlee DATE:4/30/2008 2:29:06 PM

Discarded by TAG 12/07.

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 3824                                                                      |
| Subject: Can't analyze structure due to BRASS limit on number of concentrated loads |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Thomas, James         | 7/25/2002 12:16:17 PM |
| Modified By: administrator          | 6/19/2008 4:05:25 PM  |
| Priority: High                      |                       |
| Category: Enhance BRASS             |                       |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Unknown       |
| Goodrich, Brian | Assigned  |          | Enhance BRASS |
|                 | Suspended |          |               |

### Complete Issue Information

|                 |           |      |  |               |
|-----------------|-----------|------|--|---------------|
|                 | Discard   |      |  |               |
| Goodrich, Brian | Discard   | High |  | Enhance BRASS |
| Duray, Jim      | New       | High |  | Bug           |
|                 | Suspended |      |  | Enhance BRASS |
|                 | Discard   |      |  |               |
|                 | Resolved  |      |  |               |
| Duray, Jim      | Resolved  | High |  | Enhance BRASS |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 3857.11498 | Resolved      | Number of trucks per run |

### Description

FROM:kkennelly DATE:7/25/2002 8:13:19 AM  
Submitted on behalf of Jim Thomas via email:

Hope you might be able to help with this one. Dead-in-the-water!

Call me if you have any questions.

<<model724.bbd>> <<Error.jpg>>

Best regards,  
James R. Thomas, P.E.  
Design Engineer  
Delich, Roth & Goodwillie, P.A.  
600 Broadway, Suite 220  
Kansas City, MO 64105  
816.221.4225 x239 Voice  
816.471.4813 Fax  
jthomas@drgengineers.com e-mail  
http://www.drgengineers.com web

FROM:kkennelly DATE:7/25/2002 8:16:47 AM

1/5/2016 11:07:05 AM

HRS AASHTO

103



Complete Issue Information

BRASS LRFD has a limit of 70 concentrated loads. This structure is very long and has 113 diaphragms on the exterior member. To work around this BRASS limitation, you can remove the diaphragm weights that you have entered on the Framing Plan tab. Keep the diaphragm locations entered, just remove the values in the "Weight" column. Then manually compute the total weight of all diaphragms on the member and divide this total weight by the length of the member to get a uniform weight per foot. You can then enter this uniform weight on the Member Loads window.

FROM:kkennelly DATE:7/25/2002 8:28:31 AM

FROM:kkennelly DATE:7/25/2002 4:17:46 PM

An alternative would be to have the export check if the max number of concentrated loads will be exceeded and if it is issue a warning and compute the uniform weight per foot for the user.

FROM:bgoodrich DATE:Saturday, January 25, 2003 4:18:51 PM  
WYDOT has placed this issue on the BRASS enhancement list.

FROM:hlee DATE:4/30/2008 2:29:13 PM  
Discarded by TAG 12/07.

|                                   |
|-----------------------------------|
| Issue ID: 3857                    |
| Subject: Number of trucks per run |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 6:38:00 PM |
| Modified By: administrator          | 6/19/2008 4:05:24 PM |
| Priority: High                      |                      |
| Category: Enhance BRASS             |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:dteal DATE:Friday, August 16, 2002 2:38:00 PM  
From 2002 UserGroup Meeting

Increase max number of trucks per run from 10 to 50

FROM:hlee DATE:4/30/2008 2:29:29 PM  
Discarded by TAG 12/07.

Issue ID: 3858

Subject: Differ Support Conditions with Construction Stages

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

8/16/2002 7:32:11 PM

Modified By: administrator

6/19/2008 4:05:24 PM

Priority: High

Category: Enhancement

History

1/5/2016 11:07:06 AM

HRS AASHTO

105

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name        | Company                        | Email 1                       | Phone 1       |
|-------------|--------------------------------|-------------------------------|---------------|
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org                | (785)291-3001 |
| John Carney | Purcell Associates             | jcarney@purcellassociates.com | 617-288-0900  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 3859.11496 | Suspended     | Different Dist. Factors for Inv. And Operating |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:32:11 PM

UserGroup 2002

Please add the ability to change the support conditions for the different stages of construction.

## Complete Issue Information

|                                                         |
|---------------------------------------------------------|
| Issue ID: 3859                                          |
| Subject: Different Dist. Factors for Inv. And Operating |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:33:47 PM |
| Modified By: administrator          | 6/19/2008 4:05:24 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 3860.11495 | Suspended     | Longitudinal Symmetry Option |

## Description

FROM:dteal DATE:Friday, August 16, 2002 3:33:47 PM

UserGroup 2002

Add the ability to have different distribution factors for Inventory and Operating

FROM:kkennelly DATE:8/23/2002 8:23:57 AM

Could you tell me where in the specs it says you can use different distribution factors for Inventory and Operating rating?

1/5/2016 11:07:07 AM

HRS AASHTO

107

Complete Issue Information

FROM:jcarney DATE:Tuesday, December 10, 2002 11:16:13 AM

Kristina:

We recently came across this situation and ended up running the program twice to handle the situation. The beam under consideration was located beneath the curb line. In Mass., for rating purposes, a wheel load is considered to be applied at a distance of 2 feet from the curb line or face of bridge rail at inventory level. Using simple beam distribution between the curb beam and next interior beam often provide a lower distribution factor for this situation. If the curb reveal is 12" or less the sidewalk is considered to be mountable by traffic and the higher distribution factor provided using S/5.5 would then be used at operating stress level. I think that the added flexibility of being able to input different live load distribution factors at inventory and operating stress levels would be very helpful in these situations.

|                                       |
|---------------------------------------|
| Issue ID: 3860                        |
| Subject: Longitudinal Symmetry Option |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:34:35 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Friday, August 16, 2002 3:34:35 PM

1/5/2016 11:07:07 AM

HRS AASHTO

108

Complete Issue Information

UserGroup 2002

Add the ability to select longitudinal symmetry along a beam: Steel, PS & RC

Also see 2190 for symmetry of shear reinforcing

FROM:dteal DATE:Monday, August 19, 2002 12:45:49 PM

Longitudinal Symmetry would also be a great aid when doing a design review. If you have an 8 span symmetrical structure, why waste time waiting for your pc to finish the analysis of the 4 symmetrical spans??

FROM:jduray DATE:11/7/02 11:19:31 AM

We discussed at the UG (with Kristy from NE) the symmetry would be handled in wizards that generate the "other half" so the db would have a full description.

|                            |
|----------------------------|
| Issue ID: 3861             |
| Subject: Migration Utility |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:35:11 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

1/5/2016 11:07:07 AM

HRS AASHTO

109

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Suspended |      | Enhancement |
|            | Resolved  |      |             |
| Duray, Jim | New       | High | Bug         |
|            | Suspended |      | Enhancement |
|            | Discard   |      |             |
| Duray, Jim | Discard   | High | Enhancement |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                                    | Description |
|------|--------------------------------------------------------|-------------|
|      | PRESTRESS CONCRETE<br>RATING LOAD FACTOR<br>METHOD.doc |             |

### Tasks

| Name       | Current State | Summary                                                             |
|------------|---------------|---------------------------------------------------------------------|
| 3862.11493 | Discard       | Serviceability Criteria to limit Max truck loads at operating level |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:35:11 PM  
UserGroup 2002  
Add a migration utility

FROM:dteal DATE:Wednesday, August 21, 2002 9:24:09 AM  
also see 3484

FROM:kkennelly DATE:7/11/2003 9:47:52 AM  
Resolved as of July 2003

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 3862                                                               |
| Subject: Serviceability Criteria to limit Max truck loads at operating level |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Murgoitio, Shanon     | 8/16/2002 7:35:45 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |
| Duray, Jim      | Resolved  | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 3863.11492 | Resolved      | Non-Compact Design/plate girder/holes present in tension flange |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:35:45 PM  
UserGroup 2002

Add ability to use serviceability criteria to limit maximum truck loads at operating level

FROM:bgoodrich DATE:Thursday, January 23, 2003 10:50:13 AM

Attached "PRESTRESS CONCRETE RATING LOAD FACTOR METHOD.doc" from Steve Mample.

FROM:hlee DATE:4/30/2008 2:29:40 PM

Discarded by TAG 12/07.

1/5/2016 11:07:08 AM

HRS AASHTO

111



Complete Issue Information

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 3863                                                           |
| Subject: Non-Compact Design/plate girder/holes present in tension flange |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:36:30 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Friday, August 16, 2002 3:36:31 PM

UserGroup 2002

Allow Non-Compact Design to be used for Plate Girders where holes will be present in the tension flange.

## Complete Issue Information

Issue ID: 3864

Subject: Define a Member Alt as a channel

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

8/16/2002 7:37:06 PM

Modified By: administrator

6/19/2008 4:05:23 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

1/5/2016 11:07:09 AM

HRS AASHTO

113

### Complete Issue Information

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 3865.11490 | Discard       | Set BRASS default shear analysis method with Virtis |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:37:07 PM  
UserGroup 2002 – Dave Koenig, MODOT  
Need the ability to define a member Alt. As a channel

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 3865                                               |
| Subject: Set BRASS default shear analysis method with Virtis |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:37:52 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |

1/5/2016 11:07:09 AM

HRS AASHTO

114

### Complete Issue Information

|                                         |
|-----------------------------------------|
| Priority: High<br>Category: Enhancement |
|-----------------------------------------|

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                         |
|------------|---------------|-------------------------------------------------|
| 3866.11489 | Suspended     | Upside down channel shape (precast.prestressed) |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:37:53 PM  
UserGroup 2002

This may have been reported in an earlier incident but I couldn't find it.

FROM:jduray DATE:11/7/02 3:40:05 PM

Assume this item would go on the member alt engine tab.

FROM:dteal DATE:Monday, September 24, 2007 7:21:17 AM  
duplicate of 3840

FROM:hlee DATE:4/30/2008 2:29:49 PM  
Discarded by TAG 12/07.

Complete Issue Information

|                                                          |
|----------------------------------------------------------|
| Issue ID: 3866                                           |
| Subject: Upside down channel shape (precast.prestressed) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:38:37 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Friday, August 16, 2002 3:38:37 PM  
UserGroup 2002, Robert Fulton, Alabama DOT  
Upside down channel shape (precast.prestressed)

FROM:dteal DATE:Wednesday, January 15, 2003 9:54:15 AM  
ALDOT calls these Precast Channel Units - shear keyed together - 15' to 40' - 4.5" thick slab - 2.5 to 3.5 feet wide

Contact Robert Fulton for more details

FROM:jduray DATE:Wednesday, January 15, 2003 2:03:27 PM

1/5/2016 11:07:09 AM

HRS AASHTO

116

Complete Issue Information

Can be post-tensioned or r/c.

|                            |
|----------------------------|
| Issue ID: 3867             |
| Subject: Chart Enhancement |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:39:13 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 3868.11487 | Discard       | NCPRP 12-50, Results Reporting |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:39:13 PM  
UserGroup 2002, Contact Kristi Van Ooyen at NDOR for more information  
May also be related to 2848 & 3217 & 3547

|                                         |
|-----------------------------------------|
| Issue ID: 3868                          |
| Subject: NCPRP 12-50, Results Reporting |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:39:55 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

1/5/2016 11:07:10 AM

HRS AASHTO

118

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Lee, Herman     | Resolved  |          |             |
|                 | Closed    |          |             |
| Lee, Herman     | Closed    | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1               | Phone 1       |
|-----------|--------------------------------|-----------------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org        | (785)291-3001 |
| Jim Duray | Michael Baker Jr., Inc.        | jduray@mbakercorp.com |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 3869.11486 | Closed        | Rt Click mouse functionality with copy/paste in bridge explorer |

### Description

FROM:dteal DATE:Friday, August 16, 2002 3:39:55 PM  
UserGroup 2002, Contact Jay Puckett for more information

FROM:hlee DATE:4/30/2008 2:29:56 PM  
Discarded by TAG 12/07.



## Complete Issue Information

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 3869                                                           |
| Subject: Rt Click mouse functionality with copy/paste in bridge explorer |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Teal, Dean            | 8/16/2002 7:40:32 PM |
| Modified By: administrator          | 6/19/2008 4:05:23 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

## Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | s071 06114 min neg steel.bbd  |             |
|      | min slab steel pos moment.zip |             |

## Tasks

| Name       | Current State | Summary                                                                             |
|------------|---------------|-------------------------------------------------------------------------------------|
| 3878.11477 | Resolved      | 4.2 release (and 4.1) LRFD fails min slab steel for neg moment at pos moment region |

## Description

FROM:dteal DATE:Friday, August 16, 2002 3:40:32 PM  
UserGroup 2002  
May have already been reported, but I couldn't find it.

1/5/2016 11:07:11 AM

HRS AASHTO

120

Complete Issue Information

Also see 956 & 1483

FROM:dteal DATE:Friday, August 16, 2002 3:52:03 PM  
Similar to 1230

FROM:dteal DATE:Thursday, January 09, 2003 1:27:30 PM  
And 1231

FROM:hlee DATE:6/10/2003 3:32:16 PM  
In 5.0.1.

FROM:dteal DATE:Friday, October 01, 2004 2:32:21 PM

Issue ID: 3878  
Subject: 4.2 release (and 4.1) LRFD fails min slab steel for neg moment at pos moment region

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Barnhill, Gale 9/6/2002 1:29:41 PM  
Modified By: administrator 6/19/2008 4:05:22 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gbarnhill DATE:Friday, September 06, 2002 9:29:41 AM

1/5/2016 11:07:11 AM

HRS AASHTO

121

Complete Issue Information

4.2 release (also occurs in 4.1) For a two span steel composite girder, the spec check at 3/10 point Service II fails for 6.10.3.7. The check is for min neg moment steel in the slab. Service II moment is pos at that point.

We don't remember seeing this failure in versions prior to 4.1

The attached files are from 4.2 release.

FROM:bgoodrich DATE:Saturday, January 25, 2003 6:10:58 PM

The 6.10.3.7 check was added in the BRASS engine released with Opis 4.1. The overall Service II moment at the 103 point is negative. However, the moment experienced in the slab is the result of moments from only stage 2 and stage 3, which are 364 ft-kips and -588 ft-kips, respectively. This results in a net negative moment in the slab.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 3903                                                    |
| Subject: Incorrect Axial PS force in Stage 2 Service Calculations |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Alber, Nick           | 10/11/2002 8:40:00 PM |
| Modified By: administrator          | 6/19/2008 4:05:21 PM  |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

Complete Issue Information

|                 |          |        |             |
|-----------------|----------|--------|-------------|
| Goodrich, Brian | Assigned |        | Bug - BRASS |
|                 | Resolved |        |             |
| Duray, Jim      | New      | High   | Bug         |
| Goodrich, Brian | Assigned | Urgent | Bug - BRASS |
|                 | Resolved |        |             |
| Goodrich, Brian | Resolved | Urgent | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | mgnelson4.bbd       |             |

Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 3904.11451 | Resolved      | Incorrect allowable tension Values |

Description

FROM: mnelson DATE: Friday, October 11, 2002 4:42:26 PM  
 Requested Box doesn't have user name which is mnelson email mnelson@tb-engr.com

Previously ran Opis Version 4.1 and got apparent accurate results. Version 4.2 was installed and had a number of input and Save problems that were resolved. Basically input the same bridge but now get apparently incorrect results for all Service I and III construction stage 2 results for Axial PS forces. Stage I PS forces are correctly computed but when go to Stage 2 axial PS force it is computed as 2522.147 vs 555.752(stage 1) for Span 2 with 22 strands. The 2522.147 is incorrect and should most likely be less then the 555.752 value. Additionally when Spans 1 & 3 are checked for stage 2 PS force for 8 strands the same 2522.72 value is present. This is true for all the LL combinations for Construction stage two at centerlines. Consequently at the Design Ratios fail. Also the program fails to read the input allowable tension values and gives a false check. We file a separate incident on this problem

FROM: mnelson DATE: Friday, October 11, 2002 5:16:45 PM

FROM: bgoodrich DATE: Thursday, October 24, 2002 12:02:18 AM  
 The axial force of 2522 kips is due to the uniform temperature change, not prestress.

1/5/2016 11:07:12 AM

HRS AASHTO

123

## Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 3904                              |
| Subject: Incorrect allowable tension Values |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Generated, aabuhaw    | 10/12/2002 6:15:05 PM |
| Modified By: administrator          | 6/19/2008 4:05:21 PM  |
| Priority: Urgent                    |                       |
| Category: Bug - BRASS               |                       |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 4057.13288 | Suspended     | BWS Report Tool flexibility |

## Description

FROM:mnelson DATE:Saturday, October 12, 2002 2:15:06 PM

This problem is related to incident 3903 which was submitted Fri 11 Oct.

Evidently 3903 made it into the system as didn't get a confirmation it was

"updated" or sent as the form appeared to be locked up and exited the page

by leaving the web sited.However checking today incident 3903 appears to be in the system.

Discription of problem:

Was checking the problem with the Axial PS force In Service I & III for construction Stage 2, all Live

1/5/2016 11:07:12 AM

HRS AASHTO

124

Complete Issue Information

Load cases and noted the allowable tension stress value used to check pass/fail for tensile stress limits was 0 for initial stage 1 and 212 ksi tension for stage 2 (after LL) These values as input in the stress limit page were 0.006 for initial and 0.007 final. (KDOT values of 0.0948 SQRT(fci & fc). The values of 0 & 212 are wrong and must be picked it from some where default as the desired & input values are 6 & 7 psi. Need to have that problem fixed as is critical to analysis/design in addition to problem of incoorect axial PS fprce in stage 2 as noted in Incident 3903

FROM: bgoodrich DATE: Thursday, October 24, 2002 12:16:09 AM  
I found where you input the stress limits in the stress limits group you named "Bridge Stress Limits". However, this group of stress limits must be applied to the prestress beam using the Stress Limit Ranges on the Beam Details window. Note that the ranges you enter on that window reference the end of the precast beam lengths (45.14'-84.36'-45.14').

|                                      |
|--------------------------------------|
| Issue ID: 4057                       |
| Subject: BWS Report Tool flexibility |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Kemna, Darren         | 12/5/2002 4:41:26 PM |
| Modified By: dwarner                | 9/24/2008 2:58:39 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dkemna DATE: Thursday, December 05, 2002 11:41:26 AM

1/5/2016 11:07:12 AM

HRS AASHTO

125

Complete Issue Information

Enhancement Request:

I would like to be able to specify a specific member, member alternative, or even superstructure definition to use in the report tool.

Currently, if the user selects "member alternative" , for example, when building the tree, all of the member alternatives will be output along with all of the supersture definitions. I think a user would want to report only the alternative used in the final design if given the option and thus the supersture definition containing the desired member alternative. The original BWS report is better set up for specifying members, but you can not take out information that is not related to your design as can be done with the report tool. If further enhancements to the BWS report tool are already planned, let me know.

FROM:jduray DATE:12/5/02 1:41:05 PM  
I agree...good suggestion.

FROM: David Warner DATE: 9/24/2008 10:58:39 AM Eastern Daylight Time  
I've suggested this again as VI# 8885.

Could 4057 and 8885 be moved to enhancement status?

Thanks.

Issue ID: 4286  
Subject: Spec check updates?

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Kemna, Darren 1/23/2003 2:49:56 PM  
Modified By: administrator 6/19/2008 4:10:53 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | Medium   | Bug      |

1/5/2016 11:07:13 AM

HRS AASHTO

126

### Complete Issue Information

|                 |           |      |               |
|-----------------|-----------|------|---------------|
| Goodrich, Brian | Assigned  | High | Bug - BRASS   |
|                 | Resolved  |      | Enhance BRASS |
| Duray, Jim      | New       | High | Bug           |
|                 | Suspended |      | Enhancement   |
| Duray, Jim      | Suspended | High | Enhancement   |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 4312.13033 | Suspended     | Need Shear Stud Wizard |

### Description

FROM:dkemna DATE:Thursday, January 23, 2003 9:49:57 AM

I have a general question. I was working on a plate girder design and noticed that my shear resistance changed with the grade of the web (50 and 36 ksi). According to the 2001 AASHTO Interims (6.10.7.2 & 6.10.7.3.3a-7) if the D/tw ratio is greater than a certain value than the shear resistance of the web should not change with grade changes. I looked back at the original 1998 code and noticed that the method or equations used for homogeneous and hybrid girders was slightly different.

My question: When is OPIS updated for new interims and has the spec checks been updated for 6.10.7.2 in OPIS 4.2 or 5.0? Note that I still only have version 4.1 running on my PC.

FROM:jduray DATE:Tuesday, February 04, 2003 10:44:18 AM

FROM:bgoodrich DATE:Tuesday, February 04, 2003 4:00:18 PM

From the "Version Information" topic of the BRASS-GIRDER(LRFD) help (Help > BRASS LRFD Help > Main Help menu item in Opis):

"The BRASS-GIRDER(LRFD) program is current with the AASHTO LRFD Bridge Design Specifications, Second Edition, 1998, with 2000 Interims."

No specification/interim updates have been made to BRASS-GIRDER(LRFD) for the Opis 5.0 release. The AASHTO LRFD 2001 and 2002 Interims are scheduled for implementation for the Fall 2003 release.

1/5/2016 11:07:13 AM

HRS AASHTO

127





Complete Issue Information

Issue ID: 4315  
 Subject: Slab thickness used in Distribution Factors

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Generated, task force  
 Submitted By: Markel, John 2/4/2003 9:00:04 PM  
 Modified By: administrator 6/19/2008 4:10:50 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact       | Status    | Priority | Category       |
|-----------------------|-----------|----------|----------------|
| Duray, Jim            | New       | Medium   | Bug            |
| Goodrich, Brian       | Assigned  | High     | Bug - Export 2 |
| Duray, Jim            |           |          |                |
| Generated, task force | On Hold   |          | Bug - BRASS    |
|                       |           |          | Bug - Export 2 |
|                       | Suspended |          | Enhancement    |
| Generated, task force | Suspended | High     | Enhancement    |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | Opis Incident 4316.bbd |             |

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 4316.13029 | Resolved      | Specification Check 5.7.3.3.1 Maximum Reinforcement |

### Description

FROM:jmarkel DATE:Tuesday, February 04, 2003 4:00:05 PM

In the Superstructure Typical Section window I input the total deck thickness, and in the Deck Profile window I input the structural deck thickness. When I run my model and view the Load Distribution File, It shows Opis using the total deck thickness to compute the distribution factors. Examples in the "PCI Bridge Design Manual" and "Design of Highway Bridges" use the structural deck thickness to compute the distribution factors. If there is a discrepancy as to what should be used, the designer should have control over what slab thickness is used to calculate the distribution factors.

FROM:bgoodrich DATE:Thursday, February 06, 2003 11:06:56 AM

The BRASS-GIRDER(LRFD) engine provides input for the thickness of the deck used for strength and also an input for an additional thickness for dead load. Opis provides two locations for inputting the total and structural deck thicknesses. The total deck thickness is input on the Superstructure Typical Section window. The structural (effective) deck thickness is entered either on a deck profile or cross section window. The structural thickness may vary depending on how the user defined the schedule of thicknesses or cross sections. The export passes the total deck thickness to the BRASS engine.

There appear to be a few solutions:

- 1) Add another field to Opis for inputting the structural deck thickness in the same location as the total deck thickness.
- 2) Enhance the BRASS engine properties so the user can input a percent of total thickness to be used for the structural thickness. We have tried to stay away from inputting values with units (in, ft, mm, etc.) in the engine properties.
- 3) Enhance the export or domain to determine some average structural thickness for the bridge.

Note that BRASS cannot internally utilize the structural deck thickness, which is included in the cross section geometry, because non-composite bridges would not have this information.

FROM:dteal DATE:Thursday, March 06, 2003 2:30:03 PM

Please look at #2759, I think they are the same

Complete Issue Information

FROM:bgoodrich DATE: Thursday, May 08, 2003 11:48 AM  
From: Brian L. Goodrich [mailto:Goodrich@BridgeTech-Laramie.com]  
Sent: Thursday, May 08, 2003 11:48 AM  
To: Jim Duray (jduray@mbakercorp.com)  
Subject: Incidents 4315 and 4328

Jim,

Please review incidents 4315 and 4328 and let me know how to proceed.

Thanks,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Tuesday, March 16, 2004 12:48:46 PM  
Jim - I am assigning this to you to decide what to do.

FROM:jduray DATE:4/23/2004 8:24:08 AM  
Run this by the Task Force.

FROM:tthompson DATE:Monday, December 10, 2007 9:43:16 AM  
VO Beta TAG meeting 12/10/2007  
Also see VI 2759 and 7874  
This is closer to an enhancement and we should address this issue so users are not misled.

Issue ID: 4316  
Subject: Specification Check 5.7.3.3.1 Maximum Reinforcement

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Markel, John 2/4/2003 10:20:00 PM  
Modified By: administrator 6/19/2008 4:10:50 PM  
Priority: Low  
Category: Comment

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | Low      | Bug      |
| Goodrich, Brian | Assigned           |          | Comment  |
|                 | Information Needed |          |          |
|                 | Open               |          |          |

### Complete Issue Information

|                 |          |      |               |
|-----------------|----------|------|---------------|
|                 | Resolved |      |               |
| Goodrich, Brian | Resolved | Low  | Comment       |
| Duray, Jim      | New      | High | Bug           |
| Goodrich, Brian | Assigned |      |               |
|                 | Open     |      | Enhance BRASS |
|                 | Resolved |      |               |
| Goodrich, Brian | Resolved | High | Enhance BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | LRFD Example.bbd    |             |

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 4373.12972 | Resolved      | Incorrect moment of inertia in negative moment region |

### Description

FROM:jmarkel DATE:Tuesday, February 04, 2003 5:20:01 PM

When computing "de," (Eq. 5.7.3.3.1-2) in the negative flexure sence, the program includes the area of prestressing steel located on the compression side of the neutral axis. Please review.

FROM:bgoodrich DATE:Tuesday, February 11, 2003 3:54:51 PM

Mr. Markel,

In order to address the incident you submitted, please export your bridge to a BBD file and either attach it to the incident or e-mail it to me directly. Also indicate the structure definition, member, and member alternative with which you are concerned.

Regards,

Brian L. Goodrich  
BridgeTech, Inc.

FROM:bgoodrich DATE:Wednesday, February 12, 2003 1:25:37 PM

E-mail from John Markel (2/12/03):

Brian,

1/5/2016 11:07:14 AM

HRS AASHTO

132

## Complete Issue Information

Here is the information you requested:

Superstructure definition: 5 Beam Girder System  
Member: G2  
Member Alternative: K4 Beam

Please note that after I run my model using the HL-93(SI) load and view the Specification Check under Stage 3, I view the following:

Location: Span 1 - 25110 (for example)

Specification Reference 5.7.3.3.1 Maximum Reinforcement (Ductility)  
Negative Flexure Sense

Input Parameters:

$c = 573.660$  mm

$A_s = 6941.400$  mm<sup>2</sup>  $f_y = 420.000$  MPa  $d_s = 1481.080$  mm

$A_{ps} = 2961.270$  mm<sup>2</sup>  $f_{ps} = 849.134$  Mpa  $d_p = 1008.370$  mm

Computed Value:

$d_e = [\text{AASHTO LRFD Equation (5.7.3.3.1-2)}] = 1262.174$  mm

Computed Value:

$c/d_e = 0.4545$

AASHTO Limit = 0.4200

Result Code : Fail

The area of prestressed reinforcement 'A<sub>ps</sub>', listed in the input parameters, lies within the compression zone and should be considered zero. I may be wrong in my assumption that A<sub>ps</sub> should be zero, but example 9.6 in the "PCI Bridge Design Manual" shows A<sub>ps</sub> equal to zero when calculating d<sub>e</sub> in the negative moment section.

As a note, when viewing this specification in the positive sense, the area of nonprestressed reinforcement 'A<sub>s</sub>' shown in the input parameters is listed as zero.

Although this specification check does not fail at all locations along the structure, the inclusion of prestressed reinforcement when located on the compression side of the neutral axis does occur at all locations along the structure.

I hope this helps.

John Markel  
Schwab-Eaton, P.A.

FROM: bgoodrich DATE: Friday, February 28, 2003 4:50:30 PM

WYDOT has assigned this issue to BRASS Problem Log 410. Incident 4389 will also be included in

1/5/2016 11:07:14 AM

HRS AASHTO

133

Complete Issue Information

this problem log as it pertains to the same specification article.

FROM:bgoodrich DATE:Tuesday, October 21, 2003 6:52:05 PM  
WYDOT authorized this issue on 10/16/03.

FROM:bgoodrich DATE:Thursday, February 12, 2004 9:43:35 AM  
For the purposes of the maximum reinforcement check, the calculation of partial prestress ratio (PPR) was added per the specification language and used accordingly. When the PPR is less than 50%, the calculation of effective depth is taken as that of a reinforced concrete section. Otherwise, the effective depth is calculated from the prestressing strand and mild reinforcement. Additionally, the prestress strand area provided below or above mid-depth (based on the flexure sense) is now used in the maximum reinforcement check instead of the full prestress strand area. This issue has been addressed in BRASS-GIRDER 5.8.8. Fixed for Virtis 5.2.0.

FROM:bgoodrich DATE:Monday, March 06, 2006 2:56:45 PM  
The statement on 2/2/2004 regarding the determination of the effective depth when the PPR is less than 50% is not correct. The effective depth is determined based on the mild and prestressing steel.

Issue ID: 4373  
Subject: Incorrect moment of inertia in negative moment region

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Best, Richard 2/19/2003 5:33:32 PM  
Modified By: administrator 6/19/2008 4:10:46 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

1/5/2016 11:07:15 AM

HRS AASHTO

134

## Complete Issue Information

FROM:rmbest DATE:Wednesday, February 19, 2003 12:33:32 PM

Attached is bbd file for a two span continuous steel plate girder. We have specified it to be composite full length of the beam. OPIS (4.1.1) design review is incorrectly computing the stage 2 and stage 3 moments of inertia at the pier to include the concrete deck slab instead of the deck reinforcement. It is interesting to note that run as a VIRTIS rating, it is done correctly.

FROM:bgoodrich DATE:Friday, February 21, 2003 5:11:30 PM

WYDOT has already assigned this issue to BRASS Problem Log 394.

The cross section properties shown in the main BRASS output are those used for the structural analysis to obtain moments, shears, etc. Then, when specification and stress checks are performed, BRASS determines the section properties for both positive and negative bending, and uses them accordingly. The section properties you are looking for are only reported in the intermediate output. We are currently working to add a summary report of these properties to the main output. Appropriate notes are being added to the existing properties report.

FROM:bgoodrich DATE:Tuesday, February 25, 2003 5:23:28 PM

E-mail from Richard Best (2/25/03):

Hello Brian,

Can you clarify your response to OPIS incident 4373 a little more.

1. Are you saying in the stiffness model used for generating moments that the concrete deck slab (not rebars) is included in the I value at the pier?
2. If so, is there justification for this method. We certainly don't include negative moment slab in our stiffness models. It can make a significant difference in moments. Do you know of other programs that do it that way?
3. If so, does VIRTIS and OPIS both do it that way?
4. Is it just the output reporting that is going to be fixed (BRASS problem log 394)?

Richard M. Best, PE

Computer Design Group Engineer

FROM:bgoodrich DATE:Friday, May 09, 2003 5:09:12 PM

I'll answer each of the four questions and after that, I'll propose how we intend to address your issues.

1. If shear connectors or composite regions are defined over the interior piers, BRASS-GIRDER(LRFD) will use the steel beam plus the concrete slab in the stiffness model section properties, which generates moments, shears, etc.
2. The justification for this method is AASHTO LRFD Article 6.10.3.4. I don't know how other programs address this issue. This method will draw more negative moment to the pier and reduce positive moments elsewhere.
3. Opis exports the entire cross section (beam, slab, rebar, etc.) to BRASS-GIRDER(LRFD), which is responsible for utilizing the section properties as described above. Virtis performs a similar export to BRASS-GIRDER, but the engine properties for BRASS-GIRDER allow the user to specify the locations

1/5/2016 11:07:15 AM

HRS AASHTO

135



## Complete Issue Information

of dead load contraflexure, which the export uses to determine which cross section to pass to BRASS-GIRDER (the beam + rebar or the beam + slab).

4. For the Opis 5.0 release, which uses BRASS-GIRDER(LRFD), only the output will be revised to indicate the section properties used for structural analysis versus section analysis (stress checks, etc.).

I discussed this incident with Jay Puckett and we understand your concerns. It appears that BRASS needs some way to control how the section properties for the structural analysis are determined. The commentary to AASHTO LRFD Article 6.10.3.4, i.e., C6.10.3.4, discusses a method by which the beam+rebar stiffness can be used over a distance of 15% of the span length near a pier. If this method was implemented, the percentage of the span length would be controlled by the user, and would probably default to the 15%. Would this help to address your concerns?

Another issue that we recognize is that BRASS-GIRDER(LRFD) performs the structural analysis using one set of section properties (beam+slab) and then performs stress checks, etc. using another (beam+slab or beam+rebar depending on the sign of the moments). We would like to revise this current implementation. AASHTO LRFD Article 6.10.5.1 indicates that stresses MAY be computed assuming the concrete slab is effective for both positive and negative bending. This means section properties for service and fatigue limit state stresses could be computed considering the slab. Stresses for the strength limit state would consider the slab for positive bending moments and the rebar for negative bending moments.

FROM: bgoodrich DATE: Thursday, March 02, 2006 7:22:10 PM

WYDOT has closed this problem log, i.e., it has been addressed to their satisfaction in 2003. Incident marked as resolved.

|                                            |
|--------------------------------------------|
| Issue ID: 4390                             |
| Subject: LL Action Factored or Unfactored? |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Lee, Herman           | 2/21/2003 10:09:36 PM |
| Modified By: administrator          | 6/19/2008 4:10:44 PM  |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Goodrich, Brian | Assigned | High     | Unknown     |
|                 | Open     |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

1/5/2016 11:07:15 AM

HRS AASHTO

136

Complete Issue Information

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Art6.10.4.1.6a.gif  |             |

Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 4476.12869 | Closed        | Compact Section Not Satisfied in Error |

Description

FROM:hlee DATE:2/21/2003 4:44:48 PM

It is not clear in the POI output whether the LL action is factored or unfactored. One line with gamma 1.0 and the other with gamma 0.75, both actions are the same.

The output is generated by BRASS-GIRDER(LRFD) Version 1.5.1:

=====

Point of Interest : 107.50  
 Construction Stage: 3  
 Live Load Combo : 4 - FAT\_LRFDFA~6 (Critical SHEARS and Concurrent Actions)  
 Limit State : FATIGUE

Live Load Descriptions:  
 5. Fatigue: AASHTO LRFD Fatigue Truck - US

| Deflection | MAXIMUM SHEARS    |        |        |       | MINIMUM SHEARS    |         |         |       |       |
|------------|-------------------|--------|--------|-------|-------------------|---------|---------|-------|-------|
|            | gamma             | Moment | Shear  | Axial | Deflection        | gamma   | Moment  | Shear | Axial |
|            | (ft-k)            | (kips) | (kips) | (in)  | (ft-k)            | (kips)  | (kips)  | (in)  |       |
|            | Dead Load Actions |        |        |       | Dead Load Actions |         |         |       |       |
| Total      | 0.000             | 0.000  | 0.000  | 0.000 | 0.000             | 0.000   | 0.000   | 0.000 | 0.000 |
|            | Live Load Actions |        |        |       | Live Load Actions |         |         |       |       |
| 5. (1.000) | 206.304           | 3.424  | 0.000  | 0.035 | (1.000)           | 324.765 | -35.644 | 0.000 |       |

Complete Issue Information

0.098

|               |         |       |       |       |               |         |         |       |       |
|---------------|---------|-------|-------|-------|---------------|---------|---------|-------|-------|
| (0.750)       | 206.304 | 3.424 | 0.000 | 0.035 | (0.750)       | 324.765 | -35.644 | 0.000 |       |
| 0.098         |         |       |       |       |               |         |         |       |       |
| Total         | 154.728 | 2.568 | 0.000 | 0.026 |               | 243.574 | -26.733 | 0.000 | 0.074 |
| eta           |         |       |       |       | eta           |         |         |       |       |
| Total Actions |         |       |       |       | Total Actions |         |         |       |       |
| DL:           | 0.000   | 0.000 | 0.000 | 0.000 |               | 0.000   | 0.000   | 0.000 | 0.000 |
| LL:           | 154.728 | 2.568 | 0.000 | 0.026 |               | 243.574 | -26.733 | 0.000 | 0.074 |
| 0.074         |         |       |       |       |               |         |         |       |       |
| (1.000)       | 154.728 | 2.568 | 0.000 | 0.026 | (1.000)       | 243.574 | -26.733 | 0.000 |       |
| Total         | 154.728 | 2.568 | 0.000 | 0.026 |               | 243.574 | -26.733 | 0.000 | 0.074 |

Notes:

=> The Truck and Lane loads already contain distribution factors (g) and impact factors (IM). The impact factors for Truck and Lane loads are independent.

FROM: bgoodrich DATE: Friday, February 28, 2003 4:45:53 PM  
 WYDOT has assigned this issue to BRASS Problem Log 411.

FROM: bgoodrich DATE: Wednesday, August 06, 2003 4:19:41 PM  
 The factor following the live load number (in the gamma column) is the combination factor assigned to the corresponding live load for this live load combination. This is different from the live load (gamma) factor. This factor is now denoted as (c=1.00) and a note follows the output report describing it. Fixed in BRASS-GIRDER(LRFD) 1.5.4. I am not sure with which Opis version this engine will be released.

Issue ID: 4476  
 Subject: Compact Section Not Satisfied in Error

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Goodrich, Brian  
 Submitted By: Teal, Dean 3/17/2003 7:10:43 PM  
 Modified By: administrator 6/19/2008 4:10:38 PM  
 Priority: High  
 Category: Bug - BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

1/5/2016 11:07:15 AM

HRS AASHTO

138

Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
| Duray, Jim      | New      | High | Bug         |
| Goodrich, Brian | Assigned |      | Bug - BRASS |
| Duray, Jim      | New      | High | Bug         |
|                 | Assigned |      | Bug - GUI 2 |
|                 | On Hold  |      |             |
| Ihnat, Joseph   | Resolved |      |             |
|                 | Accepted |      |             |
|                 | Closed   |      |             |
| Ihnat, Joseph   | Closed   | High | Bug - GUI 2 |

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | WebDepthScreen01.gif |             |
|      | WebDepthScreen03.gif |             |
|      | WebDepthScreen02.gif |             |

Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 4477.12868 | Closed        | Wrong Info in Schematic View |

Description

FROM:dteal DATE:Monday, March 17, 2003 3:10:43 PM

According to 6.10.1.1.6 we only need to satisfy one of the two equations, either 6.10.4.1.6a-1 or 6.10.4.1.6a-2. According to thins spec check in Opis it is only satisfied if both equations are ok, not one or the other. See attached gif file.

FROM:bgoodrich DATE:Thursday, March 20, 2003 5:14:34 PM

WYDOT has assigned this issue to BRASS Problem Log 419.

FROM:bgoodrich DATE:Friday, March 21, 2003 5:15:45 PM

I have corrected the issue in BRASS-GIRDER(LRFD) with respect to AASHTO LRFD 6.10.4.1.6. The wording changed from an "and" to an "or" in in the 1999 Interims. Fixed for Version 5.0 Release.

Complete Issue Information

FROM:dteal DATE:Friday, November 07, 2003 11:33:07 AM  
Accepted

FROM:bgoodrich DATE:Friday, December 12, 2003 10:42:16 AM  
Closed.

|                                       |
|---------------------------------------|
| Issue ID: 4477                        |
| Subject: Wrong Info in Schematic View |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ihnat, Joseph      |                      |
| Submitted By: Teal, Dean            | 3/17/2003 7:11:56 PM |
| Modified By: administrator          | 6/19/2008 4:10:38 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Monday, March 17, 2003 3:11:57 PM

Here are the screen shots that depict the incorrect web depth notation on the schematic view for a rolled beam definition in a schedule-based girder definition. The schematic in the first file states the web depth is 43". The second schematic shows that the rolled beam has a total depth of 43 inches not the web depth. The third schematic shows that BRASS used the proper 43" depth.

FROM:jduray DATE:4/12/2005 4:43:09 PM

The schematic should not label web and flanges for rolled beams.

FROM:jihnat DATE:8/3/2005 1:11:12 PM

Fixed for 5.4.0

Complete Issue Information

FROM:dteal DATE:Tuesday, December 06, 2005 2:21:33 PM  
Accepted

|                                     |
|-------------------------------------|
| Issue ID: 4522                      |
| Subject: Questionable spec. checks. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Lee, Herman           | 3/27/2003 4:18:23 PM |
| Modified By: administrator          | 6/19/2008 4:10:34 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status     | Priority | Category    |
|-----------------|------------|----------|-------------|
| Duray, Jim      | New        | High     | Unknown     |
| Goodrich, Brian |            |          | Bug         |
|                 | Assigned   |          | Bug - BRASS |
|                 | Patch Test |          |             |
| Goodrich, Brian | Patch Test | High     | Bug - BRASS |

Contacts

1/5/2016 11:07:16 AM

HRS AASHTO

141

### Complete Issue Information

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                    |
|------------|---------------|------------------------------------------------------------|
| 4528.12818 | Patch Test    | Opis: Distribution factors computed as Infinity for T-Beam |

### Description

FROM:hlee DATE:3/27/2003 12:02:48 PM  
Submitted for Ken Wilson.

The attached bbd generates questionable spec checks for G2 member alt (HL93 Design Review template):

1. See "Design Ratio - Resistance = 0.bmp"
2. See "Rating Factor - Resistance = 0.bmp"
3. See "Mr = 0.bmp"
4. See "Dp = Unknown.bmp"

FROM:bgoodrich DATE:Friday, May 09, 2003 5:57:41 PM  
WYDOT will assign this issue to BRASS Problem Log 431.

FROM:bgoodrich DATE:Monday, June 23, 2003 3:26:47 PM  
BRASS-GIRDER(LRFD) has been modified to address this issue. Fixed for version 5.0.1.

FROM:kkennelly DATE:7/24/2003 2:32:38 PM  
5.0.1 tested. Values don't come out to 0 anymore. I didn't check if they are correct, they just aren't zero anymore. NOTE: Attached bitmap Mr=0.bmp is for LL Combo 3. When I run this bridge I don't get any rating factor specs for LL Combo 3.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 4528                                                      |
| Subject: Opis: Distribution factors computed as Infinity for T-Beam |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Best, Richard         | 3/28/2003 5:08:50 PM |
| Modified By: administrator          | 6/19/2008 4:10:34 PM |

1/5/2016 11:07:17 AM

HRS AASHTO

142

### Complete Issue Information

|                                         |
|-----------------------------------------|
| Priority: High<br>Category: Bug - BRASS |
|-----------------------------------------|

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                                      | Description |
|------|--------------------------------------------------------------------------|-------------|
|      | FHWA LRFD Steel Bridge<br>Design Example.bbd<br>Tandem & Truck Train.bmp |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4530.12816 | Suspended     | Graph header needs to be more descriptive. |

### Description

FROM: bgoodrich DATE: Friday, March 28, 2003 1:08:50 PM  
Entered for Timothy A. Armbrecht and Richard Best:

From: Armbrecht, Timothy A.  
Sent: Wednesday, March 26, 2003 2:32 PM  
To: Best, Richard M.  
Cc: Kurtenbach, Tom L.  
Subject: Possible Opis error

Dick, looks like there is a problem with how Opis calculates the distribution factor for a concrete T-Beam. This is a screen from SN 013-0026. Everything looks normal here. But note in the output taken from the results below that  $t_s = 0$  and the moment distribution factor is calculated as infinity. Also, the output says  $I = 129,287 \text{ in}^4$  when it should be  $42,559 \text{ in}^4$  and the output says the beam area =  $1,056 \text{ in}^2$  when it should be  $549 \text{ in}^2$ . It appears that Opis is including the slab in the beam properties, when I believe, for the purpose of distribution, the slab should not be included. This argument is strengthened by the fact that in a concrete T-Beam example in the LRFR specifications developed by Lichtenstein, the slab is not included in the beam properties when calculating the distribution factors.



Complete Issue Information

Distribution factor output taken from Opis for bridge with section shown above

\*\*\*\*\* Span No. 1: Moment  
\*\*\*\*\*

Start Distance: 0.000 in  
End Distance : 563.040 in

Location of Section Properties: 50.000% along Span No. 1

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS  
Reference: AASHTO LRFD 4.6.2.2.1-1

Input Parameters:  
n = 1.000  
A = 1056.000 in^2  
eg = 0.000 in  
I = 129287.008 in^4

Kg Summary:  
Kg = n (I + A eg^2) = 129287.01 in^4

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS  
Method: AASHTO LRFD Table 4.6.2.2.2b-1  
Moment in Interior Beams: (a, e, k, i, j)

Input Parameters:  
S = 6.542 ft ts = 0.000 in  
L = 46.920 ft Kg = 129287. in^4  
Nb = 4

Ranges of Applicability:  
3.5 <= S <= 16.0 4.5 <= ts <= 12.0 20.0 <= L <= 240.0  
Nb >= 4  
Result Code: PASS Result Code: FAIL Result Code: PASS  
Code: PASS Result Code: PASS

Distribution Factors Summary:  
0.4 0.3 0.1  
mg(1) = 0.060 + (S / 14.0) (S / L) (Kg / (12.0 L ts^3)) = Infinity  
0.6 0.2 0.1  
mg(M) = 0.075 + (S / 9.5) (S / L) (Kg / (12.0 L ts^3)) = Infinity

Timothy A. Armbrecht, P.E., S.E.  
Local Bridge Operations Engineer  
Illinois Department of Transportation  
Bureau of Bridges and Structures

Complete Issue Information

FROM:bgoodrich DATE:Friday, March 28, 2003 2:25:42 PM

After some investigation, I found that the "Total deck thickness" is not specified in the Structure Typical Section window. BRASS uses the deck thickness entered here in the distribution factor calculations. Once these are input, the distribution factors are more appropriate. However, the issue pertaining to the moment of inertia and area are an engine issue that must be further reviewed. The term  $(K_g / (12 L t^3))^{0.1}$  is generally about 1.0, but in this case, the difference in the methods of determining  $K_g$  leads to BRASS calculating distribution factors that are a few percent different than Tim's calculations. I think both methods are acceptable, but I'll have to discuss this with WYDOT to get their approval to make any modifications. Maybe a user option is in order.

FROM:bgoodrich DATE:Friday, March 28, 2003 2:25:54 PM

E-mail from Richard Best (3/28/03):

"Thanks for you help. I agree that a user option would be a good idea."

FROM:jduray DATE:Sunday, March 30, 2003 3:20:09 PM

FROM:bgoodrich DATE:Friday, May 09, 2003 5:56:16 PM

WYDOT will assign this issue to BRASS Problem Log 429.

FROM:bgoodrich DATE:Monday, June 23, 2003 3:15:16 PM

BRASS-GIRDER(LRFD) has been modified to exclude the top flange (slab) from the properties used to compute the I and A for the distribution factor formulas. Fixed for version 5.0.1.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4530                                      |
| Subject: Graph header needs to be more descriptive. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Lee, Herman           | 3/31/2003 2:13:27 PM |
| Modified By: administrator          | 6/19/2008 4:10:34 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier                                                | Description |
|------|--------------------------------------------------------------------|-------------|
|      | FHWA LRFD Steel Bridge<br>Design Example.bbd<br>0.7L of Span 1.pdf |             |

Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 4538.12808 | Resolved      | Questionable moments and shears. |

Description

FROM:hlee DATE:3/31/2003 10:02:18 AM  
Submitted for Ken Wilson:

The attached bmp shows same header for tandem and truck train.

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 4538<br>Subject: Questionable moments and shears. |
|-------------------------------------------------------------|

|                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis<br>Primary Contact: Goodrich, Brian<br>Submitted By: Lee, Herman<br>4/1/2003 9:52:38 PM |
|-----------------------------------------------------------------------------------------------------------------------------|

1/5/2016 11:07:18 AM

HRS AASHTO

146

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:10:33 PM |
| Priority: High             |                      |
| Category: Bug - BRASS      |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          | Bug - GUI 1 |
| Goodrich, Brian | Resolved | High     | Bug - GUI 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | example10.bbd       |             |

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 4546.12800 | Resolved      | Distribution factors for adjacent box beams |

### Description

FROM:hlee DATE:4/1/2003 5:40:51 PM  
Submitted on behalf of Ken Wilson:

LL (HL 93) moments and shears that are back calculated from Strength I do not agree with generated values.  
Please see attached pdf file.

FROM:bgoodrich DATE:Friday, May 09, 2003 5:57:02 PM  
WYDOT will assign this issue to BRASS Problem Log 430.

FROM:bgoodrich DATE:Thursday, December 11, 2003 6:23:24 PM  
This issue relates to how BRASS-GIRDER(LRFD) calculates the factored moments for structures analyzed in multiple stages. For stage 1, the minimum or maximum dead load factors are considered in determining the maximum and minimum factored moments. These factored dead load moments are

1/5/2016 11:07:18 AM

HRS AASHTO

147

Complete Issue Information

then saved for the subsequent stages. For stage 2, the process is repeated using only the dead load moments from stage 2 loads and then the factored dead load moment from stage 1 is added. For stage 3, the process is repeated using only the live load moments from stage 3 loads and then the factored dead load moments from stages 1 and 2 are added. When there are 3 stages (2 dead and 1 live), the type of dead load factors used for stages 1 and 2 can be different. For the structure in question, minimum dead load factors are used for stage 1 dead loads, while maximum dead load factors are used for stage 2 dead loads. Note that this issue is occurring at the 107 point of a two-span structure, so the dead load moments are quite small compared to the live load moments. The input moments and load combination calculations are shown below:

DL1 = -51.8  
 DL2 = 15.5  
 DW2 = 18.8  
 LL = 1307.8

$$\begin{aligned} \text{Factored Moment (user)} &= 1.25*(-51.8*) + \\ & 1.25*15.5 + \\ & 1.5*18.8 + \\ & 1.75*1307.8 \\ & = 2271.5 \text{ ft-k} \end{aligned}$$

$$\begin{aligned} \text{Factored Moment (BRASS)} &= 0.9*(-51.8*) + \\ & 1.25*15.5 + \\ & 1.5*18.8 + \\ & 1.75*1307.8 \\ & = 2289.6 \text{ ft-k} \end{aligned}$$

Jay Puckett also agreed with the results produced by BRASS.

|                                                      |
|------------------------------------------------------|
| Issue ID: 4546                                       |
| Subject: Distribution factors for adjacent box beams |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Smith, Jeff           | 4/2/2003 6:27:44 PM  |
| Modified By: administrator          | 6/19/2008 4:10:32 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 1               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Complete Issue Information

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | vi 4550 stress limits window.bmp |             |

### Tasks

| Name       | Current State     | Summary           |
|------------|-------------------|-------------------|
| 4550.12796 | Closed - Inactive | LRFD value fields |

### Description

FROM:jsmith DATE:Wednesday, April 02, 2003 2:27:45 PM

When I ran an LRFD design review for an adjacent box beam superstructure and looked at the load distribution output file I noticed that it showed distribution factor calculations for spread box beam sections (b and c).

FROM:bgoodrich DATE:Wednesday, May 07, 2003 3:35:45 PM

I analyzed the bridge with the new Version 5.0 and cross section code (f) was used for adjacent box beam sections.

There must have been a problem in how Opis determined if the prestress boxes were adjacent or spread. The BRASS export did not change with respect to determining the code to pass to BRASS.

Issue ID: 4550

Subject: LRFD value fields

Folder: /Virtis/Support Center/Opis

Primary Contact: Ihnat, Joseph

1/5/2016 11:07:19 AM

HRS AASHTO

149

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Paxson, Rhett | 4/14/2003 4:11:55 PM |
| Modified By: administrator  | 6/19/2008 4:10:32 PM |
| Priority: High              |                      |
| Category: Bug - GUI 2       |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Ihnat, Joseph    | Assigned | High     | Unknown  |
| Kennelly, Krisha | Open     |          |          |
|                  | Resolved |          | Bug      |
|                  | Accepted |          |          |
| Kennelly, Krisha | Accepted | High     | Bug      |

### Contacts

| Name          | Company    | Email 1                 | Phone 1       |
|---------------|------------|-------------------------|---------------|
| Gale Barnhill | Earth Tech | gale.barnhill@aecom.com | (402)363-9515 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | 22-0106L California.doc |             |
|      | 22 0106L California.bbd |             |

### Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 4619.12727 | Accepted      | Runtime Error and Crash |

### Description

FROM:rpaxson DATE:Monday, April 14, 2003 12:11:55 PM

We are unable to enter LRFD values for Mat'l properties (PS strand)and Stress Limit States - Concrete, and possibly others. Have been unable to find a "toggle" to switch off the LFD and turn on the LRFD values, even though the only Factors entered are for 1998(2002 interims)AASHTO LRFD Specs.

FROM:jduray DATE:4/15/03 11:59:11 AM

I assume since you logged this incident into the Opis Support Center you are running Opis 5.0. Please confirm.

1/5/2016 11:07:19 AM

HRS AASHTO

150

Complete Issue Information

FROM:rpaxson DATE:Wednesday, April 23, 2003 2:13:18 PM  
yes

FROM:jduray DATE:5/22/03 10:43:19 AM  
I suspect you are running Virtis rather than Opis since that is what you licensed.  
I added a bitmap that I would like for you to compare to what you are describing. What is displayed in the caption?

FROM:jihnata DATE:5/6/2005 9:02:00 AM  
Wallace Engineering is not currently a licensee.

|                                  |
|----------------------------------|
| Issue ID: 4619                   |
| Subject: Runtime Error and Crash |

|                                       |                      |
|---------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis   |                      |
| Primary Contact: Kennelly, Krisha     |                      |
| Submitted By: vinayagamoorthy, vinacs | 5/23/2003 5:36:37 PM |
| Modified By: administrator            | 6/19/2008 4:10:27 PM |
| Priority: High                        |                      |
| Category: Bug                         |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jihnata DATE:5/23/2003 1:33:49 PM  
Reported via email:

When we develop the attached bridge, somehow, we entered a bridge data where a change a variable (left overhang distance at End support) will result in Runtime Error and Crash

1/5/2016 11:07:19 AM

HRS AASHTO

151



Complete Issue Information

Please check the attach file.

(See attached file: 22 0106L California.bbd)  
(See attached file: 22-0106L California.doc)

Vinacs M Vinayagamoorthy  
916-227-8657

FROM:jihnath DATE:5/28/2003 9:00:27 AM  
I don't get a crash, but I can't reopen the Structure Typical Section window.  
IsParallelSystem() is returning FALSE at line 3135 of DoGirderSystemStructDef.cpp  
Tolerance problem? Don't know what specifically about this bridge is causing this.  
Krisha, please look at this.

FROM:kkennelly DATE:5/28/2003 4:12:15 PM  
It appears that since the support skews are different from each other, when the end overhang is changed, the girders are no longer parallel to each other but the girder spacing on the Framing Plan window was specified as "Perpendicular to girder". That spacing type is not valid if the girders are not parallel to each other so you can't open the Framing Plan or Structure Typical Section windows.

I'm still trying to determine what to do with this.

FROM:kkennelly DATE:5/30/2003 3:19:31 PM  
Code fixed so that perpendicular spacing is maintained when user changes overhang. Fixed for Version 5.0 Service Pack 1.

FROM:gbarnhill DATE:Monday, June 23, 2003 5:47:12 PM  
5.0.1-beta - I created a simple span system with different skew for each end, I entered the typical cross section geometry the same at start and end, closed, then reopened and changed the end overhang, closed and was able to reopen.

|                             |
|-----------------------------|
| Issue ID: 4648              |
| Subject: Schematic Problems |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ilnat, Joseph      |                      |
| Submitted By: Koenig, David         | 6/18/2003 1:27:55 PM |
| Modified By: administrator          | 6/19/2008 4:10:25 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

1/5/2016 11:07:20 AM

HRS AASHTO

152

### Complete Issue Information

|             |          |      |             |
|-------------|----------|------|-------------|
| Duray, Jim  | New      | High | Bug         |
|             | Assigned |      | Bug - GUI 2 |
| Lee, Herman | Assigned | High | Bug         |
|             |          |      | Bug - GUI 2 |
|             | Resolved |      |             |
| Lee, Herman | Resolved | High | Bug - GUI 2 |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | Concrete Stress Tree.bmp |             |

### Tasks

| Name       | Current State | Summary                                                                                  |
|------------|---------------|------------------------------------------------------------------------------------------|
| 4706.12640 | Resolved      | Results Graph: The Initial and Final branches below the load combination are not needed. |

### Description

FROM:dkoenig DATE:Wednesday, June 18, 2003 9:27:55 AM  
We have noticed some schematic problems on steel structures.

Problem #1: On the first attached file, the girder profile schematic is not displaying correctly in the last span. On the last span, the girder has a change in height. On the schematic, it shows the bottom flange as a line going from this change in height to the end of the bridge instead of showing the change in height. We have seen similar behaviour on other structures.

Problem #2: On the second attached file, the structure framing plan is only showing the girders part of the way across the structure. Once it gets to a certain point, it is only showing the diaphragms.

FROM:kkennelly DATE:6/19/2003 3:00:19 PM

Problem #1 is probably the same as Incident 4592. The girder profile schematic did not accurately draw a girder profile that has a distinct change in depth at a hinge. This problem has been fixed in the service pack 1 for Version 5.0.

FROM:jihnata DATE:7/13/2005 9:05:15 AM

#2: I'm not able to reproduce this, even in version 5.0.0.  
For testing, I've attached version 5.3.0 BBD files.

|                                                                                           |
|-------------------------------------------------------------------------------------------|
| Issue ID: 4706                                                                            |
| Subject: Results Graph: The Initial and Final branches below the load combination are not |

1/5/2016 11:07:21 AM

HRS AASHTO

153

Complete Issue Information

needed.

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Lee, Herman           | 7/28/2003 9:23:12 PM |
| Modified By: administrator          | 6/19/2008 4:10:20 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | Assigned | High     | Bug         |
|                 | Resolved |          |             |
| Lee, Herman     | Resolved | High     | Bug - GUI 2 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                           |
|------------|---------------|---------------------------------------------------|
| 4712.12634 | Resolved      | Results Graph: Memory leaks in OnUpdate function. |

Description

FROM:hlee DATE:7/28/2003 5:11:59 PM

The load combination branch of the concrete stress tree already includes "Initial" or "Final" (eg. "(DL+PS+LL) Final").

See attached bitmap.

FROM:hlee DATE:8/1/2003 4:08:29 PM

Resolved in 5.1.

Complete Issue Information

Issue ID: 4712  
Subject: Results Graph: Memory leaks in OnUpdate function.

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Lee, Herman 7/31/2003 8:07:57 PM  
Modified By: administrator 6/19/2008 4:10:20 PM  
Priority: High  
Category: Bug - GUI 2

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:hlee DATE:8/1/2003 4:08:52 PM  
Resolved in 5.1.

Also fixed OnUpdate for existing Rating Factor trees.

Complete Issue Information

Issue ID: 4724  
Subject: Library Import not allowed?

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Kemna, Darren 8/12/2003 6:40:33 PM  
Modified By: administrator 6/19/2008 4:10:19 PM  
Priority: High  
Category: Education

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Lee, Herman     | Assigned |          |          |
|                 | Open     |          |          |
|                 | Closed   |          |          |

### Complete Issue Information

| Name        | State  | Priority | Category  |
|-------------|--------|----------|-----------|
| Lee, Herman | Closed | High     | Education |
| Duray, Jim  | New    | High     | Bug       |
|             | Closed |          |           |
| Duray, Jim  | Closed | High     | Bug       |

### Contacts

| Name             | Company               | Email 1                       | Phone 1      |
|------------------|-----------------------|-------------------------------|--------------|
| Sylvester Yongho | Stone & Webster, Inc. | sylvester.yongho@stoneweb.com | 617-589-7048 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 4733.12613 | Closed        | to version 5.0 |

### Description

FROM:dkemna DATE:Tuesday, August 12, 2003 2:40:33 PM

MoDOT uses separate databases for Virtis and OPIS. An extensive Agency library has been entered into Virtis. I am attempting to export Virtis library files and import them into the OPIS Library. I have no problem exporting files out of Virtis, but an error occurs when I attempt to import files into the OPIS library. The import error also occurs in Virtis. Attached is the xml file and a word document with the error message.

FROM:hlee DATE:8/12/2003 3:01:40 PM

Try the following:

Make sure you are not using Internet Explorer. Locate the file "msxmlfix.bat" in your Virtis/Opis 5.0 installation directory. Double-click on the bat file to fix the version of msxml in your workstation. Restart the workstation and try to import again.

If this doesn't fix the problem, please attach the xml file to the incident.

FROM:dkemna DATE:Tuesday, August 12, 2003 3:43:10 PM

I ran the "msxmlfix.bat" file and restarted my computer. The problem was not corrected. The xml file has already been attached as stated above.

FROM:hlee DATE:8/13/2003 8:08:26 AM

I successfully imported the 27 steel materials in the attached library xml file.

1/5/2016 11:07:21 AM

HRS AASHTO

157

Complete Issue Information

Do you use the same workstation to export and import the library xml file?  
Do you have other workstation that you can try to import the library xml file? (To determine whether the problem is workstation dependent)

I still think the problem is cause by the msxml\*.dll files because all the incidents we have to library export/import are related to those files.

Please try to run msxmlfix.bat again in the following way:

1. Open a Command Prompt window.
2. Change directory to Virtis/Opis 5.0 installation directory.
3. Type in "msxmlfix.bat" and hit Enter. You should see the following:

```

=====
C:\PROGRA~1\AASHTOWARE\VirtisOpis50>msxmlfix
C:\PROGRA~1\AASHTOWARE\VirtisOpis50>xmlinst -u
(scanning process table for use of msxml*.dll)
removed old & new dll entries
C:\PROGRA~1\AASHTOWARE\VirtisOpis50>regsvr32 -s msxml.dll
C:\PROGRA~1\AASHTOWARE\VirtisOpis50>regsvr32 -s msxml2.dll
C:\PROGRA~1\AASHTOWARE\VirtisOpis50>regsvr32 -s msxml3.dll
=====

```

4. Try to import again.

FROM:hlee DATE:8/14/2003 3:45:16 PM  
E-mail to Darren on 8/14:

```

=====
=====
Darren,

```

Do you still have problem in importing library items?

I'm able to import all 27 steel materials in your attached library xml file. I still think the problem is cause by the msxml\*.dll files because all the incidents we have to library export/import are related to those files. Please see the incident for another way to run the msxmlfix.bat file.

```

=====
=====

```

FROM:hlee DATE:8/15/2003 8:51:40 AM  
E-mail response from Darren on 8/15:

```

=====
=====
I did not get the "msxmlfix.bat" to work through the command prompts. I
have not tried to run on another workstation, yet.

```

Darren J. Kemna

```

=====
=====

```

Complete Issue Information

FROM:dkemna DATE:Friday, August 15, 2003 2:26:32 PM  
I had Dave Koenig run the fix on his Dell and he still cannot get the library import to work. I was using a compaq. We have two independant workstations that cannot perform the Library import.

FROM:hlee DATE:8/18/2003 3:26:38 PM  
E-mail to Darren on 8/18:

=====  
=====

Darren,

More questions:

What version of Windows do you have on the workstation? Windows NT, 2000, or XP

What version of Internet Explorer do you use?

Can you open the library xml file from Internet Explorer?

I just found out you are going to attend the User Group meeting. May be we can discuss this further over there. If you bring a laptop, see whether you can duplicate the problem on the laptop.

=====  
=====

E-mail response from Darren on 8/18:

=====  
=====

Windows 2000 w/ service pack 3  
Internet Explorer 5.50.4134.0600  
I can open the file in my explorer.

I will try to import the file on my laptop before the advanced training sessions.

Darren J. Kemna

=====  
=====

E-mail to Darren on 8/18:

=====  
=====

The MSXML version that is included in IE 5.5 is 2.5 SP1. The MSXML version that supports Virtis/Opis is 3.0 SP3. 3.0 SP3 comes with IE 6.0 SP1.

Please install at least IE 6.0 SP1 to your workstation for library import.

Thanks,  
Herman

=====  
=====



Complete Issue Information

FROM:hlee DATE:8/25/2003 1:40:40 PM

I talked to Darren in the User Group Meeting. IE 5.5 is the current standard in his office. He will try to convince their IT department to upgrade to IE 6.0 SP1.

Darren, I changed the status to close for now and will reopen the incident when upgrading to 6.0 SP1 doesn't fix the problem.

|                         |
|-------------------------|
| Issue ID: 4733          |
| Subject: to version 5.0 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Yongho, Sylvester     | 8/20/2003 9:11:17 PM |
| Modified By: administrator          | 6/19/2008 4:10:18 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:syongho DATE:Wednesday, August 20, 2003 5:11:17 PM

I used OPIS version 4.2, and want to upgrade to version 5.0. I would like to know how my Database file in MSDE can be converted to fit into version 5.0.

## Complete Issue Information

Issue ID: 4791

Subject: Nomenclature error in BWS Report Tool

Folder: /Virtis/Support Center/Opis

Primary Contact: Duray, Jim

Submitted By: Kemna, Darren

9/12/2003 1:29:39 PM

Modified By: administrator

6/19/2008 4:10:14 PM

Priority: High

Category: Bug - GUI 2

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
|                 | Resolved |          | Bug - GUI 2 |
| Duray, Jim      | Resolved | High     | Bug - GUI 2 |

### Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Complete Issue Information

Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | Analysis Settings Error.doc |             |

Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 4807.12540 | Resolved      | Cannot retrieve Analysis Settings Template |

Description

FROM:dkemna DATE:Friday, September 12, 2003 9:37:07 AM

In an older file I had given the name "Bent #1 & 4" for a bearing stiffener definition. The program executes fine, but an error occurs when trying to generate a user defined BWS Report using the Report Tool. The following error message occurs:

Cannot view XML input using XSL style sheet. Please correct the error and then click the Refresh button, or try again later.

-----

Whitespace is not allowed at this location. Error processing resource  
'file:///D:/AASHTOWARE/VirtisOpis50/Reports/Steel Plate Girder.xml'. Line 1200, Position 46

<BearingStiffenerName>Bent #1 & 4</BearingStiffenerName>  
-----^

The error refers to whitespace, but the following name was acceptable, "Bent #1\_4", and clearly white space is present. I think it could be the "&" symbol. Either way, I think this error should be corrected or more guidance should be given on the restrictions in acceptable characters in naming fields. I will attach a bbd and xml file below.

FROM:dkemna DATE:Friday, September 12, 2003 9:50:54 AM

FROM:jduray DATE:9/12/2003 3:13:03 PM  
It doesn't like the & character.

Fixed for 5.1

|                                                     |
|-----------------------------------------------------|
| Issue ID: 4807                                      |
| Subject: Cannot retrieve Analysis Settings Template |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center/Opis |
| Primary Contact: Ordoobadi, Mehrdad |

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Kemna, Darren | 9/24/2003 7:22:20 PM |
| Modified By: administrator  | 6/19/2008 4:10:13 PM |
| Priority: High              |                      |
| Category: Bug               |                      |

### History

| Primary Contact  | Status   | Priority | Category                   |
|------------------|----------|----------|----------------------------|
| Duray, Jim       | New      | High     | Bug                        |
| Goodrich, Brian  | Assigned |          | Bug - BRASS<br>Bug - GUI 2 |
| Kennelly, Krisha | Resolved |          |                            |
| Kennelly, Krisha | Resolved | High     | Bug - GUI 2                |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 4825.12522 | Resolved      | Truck Train output at 90% |

### Description

FROM:dkemna DATE:Wednesday, September 24, 2003 3:22:20 PM

Today I tried to overwrite an Analysis Settings template named "plate girder design". I saved my template as "Plate Girder Design", but ended up with two templates (i guess due case sensitivity). I attempted to overwrite my "Plate Girder Design" template using the Save Template button. I ended up with two "Plate Girder Design" templates, the original one disappeared. I tried to open and delete both of these templates, but instead I recieved error messages.

To duplicate the error I tried to create a "fatigue" template. I had no problems saving the template, but again recieved the same error (actually line #s in the source file changed). I also noticed the description I tried to give this template was shown with one of my "Plate Girder Design" templates. I then created and saved a template named "Fatigue", and this template is working fine.

1/5/2016 11:07:23 AM

HRS AASHTO

163

Complete Issue Information

Can you give me some insight on what is happening to cause these errors? Also, will I need to go through our IS department to get these deleted?

Attached is a word file with a copy of my Analysis Settings template box and the error messages.

FROM:jduray DATE:Friday, September 26, 2003 1:36:12 PM

FROM:mordoobadi DATE:9/30/2003 12:51:04 PM  
Fixed. For Versions 5.1 Service pack 1 (5.1.1) and later.

FROM:gbarnhill DATE:Monday, January 12, 2004 11:14:28 AM  
OK in v5.1.1

|                                    |
|------------------------------------|
| Issue ID: 4825                     |
| Subject: Truck Train output at 90% |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Kemna, Darren         | 9/29/2003 3:58:47 PM |
| Modified By: administrator          | 6/19/2008 4:10:11 PM |
| Priority: High                      |                      |
| Category: Bug - GUI 2               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Monday, September 29, 2003 11:58:47 AM  
I think whenever output for moments or shear is designated as "Truck Train" for the Controlling Live Load, that 90% Truck Train + 90% Lane should be used in lieu of 100%. The Reactions and Moment

1/5/2016 11:07:23 AM

HRS AASHTO

164

## Complete Issue Information

Summary tables in the LRFD Analysis Output of the Report Tool use 100% when they should use 90%.

FROM:kkennelly DATE:10/6/2003 2:46:06 PM

The LRFD Analysis Output report in the Report Tool is reporting what is shown in the Analysis Results window, Steel Limit State Summary report. I don't know if what is displayed there is 90% or 100%.

FROM:bgoodrich DATE:Monday, October 06, 2003 3:59:58 PM

The truck train moments are reported as 100%. The 90% is applied when the actions are factored. This request is not a bug, but a preference. At the very least, I suggest we update the Analysis Results help topic for the BRASS LRFD engine with something like this:

"The live load actions for the truck train are not factored by 90%."

This is how we addressed questions on whether the live load actions included impact and distribution factors.

The BRASS output is silent in this regard as well, so I will request permission from WYDOT to update the BRASS output.

FROM:dkemna DATE:Thursday, October 09, 2003 9:34:15 AM

One comment. LRFD 3.6.1.3.1 states that "the extreme force effect shall be taken as the larger of the following"-

simplified below:

1. design tandem + design lane,
2. design truck + design lane,
3. 90% of two design trucks + 90% of design lane (negative moments and reactions)

When a span listing in the analysis results shows moment summaries that are controlled by "Axle" and then "Truck Train", you would expect the above criteria to be used. Otherwise, the user does not know whether the 90% truck train controls over the design truck.

FROM:bgoodrich DATE:Friday, October 10, 2003 5:53:26 PM

After reviewing this issue further and better understanding the issue, I agree with Mr. Kemna that the output reports provided by Opis are inconsistent when the truck train is reported as critical. The reaction, moment, and shear summaries in Opis combine the actions for the design truck + lane, design tandem + lane, and truck train + lane. Opis is simply combining the actions (calculated by BRASS) for the individual trucks, which only contain distribution factors and impact. These results are not adjusted for the 90%. The functions in Opis that combine the truck and lane loads should be modified to account for the 90% prior to generated the XML report. See the CUILRFDOutputReport::AddLaneToReactions, AddLaneToMoments, and AddLaneToShears functions.

My comments regarding the change to the help and BRASS output are still valid and should be addressed.

FROM:jduray DATE:10/13/2003 7:46:16 AM

Krishna - Let's discuss this.

FROM:bgoodrich DATE:Monday, October 13, 2003 11:49:22 AM

WYDOT has assigned the BRASS issues to BRASS Problem Log 451.

1/5/2016 11:07:23 AM

HRS AASHTO

165

Complete Issue Information

FROM: bgoodrich DATE: Tuesday, October 14, 2003 12:48:20 PM  
 I have updated the Analysis Results help topic for the BRASS LRFD engine.

FROM: bgoodrich DATE: Monday, November 03, 2003 5:43:07 PM  
 I have updated the engine so the live load action report for the truck train clarifies that the actions do not include the 90% factor.

FROM: kkennelly DATE: 12/30/2003 11:06:45 AM  
 Opis Report Tool updated to include the 90% when determining which live load governs.

|                                          |
|------------------------------------------|
| Issue ID: 4890                           |
| Subject: P/S Strands used for continuity |

|                                                   |
|---------------------------------------------------|
| Folder: /Virtis/Support Center/Opis               |
| Primary Contact: Duray, Jim                       |
| Submitted By: Kemna, Darren 11/18/2003 2:40:14 PM |
| Modified By: administrator 6/19/2008 4:38:36 PM   |
| Priority: High                                    |
| Category: Enhance BRASS                           |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Duray, Jim      | New       | High     | Bug           |
|                 | On Hold   |          | Enhancement   |
|                 | Duplicate |          | Enhance BRASS |
| Duray, Jim      | Duplicate | High     | Enhance BRASS |

Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

|            |           |                                                                                       |
|------------|-----------|---------------------------------------------------------------------------------------|
| 4890.12458 | Duplicate | P/S Strands used for continuity                                                       |
| 4936.12412 | Resolved  | Public synonyms conflict if Pontis and Virtis stand-alone run in same Oracle instance |

Description

FROM:dkemna DATE:Tuesday, November 18, 2003 9:40:14 AM

From the information I have seen, the use of P/S strands for continuity reinforcement at interior bents was supposed to be implemented for 5.1. Both Incident 3633 and the "List of Requested Enhancements" passed out at the 2003 User Group meeting suggest implementation for 5.1. Clearly, this has not been included for 5.1.

My question is: When will this be implemented? Or what version?

FROM:jduray DATE:11/20/2003 3:53:04 PM

Apparently at that time it was thought that it would be in 5.1. To my knowledge WyDOT has not approved nor did we have clear direction from the Task Force as to how to implement it early enough to include int in 5.1. I will check on when it is scheduled.

FROM:hlee DATE:6/4/2004 3:08:36 PM

Changed Category from "Enhancement" to "Enhance BRASS".

Changed Subject from "Status: Incident 3633 - P/S Strands used for continuity" to "P/S Strands used for continuity".

FROM:hlee DATE:6/10/2004 3:21:22 PM

Please see Incident 4683 for details of this incident.

|                                                                                                |
|------------------------------------------------------------------------------------------------|
| Issue ID: 4936                                                                                 |
| Subject: Public synonyms conflict if Pontis and Virtis stand-alone run in same Oracle instance |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Duray, Jim            | 1/7/2004 2:49:34 PM  |
| Modified By: administrator          | 6/19/2008 4:10:01 PM |
| Priority: High                      |                      |
| Category: Bug - Database 2          |                      |

History

| Primary Contact    | Status   | Priority | Category         |
|--------------------|----------|----------|------------------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug - Database 2 |
|                    | Resolved |          |                  |



### Complete Issue Information

|                    |          |      |                  |
|--------------------|----------|------|------------------|
| Ordoobadi, Mehrdad | Resolved | High | Bug - Database 2 |
|--------------------|----------|------|------------------|

### Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

### Documents

| Name | Resource Identifier          | Description                      |
|------|------------------------------|----------------------------------|
|      | Report_Tool_Enhancements.doc | Steel LRFD Report UI Changes.pdf |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 5023.14318 | Assigned      | Additional LRFD Analysis Reports for Steel |

### Description

FROM:jduray DATE:1/7/2004 9:42:56 AM

Florida DOT reported they are having trouble getting Pontis and Virtis to work properly when running within the same Oracle instance as stand-alone apps.

The public synonyms Virtis uses for the Pontis tables should be changed to be unique relative to the Pontis synonyms. I suggest we change the following:

```
CREATE PUBLIC SYNONYM bridge for owner.bridge;  
CREATE PUBLIC SYNONYM paramtrs for owner.paramtrs;  
CREATE PUBLIC SYNONYM roadway for owner.roadway;
```

to:

```
CREATE PUBLIC SYNONYM bridge_virtis for owner.bridge;  
CREATE PUBLIC SYNONYM paramtrs_virtis for owner.paramtrs;  
CREATE PUBLIC SYNONYM roadway_virtis for owner.roadway;
```

Change our code to use these synonyms.

For the integrated db these synonyms will point to the Pontis tables. If Virtis stand-alone they should point to the Virtis version of these tables. Views and perhaps other scripts will require similar modifications.

1/5/2016 11:07:24 AM

HRS AASHTO

168

Complete Issue Information

FROM:jduray DATE:4/23/2004 8:18:35 AM  
 Resolve this for 5.2.

FROM:mordoobadi DATE:7/14/2004 8:06:44 AM  
 July 13. This resolution would cause VirtisOpis to break while using other types of databases.

There are two work arounds for this issue.

- (1) use of private synonyms for the bridge, paramtrs, and roadway tables for each user.  
 Note: If a user needs to login to both Pontis and Virtis/Opis databases two separate logins should be created for him/her. For the Pontis database the corresponding user accesses the above three tables using PUBLIC SYNONYMS and for the Virtis/Opis database the corresponding user accesses the above three tables using PRIVATE SYNONYMS.
- (2) use separate instances of Oracle for Pontis and Virtis/Opis databases.

Issue ID: 5023  
 Subject: Additional LRFD Analysis Reports for Steel

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Skow, Wayne  
 Submitted By: Kemna, Darren 2/28/2004 3:52:41 PM  
 Modified By: wskow 9/13/2010 2:30:57 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Bug         |
|                  | Suspended |          | Enhancement |
| Kennelly, Krisha | Assigned  |          |             |
| Kennelly, Krisha | Assigned  | High     | Enhancement |
| Ihnat, Joseph    |           |          |             |
| Li, Xinmei       |           |          |             |
| Skow, Wayne      | Resolved  |          |             |

Contacts

## Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Site 693v2.bbd      |             |
|      | Site 693v1.bbd      |             |

## Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 5209.14134 | Duplicate     | Unsymmetrical Actions Due to Prestress |

## Description

FROM:dkemna DATE:Saturday, February 28, 2004 10:52:41 AM

I have attached a word file that includes some additional reports that would be helpful for the designer of a steel girder. The benefit of these reports are that they would show design ratios for the major aspects of design. I am sure there are other reports that could be included to this list, but this may get the ball rolling. For example, there is no way currently to print a report that shows the controlling design ratios for bearing stiffeners at all bents. A summary for all bents would really help a designer determine quickly whether design changes are necessary. Currently a designer would have to go through the lengthy spec checks (preferably with a spec filter). Even with a spec filter the user would have to click in the detail window to determine how badly it failed for each stage. Also, a design summary is a necessity to create a simple printable report.

Note: If these reports can be handled easier through the charts that would be acceptable but it is always helpful to have the design load and resistance with the design ratios in a report format.

FROM:jduray DATE:4/14/2005 11:25:41 AM

TAG will compile a list of attributes that we need to collect from engines and make available in the report tool.

FROM:jduray DATE:12/21/2006 8:57:32 AM

TAG will provide sample design reports. Will prepare these as "canned" reports in the report tool. Need to prepare an estimate of the cost after we get the samples.

FROM: Krisha Kennelly DATE: 12/22/2009 11:23:02 AM Eastern Standard Time

Attached document contains the UI changes needed to generate the new reports that were approved by the Task Force.

Joe - please implement the UI changes

May - please work on implementing the reports

FROM: Joseph Ihnat DATE: 1/4/2010 9:30:14 AM Eastern Standard Time

UI is done.

1/5/2016 11:07:25 AM

HRS AASHTO

170

Complete Issue Information

FROM: Xinmei Li DATE: 9/13/2010 10:04:25 AM Eastern Daylight Time  
Wayne, please update the status of this incident. Thanks.

FROM: Wayne Skow DATE: 9/13/2010 10:27:31 AM Eastern Daylight Time  
These reports have been implemented in 6.2 and there are no incidents relative to them as of 9/13/2010

|                                                 |
|-------------------------------------------------|
| Issue ID: 5209                                  |
| Subject: Unsymmetrical Actions Due to Prestress |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Goodrich, Brian       | 7/8/2004 4:45:57 PM  |
| Modified By: administrator          | 6/19/2008 4:15:14 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug - BRASS |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Bug - BRASS |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

From: Donachuk, Sam (TGS) [mailto:SDonachu@gov.mb.ca]  
Sent: Thursday, July 08, 2004 9:01 AM  
To: 'Goodrich@bridgetech-laramie.com'  
Subject:

Complete Issue Information

Sending you files as per our telephone conversation. Site 693v1.bbd is the one that gives the incorrect prestressing diagram for span no. 3.

Sam Donachuk, P. Eng.  
TGS-Bridges and Structures  
Ph: (204)-945-5208

FROM:bgoodrich DATE:Thursday, July 08, 2004 12:47:59 PM  
This issue is a duplicate of Incident 4779.

FROM:bgoodrich DATE:Thursday, July 08, 2004 12:49:36 PM  
Mr. Donachuk,

I received your files and reviewed your concern. After some investigation, I found that your issue has already been addressed in Service Pack 1 for Opis 5.1, which contains BRASS-GIRDER(LRFD) 1.5.4. You indicated that your agency was not able to upgrade to this service pack, but I'm not sure of the reasons. Please contact Jim Duray at Michael Baker Jr. (412-269-6410) to see if he or someone on that staff can help you with the upgrade.

Regards,

Brian L. Goodrich  
BridgeTech, Inc.

|                                       |
|---------------------------------------|
| Issue ID: 5254                        |
| Subject: Infinite Loop Error in BRASS |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 7/30/2004 4:04:08 PM |
| Modified By: administrator          | 6/19/2008 4:15:11 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | FHWA LRFD Steel Bridge<br>Design Example.bbd |             |

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 5287.14057 | Resolved      | Unable to get design ratio over 1.0 |

### Description

FROM:dkemna DATE:Friday, July 30, 2004 12:04:08 PM

A designer has input a four span plate girder bridge (196'-230'-230'-161') with a 20 deg. skew. She and I have not been able to find any input errors and our tolerance settings are 0.01 ft and 0.125 in. For G2, the export is successful, but during Engine Analysis an infinite loop error occurs. Please take a look at the attached file to see if you can replicate the problem. We have completely re-input the bridge in a separate file with no success.

FROM:kkennelly DATE:7/30/2004 1:28:12 PM

I get the same error when I run BRASS LRFD. It seems to be something internal in BRASS is creating an (FE?) analysis point at 400.994 and we can't control that from Opis. (I know this isn't a workaround but if I change the span 4 length to 161.1' it will run ok. That's why I think its internal to BRASS.)

FROM:bgoodrich DATE:Sunday, August 01, 2004 1:44:42 PM

I was also able to duplicate the issue, which I forwarded to WYDOT.

FROM:bgoodrich DATE:Wednesday, August 04, 2004 6:40:51 PM

WYDOT assigned this issue to BRASS Problem Log 521.

FROM:bgoodrich DATE:Monday, August 23, 2004 12:38:58 PM

This issue has been addressed in BRASS-GIRDER(LRFD) 1.6.0, which will be released with Opis 5.2.0.

Issue ID: 5287

Subject: Unable to get design ratio over 1.0

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: Wilson, Ken  | 8/16/2004 7:36:53 PM |
| Modified By: administrator | 6/19/2008 4:15:08 PM |
| Priority: High             |                      |
| Category: Education        |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Resolved |          |          |
|                 | Closed   |          |          |
| Duray, Jim      | Closed   | High     | Bug      |

Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary               |
|------------|---------------|-----------------------|
| 5362.13982 | Closed        | Client install access |

Description

FROM:bgoodrich DATE:Monday, August 16, 2004 3:36:54 PM  
 E-mail from Herman Lee:

Please find the 5.2 beta bbd attached. The girder of interest is G2.

The calculations in question is in "Steel\_Plate\_Girder(109.000).OUT":

=====

MINIMUM Actions: Critical Unbraced Length (1)

PERFORMING DESIGN RATIO COMPUTATIONS: Stress (Flexure)  
 Point of Interest : 109.00  
 Construction Stage: 3  
 Resistance = -49.844  
 LL Combination No.: 3                      Dead Load  
 = -27.764  
 Limit State : STRENGTH I                      Live Load

1/5/2016 11:07:26 AM

HRS AASHTO

174

Complete Issue Information

= -23.408  
 Units : ksi Design  
 Ratio = 0.974

PERFORMING RATING FACTOR COMPUTATIONS: Stress (Flexure)

Point of Interest : 109.00  
 Construction Stage: 3  
 Resistance = -49.844  
 LL Combination No.: 3 Dead Load  
 = -27.764  
 Limit State : STRENGTH I Live Load  
 = -23.408  
 Units : ksi Rating  
 Factor = 0.943

Thanks,  
 Herman

FROM: bgoodrich DATE: Monday, August 16, 2004 3:39:12 PM

Herman indicated that he was trying to increase the top flange thickness (for the ranges left of the 109 POI) in order to reduce the live load stress to that flange. After some investigation, it was determined that the bottom flange is actually the critical component. Therefore, the bottom flange thickness must be changed to get a rating factor greater than 1.0. I changed the bottom flange thickness to 1.5 inches for the ranges from 84'-108' in span 1 and 12'-36' in span 2, which resulted in a design ratio of 1.03.

Issue ID: 5362  
 Subject: Client install access

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Duray, Jim  
 Submitted By: Waheed, Amjad 9/22/2004 6:44:10 PM  
 Modified By: administrator 6/19/2008 4:15:03 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 5372.13972 | Resolved      | C3.6.1.3.1 vs. Opis/Virtis |

Description

We're having a problem with VirtisOpis here at ODOT. I'm pretty sure the problem is on our end, but I need some info from you. We just deployed new machines with Windows XP and a new security policy on the C drive. Now when a user double-clicks on a bridge in the bridge explorer there are 2 error messages produced. The first says "file error writing data" and the second is "revert command may not work properly due to error writing backupfile."

I have a feeling the OS user does not have the proper privileges to write to the locations that Virtis is trying to use. Can you let me know what the location of these writes are so I can make sure that security is setup properly?

Contact Jon Nance @ (614) 466-9911 or jnance@dot.state.oh.us

FROM:awaheed DATE:Wednesday, September 22, 2004 2:48:02 PM

FROM:jihnat DATE:9/22/2004 3:53:18 PM

I sent email reply to Jon:

VirtisOpis wants to write files and add directories in the directory where it is installed. The default location is C:\Program Files\AASHTOWARE\VirtisOpis51

FROM:jihnat DATE:9/23/2004 7:51:18 AM

Jon sent email that it was OK to close this incident.

|                                     |
|-------------------------------------|
| Issue ID: 5372                      |
| Subject: C3.6.1.3.1 vs. Opis/Virtis |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Generated, shida      | 9/29/2004 5:41:44 PM |

1/5/2016 11:07:27 AM

HRS AASHTO

176

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:15:02 PM |
| Priority: High             |                      |
| Category: Education        |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Resolved  |          | Education   |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Duplicate |          |             |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 5379.13965 | Suspended     | RC Post Tensioned Bridges |

### Description

From: susan\_hida@dot.ca.gov [mailto:susan\_hida@dot.ca.gov]  
E-mail from Sue Hida:

Sent: Friday, September 24, 2004 5:14 PM

To: Susan\_Hida\_-\_LRFD\_Meeting\_02@dot.ca.gov; gbailey@dot.state.wv.us; Kenneth Hurst

Cc: murugesu\_vinayagamoorthy@dot.ca.gov; Brian L. Goodrich; Brice, Richard

Subject: C3.6.1.3.1 vs. Opis/Virtis

Hello Loads Aficionado's,

The Commentary to 3.6.1.3.1 says "One hundred percent of the combined effect of the design tandems and the design lane load should be used."--when investigating negative moment.

Virtis/BRASS, Vinacs' own program, and CTBridge are both using NINETY% (of the dual tandem \* IM, +lane). I think QCon is, too, although I wasn't able to download their latest version.

1/5/2016 11:07:27 AM

HRS AASHTO

177

## Complete Issue Information

The '100%' interpretation increases negative design moment for adjacent spans lengths less than ~75', only. In other words, for a two-equal-spans 75'-75' in length and greater, 90% of the dual truck always controls over 100% of the low-boy.

Do we change the software to match the Specs, or change the Specs to match the software?

Thanks,  
Sue

Susan E. Hida, P.E.  
AASHTO SCOBS, LRFD, Loads, etc.  
916-227-8738

FROM: bgoodrich DATE: Wednesday, September 29, 2004 1:43:20 PM  
BRASS-GIRDER(LRFD) currently uses 100% of the dual tandem plus lane. This percentage can be adjusted by the user if they wish, but it defaults to 100% for this load combination. I recall BRASS using 90% when the commentary did not specify a percentage, but the software was changed to match the specifications once the "One hundred percent" wording was added.

FROM: bgoodrich DATE: Wednesday, September 29, 2004 1:43:43 PM  
E-mail from Vinacs:

From: murugesu\_vinayagamoorthy@dot.ca.gov [mailto:murugesu\_vinayagamoorthy@dot.ca.gov]  
Sent: Tuesday, September 28, 2004 7:36 AM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: susan\_hida@dot.ca.gov  
Subject: RE: C3.6.1.3.1 vs. Opis/Virtis

Brian

Do we have the same option in the Opis? If so, please direct me to the GUI. I could not locate the GUI that allows me to change the percentage.

When I ran a sample bridge using Opis, Opis did not report results from Tadem Train results.

Vinacs M Vinayagamoorthy

FROM: bgoodrich DATE: Wednesday, September 29, 2004 1:44:48 PM  
BRASS-GIRDER(LRFD) allows the percentage applied to any vehicle to be adjusted. However, this percentage is not exposed to the user in Opis. This is why you could not find it.

The dual tandem (Tandem Train) is only considered if you select it. Click the Advanced button on the Vehicles tab of the Analysis Settings window to check the appropriate box. As you know, the truck and tandem trains are not applicable to simply-supported bridges, so they are automatically removed from the analysis for these structures.

|                |
|----------------|
| Issue ID: 5379 |
|----------------|

1/5/2016 11:07:27 AM

HRS AASHTO

178

### Complete Issue Information

Subject: RC Post Tensioned Bridges

Folder: /Virtis/Support Center/Opis  
Primary Contact: Duray, Jim  
Submitted By: Teal, Dean 10/1/2004 5:51:54 PM  
Modified By: hlee 1/21/2013 9:23:51 PM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Duray, Jim      | New       | High     | Bug - Export 1 |
| Goodrich, Brian | Assigned  |          |                |
|                 | Duplicate |          |                |
| Goodrich, Brian | Duplicate | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | g31_v520.bbd            |             |
|      | g31_v510.bbd            |             |
|      | virtis rating exist.doc |             |
|      | opis rating exist.doc   |             |

### Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 5826.13519 | Duplicate     | Opis: Missing Deck Dead Load |

### Description

FROM:dteal DATE:Friday, October 01, 2004 1:51:54 PM

I understand that BRASS can analyze RC Post Tensioned Bridges (LRFD) – When will this be on of the

1/5/2016 11:07:28 AM

HRS AASHTO

179

Complete Issue Information

structure types available in Opis?

FROM:jduray DATE:10/1/2004 2:14:30 PM

This is not in the planning, however, LEAP is interested in connecting Conbox which provides this capability.

FROM:dteal DATE:Friday, October 01, 2004 2:38:04 PM

Couldn't we also use the BRASS engine as well as Conbox?

FROM:dteal DATE:Wednesday, November 07, 2007 11:33:24 AM

Change this to an enhancement

FROM: Herman Lee DATE: 1/21/2013 4:19:17 PM Eastern Standard Time

Duplicate of Incident 8990.

|                                       |
|---------------------------------------|
| Issue ID: 5826                        |
| Subject: Opis: Missing Deck Dead Load |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Goodrich, Brian       | 1/19/2005 6:28:18 AM |
| Modified By: administrator          | 6/19/2008 4:14:30 PM |
| Priority: High                      |                      |
| Category: Bug - Export 1            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bgoodrich DATE:Wednesday, January 19, 2005 1:28:19 AM

E-mail submitted by Andrea Wargula: 1/17/2005 1:30:52 PM >>>

is this true....????

1/5/2016 11:07:28 AM

HRS AASHTO

180

Complete Issue Information

virtis calculates the weight of the deck for stage 1 rxs, etc.

opis does not; it uses a user defined member load value.

therefore, you cant really use the same file for virtis and opis.... if you do, you will essentially be using twice the deck dead load when running virtis.

let me know asap please

thanks

FROM:bgoodrich DATE:Wednesday, January 19, 2005 1:30:56 AM

E-mail reply from Krisha: 1/17/2005 11:39:07 AM >>>

No, that is not true.

BRASS LRFD will compute the dead load of the deck for you in Opis just as BRASS LFD will compute the deck dead load in Virtis.

FROM:bgoodrich DATE:Wednesday, January 19, 2005 1:37:39 AM

This issue is a duplicate of Incident 5086. This issue has been corrected for Opis 5.2.

|                                                      |
|------------------------------------------------------|
| Issue ID: 5845                                       |
| Subject: Shear reinforcing definition not being read |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Oramasionwu, Geoffrey | 1/24/2005 5:57:42 PM |
| Modified By: administrator          | 6/19/2008 4:14:29 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |

1/5/2016 11:07:28 AM

HRS AASHTO

181

### Complete Issue Information

|                   |          |      |     |
|-------------------|----------|------|-----|
| Kennelly, Krishna | Resolved | High | Bug |
|-------------------|----------|------|-----|

### Contacts

| Name                 | Company      | Email 1            | Phone 1      |
|----------------------|--------------|--------------------|--------------|
| Geoffrey Oramasionwu | Manitoba DOT | GOramasi@gov.mb.ca | 204-945-5202 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SeineRiver.bbd      |             |

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 5865.13480 | Resolved      | Shear Reinforcing Errors? |

### Description

FROM:goramasionwu DATE:Monday, January 24, 2005 12:57:50 PM

I am getting the following warnings regarding my shear reinforcing steel not being defined.

Seine River PPCI Girder (Girder System Superstructure Definition)

10M H\_Stirrups (Vertical Shear Reinforcement Definition)

Warning: Reinforcing steel material not defined for shear reinforcement.

Warning: Reinforcement bar size not defined for shear reinforcement.

I think I have defined everything correctly (other than the distribution factors which I must still input.) Is there a way for OPIS to determine the distribution factors since BRASS is able to?

Thanks,

Andy Pankratz  
apankratz@gov.mb.ca

FROM:kkennelly DATE:1/24/2005 1:25:31 PM

1. If you have entered a horizontal shear reinforcement definition, you can ignore the warning you are getting about the vertical shear reinforcement. Opis is trying to validate the vertical shear reinforcement data when it really shouldn't since you have entered a horizontal shear reinf definition. (This was previously entered in Visual Intercept incident 5622.)

2. If you leave the LRFD factors blank in Opis, the BRASS program will compute the LRFD factors for you.

|                                    |
|------------------------------------|
| Issue ID: 5865                     |
| Subject: Shear Reinforcing Errors? |

### Complete Issue Information

|                  |                             |                      |  |
|------------------|-----------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Opis |                      |  |
| Primary Contact: | Kennelly, Krisha            |                      |  |
| Submitted By:    | Oramasionwu, Geoffrey       | 1/25/2005 5:16:46 PM |  |
| Modified By:     | administrator               | 6/19/2008 4:14:28 PM |  |
| Priority:        | High                        |                      |  |
| Category:        | Education                   |                      |  |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          |                |
|                 | Resolved |          | Bug - Export 1 |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | SeineRiver.bbd      |             |

### Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 5880.13465 | Resolved      | Shrinkage bug & custom design vehicle |

### Description

FROM:goramasionwu DATE:Tuesday, January 25, 2005 12:16:46 PM

Further to IncidentID 5845, the suggestions were followed however, the bridge does not pass from opis to BRASS for analysis. The following errors were given by:

Opis:

Error generating LRFD schedule commands!

Error generating stirrup schedule commands!

Error getting horizontal shear reinf. in vertical shear reinf. range!

Error generating STIRRUP-SCHEDULE or STIRRUP-GROUP commands!

The number of horizontal shear reinf. spaces must be greater than

1/5/2016 11:07:29 AM

HRS AASHTO

183



Complete Issue Information

zero!

BRASS gave the following:

ERROR - The number of horizontal shear reinf. spaces must be greater than zero!

ERROR - Error getting horizontal shear reinf. in vertical shear reinf. range!

WARNING (High):

The P/S shape properties from Virtis are not utilized by the BRASS engine. The properties are computed based on the section dimensions.

WARNING (High):

BRASS does not support a composite (long-term) stage. The results from loads applied to this stage will appear under the composite (short-term) stage.

Analysis failed!

The exact same model was run successfully with Virtis however not with Opis.

FROM:kkennelly DATE:1/25/2005 2:33:30 PM

Virtis runs the BRASS LFD analysis engine and Opis runs the BRASS LRFD analysis engine. The BRASS LRFD analysis engine must have different checks in it and it checks to be sure that you have not entered a zero for number of spaces whereas the BRASS LFD engine must not be checking for that in your input.

I ran G1 and get the same error. If you open the Shear Reinforcement Ranges: Horizontal tab, you will see that you have several rows of data with a "0" for the number of spaces for your horizontal shear reinf. spacing. Change those 0's to 1's so that your input reads similar to "1 space of 0mm" and BRASS LRFD will be able to analyze your girder.

|                                                |
|------------------------------------------------|
| Issue ID: 5880                                 |
| Subject: Shrinkage bug & custom design vehicle |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Oramasionwu, Geoffrey | 1/26/2005 9:47:46 PM |
| Modified By: administrator          | 6/19/2008 4:14:27 PM |
| Priority: High                      |                      |
| Category: Bug - Export 1            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 6062.15273 | Resolved      | Prestress Girder End Blocks |

### Description

FROM:goramasionwu DATE:Wednesday, January 26, 2005 4:47:46 PM

In OPIS the type of curing used for the deck was specified as Moist Cure with the girders being Steam cured (as is the common practice). When performing the analysis OPIS passes a generated BRASS input file specifying that the girder is Steam cured and the slab is now steam cured and not moist cured as was input in OPIS. Is this a possible bug in the program?

Also, I would like to use a modified vehicle as a design vehicle other than the standard HL-93 loading configuration. Our agency specifies a modified HSS-25 truck be considered as well as the HL-93 vehicle specified by AASHTO LRFD. When input into the library or as a temporary vehicle the loads generated includes the modified HSS-25 truck as well as a generated truck train, tandem train and lane load for this vehicle.

Our agency only considers the load case of the HSS-25 vehicle alone. Is there a way for OPIS to perform this analysis or does it require that the vehicle must have the trk tmt and lane load combinations as well?

The modified HSS-25 vehicle is defined as one 45kN axle followed by three 180kN axles all at a fixed axle spacing of 4.25m and a standard 1.8m gauge.

FROM:goramasionwu DATE:Friday, January 28, 2005 11:12:02 AM

I changed the HSS-25 Truck to be in the permit load and that solved my problem with this vehicle. However for the HL-93 loading, the tandem train is run either with and without the check box enabled for the under the advanced tab. I have also attempted to reduce the scale factor from 1 to 0.0001 in the advanced tab but this introduces this same scale factor for all combinations for this vehicle and not just the tandem train.

The online help indicates to leave the check box unchecked to disable the tandem train. However, in this version of OPIS (5.1.0) either this feature does not work or I am doing something wrong.

FROM:jduray DATE:3/7/2005 10:56:52 AM

1/5/2016 11:07:29 AM

HRS AASHTO

185

Complete Issue Information

FROM:bgoodrich DATE:Tuesday, March 08, 2005 2:17:42 PM

The issue with the tandem train was addressed in Incident 4835 for Version 5.1.1. I fixed a bug in the export (BrassLrfdPrestress.cpp) with the curing method. Fixed for version 5.3.0.

|                                      |
|--------------------------------------|
| Issue ID: 6062                       |
| Subject: Prestress Girder End Blocks |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Oramasionwu, Geoffrey | 2/18/2005 7:24:34 PM |
| Modified By: administrator          | 6/19/2008 4:20:26 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact   | Status   | Priority | Category  |
|-------------------|----------|----------|-----------|
| Duray, Jim        | New      | High     | Bug       |
| Kennelly, Krishna | Assigned |          |           |
| Goodrich, Brian   |          |          | Education |
|                   | Resolved |          |           |
| Goodrich, Brian   | Resolved | High     | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:goramasionwu DATE:Friday, February 18, 2005 2:24:34 PM

Is there a way to incorporate end blocks in the opis model as it is with the current BRASS Girder

1/5/2016 11:07:29 AM

HRS AASHTO

186

Complete Issue Information

LRFD?

FROM: bgoodrich DATE: Tuesday, March 08, 2005 11:08:25 AM

BRASS allows the user to specify a different cross section at the beam ends to withstand the increased shear forces. However, I do not see any way to specify end blocks in the Opis model. Opis only permits a single beam cross section to be used for the entire length.

|                                 |
|---------------------------------|
| Issue ID: 6081                  |
| Subject: Missing Incident 4683? |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Kemna, Darren         | 2/25/2005 4:56:57 PM |
| Modified By: administrator          | 6/19/2008 4:20:25 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Bug       |
|                 | Resolved |          | Education |
| Duray, Jim      | Resolved | High     | Education |

Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 6088.15247 | Duplicate     | Rail loads are not being distributed to the girders. |

Description

FROM:dkemna DATE:Friday, February 25, 2005 11:56:58 AM

The Release notes for version 5.2 and incident 4890 both refer to incident 4683 for information about P/S Strand used for positive moment connection. It appears that 4683 is missing from the list?

FROM:jduray DATE:3/2/2005 8:43:03 AM

4683 is a request to WYDOT to allow strands to be extended for Positive Moment Connection.

FROM:dkemna DATE:Tuesday, March 08, 2005 10:05:23 AM

The release notes say that P/S steel can now be used for the positive moment connection, but I find no evidence that this is true. I have looked through the help, input screens, etc...yet I cannot find anything referring to P/S steel extension into the diaphragm. If incident 4683 was listed then maybe I could find specific information to help guide me.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 6088                                                |
| Subject: Rail loads are not being distributed to the girders. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Markel, John          | 3/2/2005 12:07:38 AM |
| Modified By: administrator          | 6/19/2008 4:20:24 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | On Hold  |          | Bug - BRASS |
|                 | Assigned |          |             |
|                 | Resolved |          |             |
|                 | Accepted |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS Problem.bbd      |             |
|      | PS Problem.bbd      |             |

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 6146.15189 | Closed        | Option to ignore PS beam stresses at interior support points of interest |

### Description

FROM:jmarkel DATE:Tuesday, March 01, 2005 7:07:38 PM

I created a Girder System model and found that the generic rail loads were not being distributed to the beams. I searched the output files and found no reference to these loads being generated. I know this was not a problem in previous versions of Opis. Please take a look and let me know if it's something on my end.

John Markel

FROM:kkennelly DATE:3/2/2005 7:55:22 AM

This problem was previously entered in Incident 5753. An AbxBrass replacement file is available on the support website in the "Downloads" section to fix this problem. You should probably add your email address to the "End user mailing list - e Notification" on the support website so you will receive emails notifying you of such fixes.

---

1/5/2016 11:07:31 AM

HRS AASHTO

189

Complete Issue Information

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 6146                                                                    |
| Subject: Option to ignore PS beam stresses at interior support points of interest |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 3/11/2005 8:41:13 PM |
| Modified By: administrator          | 6/19/2008 4:20:20 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 | Resolved |          |             |
|                 | Closed   |          |             |
| Goodrich, Brian | Closed   | High     | Bug - BRASS |

Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PS Problem.bbd      |             |
|      | ductilityerror.JPG  |             |
|      | PS Problem.bbd      |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

|            |        |                                                  |
|------------|--------|--------------------------------------------------|
| 6147.15188 | Closed | Ductility being Checked in Error in this PS beam |
|------------|--------|--------------------------------------------------|

Description

FROM:dteal DATE:Friday, March 11, 2005 3:41:15 PM

Below is a spec check showing a failure in a top flange at point 110 (which is at the centerline of the pier beam). .bbd is attached, I used girder line #2 to create this run.

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 5.9.4 Stress Limits for Concrete

Point of Interest : 110.00

Construction Stage: 2

Units: Stresses are in (MPa).

Stresses After Losses: DL + PS + LL

Stress Comparisons for NEGATIVE Flexure Sense:

| Location   | Compressive  |     | Factored |     | Tensile      |             | Result Codes |  |
|------------|--------------|-----|----------|-----|--------------|-------------|--------------|--|
|            | Stress Limit |     | Stress   |     | Stress Limit | Compressive | Tensile      |  |
| Slab       | -18.000      | ... | 3.071    | ... | 0.000        | N/A         | N/A          |  |
| Top Flange | -21.000      | ... | 1.605    | >   | 1.480        | N/A         | FAIL         |  |
| Bot Flange | -21.000      | ... | -10.165  | <=  | 1.480        | N/A         | PASS         |  |

This point is at the center line of pier where no beam exists (this is the diaphragm area) Because of this questionable check, it will also effect the LRFR BRASS rating at this point.

Checking the end of the beam at the top and bottom for tension and compression does not make sense. (BRASS assumes that the end of the beam is at the centerline of the pier – that is wrong)

FROM:dteal DATE:Friday, March 11, 2005 3:49:46 PM

This was in 5.2 release (not 5.3 beta)

FROM:bgoodrich DATE:Thursday, March 17, 2005 4:03:37 PM

I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Friday, May 13, 2005 10:43:00 AM

WYDOT assigned this issue to BRASS Problem Log 589. BRASS-GIRDER(LRFD) 1.6.1 has been modified to allow the user to ignore beam stresses at interior support points of interest. The BRASS export must be revised to utilize this new capability.

FROM:bgoodrich DATE:Tuesday, May 31, 2005 2:14:49 PM

The export has been updated. Fixed for version 5.3 SP1.

FROM:dteal DATE:Monday, June 27, 2005 4:31:43 PM

Accepted

FROM:bgoodrich DATE:Monday, July 11, 2005 9:22:38 AM

Closed.



### Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6147                                            |
| Subject: Ductility being Checked in Error in this PS beam |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 3/11/2005 8:44:05 PM |
| Modified By: administrator          | 6/19/2008 4:20:20 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |
| Kennelly, Krisha | Resolved | High     | Education |

### Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6153.15182 | Resolved      | P/S Positive moment connection |

### Description

FROM:dteal DATE:Friday, March 11, 2005 3:44:06 PM

See the attached jpg for the spec check info. - .bbd attached, used girder #2.

This check, 5.7.3.3.1 Max Reinforcement (Ductility), shouldn't apply to a stage 1 configuration. It is checking for max. reinforcement at ultimate and at stage 1 the beam should not ever be at ultimate (it is not designed to be at ultimate for the beam only). To determine the "C" value, it is using the properties of the beam only. This check is valid for the stage 2 configuration since it is designed to be composite with the slab and therefore the properties determined using the composite section. And at stage 2 is

1/5/2016 11:07:31 AM

HRS AASHTO

192

Complete Issue Information

where ultimate should be checked.

FROM:bgoodrich DATE:Thursday, March 17, 2005 12:58:47 PM  
I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Wednesday, May 18, 2005 11:52:41 AM  
WYDOT assigned this issue to BRASS Problem Log 603.

FROM:bgoodrich DATE:Wednesday, July 13, 2005 2:16:54 PM  
E-mail from C.J. Riley (WYDOT):  
After a more thorough review, I believe we should stick with past policy and leave this check as is. This section of the code is very clear, that if Eq. 5.7.3.3.1-1 is not satisfied (regardless of staging) then the section should be considered overreinforced, which would result in a fail code for the ductility check at some points. However, I don't see a reason not to use the moment capacity specified in the commentary.

FROM:bgoodrich DATE:Wednesday, July 13, 2005 2:22:43 PM  
Incident 6561 was submitted and is duplicate of this issue.

FROM:bgoodrich DATE:Friday, November 11, 2005 9:41:40 AM  
BRASS has been enhanced to consider the commentary equations: C5.7.3.3.1-1 and C5.7.3.3.1-2.  
Fixed for Virtis version 5.4.

FROM:dteal DATE:Wednesday, March 29, 2006 1:01:57 PM  
We (KDOT Engineering staff) disagree with C J's review.  
"that if Eq. 5.7.3.3.1-1 is not satisfied (regardless of staging) then the section should be considered overreinforced"

In 5.5.1 Limit States, General we read – Prestressed concrete structural components shall be investigated for stresses and deformations for each stage that may be critical during construction.....  
We read that to be Stage 1  
What is critical – we know the one thing for sure that's NOT critical here is that we don't have an HL93 load combination during stage 1 construction. This is what BRASS is checking right now – this is wrong.  
Puckett and Barker's book completely ignores this for stage one.

The change I see in 5.4 beta 7 is that we don't call this a "Failed" spec any more, we call it "Not Satisfied". The KDOT looks at it and the way the text referenced above looks at it – is not failed nor not satisfied – it simply shouldn't be checked.

FROM:dteal DATE:Friday, June 09, 2006 8:41:51 AM  
AASHTO Deleted 5.7.3.3.1 from the Spec in the '06 Interims

FROM:dteal DATE:Thursday, June 15, 2006 8:45:42 AM  
What would be nice: If you could set the default to ignore this spec and force the user to turn it back on if they wanted to check this on earlier designed structure.

FROM:dteal DATE:Thursday, June 15, 2006 8:57:22 AM

1/5/2016 11:07:31 AM

HRS AASHTO

193

Complete Issue Information

See VI 7356

FROM:bgoodrich DATE:Wednesday, July 25, 2007 1:35:47 PM  
AASHTO LRFD 5.7.3.3.1 has been removed from BRASS-GIRDER(LRFD) 2.0.0. This will no longer be an issue for Opis 5.6 and higher.

FROM:dteal DATE:Wednesday, November 07, 2007 12:26:54 PM

|                                         |
|-----------------------------------------|
| Issue ID: 6153                          |
| Subject: P/S Positive moment connection |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Kemna, Darren         | 3/14/2005 8:52:21 PM |
| Modified By: administrator          | 6/19/2008 4:20:19 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Monday, March 14, 2005 4:52:21 PM  
The release notes say that P/S steel can now be used for the positive moment connection, but I find no evidence that this is true. I have looked through the help, input screens, etc...yet I cannot find anything referring to P/S steel extension into the diaphragm. If incident 4683 was listed then maybe I could find specific information to help guide me. Is it available for something other than P/S-I girders?

FROM:kkennelly DATE:3/17/2005 10:32:57 AM

FROM:kkennelly DATE:3/17/2005 1:20:37 PM  
The subject description for Incident 4683 is misleading as to what was actually implemented. When

1/5/2016 11:07:31 AM

HRS AASHTO

194

### Complete Issue Information

the incident was first submitted by a user, the request was for the ability to extend strands and have them considered for the positive moment connection. After some discussion, it was determined that instead of having the user enter data for extending the strands, the BRASS LRF D program would just be given an option to ignore the positive moment at a support. In previous versions, a fake amount of rebar had been generated by the export to BRASSLRFD when the user checked the "ignore positive moment at supports in ratings" on the Continuity Diaphragm tab. Now instead of generating the fake amount of rebar, the BRASS LRF D program doesn't rate for positive moment at all when the "Ignore positive moment at supports in ratings" checkbox is checked in Opis.

So the user cannot extend the strands for positive moment as the name of the incident implies.

|                                     |
|-------------------------------------|
| Issue ID: 6182                      |
| Subject: Ignore Postive moment..... |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 3/18/2005 8:23:23 PM |
| Modified By: administrator          | 6/19/2008 4:20:17 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Ihnat, Joseph    | Assigned |          |          |
| Kennelly, Krisha |          |          |          |
| Goodrich, Brian  | Resolved |          |          |
| Goodrich, Brian  | Resolved | High     | Bug      |

## Complete Issue Information

### Contacts

| Name    | Company                                | Email 1                 | Phone 1      |
|---------|----------------------------------------|-------------------------|--------------|
| Binh Ha | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us | 617-973-7561 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6204.15131 | Duplicate     | Section properties of PS beams |

### Description

FROM:dkemna DATE:Friday, March 18, 2005 4:23:23 PM

I have attached a file. In my last incident a discussion involved the "Ignore positive moment at supports in ratings" checkbox in OPIS. Is this box only activated in new files or am i missing something. The attached file was created in 5.0 and the option is inactive. Was this a Virtis enhancement only?

FROM:kkennelly DATE:3/21/2005 8:52:58 AM

Looks like we missed enabling this check box for Opis.

For 5.3:

1. Enable the "Ignore positive moment at supports in ratings" on the Beam Details: Continuity Diaphragm Reinf. tab.
2. Revise Virtis help which says this box is only enabled for Virtis.
3. Revise BRASS LRFD engine help which still says fake amount of rebar is generated.

Joe-1, Krisha-2, Brian - 3.

FROM:jihnat DATE:3/21/2005 12:47:31 PM

#1 is done for Beta 6

FROM:kkennelly DATE:3/22/2005 8:36:37 AM

#2 is done for Beta 6.

FROM:bgoodrich DATE:Wednesday, April 06, 2005 11:41:12 AM

#3 is done. The new help files are uploaded to:  
Incoming/Virtis/BrassEngineHelps-20050406.zip

|                                         |
|-----------------------------------------|
| Issue ID: 6204                          |
| Subject: Section properties of PS beams |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center/Opis |
|-------------------------------------|

1/5/2016 11:07:32 AM

HRS AASHTO

196

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Ha, Binh      | 3/23/2005 4:28:34 PM |
| Modified By: administrator  | 6/19/2008 4:20:16 PM |
| Priority: High              |                      |
| Category: Enhance BRASS     |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 6237.15098 | Suspended     | Mild steel and prestressed strand in a P/S Bulb Tee |

### Description

FROM:bha DATE:Wednesday, March 23, 2005 12:28:34 PM

Two year ago we requested an enhancement of PS beam section properties in incident 4443. But now we have to repeat this request again because our bridge unit is on the process of fulfillment of LRFD Implementation plan with more than 60% of bridge projects designed with LRFD method using Opis as a main program for design and analysis. So that the accurate requirements of beam elements are high which one of them is the section properties.

Like other commercial programs such as CONSPAN (Leap Software)in which the programmers provide two options for section properties: 1. by User input 2. by Dimensions (input)(we prefer to use option 1). It is very convenience and simple and this task is not a big deal for programming.

The bottom line is (in our opinion) if Virtis/Opis could not fix this problem we rather use other software for LRFD design and analysis. Please consider our requested enhancement as a very high priority.

FROM:jduray DATE:4/6/2005 7:57:27 AM

1/5/2016 11:07:32 AM

HRS AASHTO

197

## Complete Issue Information

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 6237                                               |
| Subject: Mild steel and prestressed strand in a P/S Bulb Tee |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Horton, Doug          | 3/29/2005 11:59:19 AM |
| Modified By: administrator          | 6/19/2008 4:20:13 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dhorton DATE:Tuesday, March 29, 2005 7:59:19 AM

VDOT often uses a combination of mild steel and prestressed strands in bulb tees. In working with OPIS, our designers did not see a way to incorporate both into the design. Can OPIS handle both or do we have to "fake it out" in some manner using all prestressed strands?

P.S. If this is not the forum for this question, please let us know.

FROM:kkennelly DATE:4/1/2005 7:53:04 AM

Opis does not support mild steel in prestress beams. This was previously submitted in incident 2363

1/5/2016 11:07:33 AM

HRS AASHTO

198

Complete Issue Information

but the user group hasn't voted to have it implemented.

Issue ID: 6239  
Subject: BRASS LRFD Calculated and Used the Wrong Dist. Factor

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 3/29/2005 4:01:50 PM  
Modified By: administrator 6/19/2008 4:20:13 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
|                 | Resubmit |          |             |
|                 | Assigned |          |             |



Complete Issue Information

|                  |          |      |           |
|------------------|----------|------|-----------|
|                  | Resolved |      |           |
|                  | Resubmit |      |           |
| Duray, Jim       | New      | High | Bug       |
| Kennelly, Krisha | Assigned |      |           |
|                  | Resolved |      | Education |
| Kennelly, Krisha | Resolved | High | Education |

Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Slab.bbd            |             |

Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 6311.15024 | Resolved      | Slab Superstructure Dead Loads |

Description

FROM:dteal DATE:Tuesday, March 29, 2005 12:01:50 PM  
 An Opis analysis on the attached bbd file for member #2. This is an Inverted Prestressed Tee with 17 girder lines spaced 675 mm apart. The problem is with the LRFD distribution factors (Virtis LFD distribution factors of S/5.5 are okay). With only a 675 mm girder spacing the values BRASS computes are in error. As you can see from the page below, cut out of the BRASS Load distribution file, that the range of applicability for the beam spacing "S" has failed. At this point the analysis should not have run. But BRASS went ahead and used the "Failed" value in the equation and calculated an erroneous distribution factor. According to AASHTO, when the girder spacing is less than 1100 mm (3.5 ft) a more refined analysis complying with Article 4.6.3 should be used.

\*\*\*\*\*

Span No. 3: Moment

Start Distance: 4377.544 mm  
 End Distance : 14150.000 mm

Location of Section Properties: 65.468% along Span No. 3

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS  
 Reference: AASHTO LRFD 4.6.2.2.1-1

Input Parameters:

Complete Issue Information

n = 1.354  
A = 163100.000 mm^2  
eg = 466.547 mm  
I = 4978.143E+6 mm^4

Kg Summary:

Kg = n (I + A eg^2) = 54815485952.00 mm^4

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS

Method: AASHTO LRFD Table 4.6.2.2b-1

Moment in Interior Beams: (a, e, k, i, j)

Input Parameters:

S = 675.000 mm ts = 150.000 mm  
L = 14150.000 mm Kg = 0.548155E+11 mm^4  
Nb = 17

Ranges of Applicability:

1100.0 <= S <= 4900.0 110.0 <= ts <= 300.0 6000.0 <= L <= 73000.0

Result Code: FAIL Result Code: PASS Result Code: PASS

0.400000E+10 <= Kg <= 0.300000E+13 Nb >= 4

Result Code: PASS Result Code: PASS

Distribution Factors Summary:

0.4 0.3 0.1  
mg(1) = 0.060 + (S / 4300.0) (S / L) (Kg / ( 1.0 L ts^3)) = 0.254  
0.6 0.2 0.1  
mg(M) = 0.075 + (S / 2900.0) (S / L) (Kg / ( 1.0 L ts^3)) = 0.305  
\*\*\*\*\*

FROM:jduray DATE:4/13/2005 12:34:31 PM

BRASS should stop the analysis when this situation is detected. The export should check for this, issue a message to the user to input distribution factors and stop the analysis.

FROM:bgoodrich DATE:Wednesday, April 13, 2005 12:55:08 PM

BRASS does calculate the distribution factor using the LRFD formula even if all the ranges of applicability for spacing, span length, etc. are not met. This is done just to show the user what the distribution factor would have been. However, if you review the "LIVE LOAD DISTRIBUTION FACTORS SUMMARY" in the main output file, you will see that the distribution from the "Lever Rule Override" (LR-O) was actually used. A note after the summary states: "The Lever Rule Override is invoked when the ranges of applicability are not satisfied for the AASHTO LRFD distribution factor formulas." If the user does not agree with the lever rule distribution factors, the distribution factors can be entered manually.

FROM:dteal DATE:Wednesday, April 13, 2005 4:53:14 PM

In this case it didn't do the lever rule! It entered the wrong distribution factor.

FROM:dteal DATE:Thursday, April 14, 2005 3:52:42 PM

Using the lever rule would have been correct -

## Complete Issue Information

FROM:dteal DATE:Monday, April 18, 2005 2:12:19 PM

From what I understand from the BRASS distribution file, BRASS told Virtis to use 0.245 for single lane and 0.305 for multi lane distribution factors. These are wrong!

Lever Rule for a multi lane is  $S/5.5$  and in this case would give a Dist Factor of 0.201 not the 0.305 that was passed on to Virtis.

Note: The  $S/5.5$  has to be divided by 2 to change 2 wheel lines to one.

In the "Load Distribution File" under Distribution factors Summary - the values shown are not values derived from the lever rule – they are values that were calculated from the numbers obtained from the Failed Results of the Ranges Applicability.

I searched this file to find references that you mentioned – "Lever Rule", "LR-O", "Override" – none where found.

You said that there is a note after the summary stating "The Lever Rule Override is invoked when the ranges of applicability are not satisfied for the AASHTO LRFD distribution factor formulas." – there is no note???

It is clearly stated - Result Code: FAIL for Ranges of Applicability and it's clear that it uses these failed values.

FROM:bgoodrich DATE:Friday, April 22, 2005 12:08:49 PM

The MAIN output shows the summary that I noted in previous statements. I did find a bug in the engine in which warnings were not being written to the intermediate output file when the range checks were not satisfied. The code was there, but it was just not being executed. I have fixed this in BRASS-GIRDER(LRFD) 1.6.1, which should be released with Opis 5.3 SP1.

FROM:dteal DATE:Tuesday, June 28, 2005 3:17:26 PM

I think we have to change what we are doing here. We have determined that when girder spacing is small (less than 3.5 feet) a more refined analysis must be used complying with Article 4.6.3 – this DOESN'T SAY when  $S$  less than 3.5 feet that we should use the lever rule. A more refined analysis does not mean to blindly use the lever rule – I was wrong when I said that earlier.

In this example, girder spacing is about 2.2 feet center to center. The lever rule is only distributing to one girder. The girder spacing is so close here that the adjacent girder should be helping out and getting some load. Therefore – the lever rule is not applicable and will result in loads to the one girder far greater than they should be.

I think the only solution here is that when the ranges of applicability get a failed result code for girder spacing – the Opis analysis should stop at that point and put an error message on the screen telling the user that a more refined analysis for distribution factors is required and must be enter by the engineer (not blindly computed for them).

This "stopping" of the analysis would be the only way that we can force the engineer to enter more realistic distribution factors.

Complete Issue Information

FROM:bgoodrich DATE:Monday, July 11, 2005 9:20:32 AM  
I have forwarded this issue to WYDOT for consideration.

FROM:bgoodrich DATE:Wednesday, July 13, 2005 1:57:37 PM  
WYDOT has decided that a warning message will be added to the main output file to more prominently indicate when the lever rule override is used. The analysis will not be halted when the distribution factor formula ranges of applicability are not satisfied. WYDOT assigned this issue to BRASS Problem Log 608.

FROM:bgoodrich DATE:Saturday, August 27, 2005 9:31:24 PM  
A warning has been added to the main output file. Fixed for version 5.4.0.

FROM:dteal DATE:Tuesday, October 25, 2005 10:13:01 AM  
The average user is not going to look at the BRASS output file unless they have reason to. The average user will assume that the DF's have been calculated correctly. User needs to be warned in the GUI before the analysis begins then.

FROM:jduray DATE:10/26/2005 9:15:02 AM  
Resubmitted on behalf of Dean Teal.

FROM:bgoodrich DATE:Friday, November 11, 2005 12:05:02 PM  
The distribution factor calculations are performed within the BRASS engine, so the analysis must be performed. Therefore, it is not possible, given the current implementation, for the GUI to issue a warning prior to analysis. I have a possible solution that I will discuss with the development team.

FROM:dteal DATE:Tuesday, December 06, 2005 2:00:50 PM  
One solution – have the export check the girder spacing. If the girder spacing is less than 3.5 feet and the LRFD Dist. Factor fields are empty then stop the export leaving a message telling the user they need to enter values.  
This isn't just for BRASS – I would assume this would be for all engines.

FROM:bgoodrich DATE:Monday, February 13, 2006 11:44:21 AM  
We have added Incident 6906 for adding a mechanism for engines to send messages back to the Virtis/Opis GUI for display to the user. This is the solution mentioned in the 11/11/2005 comments above.

FROM:dteal DATE:Wednesday, March 08, 2006 3:42:43 PM  
I think we are asking too much of the user to go dig this info out of a text file buried in there drive.

FROM:dteal DATE:Wednesday, November 07, 2007 12:31:24 PM  
I don't think this is resolved

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 6311<br>Subject: Slab Superstructure Dead Loads |
|-----------------------------------------------------------|

|                                                                          |
|--------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis<br>Primary Contact: Kennelly, Krisha |
|--------------------------------------------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Submitted By: Kemna, Darren | 4/14/2005 8:48:39 PM |
| Modified By: administrator  | 6/19/2008 4:20:08 PM |
| Priority: High              |                      |
| Category: Education         |                      |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug - Export 1 |
|                 |          | Urgent   |                |
|                 | Resolved |          | Education      |
|                 | Assigned |          |                |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | Urgent   | Bug            |
|                 |          |          | Bug            |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                          |
|------------|---------------|------------------------------------------------------------------|
| 6312.15023 | Resolved      | Account for dead load due to sacrificial wear thickness on slabs |

### Description

FROM:dkemna DATE:Thursday, April 14, 2005 4:48:39 PM

I am analyzing a solid slab superstructure. When the "Consider effective slab thickness for design" is selected in the Analysis tab of the Girder Line Superstructure Definition window the effective slab depth is used for dead load calculations. The total depth entered in the Web tab of the Girder Profile window should be used or the option should be given. I determined this by analyzing the moments output by the program as I cannot find where the linear girder weight load is displayed. If I am in error please let me know.

Complete Issue Information

FROM:dkemna DATE:Thursday, April 14, 2005 4:57:22 PM

The workaround is simple, but I thought this might be difficult to catch for users especially if a frame definition is utilized. I don't believe this is addressed in the help?

FROM:kkennelly DATE:4/15/2005 10:33:10 AM

There are additional input commands generated that account for the dead load due to the sacrificial wear thickness. They are:

COMMENT DL1 - Additional Slab

LOAD-DEAD-DESCR 3, DC, 1, DL1 - Additional Slab

LOAD-DEAD-UNIFORM 3, 1, 0.000, 0.039750, 393.701, 0.039750

LOAD-DEAD-UNIFORM 3, 2, 0.000, 0.039750, 393.701, 0.039750

LOAD-DEAD-UNIFORM 3, 3, 0.000, 0.039750, 393.701, 0.039750

The self weight of the slab can be found by searching for "Self-Load Summary" in the BRASS LRFD output file. This will be the dead load of the slab due to the effective slab thickness.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 6312                                                            |
| Subject: Account for dead load due to sacrificial wear thickness on slabs |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kennelly, Krisha      | 4/15/2005 2:41:55 PM |
| Modified By: administrator          | 6/19/2008 4:20:08 PM |
| Priority: Urgent                    |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:4/15/2005 10:33:42 AM

Found as a result of investigating 6311. See bbd file attached to that incident.

Complete Issue Information

Run Slab Schedule mbr alt using the "Consider eff slab thickness for design" not checked. BRASS LRFD input file has the total slab thickness in the Span-General Segment command which is good. However it has the following commands for the 1" sacrificial wearing thickness:

COMMENT DL1 - Additional Slab  
LOAD-DEAD-DESCR 3, DC, 1, DL1 - Additional Slab  
LOAD-DEAD-UNIFORM 3, 1, 0.000, 0.039750, 393.701, 0.039750  
LOAD-DEAD-UNIFORM 3, 2, 0.000, 0.039750, 393.701, 0.039750  
LOAD-DEAD-UNIFORM 3, 3, 0.000, 0.039750, 393.701, 0.039750

Since the dead load is being based on the total slab thickness in the Span General Segment command, we shouldn't add the additional slab.

FROM:dkemna DATE:Friday, April 15, 2005 2:19:30 PM

I believe the "Additional Slab" load that you are referring to is due to my input in the Member Loads window. I had to create it because OPIS/BRASS only uses the effective slab (when checked) in determining the girder weight. I also noticed that the reinforcement distance from top of slab are being measured from the 1" worn surface, thus putting all the marks an 1" below their desired location. Since a total thickness is input the reinforcement distances should be measured from the original top of slab location. Weight should also be calculated from the total thickness entered.

FROM:bgoodrich DATE:Monday, April 18, 2005 5:04:19 PM

User-defined member loads are assigned to the user's "DL1 - Additional Slab" load case as Mr. Kemna indicated. Therefore, there is not an error with the export process. The help topic for the reinforcement states: "Top of slab is the top of the effective slab thickness." This input method was used so the rebar did not have to be repositioned when the "Consider effective slab thickness for rating/design" was changed. The sacrificial wear thickness is not automatically applied as an additional weight because the Girder Line option was used to define the structure definition. The Girder System structure definition would have performed this calculation automatically.

FROM:kkennelly DATE:4/21/2005 9:28:28 AM

Why can't we compute the extra dead load due to the sacrificial wear thickness? Does the engine help tell the user we don't compute the extra dead load due to sacrificial wear?

FROM:bgoodrich DATE:Thursday, May 12, 2005 1:25:36 PM

After reviewing the export, the selfweight due to the difference between the actual and effective thicknesses for I- and Tee-beams is calculated. So you are correct that this should also be done for the slab-beams. I revised the export to address this issue. Fixed for 5.3 SP1.

Issue ID: 6357

Subject: PS Beam Volume/Surface and Half Depth areas not computed correctly

Folder: /Virtis/Support Center/Opis

Primary Contact: Ordoobadi, Mehrdad

1/5/2016 11:07:34 AM

HRS AASHTO

206

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Submitted By: Kennelly, Krisha | 4/28/2005 5:12:52 PM |
| Modified By: administrator     | 6/19/2008 4:20:05 PM |
| Priority: High                 |                      |
| Category: Bug - GUI 2          |                      |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug - BRASS |
|                 | Information Needed |          |             |
|                 | Resolved           |          |             |
| Goodrich, Brian | Resolved           | High     | Bug - BRASS |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier                      | Description |
|------|------------------------------------------|-------------|
|      | SR35 over US 11E in Greene<br>County.bbd |             |

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 6358.14977 | Resolved      | Tensile problem in prestressed beam output |

### Description

FROM:kkennelly DATE:4/28/2005 1:08:14 PM  
Submitted on behalf of Adam Price, TNDOT via email:

...On both files, I did notice that for the beam properties, the Volume/Surface ratio was slightly lower than that given in Table 2.5.7.1-3 of the PCI Bridge Design Manual 2nd Edition. Also, the two half depth areas did not add up to the total beam area. ...

Thank you,  
Adam Price  
Tennessee Department of Transportation - Structures Division  
615-741-6362

1/5/2016 11:07:34 AM

HRS AASHTO

207



Complete Issue Information

FROM:jduray DATE:10/27/2005 3:11:18 PM  
The analysis engines do not use the properties.

FROM:mordoobadi DATE:9/6/2006 10:35:20 AM  
Calculation of Volume/Surface Ratio corrected. (5.5 Beta 4)

|                                                     |
|-----------------------------------------------------|
| Issue ID: 6358                                      |
| Subject: Tensile problem in prestressed beam output |

|                                                     |
|-----------------------------------------------------|
| Folder: /Virtis/Support Center/Opis                 |
| Primary Contact: Goodrich, Brian                    |
| Submitted By: Kennelly, Krisha 4/28/2005 5:14:49 PM |
| Modified By: administrator 6/19/2008 4:20:04 PM     |
| Priority: High                                      |
| Category: Bug - BRASS                               |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:4/28/2005 1:11:49 PM  
Submitted on behalf of Adam Price, TNDOT via email:

Here are the two Opis files I was telling you about. For both files, G2 is the only girder defined, and the others are linked to it. Run these files using the HL 93 Design Review template. For the specification check, filter out the following: Pass, Not Applicable, Computation, Not Checked, 5.8.3.5, and 5.8.4. Ignor the results for stage one. ...

...In the file sr35 over us11e, I noticed the following: With the current strand pattern for span 1, the middle tenth points of span 2 have tensile problems. If I use a different strand pattern in span 1, then

Complete Issue Information

the middle of span 2 is OK. The different strand pattern is 10 strands in row 1, 4 strands in row 3, 2 strands in row 7, and 2 strands each in rows 11, 12, 13, and 14. There are no bond breaks with this pattern.

Why is this happening?

Thank you,  
Adam Price  
Tennessee Department of Transportation - Structures Division  
615-741-6362  
Adam.Price@state.tn.us

FROM:kkennelly DATE:4/28/2005 1:14:00 PM  
sr35 over us11e.bbd is attached to incident 6357.

FROM:bgoodrich DATE:Thursday, May 12, 2005 11:16:07 AM  
I ran "sr35 over us11e.bbd" as-is and with the change to the strand pattern in span 1. I get the same Service III tensile stress failures in span 2 regardless. Please make a copy of your member alternative with the revised strand pattern just to make sure I input it as you described, and then attach a revised BBD file. Also, attach the intermediate output file for the 205 POI (63\_\_BULB-TEE\_BEAM (205.000).OUT) for both member alternatives. This file contains the information displayed in the spec check viewer in Opis.

FROM:bgoodrich DATE:Monday, May 16, 2005 5:03:48 PM  
I was able to reproduce the issue with the attached file. This issue is a bug in the BRASS-GIRDER (LRFD) engine released with Opis 5.0. However, the issue was corrected in a subsequent release. Opis 5.2 or 5.3 contains a new BRASS-GIRDER(LRFD) DLL with this fix.

Issue ID: 6359  
Subject: dp computed by BRASS LRFD

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Kennelly, Krisha 4/28/2005 5:18:14 PM  
Modified By: administrator 6/19/2008 4:20:04 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

Complete Issue Information

|                 |          |      |             |
|-----------------|----------|------|-------------|
| Goodrich, Brian | Resolved | High | Bug - BRASS |
|-----------------|----------|------|-------------|

Contacts

| Name         | Company      | Email 1                        | Phone 1      |
|--------------|--------------|--------------------------------|--------------|
| Darren Kemna | Missouri DOT | kemnad1@mail.modot.state.mo.us | 573-526-3030 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Slab_Steel.bbd      |             |

Tasks

| Name       | Current State | Summary                                              |
|------------|---------------|------------------------------------------------------|
| 6369.14966 | Resolved      | Reinforcement entry causes member to be unexecutable |

Description

FROM:kkennelly DATE:4/28/2005 1:16:06 PM  
 Submitted on behalf of Adam Price, TNDOT via email:

For sr37 over doe river, I did notice one problem with the ductility check in the negative moment region. For the specification check on this bridge, you can also filter out design ratio and rating factor. For stage 3, the only two failures will be two ductility failures in span 2. The reported dp is 21.915 inches. This doesn't make sense because the highest strand is only 14 inches from the bottom of the beam. Where is this number coming from?

Thank you,  
 Adam Price  
 Tennessee Department of Transportation - Structures Division  
 615-741-6362

FROM:kkennelly DATE:4/28/2005 1:17:44 PM  
 bbd file is attached to incident 6357

FROM:bgoodrich DATE:Thursday, May 12, 2005 9:14:35 AM  
 I was able to duplicate the problem with the latest version of BRASS. I have forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Friday, May 13, 2005 1:38:31 PM  
 WYDOT has assigned this issue to BRASS Problem Log 600.

FROM:bgoodrich DATE:Sunday, October 02, 2005 10:11:51 PM  
 This issue has been addressed in the BRASS engine. Fixed for version 5.4.0.

|                |
|----------------|
| Issue ID: 6369 |
|----------------|

### Complete Issue Information

|                                                               |                      |
|---------------------------------------------------------------|----------------------|
| Subject: Reinforcement entry causes member to be unexecutable |                      |
| Folder: /Virtis/Support Center/Opis                           |                      |
| Primary Contact: Kennelly, Krishna                            |                      |
| Submitted By: Kemna, Darren                                   | 5/2/2005 6:21:34 PM  |
| Modified By: administrator                                    | 6/19/2008 4:20:04 PM |
| Priority: Urgent                                              |                      |
| Category: Bug                                                 |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Bug      |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Slab_Steel_2.bbd     |             |
|      | v53_slab_steel_2.bbd |             |

### Tasks

| Name       | Current State | Summary                                                 |
|------------|---------------|---------------------------------------------------------|
| 6394.14941 | Resolved      | Spek Check Execution Error in R/C Slab using POI Wizard |

### Description

FROM:dkemna DATE:Monday, May 02, 2005 2:21:35 PM

Attached is my file for a 3-span solid slab superstructure. I have many entries into the Reinforcement tab of the "Slab Schedule Full Bar Lengths" member. The member will run until I put in the last entry (Edge #8 Bottom). I am only attempting to run that specific member with the HL-93 template. I had noticed this error before when entering bars that overhang the end bearings. What is causing this execution error? The error is reported as follows.

1/5/2016 11:07:36 AM

HRS AASHTO

211

Complete Issue Information

Error converting Virtis/Opis R/C schedules to 'general' cross sections!  
01:19:06 PM - Line 8007 in source file .\EngineExport.cpp.

Unknown exception in the Analysis Module.  
01:19:06 PM - Line 8006 in source file .\EngineExport.cpp.

FROM:jduray DATE:5/3/2005 8:24:12 AM

FROM:dkemna DATE:Tuesday, May 03, 2005 10:12:55 AM  
Has this error been fixed for 5.3. My problem is very similar to Incident 6013 except I am only using straight bars.

FROM:kkennelly DATE:5/3/2005 10:41:23 AM  
No this error has not been fixed for 5.3. I'm trying to find a work around for you.

FROM:kkennelly DATE:5/3/2005 12:53:01 PM  
I'm not able to find a work around. We're going to have to issue a service pack to fix this.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 6394                                                   |
| Subject: Spek Check Execution Error in R/C Slab using POI Wizard |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 5/5/2005 1:55:59 PM  |
| Modified By: administrator          | 6/19/2008 4:20:02 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

1/5/2016 11:07:36 AM

HRS AASHTO

212

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Thursday, May 05, 2005 9:55:59 AM

Same bridge as my last incident report. I stumbled upon the R/C POI Wizard and attempted to run my member with all the generated POI's. First an execution error occurs as the last POI generated is "Span 0 - 99.03958". After I delete the last POI it runs fine until the spec checks occur and another execution error occurs telling me that the effective web width cannot be 0. The file runs fine using tenth points alone. Any ideas? Too many points generated?

Use the attached file. To replicate both errors select the "Slab Schedule Full Bar Lengths" member and generate all POI's using the wizard. Delete last POI and run to get the second error. HL-93 Design Review.

----- Contents of BRASS Error File -----

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

File: d:\AASHTOWARE\VirtisOpis52\Copy\_of\_A6129\Superstructure\_Definition\_1  
\Continuous\_Solid\_Slab\Slab\_Schedule\_Full\_Bar\_Lengths\BRASS\_LRFD\Slab\_Schedule\_Full\_Bar\_L  
engths.ERR

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

Fatal Error Encountered - Unexpected Termination

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

Data File: d:\AASHTOWARE\VirtisOpis52\Copy\_of\_A6129\Superstructure\_Definition\_1  
\Continuous\_Solid\_Slab\Slab\_Schedule\_Full\_Bar\_Lengths\BRASS\_LRFD\Slab\_Schedule\_Full\_Bar\_L  
engths.DAT

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

-----

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

Error No.: 3340

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

Type : Section Analysis or Spec. Check Error

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

Location : ComprFieldControl.f90

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

The effective web width (bv) cannot be zero. This causes a divide-by-zero error in the compression

Complete Issue Information

field computations.  
09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

----- End of Contents of BRASS Error File -----  
09:04:42 AM - Line 1993 in source file .\AbxBrassEngine.cpp.

FROM:dkemna DATE:Thursday, May 05, 2005 10:15:31 AM  
Note: My tolerances are 0.01',0.125"

FROM:kkennelly DATE:5/9/2005 12:29:57 PM  
I analyzed member "Slab Schedule Full Bar Lengths" and I get the same behavior. I can work on the problem of the Opis RC POI wizard generating that last poi at span 0. Brian, can you look into the error message returned by BRASS when you run BRASS LRFD after you delete that poi?

FROM:kkennelly DATE:5/9/2005 2:36:27 PM  
I've fixed the RC POI wizard for 5.3 SP1.

FROM:bgoodrich DATE:Wednesday, May 11, 2005 7:13:08 PM  
I was able to duplicate the error with BRASS-GIRDER(LRFD) 1.6.0. However, the error does not occur in the current beta version. Modifications were made to address POI that were close to each other, which is identical to this issue. Fixed for 5.3 SP1.

Issue ID: 6422  
Subject: What do the brace point warnings mean in BRASS output file?

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Goodrich, Brian 5/16/2005 5:28:47 PM  
Modified By: administrator 6/19/2008 4:20:00 PM  
Priority: Medium  
Category: Education

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | Medium   | Education |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          |           |
| Goodrich, Brian | Resolved | Medium   | Education |

## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | C-683 WB.bbd        |             |

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 6451.14884 | Resolved      | BRASS LRFD spec check of trans stiffener at bearing stiffener location |

### Description

FROM:bgoodrich DATE:Monday, May 16, 2005 1:28:47 PM  
Submitted for Andrea Wargula (Baker in SLC):

What do the brace point warnings mean in BRASS output file?

- \*\* WARNING: The distance to the RIGHT bracing point for analysis point 110.00 is NOT located on the same span as the analysis point. Review input carefully.
- \*\* WARNING: The distance to the LEFT bracing point for analysis point 200.00 is NOT located on the same span as the analysis point. Review input carefully.
- \*\* WARNING: The distance to the RIGHT bracing point for analysis point 210.00 is NOT located on the same span as the analysis point. Review input carefully.
- \*\* WARNING: The distance to the LEFT bracing point for analysis point 300.00 is NOT located on the same span as the analysis point. Review input carefully.
- \*\* WARNING: The distance to the RIGHT bracing point for analysis point 310.00 is NOT located on the same span as the analysis point. Review input carefully.
- \*\* WARNING: The distance to the LEFT bracing point for analysis point 400.00 is NOT located on the same span as the analysis point. Review input carefully.

FROM:bgoodrich DATE:Monday, May 16, 2005 1:30:59 PM

The warnings identify points of interest for which the bracing was not intended to extend into the next span, i.e., inputting a cross frame at or near a support was missed. The warning is general and is printed even for interior support points of interest. For these points, there is no problem.

1/5/2016 11:07:37 AM

HRS AASHTO

215



Complete Issue Information

FROM: bgoodrich DATE: Monday, May 16, 2005 1:34:19 PM  
 I contacted the user by phone and she was satisfied with the explanation.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 6451                                                                  |
| Subject: BRASS LRFD spec check of trans stiffener at bearing stiffener location |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kennelly, Krisha      | 5/23/2005 7:20:46 PM |
| Modified By: administrator          | 6/19/2008 4:19:57 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
| Goodrich, Brian | Resolved | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: kkennelly DATE: 5/23/2005 3:19:56 PM  
 Submitted on behalf of Andrea Wargula, Baker Salt Lake City:

attached is a file.... i'm sure the brg stiffs and intermed stiffs are located in the correct place... when i run opis and look at the code checks for stage 3 at the support (x = 240.0 ft) there is a moment of inertia check for stiffs... the check is using the intermed stiff dims and not the bearing stiff dims (it should be using brg stiff dims).....check it out.  
 thanks

1/5/2016 11:07:37 AM

HRS AASHTO

216

Complete Issue Information

andy

FROM:kkennelly DATE:5/23/2005 3:23:19 PM

Response sent via email:

Hi Andy,

I've entered your problem as incident 6451 on the Virtis/Opis Technical Support website. I am not sure why that transverse stiffener spec check is being performed at the Support 2 location. Someone more familiar with BRASS LRFD will have to look into this problem.

Krishna

FROM:bgoodrich DATE:Tuesday, May 31, 2005 3:00:18 PM

BRASS performs checks for both bearing and transverse stiffeners at support points of interest. The transverse stiffener schedules exported to BRASS are generated independently of the bearing stiffeners. When the stiffeners at the ends of a range are different, the stiffener with the smallest area is exported. BRASS does not know the transverse stiffener at a finite location, but rather it knows the critical transverse stiffener over a range in which the point of interest is located. The solution to your issue is to use the point of interest overrides, which were provided to address this very issue. Add a POI at each support and override the transverse stiffeners schedule to use the dimensions you supply. Note that these schedule overrides only work from Opis.

Issue ID: 6498  
Subject: Stirrup schedule error in Opis

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Armbrecht, Tim 6/13/2005 2:34:08 PM  
Modified By: administrator 6/19/2008 4:19:54 PM  
Priority: High  
Category: Bug

History

| Primary Contact   | Status             | Priority | Category |
|-------------------|--------------------|----------|----------|
| Duray, Jim        | New                | High     | Bug      |
| Kennelly, Krishna | Assigned           |          |          |
|                   | Information Needed |          |          |
|                   | Assigned           |          |          |
| Goodrich, Brian   | Information Needed |          |          |
|                   | Assigned           |          |          |
|                   | Resolved           |          |          |

1/5/2016 11:07:37 AM

HRS AASHTO

217

Complete Issue Information

|                 |                    |      |     |
|-----------------|--------------------|------|-----|
| Goodrich, Brian | Resolved           | High | Bug |
| Duray, Jim      | New                | High | Bug |
| Goodrich, Brian | Assigned           |      |     |
|                 | Information Needed |      |     |
|                 | Duplicate          |      |     |
|                 | Closed             |      |     |
| Goodrich, Brian | Closed             | High | Bug |

Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | SGB Test Bridge_Fixed.bbd |             |
|      | SGB Test Bridge.bbd       |             |

Tasks

| Name       | Current State | Summary           |
|------------|---------------|-------------------|
| 6516.14819 | Closed        | Analysis Settings |

Description

FROM:tarmbrecht DATE:Monday, June 13, 2005 10:34:08 AM

File attached. When attempting to run under Opus w/a HL93 truck, the following error occurs...

----- Contents of BRASS Error File -----

File: C:\Program  
Files\AASHTOWARE\VirtisOpis53\0070024-DAB\_TES\1-Span\_PSI\3\_-\_2nd\_E\_Int\54\_\_PS\_I-  
Beam\BRASS\_LRFD\54\_\_PS\_I-Beam.ERR  
Fatal Error Encountered - Unexpected Termination  
Data File: C:\Program  
Files\AASHTOWARE\VirtisOpis53\0070024-DAB\_TES\1-Span\_PSI\3\_-\_2nd\_E\_Int\54\_\_PS\_I-  
Beam\BRASS\_LRFD\54\_\_PS\_I-Beam.DAT

-----  
Error No.: 1707  
Type : Input Error  
Location : Data File

1/5/2016 11:07:37 AM

HRS AASHTO

218

Complete Issue Information

\*\* ERROR: Parameter 4 on the STIRRUP-SCHEDULE command must be greater than zero.

-----  
Error No.: 1004  
Type : Input Error  
Location : Data File

\*\* ERROR: One or more input errors occurred. Please see the output file for detailed error description(s).  
----- End of Contents of BRASS Error File -----

followed by...

Input Errors (1004) - Input error occurred - See output file for details  
09:07:57 AM - Line 2349 in source file .\DoMemberResults.cpp.

Input Errors (1707) - Real parameter must be greater than zero  
09:07:57 AM - Line 2349 in source file .\DoMemberResults.cpp.

FROM:kkennelly DATE:6/20/2005 8:31:51 AM  
I can't reproduce this error. What tolerances are you using? Can you attach the 54\_\_PS\_I-Beam.DAT file?

FROM:tambrecht DATE:Wednesday, June 22, 2005 10:15:00 AM

Krishna, the DAT file is attached. Please let me know if you need anything else. Tim

FROM:kkennelly DATE:6/30/2005 8:41:53 AM  
What tolerances are you using?

FROM:kkennelly DATE:7/13/2005 10:45:43 AM  
Tolerances received from Tim:

ft - 0.010000  
in - 0.125000  
m - 0.003048  
mm - 3.17500  
mi - 0.01000  
km - 0.01000

FROM:kkennelly DATE:7/13/2005 10:58:52 AM  
I can reproduce this with these tolerances.

FROM:bgoodrich DATE:Friday, March 03, 2006 4:27:25 PM  
I can reproduce this issue in 5.3 with the specified tolerances. However, 5.4 runs successfully. Addressing Incident 6936 corrected this issue. Fixed for 5.4.

Issue ID: 6516

Subject: Analysis Settings

1/5/2016 11:07:38 AM

HRS AASHTO

219

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 6/16/2005 5:54:19 PM |
| Modified By: administrator          | 6/19/2008 4:19:53 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |
|                 | Closed   |          |          |
| Goodrich, Brian | Closed   | High     | Bug      |

### Contacts

| Name                                     | Company          | Email 1                             | Phone 1      |
|------------------------------------------|------------------|-------------------------------------|--------------|
| Tim Armbrrecht                           | Illinois DOT     | tim.armbrrecht@illinois.gov         | 217-782-6266 |
| Brian Goodrich                           | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Load Rating Engineer<br>Shanon Murgoitio | Idaho DoT        | Shanon.Murgoitio@itd.idaho.<br>gov  | 208-334-8547 |
| Darren Kemna                             | Missouri DOT     | kemnad1@mail.modot.state.<br>mo.us  | 573-526-3030 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PSDBSolidError.bbd  |             |

### Tasks

| Name       | Current State | Summary                                             |
|------------|---------------|-----------------------------------------------------|
| 6524.14811 | Closed        | Solid Prestressed Concrete Slab - see incident 6524 |

### Description

1/5/2016 11:07:38 AM

HRS AASHTO

220

Complete Issue Information

FROM:dteal DATE:Thursday, June 16, 2005 1:54:19 PM

For Stephen G. Burnett:

I have entered a steel rolled beam bridge into Version 0.9.0(Beta Build 10) Build date May 26, 2005. In the Analysis Settings, I have check only Strength I and Service I Limit States for the Intermediate Output. Also, I have checked output for all three stages of construction. After I analyze a superstructure member (G1 or G2) the output is for Strength I and II and Service II. In addition, I only receive output for Stage 2 and 3. I have attached the file for this structure.

FROM:jduray DATE:6/24/2005 8:45:40 AM

I believe this is not related to substructure so I am assigning to the Support Center.

FROM:jduray DATE:6/24/2005 8:47:10 AM

FROM:bgoodrich DATE:Tuesday, July 19, 2005 10:54:35 AM

In the intermediate and final output, I see output for stages 1, 2, and 3. In the intermediate output files and the spec checker, I see output only for Strength I and Service I. Therefore, I am unable to reproduce this issue. Please submit further details, BRASS data and output files, etc.

FROM:bgoodrich DATE:Wednesday, August 24, 2005 2:51:01 PM

This is a duplicate of incident 6593.

FROM:dteal DATE:Monday, February 26, 2007 12:04:34 PM

Accepted

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 6524                                               |
| Subject: Solid Prestressed Concrete Slab - see incident 6524 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Armbrecht, Tim        | 6/22/2005 3:52:56 PM |
| Modified By: administrator          | 6/19/2008 4:19:52 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

---

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 6540.14795 | Closed        | Service Moment Wrong at end of Slab |

### Description

FROM:smample DATE:Monday, December 17, 2007 5:30:01 PM

In June of 2005, incident 6524 reported the need to input a solid prestressed concrete slab section. Are there still plans to add this beam shape? I cannot find the solid section available in Virtis 5.6.

Issue ID: 6540

Subject: Service Moment Wrong at end of Slab

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Submitted By: Teal, Dean

6/28/2005 8:23:40 PM

Modified By: administrator

6/19/2008 4:19:51 PM

1/5/2016 11:07:38 AM

HRS AASHTO

222

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Bug - BRASS |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| George Colgrove |                  | gcolgrove@mbakercorp.com            |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | bug5.gif            |             |

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6592.14743 | Resolved      | Bug with Spec. Check 6.10.10.1.3 |

### Description

FROM:dteal DATE:Tuesday, June 28, 2005 4:23:40 PM

The bridge is a simply-supported, fixed-end, beam-slab. When performing a check of the service stress on the negative moment steel, the moment used for calculation consists of moments from the dead load only. The live load, obviously, applies negative moment to the fixed ends, yet the program does not use this when calculating the service stress on the negative moment steel. It is believed that the service moment is being read only from the "Maximum moment" column, rather than from both the "Maximum moment" and "Minimum moment" columns.

FROM:bgoodrich DATE:Tuesday, July 19, 2005 1:31:01 PM

I was able to reproduce this issue. I will forward it to WYDOT.

FROM:bgoodrich DATE:Wednesday, July 20, 2005 10:16:27 AM

WYDOT assigned this issue to BRASS Problem Log 610.

FROM:bgoodrich DATE:Friday, November 11, 2005 10:17:37 AM

1/5/2016 11:07:38 AM

HRS AASHTO

223



Complete Issue Information

BRASS has been corrected. Fixed for Opis version 5.4.

FROM:dteal DATE:Wednesday, March 29, 2006 8:58:32 AM  
Accepted 5.4 beta 7

|                                           |
|-------------------------------------------|
| Issue ID: 6592                            |
| Subject: Bug with Spec. Check 6.10.10.1.3 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Colgrove, George      | 8/10/2005 5:51:28 PM |
| Modified By: administrator          | 6/19/2008 4:19:47 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gcolgrove DATE:Wednesday, August 10, 2005 1:51:28 PM  
REPORTED BY: Tom Lackey, Project Civil Engineer, VTrans - Structures Section

DESCRIPTION: Bug with spec Check 6.10.10.1.3

COMMENTS: Even though the Specification Reference suggests that the transverse spacing has passed, looking into the Spec Check Detail shows that the min, transverse spacing failed.

FROM:gcolgrove DATE:Wednesday, August 10, 2005 1:51:28 PM  
I have enclosed a picture file that shows the bug. The calculations show that the minimum transverse spacing needs to be 88mm. The data entered is 50mm. The result is show to have failed. The next check looks at the minimum clearance to the edge which in this case passes. The conclusion of this check is that the design failed, however in the Specification Reference it says that 6.10.10.1.3 passes.

1/5/2016 11:07:39 AM

HRS AASHTO

224

Complete Issue Information

I do not believe that the check is looking at both conditions to determine pass or fail.

FROM:bgoodrich DATE:Friday, August 12, 2005 1:21:33 AM  
 I have confirmed this issue and forwarded it to WYDOT for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Monday, August 22, 2005 3:09:22 PM  
 WYDOT assigned this issue to BRASS Problem Log 620.

FROM:bgoodrich DATE:Saturday, August 27, 2005 11:27:33 PM  
 This issue has been addressed in BRASS-GIRDER(LRFD) 1.6.3. Fixed for Opis version 5.4.0.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 6593                                                                           |
| Subject: Analysis Settings for BRASS (LRFD) engine properties are misread for P/S-I Beam |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Boukamp, Sabine    |                      |
| Submitted By: Kemna, Darren         | 8/10/2005 7:28:09 PM |
| Modified By: administrator          | 6/19/2008 4:38:36 PM |
| Priority: High                      |                      |
| Category: Bug - Domain 1            |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - BRASS    |
| Duray, Jim      |          |          | Bug - Domain 1 |
| Boukamp, Sabine | Resolved |          |                |
| Boukamp, Sabine | Resolved | High     | Bug - Domain 1 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Complete Issue Information

|                |                                |                                 |               |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Darren Kemna   | Missouri DOT                   | kemnad1@mail.modot.state.mo.us  | 573-526-3030  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 6594.14741 | Duplicate     | Spec Articles need update for Spec Check Viewer Filter |

### Description

FROM:dkemna DATE:Wednesday, August 10, 2005 3:28:09 PM  
REPORTED BY:

#### DESCRIPTION:

It appears that there may be a problem with the export for the Analysis settings when analyzing a P/S-Beam. I have a template that I normally use, but the limit states that are reported are different than those set in the analysis settings. Also, only Stage 3 specs and actions are being reported even though Stage 1 is selected in the analysis settings. I have the bbd file attached and screen shots for the BRASS(LRFD) engine properties that were used. Analyze any member to replicate.

#### COMMENTS:

This may be a duplicate of 6516

FROM:dkemna DATE:Wednesday, August 10, 2005 3:41:55 PM

FROM:dkemna DATE:Wednesday, August 10, 2005 3:52:02 PM

FROM:jduray DATE:8/11/2005 2:31:38 PM

FROM:bgoodrich DATE:Friday, August 12, 2005 2:12:45 AM

There appears to be an error in the 5.3.1 engine properties string. The default string contains defaults that do not match the previous version, i.e., the Stage 1 output is set to 0 (off), Strength I output is set to 0 (off), etc. If the string defaults are going to be changed, I think the SetDefaults function should be changed to match. Finally, the MakePropertyString function is not writing the Camber output flag to the properties string. It looks like the camber flag is read from somewhere in the middle of the string instead of just being appended.

This isn't a BRASS issue, so I changed the status to a Bug - Domain 1.

1/5/2016 11:07:39 AM

HRS AASHTO

226

Complete Issue Information

FROM:sboukamp DATE:11/30/2005 3:57:19 PM  
 This is a duplicate of 6693 (and 6784). Got resolved for the next 5.3 Service Pack.

FROM:dteal DATE:Monday, February 26, 2007 12:03:45 PM  
 Accepted

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 6594                                                  |
| Subject: Spec Articles need update for Spec Check Viewer Filter |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Kemna, Darren         | 8/10/2005 8:15:58 PM |
| Modified By: administrator          | 6/19/2008 4:19:47 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
|                 | Duplicate |          |          |
| Duray, Jim      | Duplicate | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Wednesday, August 10, 2005 4:15:58 PM  
 REPORTED BY:

DESCRIPTION:

I think this is an issue with the 2004 specifications. There are spec-check articles that appear that are not listed in the spec-check articles tab of the filter. I had filters set-up for plate girder design that don't

Complete Issue Information

work any more because a bunch of new specs are included. I can clear the entire Spec Articles tab of the filter, but numerous specs will still be shown in the Specification Reference window.

COMMENTS:

FROM:jihnat DATE:8/11/2005 7:29:41 AM  
This sounds like a duplicate of 6003 (fixed in 5.4.0).

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6603                                          |
| Subject: Clarification of beam stress check enhancement |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 8/15/2005 6:49:02 PM |
| Modified By: administrator          | 6/19/2008 4:19:46 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Duray, Jim      | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |
| Goodrich, Brian | Resolved | High     | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

|                |                  |                                     |              |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Darren Kemna   | Missouri DOT     | kemnad1@mail.modot.state.<br>mo.us  | 573-526-3030 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Amjad Waheed   | Ohio DOT         | awaheed@dot.state.oh.us             | 614-752-9972 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 6652.14683 | Resolved      | Missing intermediate output for DL and LL distribution |

Description

FROM:dkemna DATE:Monday, August 15, 2005 2:49:02 PM  
 REPORTED BY:

DESCRIPTION:

"Beam Stresses at Interior Support POI"

COMMENTS:

When selecting "Compute based of P/S Modeling Method" or "Ignore beam stresses" article 5.9.4 is not reported in the specification checks for Stage 3 checks. According to the 5.3.1 Release notes and Help, only the interior support POI should ignore the stress checks. Yet, all POI's ignore stresses. I am not sure what was the intent of the enhancement, but it does not sound like it was supposed to eliminate all stage 3 stress checks. Our problem is that we have to go into the member alternative BRASS (LRFD) properties and select "consider beam stresses" when they used to be checked by default. You should be able to use the attached bridge from my last incident to verify. (A5504\_0810)

FROM:bgoodrich DATE:Friday, August 26, 2005 4:30:33 PM

There appears to be an error in the BRASS engine. I have forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Saturday, August 27, 2005 9:27:19 PM

This issue has been corrected in the engine. Fixed for version 5.4.0.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 6652                                                  |
| Subject: Missing intermediate output for DL and LL distribution |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center/Opis |
| Primary Contact: Ihnat, Joseph      |

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Submitted By: puckett, jay | 8/26/2005 7:36:37 PM |
| Modified By: administrator | 6/19/2008 4:19:43 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact  | Status             | Priority | Category  |
|------------------|--------------------|----------|-----------|
| Duray, Jim       | New                | High     | Unknown   |
|                  | Information Needed |          |           |
| Kennelly, Krisha | Assigned           |          |           |
|                  | Resolved           |          | Education |
| Kennelly, Krisha | Resolved           | High     | Education |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description   |
|------|---------------------|---------------|
|      | 54 _beams.pdf       |               |
|      | 541PPCBJu05C.pdf    | Iowa DOT file |
|      | MN45.pdf            | file 1        |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6714.14626 | Resolved      | Incorrect section properties Calcs |

### Description

FROM:bgoodrich DATE:Friday, August 26, 2005 3:36:51 PM

Submitted for Jay Puckett:

Open TrainingBridge1 and perform a design review. Do not use an Analysis Settings template. Switch the radio button and add the trucks manually. The intermediate output for dead and live load distribution is not produced. Then, open the engine properties window for the Analysis Settings is opened, select OK, and reanalyze. Now, the results are available. Something is amiss in the default engine properties or AboBrass.

FROM:jihnata DATE:5/8/2006 3:29:30 PM

1/5/2016 11:07:40 AM

HRS AASHTO

230

Complete Issue Information

Fixed for version 5.5.0

|                                             |
|---------------------------------------------|
| Issue ID: 6714                              |
| Subject: Incorrect section properties Calcs |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Obeidat, Khalid       | 9/21/2005 3:44:47 PM |
| Modified By: administrator          | 6/19/2008 4:19:39 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kobeidat DATE:Wednesday, September 21, 2005 11:44:47 AM  
REPORTED BY:

DESCRIPTION:

COMMENTS:

FROM:kobeidat DATE:Wednesday, September 21, 2005 11:44:47 AM  
we Tried to input Iowa DOT Prestressed Beam shapes but the program doesn't calculate the properties

1/5/2016 11:07:41 AM

HRS AASHTO

231



Complete Issue Information

correctly. Brass also doesn't use the user input properties

FROM:kkennelly DATE:9/21/2005 4:20:24 PM

As described in the Engine Related for the Prestress Beam Shape: Properties window, BRASS does not use the properties on that window. It internally computes the properties.

Can you tell us what properties Opis is incorrectly computing and can you attach either a sketch of the beam shape or a screen capture of the Prestress Beam Shape: Dimensions tab with the values input?

FROM:kobeidat DATE:Monday, October 03, 2005 11:05:45 AM

The area and Moment of inertia are incorrect. I could not attach the shape I'll email it.

FROM:kobeidat DATE:Monday, October 03, 2005 11:33:51 AM

FROM:jihnmat DATE:10/3/2005 1:01:06 PM

The two documents received are already attached (mn45.pdf and 54\_beams.pdf)

FROM:kkennelly DATE:10/7/2005 8:59:49 AM

As stated in the Virtis help for the PS I Beams: Properties tab, the properties computed by Virtis do not include the curved fillets.

Issue ID: 6732  
Subject: LL Distribution when lane with is less than one AASHTO lane

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Teal, Dean 9/28/2005 2:54:45 PM  
Modified By: administrator 6/19/2008 4:19:38 PM  
Priority: High  
Category: Bug - Export 2

History

| Primary Contact | Status   | Priority | Category                      |
|-----------------|----------|----------|-------------------------------|
| Duray, Jim      | New      | High     | Unknown                       |
| Goodrich, Brian | Assigned |          | Bug - BRASS<br>Bug - Export 2 |
|                 | Resolved |          |                               |
|                 | Closed   |          |                               |
| Goodrich, Brian | Closed   | High     | Bug - Export 2                |

## Complete Issue Information

### Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                             |
|------------|---------------|-------------------------------------|
| 6734.14606 | Closed        | Dist. Factor for Single Lane Loaded |

### Description

FROM:dteal DATE:Wednesday, September 28, 2005 10:54:45 AM  
REPORTED BY:Steve Burnett

### DESCRIPTION:

### COMMENTS:

FROM:dteal DATE:Wednesday, September 28, 2005 10:54:51 AM

I am currently designing a 3-span rolled beam bridge that will be constructed in stages. During one of the stages, one lane of traffic will be carried on a portion of the new deck supported by 3 new girders. The traffic lane for that stage will be 3430 mm. As part of the Opis file, I coded this stage as one of the Superstructure Definitions. I wanted a design check of this stage. I left the LRFD Live Load Distributions Factors blank, which forces the engine to calculate them. When I reviewed the output, I found that the live load values for the interior girder to be zero. Looking at the .DST output file, I found the following.

1. AASHTO LRFD Table 4.6.2.2.2b-1 states that when the number of beams equal 3, the distribution factors for moment in Interior Beams is the lesser of the values obtained from the equation in the table with  $N_b = 3$  or the lever rule. BRASS calculated the equation values correctly. However, with the traffic lane width being less than 3600 mm, it was not able to determine the lever rule value and assigned a value of zero for it. Therefore, when comparing those two values, the result was a live load distribution factor of zero.
2. The live load distribution factors for moment in Exterior Beams are similar to that for Interior Beams with the addition of the rigid cross-section provision. Again BRASS used zero for the lever rule. However, BRASS was able to correctly calculate the rigid cross-section value. When the check was made for the greater of the rigid cross-section or the other, the rigid cross-section value was greater and was the value used. That may or may not be the correct value.

I have calculated the LRFD Live Load Distribution Factors by hand and entered them into the OPIS file.

1/5/2016 11:07:41 AM

HRS AASHTO

233

Complete Issue Information

BRASS will use them instead of computing them.

This is something to keep in mind when designing a structure with a travel way of less than a design lane.

Stephen G. Burnett  
KDOT Bridge Design Section  
Office (785) 296-6468  
Fax (785) 296-6946  
e-mail burnett@ksdot.org

FROM:bgoodrich DATE:Friday, November 11, 2005 4:15:51 PM  
BRASS contains a command for specifying the width of the traffic and design lanes, which are by default 12 ft and 10 ft, respectively. This capability is not currently exposed to the the Opis user through the engine properties, but it could be. An export alternative would be to detect when the total travelway width is less than 12 ft and automatically export the DIST-LANE-GEOMETRY command with adjusted traffic lane and design lane widths.

FROM:jduray DATE:12/5/2005 2:44:41 PM  
I think we should handle it in the export and warn the user the widths are being changed from AASHTO prescribed values.

FROM:bgoodrich DATE:Tuesday, December 13, 2005 9:56:29 AM  
I added the DIST-LANE-GEOMETRY command to the export. For travelways between 10 ft and 12 ft, the lane width is set to the travelway width. For travelways between 20 ft and 24 ft, the lane width is set to half the travelway width. Otherwise, the lane width is kept at the default of 12 ft. Fixed for version 5.4.

FROM:dteal DATE:Monday, February 26, 2007 12:28:31 PM  
Accepted

|                                              |
|----------------------------------------------|
| Issue ID: 6734                               |
| Subject: Dist. Factor for Single Lane Loaded |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 9/28/2005 6:35:18 PM |
| Modified By: administrator          | 6/19/2008 4:19:38 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

Complete Issue Information

|                 |                    |      |             |
|-----------------|--------------------|------|-------------|
| Goodrich, Brian | Assigned           |      | Bug - BRASS |
|                 | Information Needed |      |             |
| Duray, Jim      | New                | High | Unknown     |
| Goodrich, Brian | Assigned           |      | Bug - BRASS |
|                 | Resolved           |      |             |
|                 | Closed             |      |             |
| Goodrich, Brian | Closed             | High | Bug - BRASS |

Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 004-048.bbd         |             |

Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 6735.14605 | Closed        | Single Lane Dist. Factors |

Description

FROM:dteal DATE:Wednesday, September 28, 2005 2:35:18 PM  
 REPORTED BY:Steve Burnett

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Wednesday, September 28, 2005 2:35:24 PM

From my review of the live load distribution factors on the stage construction of one of my bridges, I have found what I consider an error in BRASS Girder LRFD. For and exterior girder with one design lane loaded, the distribution factor is the greater of the lever rule or the rigid cross-section method. However, BRASS Girder LRFD is also considering the equations in section 4.6.2.2.2. The equations should only be used when two or more design lanes are loaded.

FROM:bgoodrich DATE:Friday, November 11, 2005 4:16:46 PM

Complete Issue Information

The BRASS tools that calculate the LRFD formula distribution factors are structured such that they perform both the one-lane and multiple-lanes calculations at the same time. Both of these distribution factors are shown in the intermediate output as well as the main output file. However, if the travelway only supports one lane (determined by the domain, not the export), only the one-lane loaded distribution factors are considered. This can be seen by how the LOAD-LIVE-DEFINITION command is generated:

LOAD-LIVE-DEFINITION 1, DTK\_HL-93\_~1, DTK, D, 100.0000, 1.0000, ONE, YES

Note the "ONE" on parameter 7. I searched the output and did not find anywhere (other than the input echo) where the number of lanes loaded is shown for a particular vehicle. This would be helpful in the following reports: LIVE LOAD SETTINGS SUMMARY or UNFACTORED GIRDER ACTIONS DUE TO APPLIED LIVE LOADS or both. Currently, it isn't clear as to which distribution factors are actually used for a particular vehicle.

Dean - Please attach a BBD file.

FROM:dteal DATE:Monday, November 21, 2005 2:03:02 PM  
The solution here tos to make it clearer which distribution factor is being used.

FROM:bgoodrich DATE:Monday, December 05, 2005 1:19:42 PM  
I have forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Wednesday, December 07, 2005 5:31:01 PM  
WYDOT assigned this issue to BRASS Problem Log 645.

FROM:bgoodrich DATE:Monday, December 12, 2005 6:34:55 PM  
The two BRASS output reports mentioned above were revised to show the lanes loaded. This was done in BRASS-GIRDER(LRFD) 1.6.3. Fixed for version 5.4.

FROM:dteal DATE:Wednesday, March 29, 2006 8:39:20 AM  
Accepted 5.4 beta 7

|                                    |
|------------------------------------|
| Issue ID: 6735                     |
| Subject: Single Lane Dist. Factors |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 9/28/2005 8:08:52 PM |
| Modified By: administrator          | 6/19/2008 4:19:38 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Complete Issue Information

Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary       |
|------------|---------------|---------------|
| 6762.14578 | Resolved      | OPIS Question |

Description

FROM:dteal DATE:Wednesday, September 28, 2005 4:08:52 PM  
 REPORTED BY:Steve Burnett

DESCRIPTION:

COMMENTS:

FROM:dteal DATE:Wednesday, September 28, 2005 4:09:00 PM

In my review of the live load distribution factors for the stage constructed bridge that I am currently designing, I have found what I consider an error in the BRASS Girder LRFD calculations of the distribution factors. For Girder G3, the third girder of the three girder superstructure that will be carrying traffic during Stage II, it will be an exterior girder during that stage. One of the methods used is the Rigid Cross-Section. One of the components used in the Rigid Cross-Section calculations is the distance from C.G. of girder pattern to C.G. of LL group, (eL Avg.). With the placement of the temporary concrete safety barrier, the eL of the one design lane loaded is 450 mm to the left of the C.G. of the girder pattern. That is on the opposite side of the C.G. of the girder pattern than is Girder G3. Therefore, the rotation portion of the calculation would decrease the Live Load in Girder G3. I believe that the program should use a negative value for eL, (-450 mm). I have attached a portion of the BRASS output file .DST showing the Rigid Cross-Section calculations.

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS

Method: Rigid  
 Girder of Interest (GOI): 3  
 No. of Girders (Nb) : 3  
 No. Lanes Loaded (NL) : 1  
 Distribution Factor Parameters:  
 C.G. of Girders 2680.000 mm  
 Distance from C.G. of girder pattern to girder:  
 Girder No. Xg, mm

-----  
 1 2080.000

Complete Issue Information

2 0.000  
3 2080.000

Xg(GOI) = 2080.000 mm (Distance from C.G. of girder pattern to GOI)  
SUM(Xg^2) = 0.865E+07 mm^2 (Sum of distances from C.G. of girder pattern to each girder)  
eL Avg. = 450.000 mm (Distance from C.G. of girder pattern to C.G. of LL group)

SUM(eL) = NL \* eL Avg. = 450.000 mm (Sum of distances from C.G. of girder pattern to C.G. of each LL )

Distribution Factor Summary:

NL Xg(GOI) SUM(eL)  
g = -- + ----- = 0.442 [AASHTO LRFD C4.6.2.2.2d-1]

Nb SUM(Xg^2)  
mg = m \* g  
= 1.20 \* 0.442 = 0.530

Notes:

- => The wheel positions reference the left edge of the deck.
- => If the girder of interest is left of the center of gravity of the pattern of girders, the truck(s) will be placed with respect to the left edge of the travel way. Otherwise, the truck(s) will be placed with respect to the right edge of the travel way.

FROM:bgoodrich DATE:Friday, November 11, 2005 4:53:02 PM  
BRASS ignores the presence of any medians/barriers between travelways. The "BRASS" travelway is established as the left side of the left-most travelway to the right side of the right-most travelway as set on the Lane Position tab of the Structure Typical Section window. This is discussed in the Engine Related Help for the BRASS-LRFD engine. Please attach the BBD file if these comments do not address the concern.

FROM:dteal DATE:Monday, November 21, 2005 2:04:30 PM  
To completely understand the problem the attached bbd needs to be reviewed.

FROM:bgoodrich DATE:Monday, December 05, 2005 1:52:52 PM  
I now understand the problem and agree that BRASS is incorrectly calculating the rigid method distribution factor for this structure. I have forwarded this issue to WYDOT for assignment to a BRASS Problem Log.

FROM:bgoodrich DATE:Wednesday, December 07, 2005 5:31:37 PM  
WYDOT assigned this issue to BRASS Problem Log 646.

FROM:bgoodrich DATE:Friday, December 09, 2005 11:27:40 AM  
The live load distribution module of BRASS-GIRDER(LRFD) 1.6.3 was revised to include the sign of the eccentricity of the live load group when determining the rotation contribution to the rigid method distribution factor. Fixed for Opis version 5.4.

FROM:dteal DATE:Monday, February 26, 2007 12:27:14 PM  
Accepted

### Complete Issue Information

|                        |
|------------------------|
| Issue ID: 6762         |
| Subject: OPIS Question |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Opis |                        |
| Primary Contact: Goodrich, Brian    |                        |
| Submitted By: Ihnat, Joseph         | 10/13/2005 12:20:51 PM |
| Modified By: administrator          | 6/19/2008 4:19:36 PM   |
| Priority: High                      |                        |
| Category: Bug                       |                        |

### History

| Primary Contact | Status    | Priority | Category |
|-----------------|-----------|----------|----------|
| Duray, Jim      | New       | High     | Unknown  |
| Boukamp, Sabine | Assigned  |          |          |
|                 | Duplicate |          |          |
| Boukamp, Sabine | Duplicate | High     | Unknown  |

### Contacts

| Name            | Company         | Email 1                   | Phone 1 |
|-----------------|-----------------|---------------------------|---------|
| Brian McCaffrey | AECOM/EarthTech | Brian.McCaffrey@aecom.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | N2247160.bbd        |             |

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 6784.14556 | Duplicate     | Limit state settings |

### Description

FROM:jihnat DATE:10/13/2005 8:17:47 AM

Email from Jon Herbeck, George Butler Associates

I am currently running OPIS Version 5.2. I have modeled a two span plate girder superstructure. Upon inspection of the Analysis Report for the Dead Load Actions, I cannot find the results for the parapet load.

1/5/2016 11:07:42 AM

HRS AASHTO

239



Complete Issue Information

I have input a parapet into the typical section as a Stage 2 DC, but I cannot find it in the Analysis Report.

FROM:dteal DATE:Friday, October 14, 2005 9:20:14 AM

Jon from GBA is using Version 5.2 - this problem was an export problem reported via incident #5753 and fixed in the next release. When GBA updates to a current version the problem will go away.

|                               |
|-------------------------------|
| Issue ID: 6784                |
| Subject: Limit state settings |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Boukamp, Sabine    |                       |
| Submitted By: McCaffrey, Brian      | 10/17/2005 2:29:13 PM |
| Modified By: administrator          | 6/19/2008 4:19:34 PM  |
| Priority: High                      |                       |
| Category: Unknown                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, October 17, 2005 10:29:13 AM

REPORTED BY:

Complete Issue Information

DESCRIPTION: When you go to analysis settings and choose BRASS LRFD for the engine and then click on Properties ... the program doesn't seem to pick up the settings correctly for limit states and stages that you select.

For example, if you turn on Strength II and turn off the other limit states, you will get Strength I and III in the output, but not Strength II. Also, even if you choose all three stages (I,II and III), it only seems to give you the output for Stage II (SDL) and III (live load). Stage I (DL) is missing.

COMMENTS:

FROM:kkennelly DATE:10/18/2005 12:57:32 PM  
I think this is a duplicate of 6693. Sabine, please verify that fix for 6693 fixes this problem.

FROM:sboukamp DATE:10/21/2005 2:25:29 PM  
Yes, this is a duplicate of 6693 which has also resolved this problem.

|                                   |
|-----------------------------------|
| Issue ID: 6802                    |
| Subject: Load Distribution report |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: McCaffrey, Brian      | 10/20/2005 7:02:53 PM |
| Modified By: administrator          | 6/19/2008 4:19:33 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|                 |          |      |           |
|-----------------|----------|------|-----------|
| Goodrich, Brian | Assigned |      | Bug       |
|                 | Resolved |      |           |
| Duray, Jim      | New      | High | Unknown   |
| Goodrich, Brian | Assigned |      | Bug       |
|                 | Resolved |      | Education |
|                 | Closed   |      |           |
| Goodrich, Brian | Closed   | High | Education |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Tim Armbrecht  | Illinois DOT     | tim.armbrecht@illinois.gov          | 217-782-6266 |
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | CustomLF'sMakesMn=0.bbd |             |

### Tasks

| Name       | Current State | Summary                          |
|------------|---------------|----------------------------------|
| 6905.14435 | Closed        | Custom load factors produce Mn=0 |

### Description

FROM:bmccaffrey DATE:Thursday, October 20, 2005 3:02:53 PM  
REPORTED BY:

DESCRIPTION: When doing an LRFD analysis, the 'Load Distribution' output file only has header information even though it is checked as an option in the 'Analysis Settings/Properties' tab. If you then go into the 'Properties' tab and do nothing except hit OK, then the report will be generated. This happens on every Opis run I've tried.

### COMMENTS:

FROM:bgoodrich DATE:Thursday, March 02, 2006 10:57:07 AM

This issue is not occurring in version 5.4 beta. Some errors with the Analysis Event engine properties were addressed that fixed this incident.

|                |
|----------------|
| Issue ID: 6905 |
|----------------|

### Complete Issue Information

|                                           |                        |
|-------------------------------------------|------------------------|
| Subject: Custom load factors produce Mn=0 |                        |
| Folder: /Virtis/Support Center/Opis       |                        |
| Primary Contact: Goodrich, Brian          |                        |
| Submitted By: Armbrecht, Tim              | 11/10/2005 10:27:35 PM |
| Modified By: administrator                | 6/19/2008 4:19:25 PM   |
| Priority: High                            |                        |
| Category: Education                       |                        |

### History

| Primary Contact | Status             | Priority | Category    |
|-----------------|--------------------|----------|-------------|
| Duray, Jim      | New                | High     | Unknown     |
| Goodrich, Brian | Assigned           |          | Bug         |
|                 | Information Needed |          |             |
|                 | Assigned           |          | Bug - BRASS |
| Goodrich, Brian | Suspended          |          |             |
|                 | Suspended          | High     | Bug - BRASS |

### Contacts

| Name           | Company                    | Email 1                             | Phone 1      |
|----------------|----------------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc.           | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Jim Duray      | Michael Baker Jr.,<br>Inc. | jduray@mbakercorp.com               |              |

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | SR35 over US 11E - Opis.bbd |             |

### Tasks

| Name       | Current State | Summary      |
|------------|---------------|--------------|
| 7039.16293 | Suspended     | opis problem |

### Description

FROM:tarmbrecht DATE:Thursday, November 10, 2005 5:27:35 PM

1/5/2016 11:07:44 AM

HRS AASHTO

243

Complete Issue Information

File attached. From my consultant:

For an RC-Slab, when custom load factors are specified the ultimate moment capacity (Mn) becomes 0.0. In the example model the custom LF's were saved with the name "Filled Culvert" and applied to the Superstructure Definition, "Double 5x2 RC Box (2.56' Fill)". When the custom LF's were removed, Mn was computed properly.

From the BRASS output:

w/custom LF's...

POSITIVE Flexural Resistance:

\*\* Analyzed as a RECTANGULAR Section \*\*

| Layer | Area, in^2 | Stress, ksi          | Force, kips | Lever-Arm, in | Moment i, in-k |
|-------|------------|----------------------|-------------|---------------|----------------|
| CW    | 5.885      | -0.85*f <sub>c</sub> | -17.509     | 0.332         | 5.809          |
| R1    | 0.438      | 40.000               | 17.509      | -4.611        | 80.724         |
| Sum   |            |                      | 0.000       |               | 86.533         |

Flexural Resistance Summary:

beta 1 = 0.850                      phi f = 0.000  
 c = 0.577 in                      Mn = NaN                      in-k  
 a = 0.490 in (from top)                      = NaN                      ft-k  
                                          phi\*Mn = 0.000 in-k  
                                          = 0.000 ft-k  
 f<sub>c</sub> = 3.500 ksi (stem)

...

Truck 1 Load Level 1 Rating Factor(Pos mom) = 0.00 = ( 0.00 - 1.30 \*1.00 \* 1.00) / (1.30 \*1.67 \* 2.60)

Truck 1 Load Level 1 Rating Factor(neg mom) = 1.24 = ( 0.00 - 1.30 \*1.00 \* 1.00) / (1.30 \*1.67 \* -0.48)

w/default LF's...

POSITIVE Flexural Resistance:

\*\* Analyzed as a RECTANGULAR Section \*\*

| Layer | Area, in^2 | Stress, ksi          | Force, kips | Lever-Arm, in | Moment i, in-k |
|-------|------------|----------------------|-------------|---------------|----------------|
| CW    | 5.885      | -0.85*f <sub>c</sub> | -17.509     | 0.332         | 5.809          |
| R1    | 0.438      | 40.000               | 17.509      | -4.611        | 80.724         |
| Sum   |            |                      | 0.000       |               | 86.533         |

Flexural Resistance Summary:

beta 1 = 0.850                      phi f = 0.900  
 c = 0.577 in                      Mn = 86.533 in-k  
 a = 0.490 in (from top)                      = 7.211 ft-k  
                                          phi\*Mn = 77.880 in-k  
                                          = 6.490 ft-k  
 f<sub>c</sub> = 3.500 ksi (stem)

Complete Issue Information

...

Truck 1 Load Level 1 Rating Factor(Pos mom) = 0.92 = ( 6.49 - 1.30 \*1.00 \* 1.00) / (1.30 \*1.67 \* 2.60)

Truck 1 Load Level 1 Rating Factor(neg mom) = 1.24 = ( 0.00 - 1.30 \*1.00 \* 1.00) / (1.30 \*1.67 \* -0.48)

FROM:bgoodrich DATE:Tuesday, November 15, 2005 11:47:34 PM

In addition to the load factors, the LFD Factors window contains a tab for specifying the resistance factors. Because these were not specified, the resistance factors were taken as zero. If you specify your own set of LFD factors, you must enter all the factors, not just the factors you want to override.

FROM:bgoodrich DATE:Wednesday, November 16, 2005 12:45:07 PM  
E-mail from Tim Armbrecht (11/16/2005):

Brian, thanks for the response. I didn't realize that LFD analysis utilizes resistance factors, since that term is more commonly associated with LRFD. Are you referring to the strength reduction phi factors from AASHTO 8.16.1.2.2, like 0.9 for moment and 0.85 for shear?

FROM:bgoodrich DATE:Wednesday, November 16, 2005 12:46:42 PM

I am referring to the strength reduction factors. Virtis has the window tab labeled as resistance factors.

FROM:bgoodrich DATE:Wednesday, November 16, 2005 12:46:59 PM  
E-mail from Tim Armbrecht (11/16/2005):

OK, thanks for the clarification.

FROM:bgoodrich DATE:Monday, December 05, 2005 2:08:39 PM  
Issue was resolved.

FROM:bgoodrich DATE:Monday, December 05, 2005 2:13:05 PM  
Closed.

Issue ID: 7039  
Subject: opis problem

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Ihnat, Joseph 1/12/2006 9:00:55 PM  
Modified By: administrator 6/19/2008 4:28:13 PM  
Priority: High  
Category: Bug - BRASS

History

1/5/2016 11:07:45 AM

HRS AASHTO

245

## Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

## Contacts

| Name           | Company                        | Email 1                         | Phone 1       |
|----------------|--------------------------------|---------------------------------|---------------|
| Dean Teal      | Kansas Dept. of Transportation | teal@ksdot.org                  | (785)291-3001 |
| Brian Goodrich | BridgeTech, Inc.               | Goodrich@BridgeTech-Laramie.com | 307 222-4688  |
| Eric Lantzy    | NYS DOT                        | unknown@unknown.com             |               |
| Jim Duray      | Michael Baker Jr., Inc.        | jduray@mbakercorp.com           |               |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                              |
|------------|---------------|--------------------------------------|
| 7141.16191 | Closed        | Spec Checker Filter of LL Deflection |

## Description

FROM:jihnmat DATE:1/12/2006 3:58:32 PM  
received via email:

I ran the attached file in Opis and am having the following problem. When I do a design check, I am getting several failures in maximum reinforcement in stage 3. For these failures, c is given as over 30 inches, which is much higher than what I get for c. Based on my value for c, the slab is not over-reinforced. I believe Opis is making a mistake when calculating c.

Thank you,  
Adam Price  
Tennessee Department of Transportation - Structures Division  
Adam.Price@state.tn.us

FROM:jduray DATE:Monday, January 16, 2006 6:02:42 PM

FROM:bgoodrich DATE:Tuesday, January 31, 2006 11:42:10 AM

I was able to duplicate the negative flexure analysis where BRASS reports a maximum reinforcement failure that results from its calculation of a "c" depth greater than 30 inches. Please send me any calculations and further discussion that illustrates how you think the calculation of "c" should be done.

FROM:bgoodrich DATE:Tuesday, February 28, 2006 8:42:10 PM  
E-mail from Adam Price (2/27/2006):

1/5/2016 11:07:45 AM

HRS AASHTO

246

Complete Issue Information

Brian,

I apologize for the delay. I am on currently on educational leave. This bridge has bulb-tee beams, and I am assuming a rectangular bottom flange to calculate c. If I use the standard equation for c:

$c = (A_s \cdot f_y) / (0.85 \cdot f'_c \cdot b \cdot \beta_1)$ , I get 11.08 inches for c. Please let me know if you need anything else.

Thank you,  
Adam Price

FROM: bgoodrich DATE: Monday, March 06, 2006 4:43:01 PM

BRASS-GIRDER(LRFD) considers the contribution of the prestressing strand to the summation of forces in the flexural resistance calculation, which results in the N.A. "c" depth reported in the intermediate output. For your structure, this N.A. depth is much higher than that calculated considering only the mild deck steel. The large N.A. depth results in the maximum reinforcement check failing. I need to discuss this issue with the development team. I'll get back to you after that.

FROM: bgoodrich DATE: Tuesday, February 27, 2007 11:24:47 AM

The maximum reinforcement check of LRFD 5.7.3.3.1 was removed from the spec, so this will not be an issue in future releases. However, the difference in the calculation of the N.A. depth remains. To get the "c" of the user, the engine would have to be modified to provide an option to only consider the mild steel in the deck for negative flexure.

FROM: bgoodrich DATE: Wednesday, July 25, 2007 1:44:50 PM

AASHTO LRFD 5.7.3.3.1 has been removed from BRASS-GIRDER(LRFD) 2.0.0. This will no longer be an issue for Opis 5.6 and higher. The issue with calculating the N.A. depth using only the mild reinforcement in the deck is being reviewed by WYDOT engineers.

FROM: bgoodrich DATE: Thursday, November 15, 2007 8:12:34 AM

The issue with calculating the N.A. depth using only the mild reinforcement in the deck has been added to the BRASS Enhancement List to be prioritized by the users.

|                                               |
|-----------------------------------------------|
| Issue ID: 7141                                |
| Subject: Spec Checker Filter of LL Deflection |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Teal, Dean            | 2/28/2006 9:07:22 PM |
| Modified By: administrator          | 6/19/2008 4:28:05 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Goodrich, Brian | Assigned |          | Bug      |



## Complete Issue Information

|                 |           |      |             |
|-----------------|-----------|------|-------------|
|                 | Resolved  |      |             |
| Duray, Jim      | New       | High | Unknown     |
| Goodrich, Brian | Assigned  |      | Education   |
| Duray, Jim      | Suspended |      | Enhancement |
| Duray, Jim      | Suspended | High | Enhancement |

## Contacts

| Name           | Company                                | Email 1                             | Phone 1      |
|----------------|----------------------------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc.                       | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Binh Ha        | Massachusetts<br>Highway<br>Department | binh.ha@mhd.state.ma.us             | 617-973-7561 |
| Jim Duray      | Michael Baker Jr.,<br>Inc.             | jduray@mbakercorp.com               |              |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | S-8-11.bbd          |             |

## Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 7255.16079 | Suspended     | How to override Allowable Deflection Denominator from 800 to 1000 |

## Description

FROM:dteal DATE:Tuesday, February 28, 2006 4:07:23 PM

In the spec checker filter, Spec Articles, I have the very first one, 3.6.1.3.2 Live Load Deflection evaluation unchecked. When I do a review of the failed spec's it still reports Live Load Deflection for Design Ratio and Rating Factor Comps.

Being have this unchecked, they should be filtered out – right?

FROM:jduray DATE:Wednesday, March 01, 2006 9:45:17 AM

Yes, we will investigate. Since we did not make any changes to the spec-check filter for this release this either an old bug or changes within BRASS are causing it.

Dean - did it behave this way in 5.3.1?

Brian - please investigate within BRASS.

1/5/2016 11:07:45 AM

HRS AASHTO

248

Complete Issue Information

FROM:dteal DATE:Wednesday, March 01, 2006 10:35:31 AM  
It didn't work in 5.3.1

FROM:jduray DATE:Thursday, March 02, 2006 10:01:14 AM

FROM:bgoodrich DATE:Sunday, March 05, 2006 3:07:22 AM  
The 3.6.1.3.2 reference in the spec check filter only turns on or off that particular check, i.e., output similar to that below:

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 3.6.1.3.2 Live Load Deflection Evaluation

Point of Interest : 109.00  
Construction Stage: 2

Input Parameters:

Truck: Deflection D(Trk) = 0.144 in Factor f(Trk) = 1.000  
Lane : Deflection D(Lan) = 0.000 in Factor f(Lan) = 0.000  
gamma LL = 1.000

Deflection Summary:

Deflection = gamma LL \* [D(Trk) \* f(Trk) + D(Lan) \* f(Lan)]  
= 0.144 in

The Design Ratio and Rating Factor checks are separate and controlled by the reference of the same name in the filter window. There is no link in the filter between these references nor has there ever been.

FROM:dteal DATE:Monday, March 06, 2006 9:21:41 AM  
Accepted - there is another incident for the LL Deflection filtering for Rating & Desing reviews VI # 5008

FROM:dteal DATE:Wednesday, November 07, 2007 10:39:02 AM  
7141, 5008, 4979 & 2737 are all related to LL Deflection problems

Issue ID: 7255  
Subject: How to override Allowable Deflection Denominator from 800 to 1000

Folder: /Virtis/Support Center/Opis  
Primary Contact: Duray, Jim  
Submitted By: Ha, Binh 4/14/2006 5:35:28 PM  
Modified By: administrator 6/19/2008 4:27:55 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

1/5/2016 11:07:45 AM

HRS AASHTO

249

## Complete Issue Information

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | hl93m nybpm.xml     |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7464.15870 | Resolved      | HL93 metric not exporting axle loads correctly in Opis |

### Description

FROM:bha DATE:Friday, April 14, 2006 1:35:34 PM  
Bridge Section - MassHighway

In LOAD-LIVE-DEFLECTION command of Brass, its fifth parameter is Allowable Deflection Denominator with the value of 800 (default). My question is how to change to 1000 to satisfy the deflection limit of L/1000.

Thanks,

FROM:bgoodrich DATE:Tuesday, April 18, 2006 3:47:11 PM  
This parameter is not currently exposed to the Opis user through the engine properties.

FROM:jduray DATE:Wednesday, August 02, 2006 8:48:45 AM  
This should probably be added one of the windows but not engine data since it pertains to the spec. Brian will check into where the appropriate place would be.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 11:50:39 AM  
BRASS allows the user to specify the allowable deflection denominator or an absolute allowable deflection in inches. Either one of these values can be input for a particular live load combination such as 1) design truck alone or 2) 25% of the design truck plus the design lane load. The deflection check is really independent of the material, so this input could be placed on the Analysis tab of the Superstructure Definition window. Another alternative would be to put this input on the Factors tab of the Member Alternative Description window, which would provide more flexibility if the user wanted to change this on a material basis.

FROM:kkennelly DATE:2/27/2007 2:56:07 PM  
Suspended until we get approval from Task Force.

FROM:kkennelly DATE:2/27/2007 3:47:31 PM  
Info from Brian: The LOAD-LIVE-DEFLECTION command was added to BRASS in 2001. All the

1/5/2016 11:07:46 AM

HRS AASHTO

250

Complete Issue Information

parameters including the deflection limit were implemented at that time.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 7464                                                  |
| Subject: HL93 metric not exporting axle loads correctly in Opis |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: McCaffrey, Brian      | 6/26/2006 3:22:54 PM |
| Modified By: administrator          | 6/19/2008 4:27:39 PM |
| Priority: High                      |                      |
| Category: Bug - Export 1            |                      |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown        |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
|                 | Resolved |          |                |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Monday, June 26, 2006 11:22:55 AM

When analyzing a bridge with the HL93 Metric vehicle, the first axle is in kN and the second and third axles are in N. The unfactored live load moments and shears are all off because of this (close to a factor of two). The Design Tandem loads are wrong - the truck is correct.

12-4.4 TRUCK-SPECIAL 3, 35.000, 4300.000, 145000.000, 4300.000  
 1. Special Truck Number : 3  
 2. Truck Axle Load : 35.000  
 3. Axle Spacing : 4300.000

1/5/2016 11:07:46 AM

HRS AASHTO

251

Complete Issue Information

4. Truck Axle Load : 145000.000  
 5. Axle Spacing : 4300.000  
 6. Truck Name :  
 7. Truck Description :

FROM:bmccaffrey DATE:Monday, June 26, 2006 1:16:37 PM

FROM:bgoodrich DATE:Tuesday, June 27, 2006 11:25:54 AM  
 I confirmed the issue. I fixed the SI units export of the first axle weight on the TRUCK-SPECIAL command. It is exported in Newtons like the subsequent axles.

FROM:bgoodrich DATE:Friday, September 22, 2006 11:52:36 AM  
 Marked as resolved. Fixed for version 5.5.

Issue ID: 7471  
 Subject: Unable to generate LRFD flexure analysis summary and shear analysis summary for RC bridge

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Kennelly, Krisha  
 Submitted By: Li, Xinmei 6/27/2006 8:04:28 PM  
 Modified By: administrator 6/19/2008 4:27:38 PM  
 Priority: High  
 Category: Enhancement

History

| Primary Contact  | Status        | Priority | Category    |
|------------------|---------------|----------|-------------|
| Duray, Jim       | New           | High     | Bug         |
| Kennelly, Krisha | On Hold       |          |             |
|                  | Investigation |          |             |
|                  | Suspended     |          | Enhancement |
| Kennelly, Krisha | Suspended     | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

|                                 |
|---------------------------------|
| RC1-<br>SingleSpanRCTeeBeam.bbd |
|---------------------------------|

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 7477.15857 | On Hold       | Training problem RC5 - Points of interest |

Description

FROM:xli DATE:6/27/2006 4:00:52 PM

See attached bridge, do LRFD analysis for G2, Interior 36" RC Tee Beam, unable to generate LRFD flexure analysis summary and shear analysis summary with report tool.

FROM:kkennelly DATE:8/14/2006 8:57:50 AM

The report tool is not meant to create the flexure and shear analysis summary for reinforced concrete members. That wasn't in the original work plan for this feature.

|                                                    |
|----------------------------------------------------|
| Issue ID: 7477                                     |
| Subject: Training problem RC5 - Points of interest |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Li, Xinmei         |                      |
| Submitted By: Li, Xinmei            | 6/29/2006 9:02:09 PM |
| Modified By: hlee                   | 1/9/2012 5:43:26 PM  |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | On Hold   |      |             |
| Duray, Jim | On Hold   | High | Bug         |
| Duray, Jim | Suspended | High | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                     |
|------------|---------------|---------------------------------------------|
| 7538.15796 | Suspended     | UG 2006 - Design tool for P/S beam capacity |

### Description

FROM:xli DATE:6/29/2006 2:44:03 PM

Training problem RC5, page 32 Points of interest wizard is introduced before analysis results. But if user creates points of interest as training document instructed the analysis will not perform successfully because number of ranges is more than 40.

Should we move the Points of interest wizard to the end of document?

FROM: Jim Duray DATE: 11/6/2008 7:31:38 AM Eastern Standard Time

Is this still a problem?

FROM: Xinmei Li DATE: 1/9/2012 11:12:29 AM Eastern Standard Time

I tested with 6.2 release version, this problem is resolved. Analysis completed successfully after POIs are added.

Issue ID: 7538

Subject: UG 2006 - Design tool for P/S beam capacity

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Duray, Jim            | 8/4/2006 3:08:19 PM  |
| Modified By: administrator          | 6/19/2008 4:27:32 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Mac Hasan      | Colorado DOT  | mahmood.hasan@dot.state.co.us  | 303-757-9064 |
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7539.15795 | Suspended     | UG 2006 - Steel Design |

### Description

FROM:jduray DATE:8/4/2006 11:05:23 AM

The Opis UG ranked this number 1 priority.

Add design capability to Opis for P/S beams. This includes design of the strand pattern including harped and debonded strands (to match current analysis capability). It seems their preference is for this to be added to the engine rather than the design tool. We should consider improving the design tool to make it more useable or remove it.

FROM:jduray DATE:8/4/2006 12:11:57 PM

Suggestions from Ken for strand design:

1 Straight - set by number required at CL beam, Start from the bottom up and outside in

2 debond - rules at end (alt%/max), debond in increments of 5 feet.

3 harp - top down, harp location is set by the designer

1/5/2016 11:07:47 AM

HRS AASHTO

255



Complete Issue Information

|                                 |
|---------------------------------|
| Issue ID: 7539                  |
| Subject: UG 2006 - Steel Design |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Duray, Jim            | 8/4/2006 3:10:15 PM  |
| Modified By: administrator          | 6/19/2008 4:27:32 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jduray DATE:8/4/2006 11:13:00 AM

The Opus UG ranked this number 2 priority.

Add design capability to Opus for steel plate girders. Capability should include sizing of the web depth and flanges for simple and continuous span configurations.

FROM:jduray DATE:8/4/2006 11:14:55 AM

Complete Issue Information

FROM:kobeidat DATE:Monday, August 07, 2006 3:47:13 PM

The sizing should not be only based on weight. The cost of splicing might more than offset the saving in weight. The sizing should use some common sence rules ie saving need to be at least 400lbs of steel to offset 1 added connection. Area of the plates can't be doubled on both side of connection and so on

FROM:mhasan DATE:Saturday, January 20, 2007 2:34:43 PM

As a minimum, the Designer should be able to set the limit on these items: a) minimum web thickness; b) maximum web depth; c) minimum flange width (top & bottom); d) web depth variation/increment control for girder optimization; e) minimum haunch to be used for composite section properties (zero to any preferred value); f) member stiffness control in the +ve and -ve regions (this would simplify verification of results between engines).

Also, provide bearing stiffener design and deck pouring sequence analysis/design check capabilities.

Include girder performance ratio in the output.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 7540                                        |
| Subject: UG 2006 - Shear stirrup design for P/S beams |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Duray, Jim            | 8/4/2006 3:10:57 PM  |
| Modified By: administrator          | 6/19/2008 4:27:32 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

|           |                                |                |               |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|--------------------------------|----------------|---------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 7541.15793 | Suspended     | UG 2006 - Stiffener spacing design |

Description

FROM:jduray DATE:8/4/2006 11:15:42 AM  
The Opis UG ranked this number 5 priority.

FROM:dteal DATE:Monday, August 07, 2006 11:24:14 AM  
See VI # 4766 for Dup.

|                                             |
|---------------------------------------------|
| Issue ID: 7541                              |
| Subject: UG 2006 - Stiffener spacing design |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Duray, Jim            | 8/4/2006 3:11:34 PM  |
| Modified By: administrator          | 6/19/2008 4:27:32 PM |

### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Ordoobadi, Mehrdad | Assigned |          |          |
|                    | Resolved |          |          |
| Ordoobadi, Mehrdad | Resolved | High     | Unknown  |

### Contacts

| Name         | Company  | Email 1                 | Phone 1      |
|--------------|----------|-------------------------|--------------|
| Amjad Waheed | Ohio DOT | awaheed@dot.state.oh.us | 614-752-9972 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Opis2.gif           |             |
|      | Opis1.gif           |             |

### Tasks

| Name       | Current State | Summary                                |
|------------|---------------|----------------------------------------|
| 7616.15719 | Resolved      | Error while saving the results in Opis |

### Description

FROM:jduray DATE:8/4/2006 11:16:17 AM  
The Opis UG ranked this number 6 priority.

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 7616                                  |
| Subject: Error while saving the results in Opis |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Waheed, Amjad         | 9/18/2006 7:13:35 PM |
| Modified By: administrator          | 6/19/2008 4:27:25 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:awaheed DATE:Monday, September 18, 2006 3:13:35 PM

One of our engineers coded a bridge (actually one of LRFD Examples) in OPIS. He tried to save the results but it took really long time. I do not know how he got out of that. I later tried to save results of the same bridge and noticed it was taking exceptionally long (more than 15 minutes) to get out of flipping hour glass. Now few days later, today I noticed two events stored. When I try to delete any one, I get an error (see attached). Why is this problem and how can it be corrected?

thanks,

Amjad Waheed

FROM:mordoobadi DATE:9/20/2006 9:22:10 AM

ORA-01013 Oracle error indicates that an operation has taken a long time in processing (a timeout).

1/5/2016 11:07:48 AM

HRS AASHTO

260

Complete Issue Information

The timeout may have been set in two places:

(1) In Virtis/Opis ODBC connection settings on your machine. Go to Control Panel/Administrative Tools/Data Sources (ODBC), double-click on the ODBC data source that you use when you run Virtis/Opis.

"Oracle ODBC Driver Configuration" window appears. In the window look for "Enable Query Timeout" and un-check it if it is checked.

(2) On the Oracle Server machine. Ask your database administrator (DBA) to verify the settings for sqlnet.expire\_time in the sqlnet.ORA file on the server. Increasing the value in the setting may fix your problem.

Please do (1) first and see if it fixes the problem if it didn't fix the problem then ask your DBA to try option (2).

FROM:mordoobadi DATE:5/21/2007 3:22:00 PM

Since I haven't heard from Amjad since September 2006, I assume that the suggested resolutions have worked.

I will mark the incident as resolved.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 7640                                          |
| Subject: Opis export of vehicle uses inconsistent units |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Duray, Jim            | 10/2/2006 2:47:55 PM |
| Modified By: administrator          | 6/19/2008 4:38:36 PM |
| Priority: High                      |                      |
| Category: Bug - Export 1            |                      |

History

| Primary Contact | Status    | Priority | Category       |
|-----------------|-----------|----------|----------------|
| Goodrich, Brian | Assigned  | High     | Bug - Export 1 |
|                 | Duplicate |          |                |
| Goodrich, Brian | Duplicate | High     | Bug - Export 1 |

Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

Documents

1/5/2016 11:07:49 AM

HRS AASHTO

261

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | PCILOAD.doc         |             |

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 7747.15588 | Resolved      | Various Prestress Design Topics |

Description

FROM:jduray DATE:10/2/2006 10:47:37 AM

Michael Hagos (Manitoba Transportation & Government Services) 204-945-5204 reported the first axle is exported using kn and the other axles are exported using newtons.

FROM:jduray DATE:10/2/2006 1:43:54 PM  
email from Michael:

Hi Jim,

As per our phone conversation this morning, please see the attached input data that was generated using OPIS 5.4 in metric SI units. Under the TRUCK-SPECIAL command the truck axle loads are in mixed unites of kN and N.

Any time line when this might be corrected is appreciated.

Regards,

---

Michael Hagos, P.Eng.

Manitoba Transportation & Government Services

Bridges and Structures Branch

600 - 215 Garry Street

Winnipeg, MB R3C 3Z1

Phone (204) 945 - 5204

Fax (204) 945 - 4456

1/5/2016 11:07:49 AM

HRS AASHTO

262

Complete Issue Information

FROM: bgoodrich DATE: Tuesday, October 03, 2006 10:18:31 AM  
This issue is a duplicate of Incident 7464, which was already addressed.

|                                          |
|------------------------------------------|
| Issue ID: 7747                           |
| Subject: Various Prestress Design Topics |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Kennelly, Krisha   |                       |
| Submitted By: Colgrove, George      | 12/21/2006 1:19:01 PM |
| Modified By: administrator          | 6/19/2008 4:27:14 PM  |
| Priority: High                      |                       |
| Category: Bug - GUI 2               |                       |

History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Unknown     |
| Kennelly, Krisha | Assigned           |          | Bug - GUI 2 |
|                  | Information Needed |          |             |
|                  | Resolved           |          |             |
| Kennelly, Krisha | Resolved           | High     | Bug - GUI 2 |

Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: gcolgrove DATE: Thursday, December 21, 2006 8:19:01 AM  
The following comments pertain to the Prestress Properties Dialog:

1. The entry for P/S Transfer Stress Ratio is unclear as it relates to the AASHTO LRFD code. A lot of



## Complete Issue Information

times designers will treat the result of equation 5.9.5.2.3a-1 in terms of a percent of ultimate. I suspect that is the intent of the entry. The problem I am having is when beginner designers ask what this entry is about. The term "P/S Transfer Stress Ratio" does not appear in the AASHTO specs anywhere and the help is not necessarily clear as to what this entry refers to. I think some clarification is all that is needed here.

2. I get numerous questions regarding the term used for the bridge life age (or Final Age). I think this should be labeled as "Expected Bridge Life" and it should be entered in years - not days. This would be more self explanatory.

On another topic:

When using the Prestress Design Wizard, the beams are set up without the "Use Creep" flag marked. (See the "Beam Details" Dialog) a warning pops up that states this flags was not set. This flag is not necessary for simple span prestress members. To eliminate the error you need to set the flag to yes - accept the change - then set the flag back to no - then finally accept the flag once more. The warning does not pop up any more. I think there may be an error when setting up data from the wizard.

FROM:gcolgrove DATE:Thursday, December 21, 2006 8:19:20 AM

FROM:kkennelly DATE:5/7/2007 9:10:42 AM

1. The intent of the P/S Transfer Stress Ratio is not the result of equation 5.9.5.2.3a-1. It is used to estimate the concrete stress at the cg of the ps strands due to prestress force and selfweight immediately after transfer. The LFD spec 9.16.2.1.2 lists this factor as 0.63 for stress relieved strand and 0.69 for low relax strand. The LRFD spec 5.9.5.2.3a listed this factor as 0.65fpu for stress relieved strand and 0.7fpu for low relaxation strand in the 3rd edition. The 2005 interims to the 3rd edition changed this factor to 0.9 of the initial prestress before transfer.

I can't find a better name for this field so I will expand the description in the help.

2. Final age is the term used in the spec so that will remain the label in Opis. I will expand the help to include 'expected bridge life'. It is entered as days in the spec so that is what is used in Opis. If you want to change it to years that is a small effort and you can enter an enhancement request for that.

3. I can't reproduce the problem you are having with the PS Design Tool and the 'Use Creep' setting. Are you talking about the "Prestress Design Tool" available on the toolbar when you have selected the name of a prestress member alternative in the BWS tree?

FROM:kkennelly DATE:5/9/2007 12:26:44 PM

Help has been updated for 5.6.

FROM:xli DATE:6/15/2007 9:26:37 AM

2 is verified in 5.6 Beta2

Issue ID: 7756

Subject: Questionable 5.7.3.4 fs calculation for positive flexure at point of interest 105.68

1/5/2016 11:07:49 AM

HRS AASHTO

264

### Complete Issue Information

|                  |                             |                      |  |
|------------------|-----------------------------|----------------------|--|
| Folder:          | /Virtis/Support Center/Opis |                      |  |
| Primary Contact: | Goodrich, Brian             |                      |  |
| Submitted By:    | Lee, Herman                 | 1/5/2007 4:32:52 PM  |  |
| Modified By:     | administrator               | 6/19/2008 4:27:13 PM |  |
| Priority:        | High                        |                      |  |
| Category:        | Bug - BRASS                 |                      |  |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company      | Email 1                       | Phone 1      |
|-----------|--------------|-------------------------------|--------------|
| Mac Hasan | Colorado DOT | mahmood.hasan@dot.state.co.us | 303-757-9064 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 7787.15548 | Suspended     | Generic Section Composer for Opis & Virtis |

### Description

FROM:hlee DATE:1/5/2007 11:20:14 AM

Attached 5.5 Bridgware XML file, RC Service Stress report screen capture, and BRASS LRFD intermediate output file at point of interest 105.68.

To reproduce: Perform a HL93 design review on "2 1/2" Clear To Top Steel" member.

FROM:bgoodrich DATE:Tuesday, February 27, 2007 7:13:14 PM

There is a bug in the BRASS LRFD engine with respect to calculating the limiting crack control stress. I forwarded this issue to WYDOT.

FROM:bgoodrich DATE:Thursday, March 08, 2007 11:54:45 AM

WYDOT assigned this issue to BRASS Problem Log 748.

1/5/2016 11:07:49 AM

HRS AASHTO

265

Complete Issue Information

FROM: bgoodrich DATE: Monday, July 02, 2007 6:46:01 PM  
This issue has been addressed in BRASS-GIRDER(LRFD) 2.0.0. Fixed for Opis 5.6.

|                                                     |
|-----------------------------------------------------|
| Issue ID: 7787                                      |
| Subject: Generic Section Composer for Opis & Virtis |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Hasan, Mac            | 1/20/2007 8:03:51 PM |
| Modified By: administrator          | 6/19/2008 4:27:10 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: mhasan DATE: Saturday, January 20, 2007 3:03:52 PM  
Need a generic section composer for validation purposes (drawing capability using the mouse and grids).

FROM: jduray DATE: 1/22/2007 7:48:12 AM  
WE will need a more detailed description so we can prepare a rough cost estimate and so it can be

Complete Issue Information  
explained to the users and TF.

FROM:mhasan DATE:Sunday, January 28, 2007 12:15:43 PM

Primarily it can be used for computation of generic section properties that are not supported by Opis/Virtis. Also, it can be used for validation of section properties computed by different engines. Our current process for creating non-standard sections is template dependent and non-generic.

Users should be able to select a standard section from the library or create a non-standard section preferably using grids into the section interface window and subsequently add a haunch, deck and re-bars by use of the mouse. The rectangular co-ordinate system will be considered at this time.

Finally, it can be integrated into Opis/Virtis for use by it's members.

|                                        |
|----------------------------------------|
| Issue ID: 7793                         |
| Subject: BRASS LRFD live load stresses |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: McCaffrey, Brian      | 1/23/2007 8:16:30 PM |
| Modified By: administrator          | 6/19/2008 4:27:10 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Duray, Jim      | New      | High     | Unknown   |
| Goodrich, Brian | Assigned |          |           |
|                 | Resolved |          | Education |
| Goodrich, Brian | Resolved | High     | Education |

1/5/2016 11:07:50 AM

HRS AASHTO

267

## Complete Issue Information

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 7941.15394 | Resolved      | LRFD 4th edition |

### Description

FROM:bmccaffrey DATE:Tuesday, January 23, 2007 3:16:40 PM

Where are live load stresses reported in BRASS LRFD?

FROM:bgoodrich DATE:Monday, January 29, 2007 11:51:34 AM

There is not a table of just live load stresses. Live load stresses are shown in the SERVICE LIMIT STATE SUMMARY and/or STRENGTH LIMIT STATE SUMMARY in the BRASS output. These are also shown in the intermediate output for a point of interest when a design ratio or rating factor is calculated. Additionally, the same information is available in the "Steel Limit State Summary" in the Opis tabular reports. In some strength cases, only the moment is provided if the stress is not needed according to the spec.

Issue ID: 7941

Subject: LRFD 4th edition

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Submitted By: McCaffrey, Brian

5/15/2007 1:49:52 PM

1/5/2016 11:07:50 AM

HRS AASHTO

268

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:26:55 PM |
| Priority: High             |                      |
| Category: Enhance BRASS    |                      |

### History

| Primary Contact | Status   | Priority | Category                      |
|-----------------|----------|----------|-------------------------------|
| Duray, Jim      | New      | High     | Unknown                       |
| Goodrich, Brian | Assigned |          | Bug - Export 1                |
| Goodrich, Brian | Assigned | High     | Bug - Export 1<br>Bug - BRASS |

### Contacts

| Name            | Company          | Email 1                             | Phone 1      |
|-----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich  | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Paul Campisi    | NYS DOT          | pcampisi@dot.state.ny.us            |              |
| Brian McCaffrey | AECOM/EarthTech  | Brian.McCaffrey@aecom.com           |              |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1020920.xml         |             |
|      | Shear transfer.JPG  |             |

### Tasks

| Name       | Current State | Summary                  |
|------------|---------------|--------------------------|
| 7943.15392 | Assigned      | Interface shear transfer |

### Description

FROM:bmccaffrey DATE:Tuesday, May 15, 2007 9:50:02 AM

When will the 4th edition of the LRFD specs be available in Opis?

FROM:jduray DATE:7/23/2007 10:06:50 AM

Are you referring to BRASS or the new LRFD RC super and sub spec-checker? Brian Goodrich will have to respond regarding BRASS. For the new AASHTO LRFD engine it will be in the 6.0 release.

FROM:jduray DATE:7/23/2007 10:47:30 AM

1/5/2016 11:07:50 AM

HRS AASHTO

269

Complete Issue Information

FROM:bgoodrich DATE:Wednesday, July 25, 2007 1:28:25 PM  
The LRFD 4th edition will be included in BRASS-GIRDER(LRFD) 2.0.0, which is to be released with Opis 5.6.

|                                   |
|-----------------------------------|
| Issue ID: 7943                    |
| Subject: Interface shear transfer |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Opis |                        |
| Primary Contact: Goodrich, Brian    |                        |
| Submitted By: McCaffrey, Brian      | 5/16/2007 3:26:41 PM   |
| Modified By: hlee                   | 10/15/2011 10:23:26 PM |
| Priority: High                      |                        |
| Category: Bug - BRASS               |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:bmccaffrey DATE:Wednesday, May 16, 2007 11:26:46 AM

It appears that horizontal shear reinforcement info is not being passed to the engine properly - see attached stage 3 spec check @ 22.08'. I can't tell where 's' came from either.

Use G2.

FROM:bgoodrich DATE:Monday, June 18, 2007 4:36:33 PM

The export finds the first vertical shear reinforcement to the right of the left-most support to establish the spacing of the first range. The export then determines the horizontal shear reinforcement within that range. The range is so small that there is no physical horizontal shear reinforcement within it. The export will need to be revised to determine the horizontal shear reinforcement "near" the range for

1/5/2016 11:07:51 AM

HRS AASHTO

270

Complete Issue Information

cases such as this.

FROM:bmccaffrey DATE:Thursday, August 02, 2007 10:26:09 AM

OK, when will the export be revised?

FROM:jduray DATE:10/10/2007 1:46:26 PM

FROM:pcampisi DATE:Friday, April 11, 2008 2:10:39 PM

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 7951                                               |
| Subject: Questions about AASHTO 4 provisions implementations |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Obeidat, Khalid       | 5/29/2007 2:36:32 PM |
| Modified By: administrator          | 6/19/2008 4:26:54 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Duray, Jim       | New      | High     | Unknown   |
| Kennelly, Krisha | Assigned |          | Education |
|                  | Resolved |          |           |
| Kennelly, Krisha | Resolved | High     | Education |

Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

1/5/2016 11:07:51 AM

HRS AASHTO

271



Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 8001.17068 | Assigned      | The effect of the losses and gains due to elastic deformation |

Description

FROM:kobeidat DATE:Tuesday, May 29, 2007 10:36:32 AM

1- ASHTO LRFD Article 5.8.3.4 allows three methods for calculating shear resistance for pre stressed beam. Which of these methods OPIS allows? Can the user pick which method to use and how? If all the methods are not implemented when do you anticipate incorporating them into OPIS?

2- Have OPIS implemented the new horizontal (interface) shear provisions?

3- Have OPIS implemented variable resistance factor for flexural design?

FROM:kkennelly DATE:5/31/2007 8:38:02 AM

1. Opis currently allows Art. 5.8.3.4.1 Simplified and 5.8.3.4.2 General. The third method 5.8.3.4.3 was added in the 2007 edition of the spec and is not yet implemented. We are working on implementing it, it will probably be available in the release scheduled for this fall.

2. It will probably be available in the release scheduled for this fall.

3. It will probably be available in the release scheduled for this fall.

FROM:kkennelly DATE:6/6/2007 8:10:31 AM

Email from Brian Goodrich on 5/31 indicates "WYDOT has scheduled the next major release of BRASS for August 2007. The

4th edition changes are to be implemented for this version."

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 8001                                                         |
| Subject: The effect of the losses and gains due to elastic deformation |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Obeidat, Khalid       | 7/10/2007 4:23:54 PM |
| Modified By: bgoodrich              | 3/10/2009 6:09:55 PM |
| Priority: High                      |                      |
| Category: Enhance BRASS             |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                           |
|------------|---------------|-------------------------------------------------------------------|
| 8087.16982 | New           | Enhancement request: provide an option for pre-2005 AASHTO losses |

### Description

FROM:kobeidat DATE:Tuesday, July 10, 2007 12:23:54 PM

OPIS uses the gross section properties for loss calculations. As such the total elastic loss or gain due to applied loads need to be accounted for as required by Article 5.9.5.2.3. In my review for the out put file about losses I didn't see the results for elastic gains due to loading (live and dead loads) and the adjustments for the use of the gross sections. Are these gains and losses included somewhere else or are they ignored? If they are ignored then we are not following the AASHTO intent in Article 5.9.5.2.3

FROM:dkemna DATE:Thursday, July 19, 2007 10:01:41 AM

I have noticed the same error. BRASS-LRFD appears to be using the Approximate method without gains and losses discussed in the commentary.

FROM:bgoodrich DATE:Wednesday, July 25, 2007 12:24:38 PM

Khalid will be sending me some more information on this issue.

FROM:kobeidat DATE:Wednesday, August 15, 2007 2:22:25 PM

It will be nice to have an option that let the user choose if they want to include the gains or not

FROM: Brian Goodrich DATE: 10/2/2008 9:20:37 AM Mountain Daylight Time

Kuok Chiang (Mass Highway Dept) reported this issue today.

Dear Mr.Lee,

1/5/2016 11:07:51 AM

HRS AASHTO

273

## Complete Issue Information

My name is Kuok Chiang. I work for Masshighway Department's In-house Bridge Design section. I was referred to you by my colleague Elizabeth Befikadu. I want to know if Virtis can calculate the elastic gain of prestress strain due to dead and live load.

I am currently working on a preliminary design of a bridge. I used both Virtis/Opis and Conspan to exploring the prestressed beam options. I created the same bridge in both programs and compared the results. I found that the tensile stresses at the bottom of concrete beam (in Service III limit states) from Virtis output is always higher than the output from Conspan ( 0.765 ksi from virtis vs 0.44 ksi from concspan) even though the Mu is the same (8609k-ft from virtis vs 8628 k-ft from conspan). Since the allowable tensile stress at the bottom of beam in service state III limit state is only  $0.19 \times \text{sqrt}(f'c)$  ( 0.484 ksi in my case), the difference is very significant.

After doing some investigation and hand calculation, I found that the difference was mainly caused by the different prestress loss calculation methods used by the two programs. When calculating the prestress load, Conspan included the elastic gain of the strains caused by the dead load, composite dead load, and live load, while virtis did not. Therefore, the total prestress loss computed by conspan is always less than Virtis. In my case the, the total loss is 24.1% from virtis and 18 % from conspan. The prestress gain is also mentioned in AASHTO 2008 LRFD article 5.9.5.2.3a.

Since the difference in terms of prestress loss is significant, I want to know if virtis has the capability to calculate the elastic gain. Moreover, will it be appropriate to include the elastic gain when designing the beam?

Thank you very much

Kuok Chiang  
Mass Highway Dept.  
In House Design  
10 Park Plaza  
Boston, MA 02116

FROM: Brian Goodrich DATE: 3/10/2009 11:59:37 AM Mountain Daylight Time  
BRASS-LRFD is not being revised to consider elastic gains. WYDOT will be adding the following note to the BRASS-GIRDER(LRFD) Technical Manual:

"BRASS does not calculate elastic gains due to superimposed loads. If elastic gains due to superimposed loads are to be considered as discussed in AASHTO LRFD 5.9.5.2.3a, the user must calculate any elastic gains, specify input (lump-sum) losses, and manually include any elastic gains in the total losses."

1/5/2016 11:07:52 AM

HRS AASHTO

274

Complete Issue Information

|                                                                            |
|----------------------------------------------------------------------------|
| Issue ID: 8087                                                             |
| Subject: Enhancement request: provide an option for pre-2005 AASHTO losses |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Obeidat, Khalid       | 8/15/2007 5:50:08 PM  |
| Modified By: hlee                   | 10/13/2009 5:14:03 PM |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Lee, Herman     | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 8120.16949 | Suspended     | Report wish list for LRFD reports |

Description

FROM:kobeidat DATE:Wednesday, August 15, 2007 1:50:16 PM  
 Many state DOT's still use the pre-2005 AASHTO losses. Since those losses have been already coded in OPIS in the past, why not provide them as an option for the user.

FROM: Herman Lee DATE: 10/13/2009 1:12:15 PM Eastern Daylight Time  
 Resolved in 6.1 Release.

Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 8120                             |
| Subject: Report wish list for LRFD reports |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Kennelly, Krisha      | 9/5/2007 5:40:09 PM  |
| Modified By: administrator          | 6/19/2008 4:36:26 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:9/5/2007 1:42:55 PM  
Submitted via email on behalf of Darren Kemna, Missouri:

1/5/2016 11:07:52 AM

HRS AASHTO

276

## Complete Issue Information

### Steel Wish List.

-Moments at field splices. DL breakdown. Positive and negative LL moments. Basically, components required for splice design.

-Fatigue Detail stress checks. Currently POI's are required at diaphragms and splices. Report stress demand, resistance and design ratios.

I know the above two requests are difficult due to POI entry requirements, but they should be included for steel design programs.

### Prestress Reports

I would like to see reports for shear design that give steel area provided and required at tenth points and user POIs. A report would be needed for vertical shear, interface shear, and longitudinal reinforcement.

Also, I would like to see the flexural strength report change (similar to steel) so that Mu, Mr, and DR are reported at tenth points.

Issue ID: 8159

Subject: BRASS-LRFD stops analysis due to moment of inertia error

Folder: /Virtis/Support Center/Opis

Primary Contact: Goodrich, Brian

Submitted By: Goodrich, Brian

9/24/2007 11:01:07 PM

Modified By: administrator

6/19/2008 4:36:23 PM

Priority: High

Category: Bug - BRASS

### History

| Primary Contact | Status | Priority | Category    |
|-----------------|--------|----------|-------------|
| Lee, Herman     | New    | High     | Bug - BRASS |

1/5/2016 11:07:52 AM

HRS AASHTO

277

Complete Issue Information

|                   |                    |      |             |
|-------------------|--------------------|------|-------------|
| Goodrich, Brian   | Assigned           |      |             |
|                   | Resolved           |      |             |
| Duray, Jim        | New                | High | Unknown     |
|                   | Information Needed |      |             |
|                   | Assigned           |      |             |
| Lee, Herman       |                    |      |             |
| Lee, Herman       | Assigned           | High | Unknown     |
| Kennelly, Krishna |                    |      |             |
| Duray, Jim        |                    |      |             |
|                   | Suspended          |      | Enhancement |

Contacts

| Name        | Company | Email 1                | Phone 1 |
|-------------|---------|------------------------|---------|
| Rich Flango | Baker   | RFLANGO@mbakercorp.com |         |

Documents

| Name | Resource Identifier                     | Description                                       |
|------|-----------------------------------------|---------------------------------------------------|
|      | Temperature_Forces_in_Spec_Check.xls    | Results showing no axial loads due to temperature |
|      | Beta 4 RC Superstructure Test Cases.xml |                                                   |

Tasks

| Name       | Current State | Summary                                                                               |
|------------|---------------|---------------------------------------------------------------------------------------|
| 8323.16746 | Assigned      | Axial Loads due to Temperature are not in load combinations or Spec. Checking reports |

Description

FROM:bgoodrich DATE:Monday, September 24, 2007 7:01:24 PM  
E-mail from Charles May via Mike Watters:

I am trying to get the dead load reactions in each beam for BIN 1013909 (Route 17 over 17k). I keep getting error messages for exterior girders: 2E-G1, 3E-G1, 2W-G1, and 3W-G1 when I do a Design Review (Brass LRFD) with Virtis-Opis with a HL-93 LL. There is no apparent reason for this upon our investigation, even replacing the beam entirely yielded no changes. We realize that the bottom plate on the rolled section is a little different from the rest of the composite sections but changing the bottom plate length changed nothing either. Here are a screen shots of the error message(s) as well as the Virtis-Opis file. Can you please suggest a possible solution. Thanks for your assistance in this matter.

1/5/2016 11:07:52 AM

HRS AASHTO

278

Complete Issue Information

Sincerely,

Charles May

FROM:bgoodrich DATE:Monday, September 24, 2007 7:06:37 PM  
There does not appear to be a problem with your input. The source of the problem may be within the BRASS-GIRDER(LRFD) engine. At this time, I don't have a work around. Did this structure successfully run in a previous version of Opis? If so, which one?

FROM:bmccaffrey DATE:Thursday, September 27, 2007 11:07:29 AM

No, it was an existing bridge used for rating. It's being worked on by a designer and this was the first time it was run through BRASS-LRFD.

I get the same error in 5.6 B4

FROM:bgoodrich DATE:Wednesday, October 03, 2007 11:34:27 AM  
I forwarded this issue to WYDOT on Sept. 24 for assignment to a BRASS problem log.

FROM:bgoodrich DATE:Thursday, October 04, 2007 7:46:54 AM  
WYDOT assigned this BRASS Problem Log 784.

FROM:bgoodrich DATE:Friday, December 14, 2007 12:12:37 PM  
An error was found and fixed in the engine. BRASS-GIRDER(LRFD) 2.0.1 will contain this fix.

Issue ID: 8323  
Subject: Axial Loads due to Temperature are not in load combinations or Spec. Checking reports

Folder: /Virtis/Support Center/Opis  
Primary Contact: Duray, Jim  
Submitted By: Flango, Rich 12/4/2007 7:04:23 PM  
Modified By: kkennelly 4/9/2012 5:21:02 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

1/5/2016 11:07:53 AM

HRS AASHTO

279



## Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 8394.16675 | Assigned      | Missing Specification Checks for RC - Article 5.5.3.2 |

## Description

FROM:rflango DATE:Tuesday, December 04, 2007 2:04:23 PM

Changed simple span supports definition from pin and roller to two pin supports for Structure Definition #1. Added a temperature load. Temperature load appears in the FE Model and FE Actions but not in the following reports:

- Load Combinations
- Specification Checking
- Result graphs

See attached spreadsheet for more details, "Temperature\_Forces\_in\_Spec\_Check.xls".

FROM:jduray DATE:12/5/2007 9:12:29 AM  
Which bridge?

FROM:rflango DATE:Wednesday, December 05, 2007 4:39:03 PM  
Structure Definition #1, Girder 2. Input revised for pinned supports. Refer to attached .xls file.

FROM: Herman Lee DATE: 6/20/2008 2:01:16 PM Eastern Daylight Time  
I tested Structure Definition #1 G2 (attached bridge) in Beta 4. Temperature loads appear in the Limit States Report, Load Combinations Report and Axial branch of the Results Graph.

Krishna: Looks like Article 5.7.4.5 has been removed from rc girder. Which spec article is applicable to axial loads?

FROM: Krishna Kennelly DATE: 6/24/2008 9:40:51 AM Eastern Daylight Time  
The rc girder uses 5.7.3.2 for bending now, I don't think it considers axial loads in the spec check. Ask Jim for sure.

FROM: Krishna Kennelly DATE: 4/9/2012 1:20:25 PM Eastern Daylight Time  
Estimate also needs to include adding temperature to the 3d analysis.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8394                                                 |
| Subject: Missing Specification Checks for RC - Article 5.5.3.2 |

|                                     |
|-------------------------------------|
| Folder: /Virtis/Support Center/Opis |
| Primary Contact: Kennelly, Krishna  |

1/5/2016 11:07:53 AM

HRS AASHTO

280

### Complete Issue Information

|                          |                       |
|--------------------------|-----------------------|
| Submitted By: Teal, Dean | 12/20/2007 9:52:37 PM |
| Modified By: hlee        | 5/27/2009 8:41:55 PM  |
| Priority: High           |                       |
| Category: Unknown        |                       |

### History

| Primary Contact  | Status             | Priority | Category    |
|------------------|--------------------|----------|-------------|
| Duray, Jim       | New                | High     | Unknown     |
| Kennelly, Krisha | Assigned           |          |             |
| Lee, Herman      | Information Needed |          |             |
|                  | Assigned           |          |             |
|                  | Suspended          |          | Enhancement |
| Lee, Herman      | Suspended          | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8443.16626 | Suspended     | Dead Load Camber Summary Report |

### Description

FROM:dteal DATE:Thursday, December 20, 2007 4:52:37 PM

It appears that these specs should have been included in Opis LRFD engine

5.5.3.2

5.7.3.2

5.8.3.5

FROM:jduray DATE:1/2/2008 7:59:24 AM

Krisha - are they included in our flow charts?

FROM:kkennelly DATE:1/2/2008 10:36:04 AM

Yes they are in our flowcharts. 5.5.3.2 and 5.8.3.5 are being worked on.

1/5/2016 11:07:53 AM

HRS AASHTO

281

Complete Issue Information

5.7.3.2 is the flexural resistance calc. We are re-using the 5.7.4.5 Biaxial flexure code (using uniaxial bending) for the superstructure.

FROM:kkennelly DATE:3/13/2008 10:33:36 AM  
Jim has implemented 5.7.3.2 for Beta 3.

Mark is working on 5.8.3.5 in incident 8294

This incident is assigned to Jim to finish up Article 5.5.3.2

FROM: Jim Duray DATE: 7/18/2008 11:03:43 AM Eastern Daylight Time  
The loads are now available. We need to review and complete the article.

FROM: Krisha Kennelly DATE: 8/12/2008 3:29:03 PM Eastern Daylight Time  
Article completed for 6.0 but was backed out due to lack of testing. Article ready for 6.0 Service pack 1

FROM: Herman Lee DATE: 5/27/2009 3:15:05 PM Eastern Daylight Time  
Verified in 6.1 Beta 1.

|                                          |
|------------------------------------------|
| Issue ID: 8443                           |
| Subject: Dead Load Camber Summary Report |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Teal, Dean            | 1/24/2008 8:46:27 PM |
| Modified By: sthogaru               | 7/14/2009 2:37:54 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM:dteal DATE:Thursday, January 24, 2008 3:46:28 PM  
This report has 2 issues for RC slabs

#### First one:

The deflection value is in inches to one decimal. The Analysis Results tabular report has this to 4 decimals. We need more accuracy than 1 decimal to actually be able to use this report. We convert this value to feet which is then used to construct the camber boards for construction formwork.

#### Second one:

This a total dead load camber summary. In our case , dead load includes the slab, the rail and the future wearing surface. For construction purposes we only use the slab dead load to create the camber boards –

FROM:dteal DATE:Friday, February 15, 2008 11:28:56 AM

If sacrificial wear is defined, that would be included in the above construction loads.

FROM:kkennelly DATE:2/28/2008 2:17:28 PM

Item 1: Fixed for beta 3. Camber output is now to 4 decimal places

Item 2: It is an enhancement to separate the slab/girder dead load from the total dead load camber for RC structures. (Note the RC camber report showing total dead load camber was accepted in Incident 7453.)

For BRASS LRFD, Opis is simply reporting the deflections that it receives from the BRASS LRFD program. Changes have to be made inside BRASS LRFD to pass back the separated dead load camber. That isn't in the current work plan.

Herman, can you check if we are able to separate the girder/slab dead load from the rest of the dead load in Opis Lrfd Engine relatively easily? If we can separate them easily please do it as part of the LRFD RC superstructure work plan. Otherwise it is an enhancement.

FROM:dteal DATE:Friday, April 04, 2008 2:51:36 PM

From the analysis results report - all dead loads are reported individually by dead load case - I guess I don't understand what you mean when you said the defelections aren't there??

FROM:hlee DATE:4/23/2008 9:30:30 AM

Is this request for RC slab only?

FROM:dteal DATE:Monday, April 28, 2008 11:54:07 AM

From: Herman Lee [mailto:HLee@mbakercorp.com]

Sent: Monday, April 28, 2008 9:30 AM

To: Dean Teal

Subject: Incident 8443 (Dead Load Camber Summary Report)

Hi Dean,

Is your request to separate slab dead load from the total dead load camber report for RC slab only?

1/5/2016 11:07:53 AM

HRS AASHTO

283

## Complete Issue Information

Thanks,  
Herman

Yes, Incident 8443 was to get all the dead load cambers separate out making this a useful report for creating plans.

But if it can be done steel and PS also, that would be great. This would save the designer time, they have to find all the DL deflections separately anyway to create a set of construction plans.

FROM:hlee DATE:5/6/2008 1:35:41 PM

Some dead load cases reported by the BRASS LRFD engine are composed of more than one dead load component. For example, in RCTrainingBridge1's Structure Definition #1, the "Girder Weight" load case reported by BRASS is the girder weight calculated using the structural thickness of the top flange. The "Top Flange + Diaphragms" load case is the load from the (total - structural) thickness plus the diaphragms.

Each load case in the Opis LRFD Engine represents one dead load component. Currently, the camber report generation doesn't have engine specific instructions. Domain member results (DoMemberXYResults) also need to be enhanced for storing information for each dead load cases. Since this involves the domain and possibly migration of saved results, I changed the status to Suspended and category to Enhancement.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 8513                                                                  |
| Subject: Opis RC LRFD superstructure engine - provide report of dead load calcs |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Kennelly, Krisha      | 3/19/2008 5:20:57 PM |
| Modified By: sthogaru               | 7/14/2009 2:39:30 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

## History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

1/5/2016 11:07:54 AM

HRS AASHTO

284

Complete Issue Information

Tasks

| Name       | Current State | Summary                                   |
|------------|---------------|-------------------------------------------|
| 8515.16554 | Resolved      | Dist. Factors for Shear in P/S Box (LRFD) |

Description

FROM:kkennelly DATE:3/19/2008 1:24:47 PM

An idea I had as a result of incident 8396. Refer to that incident for more details.

The export to the Opis RC LRFD Superstructure engine should create a report listing how the superimposed dead loads were computed.

|                                                    |
|----------------------------------------------------|
| Issue ID: 8515                                     |
| Subject: Dist. Factors for Shear in P/S Box (LRFD) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Lantzy, Eric          | 3/20/2008 1:11:58 PM |
| Modified By: administrator          | 6/19/2008 4:35:56 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Lee, Herman     | New      | High     | Bug            |
| Goodrich, Brian | Assigned |          | Bug - Export 1 |
| Goodrich, Brian | Resolved | High     | Bug - Export 1 |

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |

### Documents

| Name | Resource Identifier  | Description                       |
|------|----------------------|-----------------------------------|
|      | MBR2(1).DAT          | BRASS data file for TEST          |
|      | 02559-WB-B017775.xml | Bridge XML file                   |
|      | cordovam2.pdf        | BRASS LRFD Results (Strength I)   |
|      | Cordovam.pdf         | Opis LRFD Results (Chart & Table) |
|      | MBR2.DAT             | BRASS data file for wbB017775     |

### Tasks

| Name       | Current State | Summary                                                  |
|------------|---------------|----------------------------------------------------------|
| 8540.16529 | Resolved      | live load distribution factors and low live load moments |

### Description

FROM:elantzy DATE:Thursday, March 20, 2008 9:12:04 AM

Opis seems to be using old formulas to compute the distribution factors for shear in cross sections type f and g (Concrete Box Beams Used in Multibeam Decks), in the LRFD code. The "new" formulas have been in effect since the third edition of LRFD in 2004. Virtis-Opis still uses the formulas from the second edition.

Shear in Interior Beams - Two or more Lanes Loaded: Missing the (b/1200) factor. If this factor is less than 1, use 1 in the formula. Since our beams are 900 or 1200 mm in width, it shouldn't affect our typical designs.

Shear in Exterior Beams - One Lane Loaded: Virtis-Opis uses the Lever Rule. The third and fourth editions of the code use a formula in which the factor depends on the distance between curb and the

1/5/2016 11:07:54 AM

HRS AASHTO

286

Complete Issue Information

exterior beam.

Shear in Exterior Beams - Two or more Lanes Loaded: The formula for g misses the (b/1200) factor, which again doesn't affect our typical designs. The formula for e is new and includes the width of the girder in addition to the "de" distance. The formula from the third and fourth editions may easily increase the shear due to live load by 15%-25%, compared to the formula from the second edition.

Attached is the a .xml file, showing this issue.

Please advise.

Thank you.  
Eric

FROM:elantzy DATE:Thursday, March 20, 2008 9:21:33 AM

FROM:bgoodrich DATE:Thursday, March 20, 2008 3:31:52 PM

This issue was recently reported by Oregon DOT. The next release of BRASS-GIRDER(LRFD)<sup>TM</sup> will contain the necessary corrections to bring these live load distribution factor calculations up to the 4th Edition of the AASHTO LRFD Specifications.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 8540                                                    |
| Subject: live load distribution factors and low live load moments |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Mullins, Randall      | 4/3/2008 4:47:26 PM  |
| Modified By: administrator          | 6/19/2008 4:35:53 PM |
| Priority: High                      |                      |
| Category: Bug - Export 1            |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



Complete Issue Information

Tasks

| Name       | Current State | Summary                                                       |
|------------|---------------|---------------------------------------------------------------|
| 8586.16483 | Assigned      | P/S Phi calculation for Factored Flexural Resistance (Metric) |

Description

FROM: bgoodrich DATE: Thursday, April 03, 2008 12:47:40 PM  
E-mail from Herman:

From: Herman Lee [mailto:HLee@mbakercorp.com]  
Sent: Tuesday, February 26, 2008 1:13 PM  
To: Goodrich@BridgeTech-Laramie.com  
Cc: Jim Duray  
Subject: Fwd: V5.6 Virtis/Opis output problem--Brass LRFD engine

Brian,

I just spoke to Woldemichael (ALDOT) for the problems he is having with Opis. The upward deflection problem is due to the transverse continuous beam analysis selection for DL distribution. I'm not able to reproduce the live load moment problem. Could you answer the BRASS live load distribution factor question and also see whether you can reproduce the live load moment problem? His number is (334) 242-6080.

Thanks,  
Herman

>>> "Mullins, Randall" <mullinsr@dot.state.al.us> 2/25/08 3:00 PM >>>  
Herman,

I will send you a set of plans if you need them.  
Please call Woldemichael first.

Thanks,  
Randall  
334-242-6015  
Woldemichael's No. (334)-242-6080

From: Woldemichael, Berhanu  
Sent: Monday, February 25, 2008 11:43 AM  
To: Mullins, Randall  
Subject:

Dear Herman,

We are currently checking an already built bridge having welded steel plate girders with 4 continuous spans (169ft-210ft-210ft-169ft) as a superstructure based on the current AASHTO LRFD Code. We are using OPIS 5.6 to check our hand calculations. While running OPIS-LRFD program using BRASS Engine (the only engine available for LRFD), we encountered some problems which we hope you can help with.

1/5/2016 11:07:54 AM

HRS AASHTO

288

## Complete Issue Information

The following are the main problems encountered

- The composite dead load (the load due the weight of the barrier rail) seems to cause girder no. 2 and 5 to deflect upwards contrary to the usual assumption.
- The calculation of the Live Load Distribution factors seems to be vague. Please look into the outputs. Since the cross-section varies along the bridge, for our hand calculations, we used a weighed value for the  $K_g$  (Longitudinal Stiffness Parameter) like in the example which you did for the Federal Highway Project. Do we have to consider the presence of the deck slab in areas (over the piers) where shear studs are absent? We decided to leave them out (in contrary to OPIS-LRFD using BRASS) while calculating stiffness parameters.
- The STRENGTH I moments (especially the positive moments) are considerably less for the interior girders than for the exteriors. This is in contrary to our hand calculations and also to our original design based on ASD.
- The same applies to the shear forces and reactions.

Thanks

FROM:bgoodrich DATE:Thursday, April 03, 2008 12:48:39 PM

Regarding the live load distribution factor calculations, BRASS uses the non-composite area and moment of inertia to determine  $K_g$ . Additionally, the distance from the centroid of the non-composite steel beam to the center of the deck is also calculated the same for both non-composite and composite structures per a decision by the Wyoming DOT. Therefore, the slab is considered everywhere in the live load distribution factor calculations as far as BRASS is concerned. Also, the slab thickness used in these calculations comes from Structure Typical Section window and not the ranges entered on the Deck Profile window. As you probably know, the workaround would be to input the live load distribution factor schedules manually.

Regarding the lower moments for the interior girders, this could be due to the uplift due to the transverse continuous beam dead load distribution method that was selected. It could also be due to the difference in the live load distribution factors that you reported. Are the factored actions still different from your design calculations after setting the dead load distribution method to tributary or uniform and manually entering the live load distribution factors?

FROM:bgoodrich DATE:Thursday, April 03, 2008 12:50:23 PM

Regarding your comments about the stiffness term ( $K_g$ ), please submit a brief summary of your procedure (and  $K_g$  specifically) for determining the live load distribution factor for a non-composite steel structure. Send any supporting hand calculations or spreadsheets that you might have. This will help

1/5/2016 11:07:54 AM

HRS AASHTO

289

## Complete Issue Information

when I discuss this issue with WYDOT.

I investigated the difference in the live load moments between the exterior and interior girders. For some of the regions along the girder, BRASS is calculating a higher live load distribution factor for the exterior girder than the interior girder. For the exterior girder, the lever-rule is invoked and controls over the rigid method. These distribution factors are greater than those calculated for the interior girder in some of the positive moment regions. Was the lever-rule considered in the original design?

It also appears that some of the LRFD distribution factors were overridden with the lever-rule values because one of the range-of-applicability checks was not satisfied. For some cases, the  $K_g$  term is greater than the range specified in the specification. If this did not occur, more regions along the girder would have greater live load moments for the exterior girder than the interior.

FROM:bgoodrich DATE:Thursday, April 03, 2008 12:50:48 PM

From: Woldemichael, Berhanu [mailto:woldemichaelb@dot.state.al.us]  
Sent: Monday, March 17, 2008 12:41 PM  
To: Brian L. Goodrich  
Subject: V5.6 Virtis/Opis output problem--Brass LRFD engine

Brian,

As I said earlier, I used more or less the same method used by Baker for the determination of the stiffness term ( $K_g$ ).

Later, I varied  $K_g$  (with and without the slab over the pier region) and recalculated DF, there was only slight change in the final moments. I think the problem lies in the calculation of the live load moments themselves.

Does OPIS use both TRUCK (or TANDEM) and LANE moments or only one of them for the determination of critical values? I have compared my values with the LRFD Moment & Shear Table from the Minnesota DOT (see attached). This is what I get.

Taking Effective Span of 130 ft (Span I,  $L=169$  ft), the Strength I maximum positive moment,  $M_I = 3252*1.25 + (2060*1.33 + 1352)*1.75*0.8 = 9794$  kip-ft.

Where the first term,  $3252*1.25$ , is the dead load component and the second  $(2060*1.33 + 1352)*1.75*0.8$ , is the live load component with  $DF=0.8$  (weighted). The actual live load moment is even higher (loading Span III according to influence lines for the positive moment in Span I). I get 10,600 Kip-ft. OPIS gives a value which is less than 8,000 Kip-ft for the Strength I maximum positive moment in Span I taking  $DF=0.8$ .

Regards,

Berhanu

FROM:bgoodrich DATE:Thursday, April 03, 2008 12:51:24 PM

I ran the member alternative for G2. Then, I opened the Analysis Results window and found the maximum Strength I positive moment in Span 1 is 9836.27 ft-kips. I don't see the moment that you mentioned that is less than 8000 ft-kips. Please send a screen shot that shows this lower moment.

BRASS analyzes the truck, tandem, train, and lane loads individually and then combines them as

1/5/2016 11:07:55 AM

HRS AASHTO

290

## Complete Issue Information

outlined in the LRFD spec using the appropriate factors.

FROM:bgoodrich DATE:Monday, April 07, 2008 10:39:18 AM  
E-mail from Herman:

Berhanu and Brian,

I ran the steel structure's G2 member alt in the bridge file attached in Incident 8540 with both the Virtis/Opis software and Opis only software. I'm not able to duplicate the low moments shown in Berhanu's pdf file (cordovam2.pdf). One thing I noticed is that the screen capture in the pdf file show "TEST STEEL", the bridge file attached in 8540 is "WB B017775".

Brian - May be comparing the BRASS input data file will know the difference.

Herman

FROM:bgoodrich DATE:Monday, April 07, 2008 10:40:22 AM  
E-mail from Herman:

I ran the steel structure's G2 member alt in the "02559 - TEST\_STEEL.xml" bridge file and compared the BRASS input data file with "02559-WB-B017775.xml".

The differences are as follows (TEST\_STEEL vs. WB-B017775):

1. Stage 1 dead load distribution method (Tributary area vs. Transverse continuous-beam)
2. Stage 2 dead load distribution method (User defined member loads vs. Uniformly distributed to all girders)
3. Support 1 horizontal restraint (Free vs. Restrained)
4. Support 3 horizontal restraint (Restrained vs. Free)
5. Live load distribution factors schedule (Entered vs. Calculated by BRASS)

Attached is a screen capture of the Strength I results on Page 129 between the two bridge files. Please note that my TEST\_STEEL results doesn't match those listed in cordovam2.pdf.

Brian - Could you double check my comparison?

Thanks,  
Herman

FROM:bgoodrich DATE:Monday, April 07, 2008 10:40:44 AM  
Attached BRASS data files from Berhanu.

After reviewing the BRASS data files that Berhanu sent, I think I have figured out the source of the low moments. In the export to BRASS, the scale factor is being set to 0.8333 for ALL the trucks instead of just the fatigue truck. I'm not sure why this doesn't happen when Herman or I run version 5.6. This issue has already been fixed for the upcoming 5.6 service pack.

FROM:bgoodrich DATE:Tuesday, April 15, 2008 10:33:41 AM  
The service pack for 5.6 has been cancelled. This fix will be available in version 6.0.

1/5/2016 11:07:55 AM

HRS AASHTO

291

Complete Issue Information

FROM: bgoodrich DATE: Thursday, April 17, 2008 10:42:25 AM  
Another user reported the incorrect scale factor:

Subject: Virtis 5.6 Scaling Factor Question.

Hello,

I'm a graduate student at Auburn University, working for AL-Dot on a project doing a comparative study between LRFR and LFR. As requested by AL-Dot we're using Virtis for the actual analysis of our bridge database. I was wondering if you could answer a question I have regarding the use of the scaling factor. It seems that when the scaling factor is set to 1, under the advance options for analysis, that a factor of 5/6 is actually applied to the live load of the structure. And that when the factor is set to 1.2 (6/5) the factor applied to the live load is 1.0. It seems then by default, scaling factor set to 1.0, that a reduction is applied to live load when running analysis, producing non-conservative results. I was just curious about why the factor by default reduces the load by 5/6.

Thank you for any help you can give.

Michael Murdock

334-319-2621  
murdomb@auburn.edu

FROM: bgoodrich DATE: Thursday, April 17, 2008 10:44:32 AM

The 0.833 scale factor should be applied only to the LRFD fatigue vehicle to remove the multiple presence factor of 1.2 from the one-lane loaded distribution factors in the live load analysis. If you are seeing this 0.833 scale factor for any other vehicles, this is a known issue that we have already addressed for the next release of Virtis.

If this is not the condition you are experiencing, then we should discuss your issue. It may be necessary for you to export your problem bridge to an XML file, take some screenshots that illustrate the problem, and send these files to me. This will help the development team duplicate your issue.

FROM: bgoodrich DATE: Thursday, April 17, 2008 10:44:53 AM

I just got off the phone with Michael Murdock. He is indeed getting the 0.833 scale factor applied to all the vehicles. For now he is going to try to input a 1.2 scale factor to negate that effect.

|                                                                        |                      |
|------------------------------------------------------------------------|----------------------|
| Issue ID: 8586                                                         |                      |
| Subject: P/S Phi calculation for Factored Flexural Resistance (Metric) |                      |
| Folder: /Virtis/Support Center/Opis                                    |                      |
| Primary Contact: Goodrich, Brian                                       |                      |
| Submitted By: Lantzy, Eric                                             | 4/23/2008 3:05:32 PM |

1/5/2016 11:07:55 AM

HRS AASHTO

292

### Complete Issue Information

|                        |                      |
|------------------------|----------------------|
| Modified By: bgoodrich | 11/4/2008 4:35:21 PM |
| Priority: High         |                      |
| Category: Bug - BRASS  |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                     |
|------------|---------------|-----------------------------|
| 8600.16469 | Suspended     | Substructure Wizards Needed |

### Description

FROM:elantzy DATE:Wednesday, April 23, 2008 11:05:32 AM

Greetings,

There seems to be an issue with the "phi" calculation (interpolation) for the Flexural Resistance Factor in Art. 5.5.4.2.1 in a metric run.

Specifically, in the attached run, looking at POI 205 the Tensile Strain is 0.003111 which is within the 0.002-0.005 range but the interpolation fails and gives a Phi value of 0. This causes the Factored Flexural Resistance to equal zero, leading to a bunch of failures in the spec check.

When switched to US units the Phi calculations are correct.

Eric

FROM:elantzy DATE:Wednesday, April 23, 2008 11:29:03 AM

The POI of 205 is for G2....I may have left the units US...switch back to SI to see issue.

Thanks.

1/5/2016 11:07:55 AM

HRS AASHTO

293

Complete Issue Information

FROM: bgoodrich DATE: Friday, April 25, 2008 12:23:41 PM  
I forwarded this issue to WYDOT for assignment to a BRASS problem log.

FROM: bgoodrich DATE: Wednesday, June 04, 2008 10:37:57 PM  
WYDOT assigned this issue to BRASS Problem Log 816.

FROM: Brian Goodrich DATE: 11/4/2008 9:30:59 AM Mountain Standard Time  
This interpolation issue was addressed in the BRASS engine.

|                                      |
|--------------------------------------|
| Issue ID: 8600                       |
| Subject: Substructure Wizards Needed |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Teal, Dean            | 4/24/2008 1:10:08 PM |
| Modified By: sthogaru               | 7/14/2009 2:43:44 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: dteal DATE: Thursday, April 24, 2008 9:10:09 AM  
Input Wizards are needed!

With so many GUI's and so many GUI's dependant on other GUI input there needs to be substructure input wizards.

- Pier Wizard

1/5/2016 11:07:55 AM

HRS AASHTO

294

Complete Issue Information

- Cap
- Column Wizard
- Foundation

I am afraid that if we don't simplify the input process we will not retain many users.

FROM:jduray DATE:4/28/2008 2:53:25 PM

We need direction from the TF on how to proceed. We could discuss with the TAG and prepare mockups for discussion with the TF in June (or earlier if desired).

FROM: Dean Teal DATE: 8/7/2008 9:50:30 AM Eastern Daylight Time

Has anything happened here?

|                                                            |
|------------------------------------------------------------|
| Issue ID: 8694                                             |
| Subject: OPIS: Referencing 2.5.2.6.2 for Deflection Limits |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Colgrove, George      | 5/29/2008 5:14:58 PM |
| Modified By: bgoodrich              | 11/4/2008 4:28:58 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Unknown     |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
| Goodrich, Brian | Assigned | High     | Bug - BRASS |
|                 | Resolved |          |             |



## Complete Issue Information

### Contacts

| Name           | Company          | Email 1                             | Phone 1      |
|----------------|------------------|-------------------------------------|--------------|
| Brian Goodrich | BridgeTech, Inc. | Goodrich@<br>BridgeTech-Laramie.com | 307 222-4688 |
| Darren Kemna   | Missouri DOT     | kemnad1@mail.modot.state.<br>mo.us  | 573-526-3030 |

### Documents

| Name | Resource Identifier              | Description |
|------|----------------------------------|-------------|
|      | A5504_Mu_MinSteel_Stage1.<br>xml |             |

### Tasks

| Name       | Current State | Summary                                                              |
|------------|---------------|----------------------------------------------------------------------|
| 8727.16342 | Assigned      | Cannot verify loading used in stage 1 min steel check (P/S-I Girder) |

### Description

FROM:gcolgrove DATE:Thursday, May 29, 2008 1:14:59 PM

In the spec Check for Design Ratio Computations - after 3.6.1.3.2 - Live Load Deflection Evaluation is completed - the Deflection Limit is referred to Resistance. This value should be referred to as the Deflection Limit and be accompanied by an asterisk with a note below referencing 2.5.2.6.2 as well as a basic equation of  $L/800$ .

I added conceptual art in the documents tab.

FROM:kkennelly DATE:5/30/2008 8:24:08 AM

Note the attached document is displaying the BRASS LRFD results, not the new Opis LRFD engine.

FROM:bgoodrich DATE:Wednesday, June 04, 2008 11:38:39 PM

I forwarded this issue to WYDOT.

FROM: Brian Goodrich DATE: 7/11/2008 12:14:55 PM Eastern Daylight Time

WYDOT assigned this issue to Problem Log 828.

FROM: Brian Goodrich DATE: 11/4/2008 9:12:57 AM Mountain Standard Time

This issue has been addressed in the BRASS engine. Deflection Limit is now used instead of Resistance.

Issue ID: 8727

Subject: Cannot verify loading used in stage 1 min steel check (P/S-I Girder)

Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Kemna, Darren         | 6/6/2008 1:42:01 PM  |
| Modified By: bgoodrich              | 1/28/2010 9:42:04 PM |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dkemna DATE:Friday, June 06, 2008 9:42:10 AM

A user in our office found what I believe is an error in the factored moment used when checking minimum reinforcement for the noncomposite stage. It appears that BRASS (LRFD) makes two checks for minimum reinforcement during stage 1. One check uses the minimum factored dead loading. The other check uses a number that cannot be verified as the maximum factored loading (732.782 k-ft?). Shown below is BRASS (LRFD) output giving a value of 610.652 k-ft for the max factored action. A second snippet of BRASS output shows that the 732.782 number is used? Please let me know if BRASS (LRFD) is in error or if the other value is the result of a calculation not shown in the output.

Point of Interest : 105.00

Construction Stage: 1

(Dead Load ONLY) (Critical MOMENTS and Concurrent Actions)

Limit State : STRENGTH I

1/5/2016 11:07:56 AM

HRS AASHTO

297

Complete Issue Information

Dead Load Descriptions:

- 1. Girder Weight
- 2. Superimposed Uniform DL(DC) on All Top Spans
- 4. Haunches + Diaphragms
- 6. DL1 - Haunch
- 7. DL1 - Additional Slab

| MAXIMUM MOMENTS   |         |        |       |            | MINIMUM MOMENTS   |         |       |       |            |
|-------------------|---------|--------|-------|------------|-------------------|---------|-------|-------|------------|
| gamma             | Moment  | Shear  | Axial | Deflection | gamma             | Moment  | Shear | Axial | Deflection |
| (ft-k)            | (kips)  | (kips) | (in)  | (ft-k)     | (kips)            | (kips)  | (in)  |       |            |
| Dead Load Actions |         |        |       |            | Dead Load Actions |         |       |       |            |
| 1. (1.250)        | 132.082 | 0.000  | 0.000 | 0.226      | (0.900)           | 132.082 | 0.000 | 0.000 | 0.226      |
| 2. (1.250)        | 307.672 | 0.001  | 0.000 | 0.525      | (0.900)           | 307.672 | 0.001 | 0.000 | 0.525      |
| 4. (1.250)        | 5.331   | 0.033  | 0.000 | 0.009      | (0.900)           | 5.331   | 0.033 | 0.000 | 0.009      |
| 6. (1.250)        | 6.310   | 0.000  | 0.000 | 0.013      | (0.900)           | 6.310   | 0.000 | 0.000 | 0.013      |
| 7. (1.250)        | 37.127  | 0.000  | 0.000 | 0.063      | (0.900)           | 37.127  | 0.000 | 0.000 | 0.063      |
| Total             | 610.652 | 0.042  | 0.000 | 1.045      |                   | 439.669 | 0.030 | 0.000 | 0.752      |
| Live Load Actions |         |        |       |            | Live Load Actions |         |       |       |            |
| (1.750)           | 0.000   | 0.000  | 0.000 | 0.000      | (1.750)           | 0.000   | 0.000 | 0.000 | 0.000      |
| Total             | 0.000   | 0.000  | 0.000 | 0.000      |                   | 0.000   | 0.000 | 0.000 | 0.000      |
| eta Total Actions |         |        |       |            | eta Total Actions |         |       |       |            |
| DL:               | 610.652 | 0.042  | 0.000 | 1.045      |                   | 439.669 | 0.030 | 0.000 | 0.752      |
| LL:               | 0.000   | 0.000  | 0.000 | 0.000      |                   | 0.000   | 0.000 | 0.000 | 0.000      |
| (1.000)           | 610.652 | 0.042  | 0.000 | 1.045      | (1.000)           | 439.669 | 0.030 | 0.000 | 0.752      |
| Total             | 610.652 | 0.042  | 0.000 | 1.045      |                   | 439.669 | 0.030 | 0.000 | 0.752      |

Now, for the check:

PERFORMING AASHTO LRFD SPECIFICATION CHECKS - 5.7.3.3.2 Minimum Reinforcement (Ductility)

Complete Issue Information

Point of Interest : 105.00  
Construction Stage: 1

POSITIVE Flexure Sense:

Input Parameters:

Mcr = 12274.499 in-k = 1022.875 ft-k  
Mu = 8793.387 in-k = 732.782 ft-k  
Mr = 15550.404 in-k = 1295.867 ft-k

Calculated Values (Adjusted to positive sign):

Mcr = 12274.499 in-k = 1022.875 ft-k  
Mu = 8793.387 in-k = 732.782 ft-k  
Mr = 15550.404 in-k = 1295.867 ft-k

FROM:dkemna DATE:Friday, June 06, 2008 10:02:20 AM  
The analysis is run for the P/S-I Girder Shape on G1.

FROM:bgoodrich DATE:Wednesday, June 11, 2008 10:03:27 AM  
The Minimum Reinforcement check is performed once for each stage using the critical factored moment from all strength limit states. The source of the 732.782 ft-k moment is the Strength IV limit state. See the note at the end of the Minimum Reinforcement check.

=> The Mu value shown here is the critical factored moment based on ALL dead and live load combinations for the Strength limit states. See the CRITICAL LOAD EFFECTS FOR ALL DEAD AND LIVE LOAD COMBINATIONS reports for these factored moments.

FROM:dkemna DATE:Wednesday, June 11, 2008 10:20:41 AM  
Thanks. I dropped the ball on this one.

FROM:dkemna DATE:Wednesday, June 11, 2008 11:37:24 AM  
On Second thought. I only selected one Strength load combination for analysis (Strength-I). There is no information in the BRASS Output for Strength-IV calcs or the report mentioned above. It seems that BRASS (LRFD) is doing an unnecessary and unreported calc if only Strength-I is selected for analysis.

FROM:bgoodrich DATE:Wednesday, June 11, 2008 12:41:32 PM  
How did you select only the Strength I load combination for analysis? Please let me know the window and tab name.

FROM:bgoodrich DATE:Wednesday, June 11, 2008 1:46:34 PM  
E-mail from Darren Kemna:

In the Analysis Settings:  
Engine tab==> Select BRASS LRFD from Drop-down==>Click "Properties" button==>"Intermediate Output Options" tab==>O.K.==>Apply

I have a template that selects Strength-I, Service-I and Service-III only.

Darren J. Kemna, M.S., P.E.  
Missouri Department of Transportation  
Senior Structural Designer

1/5/2016 11:07:56 AM

HRS AASHTO

299

Complete Issue Information

105 W. Capitol Avenue  
Jefferson City, MO 65102  
(573) 526-3030

FROM: bgoodrich DATE: Wednesday, June 11, 2008 1:47:10 PM

The output options you set in engine properties just control which output is written to the BRASS output files and to the Opis specification check results. For P/S, calculations for Strength I-IV, Service I & III, and Fatigue are all performed.

There is a mechanism in BRASS for excluding certain limit states and even specific spec checks, but these are not exposed to the Opis user at this time. See the MAP-LIMIT-STATE and MAP-SPEC-CHECK commands in the command help for BRASS-GIRDER(LRFD).

FROM: Brian Goodrich DATE: 7/11/2008 12:12:11 PM Eastern Daylight Time

I forwarded this issue to WYDOT. Mike Watters has added this issue to the enhancement list.

FROM: Brian Goodrich DATE: 1/28/2010 2:44:44 PM Mountain Standard Time

Suspended until authorized by WYDOT.

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| Issue ID: 8818                                                                                           |
| Subject: enhancement for graphical user interface based on presentation by George Colgrove in vobug 2008 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Obeidat, Khalid       | 8/6/2008 2:07:30 AM   |
| Modified By: hlee                   | 8/13/2008 12:13:55 PM |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Khalid Obeidat DATE: 8/5/2008 10:12:01 PM Eastern Daylight Time  
enhancement to GUI based on George Colgrove's presentation to 2008 VOBUG meeting and review  
by a committee of users. Please contact George for more information

Issue ID: 8839

Subject: Article 5.8.2.5

Folder: /Virtis/Support Center/Opis

Primary Contact: Mlynarski, Mark

Submitted By: Kennelly, Krisha

8/11/2008 3:04:15 PM

Modified By: kkennelly

9/10/2009 5:23:57 PM

Priority: High

Category: Bug

### History

1/5/2016 11:07:57 AM

HRS AASHTO

301

### Complete Issue Information

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Mlynarski, Mark    | Assigned | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
| Ihnat, Joseph      | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/11/2008 11:04:33 AM Eastern Daylight Time  
Logic in Art 5.8.2.5 is not correctly determining when stirrups are required.

If  $V_u > 0.5 * \phi (V_c + V_p)$  (Eq 5.8.2.4-1) then stirrups are required and then Eq 5.8.2.5-1 should be checked.

Attached bitmap is from BID11, Structure Def 1, G1

FROM: Mark Mlynarski DATE: 8/19/2008 1:09:38 PM Eastern Daylight Time  
Fixed.

FROM: Xinmei Li DATE: 5/28/2009 1:58:44 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

FROM: Krisha Kennelly DATE: 9/10/2009 1:22:35 PM Eastern Daylight Time  
tested and accepted in 6.1 acceptance build

Complete Issue Information

|                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------|
| Issue ID: 8847                                                                                                            |
| Subject: Opis RC LRFD engine - Change Pass/Fail status from "Computation" to "General Computation" for filtering purposes |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Ihnat, Joseph      |                       |
| Submitted By: Warner, David         | 8/13/2008 12:23:26 PM |
| Modified By: xli                    | 5/28/2009 6:18:00 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |
|                 | Accepted |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/13/2008 8:24:15 AM Eastern Daylight Time  
 Submitted on behalf of David Warner, Montana, at the user group meeting.

BRASS LRFD engine spec has the following status: Fail, General Computation, Pass That allows users to filter the column in the spec check details list view and see all of the "Fails" at the top.

Opis RC LRFD engine has: Computation, Fail, Pass When users sort the column the Fails don't show up at the top of the list. Users are used to seeing the Fails at the top from BRASS so they think everything passed since Computations show up at the top.



Complete Issue Information

Revise "Computation" to "General Computation" for the Opis RC LRFD engine.

FROM: Krisha Kennelly DATE: 8/13/2008 8:40:12 AM Eastern Daylight Time

FROM: Joseph Ihnat DATE: 8/13/2008 10:21:35 AM Eastern Daylight Time  
Fixed for 6.1.0 and 6.0.1

FROM: David Warner DATE: 8/29/2008 10:10:38 AM Eastern Daylight Time  
I see this is fixed now. In Oklahoma it needed work, Thank you.

FROM: Xinmei Li DATE: 5/28/2009 2:16:07 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                                                 |
|-------------------------------------------------|
| Issue ID: 8860                                  |
| Subject: Opis RC LRFD engine - Deflection check |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Li, Xinmei         |                      |
| Submitted By: Kennelly, Krisha      | 8/25/2008 1:13:40 PM |
| Modified By: kkennelly              | 9/10/2009 5:22:30 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/25/2008 9:14:04 AM Eastern Daylight Time

Article 2.5.2.6.2 always prints out the Pedestrian deflection even when no pedestrian load was applied.

Complete Issue Information

If no pedestrian load was applied the deflection prints out as zero (which is ok) but the critical design ratio ends up belonging to the design truck + ped. This is incorrect since no pedestrian load was applied.

Refer to BID 11, Structure Def 1, G1 for the following at 28':

deflection

Des Truck -0.103  
Ped 0.0

| Vehicle                   | Deflection (inch) | Deflection Limit (inch) | Design Ratio | Pass/Fail |      |
|---------------------------|-------------------|-------------------------|--------------|-----------|------|
| Design Truck              | -0.103            | 0.600                   | 5.802        | PASS      |      |
| Pedestrian + Design Truck | -0.103            | 0.480                   | 4.641        | PASS      | <=== |

gets reported as critical design ratio in reports

It would be better to not print out the pedestrian deflection if no pedestrian load is applied.

FROM: Xinmei Li DATE: 8/25/2008 9:58:21 AM Eastern Daylight Time  
Fixed.

FROM: Srujana Thogaru DATE: 5/28/2009 4:10:43 PM Eastern Daylight Time  
appears to be corrected for 6.1V - Beta 1

FROM: Krisha Kennelly DATE: 9/10/2009 1:19:11 PM Eastern Daylight Time  
tested and accepted in the acceptance build for 6.1

Issue ID: 8865  
Subject: BRASS Design Ratio Computation Failure, lacks display information.

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Warner, David 8/27/2008 4:11:39 PM  
Modified By: hlee 10/16/2011 11:02:44 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Lee, Herman     | New    | High     | Bug      |

Complete Issue Information

|                  |          |      |     |
|------------------|----------|------|-----|
| Goodrich, Brian  | Assigned |      |     |
| Lee, Herman      | New      | High | Bug |
| Kennelly, Krisha | Assigned |      |     |
| Goodrich, Brian  | Closed   |      | N_A |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                       | Description |
|------|-------------------------------------------|-------------|
|      | Opis units 6.0 5.4.2.6 Mod of rupture.JPG |             |
|      | 15044 - P00008107+08931.xml               |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 8/27/2008 12:56:28 PM Eastern Daylight Time  
 BRASS Specification Checking. Little grey box display; lacks spec reference. When Design Ratio Computations fail, the little grey box has no reference to what calculation was used.

It time consuming to find where the numbers come from. See screen capture. How hard is it to put the AASHTO reference in the little grey box? If the little grey box simply had more specification reference information it would save time.

I know the little grey box in my screen capture pulled information from 6.10.8.2.3. Why doesn't the little grey box say that?!!!

FROM: Brian Goodrich DATE: 8/27/2008 11:42:09 AM Mountain Daylight Time  
 The BRASS results output was not designed to be viewed as individual items as is allowed in Opis. For example, the design ratio block was written after the output showing how the corresponding resistance was calculated. These blocks are not currently tied together in Opis. Within the Opis specification check viewer, the results are first displayed in the order in which they were written by the engine. The list can be sorted to find all the fails for instance, but there is currently no mechanism to return the list to its original order while keeping the focus on one particular spec check, which would allow the user to see the other spec checks immediately before and after the one with the focus. Options to address this are:

Complete Issue Information

1. Show the spec references in the Design Ratio Computations output block. Changes would have to be made to the BRASS engine.
2. Revise the spec check list so it can return to the original order while keeping the focus on the selected spec check. Changes would need to be made to the GUI only.
3. Revise the results to show a larger block of results containing multiple spec checks, i.e., a parent block of results holding child blocks of results. Changes would need to be made to the BRASS engine as well as the Opis results object.

FROM: David Warner DATE: 8/29/2008 10:50:08 AM Eastern Daylight Time

I like option #2, contingent on one thing. Please let me know if #2 is the cheapest enhancement. I think it's the cheapest, but if you could tell me you feel it's the cheapest route, I think it will solve this minor "lack of display" problem.

2. Revise the spec check list so it can return to the original order while keeping the focus on the selected spec check. Changes would need to be made to the GUI only.

Thank you,

Dave

FROM: David Warner DATE: 9/12/2008 12:51:07 PM Eastern Daylight Time

Brian,

I really appreciate your thorough description of options with this.

Is there anyway to request that this be turned into an enhancement?

Thanks

FROM: David Warner DATE: 9/17/2008 10:17:43 AM Eastern Daylight Time

If I put "ACCEPTED" in the track field how does that affect this enhancement?

FROM: Herman Lee DATE: 9/19/2008 11:53:15 AM Eastern Daylight Time

This will still be an enhancement request. It will be nice if you also put a brief comment here for the "ACCEPTED" Track field.

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 8870                                                                                      |
| Subject: 6.0 is doing 5.4.2.6 modulus of rupture wrong, which feeds 6.10.1.7, neg. reg. deck steel. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Warner, David         | 8/29/2008 4:21:25 PM |
| Modified By: hlee                   | 9/2/2008 4:53:26 PM  |
| Priority: High                      |                      |
| Category: N_A                       |                      |

## Complete Issue Information

### History

| Primary Contact | Status                         | Priority | Category    |
|-----------------|--------------------------------|----------|-------------|
| Lee, Herman     | New                            | High     | Bug         |
| Goodrich, Brian | Assigned<br>Information Needed |          |             |
| Lee, Herman     | Assigned                       |          |             |
| Li, Xinmei      |                                |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier             | Description |
|------|---------------------------------|-------------|
|      | XML Report crawler.JPG          |             |
|      | Prestress table.JPG             |             |
|      | untitled2.JPG                   |             |
|      | 15520 -<br>P00011010+0_XXX1.XML |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 8/29/2008 1:00:13 PM Eastern Daylight Time

There may be an english to metric unit's problem. See attached JPEG.

Modulus of Rupture, 5.4.2.6. In metric units hasn't changed from 2005 - 2007.

It should have a range of  $0.63$  to  $0.97 * f_c'$ , with  $f_c'$  in MPa.

My deck concrete is 31MPa. so range should be about 20 to 30 for modulus of rupture.

I have a new design ratio failure now that Virtis Opis 6.0 is installed. My bridge used to have no design ratio failures in version 5.6.

I think there's a problem with Ksi and MPa units in Negative moment deck steel. 6.10.1.7 says look up

1/5/2016 11:07:58 AM

HRS AASHTO

308

Complete Issue Information

5.4.2.6 to get modulus of rupture.

Also attached is my xml file.

FROM: David Warner DATE: 9/2/2008 10:49:56 AM Eastern Daylight Time  
My Mistake! This is fine.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 8874                                                                    |
| Subject: OPIS P/S Girder, BRASS LRFD, Concrete Stresses uncoupled from Prestress. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Li, Xinmei         |                      |
| Submitted By: Warner, David         | 9/11/2008 7:44:01 PM |
| Modified By: xli                    | 11/5/2008 3:45:36 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 9/11/2008 4:03:00 PM Eastern Daylight Time  
After analyzing a Prestressed girder, Concrete stresses which do not contain Prestress stresses, Where are these located? DC+DW+LL(IM) but no Prestress. All in units of MPa. See attached Picture.

FROM: Brian Goodrich DATE: 9/12/2008 9:11:52 AM Mountain Daylight Time  
BRASS-LRFD calculates the Service I compressive stresses and Service III tensile stresses for each point of interest along the structure. BRASS-LRFD combines the stresses due to dead load, prestressing, and live load using the factors applicable to each limit state. Please clarify the question.

FROM: David Warner DATE: 9/12/2008 12:01:11 PM Eastern Daylight Time

## Complete Issue Information

Attached are the bridge xml and a screen capture (untitled2.jpg). The screen capture may be the clarifying question we need to proceed.

Thanks

FROM: Brian Goodrich DATE: 9/12/2008 4:24:30 PM Mountain Daylight Time  
Thank you for the screen shot.

Herman - The text in the results tree is misleading. The "Dead Load Only" item should include PS. These tree item strings are not generated by BRASS, so I am assigning this back to you.

FROM: Herman Lee DATE: 9/15/2008 12:21:42 PM Eastern Daylight Time  
May, when you modify the text, make sure it only affects "Factored Dead & Prestress".

FROM: David Warner DATE: 9/16/2008 10:44:57 AM Eastern Daylight Time  
So there's no quick spot in the output to get dead load only stresses? DC1, DW, Girder Self Weight?

There's PS always included?

Thanks

FROM: David Warner DATE: 9/17/2008 10:41:14 AM Eastern Daylight Time  
I've attached some screen captures of what I'm talking about. "XML Report Crawler.jpg" The screen capture's two output files are point 105.00 opened twice.

$A(\text{MPa}) = B \text{ (both B's added up) / (Divided by C)}$       See crawler.jpg

So if instead stresses due to girder self weight only, divide the B on the left (DEAD) by the C value and we have Girder self weight stress.

Since the information is contained in the output files, and my screen captures show where, could we dialogue about this being an output enhancement.

It's hard to explain to my engineer's where to look through these text files. They need a quick repeatable report that doesn't involve text surfing.

Let's dialogue about enhancement options. to find DC, DW, Girder Wt, Haunches + Diaphragms, etc... (Stresses)

FROM: Herman Lee DATE: 9/19/2008 9:10:36 AM Eastern Daylight Time  
May, please change the Status to Suspended and Category to Enhancement after you modified the text as Brian Goodrich suggested.

Dave, is this output enhancement request for BRASS output file only OR you would also like to see these uncoupled stresses in Opis user interface?

FROM: David Warner DATE: 9/23/2008 1:31:28 PM Eastern Daylight Time  
Hmmm. I think I am only interested in seeing these as an uncoupled stress in OPIS.

I know where to look in the BRASS output.

1/5/2016 11:07:58 AM

HRS AASHTO

310

Complete Issue Information

For some engineers the BRASS Ouput is fine. Still, other engineers look for the point, click, results which seem to me to mean grabbing BRASS Output and showing it in OPIS.

I appreciate your help Herman.

Dave W.

|                                                                 |
|-----------------------------------------------------------------|
| Issue ID: 8875                                                  |
| Subject: 3 steel bridges 5.6 into 6.0. New Spec Check Failures. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Warner, David         | 9/11/2008 8:03:45 PM |
| Modified By: jduray                 | 1/14/2009 5:02:31 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
| Goodrich, Brian | Assigned           |          |          |
|                 | Information Needed |          |          |
|                 | Resolved           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | DESKTOP.ZIP                        |             |
|      | 5.6 to 6.0 LIVE LOAD INCREASE..JPG |             |
|      | GIRDER DESIGN_.XLS                 |             |
|      | VO5.5_VS_VO6.0.ZIP                 |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|



## Complete Issue Information

---

### Description

FROM: David Warner DATE: 9/11/2008 4:35:47 PM Eastern Daylight Time  
I didn't attach the three bridges as this is a fairly simple question.

Did the live loader change from 5.6 to 6.0?

I have three steel girder bridges all now with spec check failures which all passed spec check in 5.6. Obviously failures could be due to code changes, but all three of these bridges will not be done with the 2007 code, but with the 2006. One bridge now has live load deflection failures where it did not before. The other two bridges have compression flange strength 1 issues at the pier.

Thanks,

Dave.

FROM: Herman Lee DATE: 9/11/2008 4:48:06 PM Eastern Daylight Time  
Both 5.6 and 6.0 have the same BRASS LRFD Engine (Version 2.0.0). The engine uses the 2007 LRFD spec.

FROM: Brian Goodrich DATE: 9/12/2008 9:24:11 AM Mountain Daylight Time  
Herman is correct regarding the same engine being used. Please attach a bridge for each of the differences you indicated.

FROM: David Warner DATE: 9/12/2008 12:14:06 PM Eastern Daylight Time  
Those XML's sure do zip down small! I attached all three in a zip file. Hopefully they unzip ok. It's these three bridges that are now showing spec check failures, weren't in 5.6, and won't be designed with the 2007 code. The engineers for these bridges first want me to ask if the live loads have changed from 5.6 to 6.0. If the loads are the same, then those engineers will dig through the code and document where differences from 2006 to 2007 are irrelevant to their 2006 design. I look forward to the OPIS LRFD engine with it's spec check seperated from the engine!

Thanks

FROM: Brian Goodrich DATE: 9/12/2008 4:34:12 PM Mountain Daylight Time  
The live loads did not change from 5.6 to 6.0 with respect to Opis. However, there were changes for exporting live loads from Virtis to the BRASS-LRFR engine. Also, please attach the bridge files from the 5.6 version.

FROM: David Warner DATE: 9/16/2008 10:54:05 AM Eastern Daylight Time  
I'll have to ask Paul Jensen when he's in to help me get those bridges back to the 5.6 version. They are all currently in 6.0. I'm not sure if I can get them back into 5.6. To be continued...

FROM: David Warner DATE: 9/16/2008 6:01:14 PM Eastern Daylight Time  
OK, Back to my original question. Did live loads change?

The following proves that Live loads have infact increased, Substantially.

I've scanned my design file. I've attached my excel spreadsheet containing OPIS 5.6 Results - LL

1/5/2016 11:07:58 AM

HRS AASHTO

312





Complete Issue Information

FROM: Jim Duray DATE: 12/15/2008 3:21:03 PM Eastern Standard Time  
 For versions prior to 6.0 the Design vehicle and the Fatigue vehicle should not be the same vehicle.

|                      |
|----------------------|
| Issue ID: 8885       |
| Subject: Report Tool |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Warner, David         | 9/23/2008 9:05:47 PM |
| Modified By: dwarner                | 9/24/2008 2:57:49 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Duplicate |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name            | Resource Identifier | Description |
|-----------------|---------------------|-------------|
| Report Tool.JPG |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 9/23/2008 5:11:28 PM Eastern Daylight Time  
 See attached screen capture.

This bridge has 6 superstructure definitions. All of them are valid as they all represent different lengths and design alternatives.

How do I report just one superstructure definition with the report tool? Or even better, how do I report just one girder with the report tool.

Complete Issue Information

I always get all of the other 5 superstructure definitions reported along with the one I want.

FROM: Herman Lee DATE: 9/24/2008 9:56:49 AM Eastern Daylight Time  
Duplicate of Incident 4057.

FROM: David Warner DATE: 9/24/2008 10:57:48 AM Eastern Daylight Time  
Thanks.

I'll accept this as enhancement on par with VI#4057.

|                           |
|---------------------------|
| Issue ID: 8886            |
| Subject: Pedestrian Loads |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Warner, David         | 9/23/2008 9:16:17 PM  |
| Modified By: dwarner                | 11/25/2008 9:04:13 PM |
| Priority: High                      |                       |
| Category: Education                 |                       |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Yellowstone bridge  |             |

## Complete Issue Information

sidewalk.JPG  
15261 - P00011055\_09401.xml

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 9/23/2008 5:18:02 PM Eastern Daylight Time  
Do Pedestrian Loads get added in for Analysis?

I have an Engineer who after entering Outlandishly high pedestrian loads, and making pedestrian loads zero, got the exact same results.

FROM: Herman Lee DATE: 9/24/2008 10:19:02 AM Eastern Daylight Time  
The BRASS LRFD engine applies the pedestrian load as an additional live load with no impact. The pedestrian live load is always the last live load. I don't think the pedestrian live load is combined with other live loads in the BRASS LRFD engine.

The Opis LRFD engine also applies the pedestrian load as an additional live load and the pedestrian live load is combined with other live loads (e.g. Design Truck + Pedestrian, ...).

FROM: David Warner DATE: 9/24/2008 11:06:57 AM Eastern Daylight Time  
Ok Thanks.

FROM: David Warner DATE: 9/24/2008 12:26:00 PM Eastern Daylight Time  
OK. Try this. Use the attached bridge. Superstructure Definition "ENGLISH STEEL - 142-178-178-142 7/16/08 ratings not included"

It currently has an 85 ksf pedestrian load. in the Structure Typical Section.

If you analyzed the Girder 5 which has the sidewalk over it. (See Structure Typical Section Schematic)

Then look at Strength 1 reactions, or moments at say the pier and the abutment.

Then make the pedestrian load 500 ksf, analyze it, and look at the same strength 1 results, it should go up, but it does not.

What am I missing?

Thanks.

FROM: Herman Lee DATE: 9/24/2008 1:36:04 PM Eastern Daylight Time  
As mentioned in the F1 Help, the Pedestrian Load in the Sidewalk tab of the Structure Typical Section window is only used in the substructure module. The superstructure module uses the Pedestrian Load in the Member window. Since you are using Virtis/Opis/OpisSub, the Pedestrian Load column is available in the Sidewalk tab.

FROM: David Warner DATE: 9/24/2008 4:45:25 PM Eastern Daylight Time

1/5/2016 11:07:59 AM

HRS AASHTO

317

Complete Issue Information

Thanks.

|                                                  |
|--------------------------------------------------|
| Issue ID: 8888                                   |
| Subject: Help button in Spec-Check Report dialog |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ihnat, Joseph      |                      |
| Submitted By: Lee, Herman           | 9/24/2008 2:14:23 PM |
| Modified By: xli                    | 5/28/2009 6:59:16 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Ihnat, Joseph   | Assigned | High     | Bug      |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Herman Lee DATE: 9/24/2008 10:14:55 AM Eastern Daylight Time  
 Clicking the Help button should open the Spec-Check Report topic in Virtis/Opis Help.

FROM: Joseph Ihnat DATE: 9/25/2008 2:40:59 PM Eastern Daylight Time  
 Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 2:56:58 PM Eastern Daylight Time  
 Verified fixed for 6.1 Beta1.

Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 8892                        |
| Subject: Moment Gradient Modifier, Cb |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Warner, David         | 9/30/2008 4:35:58 PM  |
| Modified By: bgoodrich              | 10/15/2008 3:16:34 PM |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|



Complete Issue Information

Unsymmetrical CB factors.pdf

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 9/30/2008 12:58:07 PM Eastern Daylight Time

The moment Gradient Modifier for this particular 3 span steel bridge is wrong. In a location where the bridge contains perfect symmetry, from the pier bearing out to the first cross stiffener, basically facing in from pier 2 or pier 3 to the center span, the Cb factors are different. One side says 1.287 while the other side says 1.013. See attached PDF's front page for hand sketch.

After a closer inspection one can see that at Point 200, where the moment should be sloped and the f1, fmid, & f2, should all be curving, as they are in Point 300, well back at point 200 f1 is the same as fmid. this is wrong, why are point 200 and point 300 using much different Cb factors where they should be the same?

Attached is the PDF's which are scans of the necessary Brass output to support the simple drawings on the first page of the PDF's.

The bridge XML is zipped in VI#8875, Desktop.zip. #15223 - I90307\_06281.xml.

FROM: Brian Goodrich DATE: 9/30/2008 12:23:43 PM Mountain Daylight Time

This issue has already been corrected in BRASS-GIRDER(LRFD) 2.0.1. This version is not yet available to Opis users but should be soon.

FROM: David Warner DATE: 10/1/2008 2:20:46 PM Eastern Daylight Time

OK. I'll accept this when a new version of OPIS is available which uses BRASS 2.0.1.

|                                 |
|---------------------------------|
| Issue ID: 8904                  |
| Subject: Area calculation error |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Olsen, Jeff           | 10/14/2008 6:25:52 PM |
| Modified By: hlee                   | 10/9/2009 3:21:46 PM  |
| Priority: High                      |                       |
| Category: Bug - Export 1            |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | Assigned | High     | Bug      |

Complete Issue Information

|          |                |
|----------|----------------|
| Resolved | Bug - Export 1 |
|----------|----------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Opis Print Document.pdf    |             |
|      | 00365 - 68120210.xml       |             |
|      | Opis Print Document_#2.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/14/2008 2:26:23 PM Eastern Daylight Time  
 Received Bridgeware support e-mail:

=====  
 Jim, You may already be aware of this, but there is an error in the Brass data file that Opis prepares when using a bulb-tee beam with a flat area on the underside of the deck. I am including information to document this error.

Also included is an export of the Opis file.

If this is not already logged as an error, I will be happy to do it. Just wanted to check with you first.

If you have any questions, please let me know.

Jeff S. Olsen, P.E.  
 Bridge Area Engineer, Billings District  
 Montana Dept. of Transportation  
 2701 Prospect Ave.  
 Helena, MT 59620  
 Phone: (406) 444-7610  
 Email: jolsen@mt.gov

=====  
 FROM: Brian Goodrich DATE: 10/15/2008 7:14:56 AM Mountain Daylight Time  
 I confirmed the error and revised the export accordingly. Fixed export in BrassCrossSections.cpp.

FROM: Herman Lee DATE: 10/9/2009 10:56:41 AM Eastern Daylight Time  
 Verified in 6.1 Release. The computed area matches the one in the attached doc file.

1/5/2016 11:08:00 AM

HRS AASHTO

321

Complete Issue Information

|                                        |
|----------------------------------------|
| Issue ID: 8905                         |
| Subject: LRFD Live Load Analysis fails |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Thompson, Todd        | 10/15/2008 4:55:22 PM |
| Modified By: bgoodrich              | 11/20/2008 4:26:09 PM |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name                     | Resource Identifier | Description |
|--------------------------|---------------------|-------------|
| V_O pedestrian loads.JPG |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 10/15/2008 12:59:36 PM Eastern Daylight Time  
I have a 6 span, 7 girder, steel girder bridge that when I do a Design Review with LRFD, I get an error message that there is an interpolation error occuring when positioning live load for critical actions.

I've attached the bridge.xml file and printouts of the error message I get.

it seems to run LFD analysis ok.

FROM: Todd Thompson DATE: 11/5/2008 11:20:40 AM Eastern Standard Time

Complete Issue Information

TST 11-5-2008

Looking for a status update on this incident.

FROM: Brian Goodrich DATE: 11/5/2008 12:57:43 PM Mountain Standard Time  
This interpolation error within the BRASS LRF engine was assigned to Problem Log 826.

FROM: Brian Goodrich DATE: 11/5/2008 1:12:23 PM Mountain Standard Time  
I found one workaround. Change the wheel advancement denominator in the member alternative engine properties from 100 to 98.

FROM: Brian Goodrich DATE: 11/20/2008 9:18:41 AM Mountain Standard Time  
The interpolation error has been corrected in the engine. Fixed for version 6.1.

|                                                   |
|---------------------------------------------------|
| Issue ID: 8930                                    |
| Subject: 3.6.1.6 Pedestrian Live Loads and M.P.F. |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Warner, David         | 11/26/2008 3:54:55 PM |
| Modified By: bgoodrich              | 5/18/2011 2:16:44 PM  |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 11/26/2008 11:11:35 AM Eastern Standard Time

1/5/2016 11:08:01 AM

HRS AASHTO

323

## Complete Issue Information

The 2007 AASHTO Code, section 3.6.1.6, reads

### 3.6.1.6 Pedestrian Loads

A pedestrian load of  $3.6 \times 10^{-3}$  MPa shall be applied to all sidewalks wider than 600 mm and considered simultaneously with the vehicular design live load.

#### C3.6.1.6

See the provisions of Article 3.6.1.1.2 for applying the pedestrian loads in combination with the vehicular live load.

#### 3.6.1.1.2 Multiple Presence of Live Load

For the purpose of determining the number of lanes when the loading condition includes the pedestrian loads specified in Article 3.6.1.6 combined with one or more lanes of the vehicular live load, the pedestrian loads may be taken to be one loaded lane.

How does Opis handle Multiple presence factor with respect to pedestrian live loads?

If the designer is entering only a girder line distributed load for pedestrian loads (see attached picture), that leads a designer to think that Opis is ignoring multiple presence. Pressing F1 when entering pedestrian live loads brings up the following.

"Pedestrian load

Enter the pedestrian live load acting on the member, in units of force per length of member."

Please explain how the following multipliers are used: (1.2\*=1 lane; 1.0\*=2 lanes; 0.85\*=3 lanes; 0.65\*=4 or more lanes.)

How is Opis using pedestrian loads in combination with lane loads?

FROM: Brian Goodrich DATE: 12/2/2008 9:01:39 AM Mountain Standard Time  
BRASS does not perform the pedestrian load analysis according to the LRFD Specifications. This is a known issue that has already been assigned to BRASS Problem Log 572.

BRASS currently applies the pedestrian load to the structure and multiplies the resulting actions by the distribution factors (input by the user or calculated by BRASS). The pedestrian load is not combined with any other load.

Two issues must be addressed. First, the LRFD formula distribution factors already contain the multiple presence factors, which must be backed out to get the base distribution factor. However, for multiple lanes loaded, what multiple presence factor should be backed out when you don't know the number of lanes that was critical. It could be 2, 3, or more. Second, the spec states that the pedestrian load is one loaded lane, but how much of that lane gets distributed to a particular girder?

I have forwarded this incident to WYDOT.

FROM: Brian Goodrich DATE: 12/3/2008 9:14:30 AM Mountain Standard Time

1/5/2016 11:08:01 AM

HRS AASHTO

324

Complete Issue Information

E-mail from WYDOT:

Brian,

I will file this with the other enhancement requests.

Micheal J. Watters, P.E.  
Principal Bridge Engineer  
Special Assignments Squad

FROM: Brian Goodrich DATE: 11/19/2009 10:55:00 AM Mountain Standard Time  
Implementing the pedestrian load is the priority enhancement for the BRASS 2010 FY.

FROM: Brian Goodrich DATE: 1/26/2010 12:12:44 PM Mountain Standard Time  
This issue is now assigned to BRASS Problem Log 777.

FROM: Brian Goodrich DATE: 5/18/2011 8:18:34 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 55.

|                                      |
|--------------------------------------|
| Issue ID: 8932                       |
| Subject: Bursting steel computations |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Obeidat, Khalid       | 12/1/2008 6:31:50 PM |
| Modified By: hlee                   | 7/26/2011 4:59:43 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category      |
|-----------------|-----------|----------|---------------|
| Lee, Herman     | New       | High     | Bug           |
| Goodrich, Brian | Assigned  |          | Enhance BRASS |
|                 | Suspended |          |               |
| Duray, Jim      | Resolved  |          | Enhancement   |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI8935.pdf          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Khalid Obeidat DATE: 12/1/2008 1:34:36 PM Eastern Standard Time  
We need to show the anchorage zone calculations for bursting steel. See below:

5.10.10.1 Factored Bursting Resistance

The bursting resistance of pretensioned anchorage zones provided by vertical reinforcement in the ends of pretensioned beams at the service limit state shall be taken as:

$$Pr=fsAs \text{ (5.10.10.1-1)}$$

where:

fs = stress in steel not exceeding 20 ksi

As = total area of vertical reinforcement located within the distance h/4 from the end of the beam (in.<sup>2</sup>)

h = overall depth of precast member (in.)

The resistance shall not be less than 4 percent of the prestressing force at transfer.

The end vertical reinforcement shall be as close to the end of the beam as practicable.

FROM: Brian Goodrich DATE: 12/2/2008 8:44:44 AM Mountain Standard Time  
I have forwarded this issue to WYDOT for consideration in BRASS.

FROM: Brian Goodrich DATE: 5/28/2009 12:01:31 PM Mountain Daylight Time  
WYDOT has added this issue to the list of BRASS enhancements.

FROM: Jim Duray DATE: 6/4/2009 8:17:42 AM Eastern Daylight Time  
This request only applies to the AASHTO LRFD/LRFR engine (per TAG 6/4/09).

FROM: Krisha Kennelly DATE: 10/20/2010 10:22:01 AM Eastern Daylight Time  
Note that the AASHTO LRFD Spec 5th edition references both vertical and horizontal reinforcement for boxes and tubs and voided slabs.

Mild reinforcement cannot currently be entered in Opis for prestressed beams.

FROM: Herman Lee DATE: 7/26/2011 12:57:48 PM Eastern Daylight Time  
Resolved for the 6.3 release (AASHTO Engine only).

|                |
|----------------|
| Issue ID: 8935 |
|----------------|

### Complete Issue Information

|                                              |                      |
|----------------------------------------------|----------------------|
| Subject: Determination of single lane loaded |                      |
| Folder: /Virtis/Support Center/Opis          |                      |
| Primary Contact: Lee, Herman                 |                      |
| Submitted By: Lee, Herman                    | 12/5/2008 6:10:58 PM |
| Modified By: hlee                            | 3/1/2010 3:15:17 PM  |
| Priority: High                               |                      |
| Category: Enhancement                        |                      |

### History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name         | Resource Identifier | Description |
|--------------|---------------------|-------------|
| cracking.xml |                     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 12/5/2008 1:11:30 PM Eastern Standard Time  
Both BrassLrfdLoadControl.cpp and BrassStdLoadControl.cpp uses  
CEngineExport::GetStructDefLanesLoaded to determine whether it's single lane loaded.  
GetStructDefLanesLoaded should only check to use Std Spec or MCEB if the call is coming from  
BrassStdLoadControl.cpp.

FROM: Brian Goodrich DATE: 12/5/2008 2:34:47 PM Mountain Standard Time  
I see that the Standard spec or MCEB is set in the Preferences window. This selection is used to  
compute the simple beam live load distribution factor for the Standard spec. The export uses this  
selection to help determine which distribution factors should be passed on to the engine. Now that  
LRFR is available, it too has an article (6.2.3.2) regarding the number of lanes for roadway widths from

1/5/2016 11:08:02 AM

HRS AASHTO

327



Complete Issue Information

18 to 20 feet. I think this is a design versus rating issue. Do we need a similar input for LRFR or should the existing input be revised to include the LRFD and LRFR articles?

Could the input on the Preferences window be reworked, so the selection can be used for multiple reasons? How about a header that reads "Method for Number of Traffic Lanes (Rating)." The "Compute simple beam distribution..." label could be moved to a note on the window.

FROM: Krisha Kennelly DATE: 4/1/2009 3:43:12 PM Eastern Daylight Time  
Mockup for changes to the Preferences window is attached.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 8978                                                |
| Subject: Design Ratio Moment (Crack Control) Resistance = 0.0 |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Lantzy, Eric          | 2/13/2009 6:23:29 PM  |
| Modified By: bgoodrich              | 10/16/2009 9:31:21 PM |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Eric Lantzy DATE: 2/13/2009 1:47:05 PM Eastern Standard Time

Hello,

In the attached steel girder run, we are getting a failure for the Design Ratio Computation: Moment (Crack Control) for G1 in LRFD at several locations. At these failed locations Art. 5.7.3.4 is checked

Complete Issue Information

and the "Result Code" is "passed".....ie. the bar spacing is ok, but then in the Design Ratio check the Resistance is zero. Is this an accurate resistance?  
Thank you.

FROM: Brian Goodrich DATE: 2/17/2009 11:52:18 AM Mountain Standard Time  
I don't see anything wrong with the Opis input, so I will need to investigate the BRASS engine. I forwarded this issue to WYDOT for consideration.

FROM: Brian Goodrich DATE: 3/10/2009 11:48:18 AM Mountain Daylight Time  
WYDOT assigned this issue to BRASS Problem Log 877.

FROM: Brian Goodrich DATE: 10/16/2009 3:27:51 PM Mountain Daylight Time  
The dead load moments used for crack control checks were incorrect. A subscribing error was corrected. Fixed in BRASS-GIRDER(LRFD) 2.0.3.

Issue ID: 9367  
Subject: Permit Load Truck "creeps" into Strength I Load Combination

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Ruby, Jeff 7/14/2009 3:43:32 PM  
Modified By: bgoodrich 5/18/2011 2:19:29 PM  
Priority: High  
Category: Bug - BRASS

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
| Goodrich, Brian  |          |          |          |

1/5/2016 11:08:02 AM

HRS AASHTO

329

## Complete Issue Information

|             |          |      |           |
|-------------|----------|------|-----------|
| Lee, Herman | New      | High | Bug       |
|             | Resolved |      | Education |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Jeff Ruby DATE: 7/14/2009 11:51:46 AM Eastern Daylight Time

When I add a permit load as a vehicle in LRFD Analysis Settings, the spec check and analysis uses this truck as a design truck in the Strength I category. It should only be evaluated in the Strength II category. I attached my bridge, the agency truck in a library file, and some screenshots.

FROM: Jeff Ruby DATE: 7/14/2009 11:53:40 AM Eastern Daylight Time

The first screenshot is without the permit vehicle, the second screenshot is where I added the permit vehicle, and the third screenshot are the results with the permit vehicle.

FROM: Krisha Kennelly DATE: 7/29/2009 9:30:17 AM Eastern Daylight Time

Attached screenshots show BRASS LRFD engine was being used.

FROM: Brian Goodrich DATE: 8/27/2009 2:29:57 PM Mountain Daylight Time

For the LRFD export, the design procedure was not being set for a vehicle based on the analysis event category to which it was assigned. Therefore, Parameter 4 on the LOAD-LIVE-DEFINITION command was always set to "D", i.e., design loads.

FROM: Brian Goodrich DATE: 8/27/2009 4:21:22 PM Mountain Daylight Time

I revised the export to generate the permit load procedure flag on the LOAD-LIVE-DEFINITION. However, I then now discovered that the BRASS-LRFD engine internally sets this flag to design for a design review. Therefore, for a design review, all limit states are considered for every vehicle regardless of the category to which a vehicle is assigned.

If RATING is selected and vehicles are added to the permit category, the limit states other than Strength II are ignored by BRASS when searching for the critical rating factors.

FROM: Jeff Ruby DATE: 5/12/2010 4:45:31 PM Eastern Daylight Time

On further review Opis LRFD doesn't check for the Strength II limit state. The permit truck load is run, but it isn't used in any limit state. It belongs in the Strength II limit state for all the spec checking articles.

1/5/2016 11:08:02 AM

HRS AASHTO

330

Complete Issue Information

FROM: Jeff Ruby DATE: 5/12/2010 4:48:10 PM Eastern Daylight Time  
The subject doesn't tell the "correct" story for the opis lrfd engine. From Brian's comment above, it may never be resolved for the BRASS LRFD engine. I am not sure. But, it looks like it should be able to be fixed with the AASHTO LRFD engine.

FROM: Krisha Kennelly DATE: 5/17/2010 9:20:11 AM Eastern Daylight Time  
I've made a new incident for the Opis LRFD engine so we can track the engines separately. See 9991

FROM: Krisha Kennelly DATE: 5/25/2010 9:12:42 AM Eastern Daylight Time  
This incident can marked as resolved since the new incident deals with the AASHTO LRFD engine.

FROM: Jeff Ruby DATE: 7/12/2010 1:34:32 PM Eastern Daylight Time  
Sorry if I disagree. But, the incident as described above for the BRASS LRFD is still unresolved. Since you created a new incident number to track the AASHTO LRFD engine progress, it is now a "2-part" incident. We can fix 9991. If this incident is not fixed, it isn't resolved. Maybe it needs to be put in the "critical errors" or "issues not resolved" web site. If that happens, we can mark this closed. We can't just ignore this error as described.

FROM: Krisha Kennelly DATE: 7/12/2010 1:43:27 PM Eastern Daylight Time  
I've changed the category to Bug-BRASS

FROM: Herman Lee DATE: 7/12/2010 1:48:17 PM Eastern Daylight Time  
Changed Folder from /Beta Testing to /Support Center/Opis.  
Brian, has this issue been assigned to a BRASS Problem Log number?

FROM: Brian Goodrich DATE: 7/23/2010 8:18:20 AM Mountain Daylight Time  
This issue has not been assigned to a BRASS Problem Log. I have forwarded this discussion to WYDOT.

FROM: Jeff Ruby DATE: 4/13/2011 2:08:47 PM Eastern Daylight Time  
This should be in the Critical Bug Web page for 6.2 Release.

FROM: Brian Goodrich DATE: 5/18/2011 8:20:13 AM Mountain Daylight Time  
This issue was assigned to BRASS Incident 20.

Issue ID: 9370  
Subject: Impact/Dynamic Load Allowance redundant input

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Price, Adam 7/15/2009 12:45:30 PM  
Modified By: hlee 7/15/2009 3:30:06 PM  
Priority: High  
Category: Education

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category  |
|------------------|----------|----------|-----------|
| Lee, Herman      | New      | High     | Bug       |
| Kennelly, Krisha | Assigned |          |           |
|                  | Resolved |          | Education |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 1@8x3 3ft..xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Adam Price DATE: 7/15/2009 8:51:22 AM Eastern Daylight Time

I have been working with reinforced concrete slab bridges. I noticed that there are three different places to input impact/dynamic load allowance. I suggest that 2 of these places be removed.

Thank you,

Adam Price, P.E.  
Tennessee Department of Transportation  
Structural Design Division  
Adam.Price@tn.gov

FROM: Herman Lee DATE: 7/15/2009 11:18:34 AM Eastern Daylight Time

Impact / Dynamic Load Allowance window in three different locations in the Bridge Workspace tree is by design. Please see below description of this window from Virtis/Opis Help.

"This window allows you to enter the impact factors. Impact can be entered for a bridge, for a superstructure definition, and for a member alternative. Impact for a member alternative overrides impact for a bridge and a superstructure definition for that specific member alternative. Similarly, impact for a superstructure definition overrides impact for a bridge for that specific superstructure definition.

If you change the impact for a bridge, the impact for any existing superstructure definitions or member alternatives in that bridge is not changed correspondingly. New superstructure definitions that are created will be created using the bridge impact. Likewise, if you change the impact for a superstructure definition, the impact for any existing member alternatives is not changed correspondingly. New member alternatives that are created will be created using the superstructure definition impact."

1/5/2016 11:08:03 AM

HRS AASHTO

332

## Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 9372              |
| Subject: Development Length |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Price, Adam           | 7/17/2009 1:19:08 PM |
| Modified By: kkennelly              | 7/20/2009 1:47:27 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

## History

| Primary Contact | Status   | Priority | Category    |
|-----------------|----------|----------|-------------|
| Lee, Herman     | New      | High     | Bug         |
| Goodrich, Brian | Assigned |          | Bug - BRASS |
|                 | Resolved |          |             |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | 1 @ 6xh no transverse reinforcement.xml |             |

## Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Description

FROM: Adam Price DATE: 7/17/2009 9:31:26 AM Eastern Daylight Time

I am running a spec check of a reinforced concrete slab for the attached file. At point 100.62, there are some flexural failures. The output reports an effective area of reinforcement at this location of 0.129in<sup>2</sup>. There is one #9 bar in the bottom of the member, which is a 12" wide slab strip. I know the effective area of reinforcement is reduced because the bars are not fully developed, but I am having trouble matching the 0.129in<sup>2</sup>. Would you please send me the calculations for this number?

Thank you,

1/5/2016 11:08:03 AM

HRS AASHTO

333

Complete Issue Information

Adam Price, P.E.  
Structural Specialist Supervisor 1  
Tennessee Department of Transportation  
Structural Design Division  
Adam.Price@tn.gov

FROM: Krisha Kennelly DATE: 7/20/2009 9:42:49 AM Eastern Daylight Time  
A text file containing the development length calculations is created when you do an analysis.

Select the mbr alt in the BWS tree and then click the "eyeglasses" toolbar button. A listing of the files created during the analysis will appear. Open the 'LRFD 'Reinf Dev Length Calcs Log File' to view the calculations used to compute the area of bar developed. If you disagree with the calculations please resubmit this incident.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 9512                                               |
| Subject: table for sections without transverse reinforcement |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Price, Adam           | 10/1/2009 6:36:08 PM |
| Modified By: hlee                   | 5/7/2010 5:10:14 PM  |
| Priority: High                      |                      |
| Category: Bug - BRASS               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Adam Price DATE: 10/1/2009 2:41:11 PM Eastern Daylight Time  
The attached file is the design of the top slab of a culvert. It contains no transverse reinforcement, yet I

Complete Issue Information

noticed in the BRASS output that AASHTO Table 5.8.3.4.2-1 was used instead of table 5.8.3.4.2-2.

FROM: Brian Goodrich DATE: 10/15/2009 10:07:36 AM Mountain Daylight Time  
I confirmed the users results. This appears to be a BRASS engine issue. I will forward this issue to WYDOT.

FROM: Brian Goodrich DATE: 11/2/2009 1:42:30 PM Mountain Standard Time  
WYDOT assigned this issue to BRASS Problem Log 919.

FROM: Brian Goodrich DATE: 11/16/2009 11:24:04 AM Mountain Standard Time  
The BRASS LRFD engine was revised to use Table 2 when no transverse reinforcement is present.  
Fixed for BRASS-GIRDER(LRFD) 2.0.3. Fixed for Virtis/Opis 6.2.

FROM: Herman Lee DATE: 5/7/2010 1:06:54 PM Eastern Daylight Time  
Confirmed table 5.8.3.4.2-2 is used.  
Verified in 6.2 Beta 1.

Issue ID: 9515  
Subject: DLA windows need improving

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Duray, Jim 10/2/2009 6:49:14 PM  
Modified By: jduray 10/2/2009 6:59:59 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Suspended | High     | Enhancement |



## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | 1 @ 18 x H with EV Load.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jim Duray DATE: 10/2/2009 2:50:22 PM Eastern Daylight Time  
See 9287 for background.

I found the following behavior regarding DLA in the UI:

For the BRASS LRFR analysis, if mbr alt DLA is NULL we get the struct def DLA. If the struct def DLA is NULL we get the bridge DLA. This is the desired behavior and it was also implemented for the AASHTO LRFD/LRFR engine.

If the mbr alt and structure def DLA are NULL, the analysis checks the bridge DLA and if it is NULL the analysis is aborted with the following message.

```
"Error generating LRFD load commands!  
Error generating LOAD-LIVE-DYNAMIC command!  
Unable to determine LRFD impact factors!"
```

This is the desired behavior. For 6.1, the exports were changed to default to the AASHTO DLA values (from the data dictionary).

The DLA windows have some problems with default values for DLA:

For the struct def DLA window, if DLA is NULL it populates the window with the DLA from the bridge DLA – even if the user closes the window by clicking Cancel.

If the bridge DLA is NULL and the struct def window is opened, the struct def DLA gets set to 0 and no warning is displayed during the analysis. Not desirable.

If the bridge DLA window is opened and the DLA is NULL the window sets it to 15% and 33% even if the cancel button is clicked. Probably acceptable behavior but not intuitive.

The mbr alt window never gets populated from the struct def or bridge DLA (except when a new mbr alt is created).

The struct def window DLA should get set to NULL if the bridge DLA is NULL instead of zero, or set it to the AASHTO defaults. If the mbr alt DLA is NULL it should get set to the struct def DLA. Or we should

1/5/2016 11:08:04 AM

HRS AASHTO

336

Complete Issue Information

change the behavior so mbr alt and structure def windows do not get DLA from the parent DLA window.

The revisions should be discussed with the TF/TAG.

|                  |
|------------------|
| Issue ID: 9523   |
| Subject: EV load |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Price, Adam           | 10/7/2009 8:18:09 PM  |
| Modified By: hlee                   | 10/15/2011 9:57:28 PM |
| Priority: High                      |                       |
| Category: Bug - BRASS               |                       |

History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Goodrich, Brian | Assigned | High     | Bug            |
|                 |          |          | Bug - Export 1 |
|                 | Resolved |          | Bug - BRASS    |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/7/2009 4:18:50 PM Eastern Daylight Time  
Submitted on behalf of Adam Price, TN DOT.

Received e-mail:

=====

Herman,

Using DW will not work either because BRASS uses its own load factors. I am inputting the EV load as

1/5/2016 11:08:04 AM

HRS AASHTO

337

Complete Issue Information

a DC load and adjusting it for the difference in load factors between EV and DC. Since EV is not used by BRASS, the user should not have the ability to input this load. By being able to input this load, the user automatically assumes the program will use it properly. Although rare, this is a very dangerous problem and should be corrected as soon as possible.

Thank you for your help,  
Adam

>>> "Lee, Herman" <HLee@mbakercorp.com> 10/7/2009 11:56 AM >>>

Hi Adam,  
I checked the BRASS-GIRDER(LRFD) Technical Manual. Only DC, DW, TU, SE and LL are supported. You could enter the 7.2 k/ft load as a DW load and change the DW load factors to those for EV load.  
Herman

From: Adam Price [mailto:Adam.Price@tn.gov]  
Sent: Wednesday, October 07, 2009 9:59 AM  
To: Lee, Herman  
Subject: EV load

Herman,

We are using OPIS for a design check on the attached culvert top slab. We have modeled the culvert using a 12 inch wide strip. This particular culvert has 60 feet of earth fill on it. We input the EV load case and used a 7.2 k/ft EV load on the span. However, we do not see in the output that it was ever used. Was the EV load included, and if not, how do we include it?

Thanks,

Adam Price, M.S., P.E.

=====

FROM: Brian Goodrich DATE: 10/14/2009 10:48:49 AM Mountain Daylight Time  
The BRASS LRFD Engine help topic for the "Load Case Description" states: "BRASS LRFD only uses types D,DC and D,DW." It is dangerous to ignore the dead loads that do not fall in the DC and DW categories. Should we issue a warning or error here?

The load factors are not exported to the BRASS data file due to the configuration of the input. The "2007 AASHTO LRFD Specifications" LRFD load factors are defined as factors, but they were never applied to the structure definition or member alternative. See the Factors tab on either of these windows. Once this is set, the factors are exported to the BRASS data file.

FROM: Brian Goodrich DATE: 11/18/2009 9:38:15 AM Mountain Standard Time  
I added a "High" warning message when a non-DC and non-DW load case is detected.

WARNING (High):

An unsupported dead load type was specified for Load Case "EV".  
Only DC and DW dead load types are supported.

1/5/2016 11:08:04 AM

HRS AASHTO

338

Complete Issue Information

Fixed for version 6.2.

FROM: Herman Lee DATE: 5/7/2010 1:17:26 PM Eastern Daylight Time  
Verified in 6.2 Beta 1.

|                                                                  |
|------------------------------------------------------------------|
| Issue ID: 9536                                                   |
| Subject: Questions regarding LRFD Live Load distribution in Opis |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Armbrecht, Tim        | 10/27/2009 2:27:23 PM |
| Modified By: bgoodrich              | 1/26/2010 8:42:55 PM  |
| Priority: High                      |                       |
| Category: Support                   |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tim Armbrecht DATE: 10/27/2009 10:35:46 AM Eastern Daylight Time  
 Now that we're into the development of 6.2, perhaps you can look at and respond to Phil Coppernoll's email attached below. Phil is our designated Opis user. I believe some, if not all, of his comments and questions are related to BRASS, but since the steel module for the AASHTO engine is now being developed, this may be as good a time as any to address and respond to these concerns. Also note that this applies to 6.1, not 6.1 beta; however, the beta versions are all that are being offered in the drop down boxes for the support center folder. TAA

## Complete Issue Information

Tim,

John and Kevin asked me to investigate how Opis generates live load distribution for LRFD. In particular, they were interested in how the program interprets Table C4.6.2.2.1-1 (Page 4-30) of the 4th Edition (2008 Interim Revisions). After running the program for some bridges using the Brass LRFD engine, and attempting to run some of the test bridges using the Beta version of the Opis LRFD engine, we have come across a few issues that we would like to verify with Baker.

1. It appears as though the program's default logic is to define distribution factor ranges by determining dead load contraflexure points (using DC1 only?). The program then calculates a positive moment distribution factor and a negative moment distribution factor using the corresponding value of L from Table C4.6.2.2.1-1. The program applies the positive moment distribution factor to all moments within the positive moment distribution factor range and the negative moment distribution factor to all moments within the negative moment distribution factor range. Please note the term "all moments" was used because the envelope of live load moments generated by the program produces both positive and negative moments at a given location.

2. Another interpretation of the table would create a distribution factor for all of the positive moments in the envelope and two distribution factors for the negative moments in the envelope. The first distribution factor for negative moments would be calculated using the L for negative moments near interior supports of continuous spans and would be applied to all negative moments between the points of contraflexure produced under a uniform load. The second distribution factor for negative moments would be calculated using the L for negative moments other than near interior supports of continuous spans and would be applied to negative moments beyond the point of contraflexure produced under a uniform load. Using this interpretation of the table, a positive live load moment located near an interior support would have a different distribution factor than the negative live load moment at that same location. The program doesn't do this.

3. Did Baker receive any specific information from the T-5 committee or T-18 committee regarding the interpretation of this table? There doesn't appear to be a difference between the distribution factor calculated for the positive moment region and the distribution factor calculated for the region of negative moments away from the interior support, so why does the table differentiate between the two? Also, what distribution factor is used at the point of contraflexure (average, larger, smaller)? As stated above, the program appears to calculate the contraflexure points using the actual DC1 loads. While this is probably a more refined method than using a uniform load for structures whose sections vary, why wasn't a uniform load used?

I realize that the live load distribution factors calculated by the program appear to follow AASHTO for a majority of the range, and that any discrepancy would typically affect non-critical moments, but we would like to make sure that we understand the logic of the programs we use. To demonstrate how the program calculates distribution factors we ran a number of unusual span ratios and here are our conclusions.

For a case with no contraflexure point on an interior span, the program seems to follow the information presented in AASHTO (see commentary on Page 4-3). The region of negative moment near the interior support was increased to the centerline of the span and the L used to calculate the distribution was taken as the average of the two adjacent spans. The program calculated L using the average of the length of the span in question and the length of the span to the left for the moments from the support up to the centerline of the span, and the average of the length of the span in question and the length of the span to the right for the moments from the centerline of the span to the support.

## Complete Issue Information

For a case with no contraflexure point in an exterior span, the program uses the average of the lengths of the exterior span and first interior span to calculate the distribution factor and applies that distribution factor for all of the exterior span and up to the contraflexure point of in the first interior span. This distribution factor is applied to all moments (positive and negative) raises the same questions mentioned above pertaining to the interpretation of the chart.

For a case with an interior span with only one contraflexure point (spans = 80, 40, 240, 60), the program didn't produce reliable results. The distribution factor output file didn't show calculations for a distribution factor for most of the 40' span, and the moments generated in the 40' span were not accurate (very high, infinite?). While this type of structure is not practical, we may have exceeded the limits of the program. Perhaps an error message should have been deployed.

Baker may not be able to address all of our questions however we would appreciate any information they can provide regarding the assumptions/methodology of their program. I think Kevin may ask Tom to present some of the issues regarding the interpretation of the table to the appropriate AASHTO committees. If you think these issues should be forwarded to Baker for clarification, please feel free to edit my email as you see fit. Thanks.

Philip E. Coppernoll  
Illinois Department of Transportation  
Bureau of Bridges and Structures  
Phone: (217) 558-0004  
Email: Philip.Coppernoll@illinois.gov

FROM: Krisha Kennelly DATE: 10/27/2009 1:09:05 PM Eastern Daylight Time  
The following comments apply to the Opis LRFD (AASHTO) engine and not the BRASS LRFD engine. ( I added some numbers to the paragraphs above to make it easier to follow).

1. The AASHTO Opis LRFD engine applies a uniform load to the Stage 3 model to determine the points of dead load contraflexure. Distribution factors are then computed inside the pos and neg ranges as described above.
2. The AASHTO Opis LRFD engine does not use a different distribution factor for pos and neg moment at the same location.
3. T-5 and T-18 were not contacted by Baker. At a point of DL contraflexure, the AASHTO Opis LRFD engine uses the DF from the range to the left of the location. It does not consider max/min or compute the average of the 2 values at that point. The AASHTO Opis LRFD engine does apply a uniform load.

Also note the following difference between the AASHTO Opis LRFD engine and the BRASS LRFD engine: The AASHTO Opis engine uses the distribution factor where the axle is applied rather than the distribution factor where the action is computed.

FROM: Brian Goodrich DATE: 11/19/2009 11:52:46 AM Mountain Standard Time  
The following comments apply to the BRASS LRFD engine.

1. The BRASS LRFD engine applies a uniform load to the first continuous stage model to determine the points of dead load contraflexure. Distribution factors are then computed inside the pos and neg ranges as described above.
2. The BRASS LRFD engine does not use a different distribution factor for pos and neg moment at the

1/5/2016 11:08:05 AM

HRS AASHTO

341

Complete Issue Information

same location.

3. At a point of DL contraflexure, the BRASS LRFD engine uses the DF from the range with the larger factor. It does not compute the average of the two factors at that point. The BRASS LRFD engine does apply a uniform load.

The BRASS engine allows the user to choose how the distribution factor is applied: 1) based on the axle location or 2) based on the point under consideration (where the action is computed). However, this option is not currently exposed to the user. Option 2 is the default.

FROM: Brian Goodrich DATE: 1/26/2010 1:40:00 PM Mountain Standard Time  
Regarding the BRASS LRFD engine, should we update the engine properties with an option for choosing the distribution factor application method?

|                                                     |
|-----------------------------------------------------|
| Issue ID: 9547                                      |
| Subject: LRFD - Fatigue Truck - Incorrect Reactions |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Thompson, Todd        | 11/9/2009 3:02:05 PM |
| Modified By: hlee                   | 11/9/2009 6:31:02 PM |
| Priority: High                      |                      |
| Category: Education                 |                      |

History

| Primary Contact | Status   | Priority | Category  |
|-----------------|----------|----------|-----------|
| Lee, Herman     | New      | High     | Bug       |
|                 | Resolved |          | Education |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | 24382153_FatigueTruck.xls |             |
|      | sd_60_24382153.xml        |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

## Complete Issue Information

### Description

FROM: Todd Thompson DATE: 11/9/2009 10:07:04 AM Eastern Standard Time

We have a designer who's been working on doing an RC Slab bridge design using Opus. Last week reported a problem of getting different results if one goes up mile post and down mile post. This may or may not be related to that. Bottom line is that we are getting results that do not appear to be correct using Opus for Reactions of the LRFD Fatigue Truck.

The designer checked 3 separate applications and gets different results from Opus. He created a model in STAAD, Arcon Beam and Florida LL Generator and gets agreement among all 3 of those applications. But these 3 different applications disagree with Opus.

I've attached his 6.0 Opus Model (4 Span CCB, Slab, 16.5 inch slab (Dist = 1))

I've also attached an Excel spreadsheet containing the comparison of different engines and versions of Opus and the apps the designer used.

FROM: Herman Lee DATE: 11/9/2009 1:26:58 PM Eastern Standard Time

Please see below warning message in the analysis log. For the fatigue truck results, 1.0/1.2 factor is included in the reactions.

For the fatigue truck, the original scale factor has been divided by 1.2 to effectively remove the multiple presence factor from the distribution factors. Additionally, the one-lane distribution factors will be used for fatigue.

Issue ID: 9593

Subject: Analyzing permit load with HL-93 in other lanes

Folder: /Virtis/Support Center/Opis

Primary Contact: Lee, Herman

Submitted By: Grunau, Andrea

12/15/2009 5:19:49 PM

Modified By: hlee

6/7/2013 8:30:16 PM

Priority: High

Category: Maintenance

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
|                 |           |          | Maintenance |

1/5/2016 11:08:05 AM

HRS AASHTO

343



Complete Issue Information

|           |
|-----------|
| Duplicate |
|-----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier   | Description                  |
|------|-----------------------|------------------------------|
|      | Watchung Analysis.JPG | Analysis settings screenshot |
|      | Watchung.xml          | Bridge XML file              |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 12/15/2009 10:20:02 AM Mountain Standard Time  
Submitted on behalf of Andrea Grunau:

-----  
Good Morning,

I am new to OPIS and am working my way through a 2 span continuous plate girder design. Is there a way in OPIS to use the special loading condition as per AASHTO 4.6.2.2.5 with HL-93 in combination with a permit truck in 1 lane?

Thanks,  
Andrea

Andrea F. Grunau  
TranSystems  
45 Eisenhower Drive  
Paramus, NJ 07652-1416  
Main: 201-368-0400  
Direct: 201-334-1465  
Fax: 201-368-7740  
www.transystems.com

-----  
FROM: Brian Goodrich DATE: 12/15/2009 10:24:14 AM Mountain Standard Time  
As far as BRASS-LRFD goes, it does not allow mixing of different trucks on the bridge as is discussed in AASHTO LRFD 4.6.2.2.5.

FROM: Brian Goodrich DATE: 12/15/2009 10:24:50 AM Mountain Standard Time  
E-mail from Herman Lee:

1/5/2016 11:08:05 AM

HRS AASHTO

344

Complete Issue Information

-----  
I don't think mixing truck is supported in the AASHTO Engine.  
-----

FROM: Herman Lee DATE: 5/30/2010 10:26:58 AM Eastern Daylight Time  
Changed to Maintenance (TF and TAG May 2010)

FROM: Herman Lee DATE: 10/20/2011 3:53:11 PM Eastern Daylight Time  
Related to Incident 10776.

FROM: Herman Lee DATE: 6/7/2013 4:16:08 PM Eastern Daylight Time  
This functionality will be available in the 6.6 release.  
Duplicate of Incident 10776.

|                                                      |
|------------------------------------------------------|
| Issue ID: 9594                                       |
| Subject: Fatigue truck governing for Strength I case |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Goodrich, Brian    |                       |
| Submitted By: Grunau, Andrea        | 12/15/2009 5:25:48 PM |
| Modified By: bgoodrich              | 3/23/2010 7:43:46 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Goodrich, Brian | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 12/15/2009 10:25:49 AM Mountain Standard Time  
Submitted on behalf of Andrea Grunau:

-----  
Herman,

I am using Brass LRFD as the engine. I am doing design work. I do have the manual that is on the installation CD. I am trying to design the bridge for HL-93 loading, with a permit truck for Strength II and the fatigue truck for the fatigue combination. I just don't understand why when I open the LRFD critical loads in the output that the fatigue truck is governing for the Strength I case.

Thanks,  
Andrea  
-----

FROM: Brian Goodrich DATE: 12/15/2009 10:28:07 AM Mountain Standard Time  
I'm not sure why the Fatigue truck would control the Strength I limit state. I tried this with one of our example bridges but was not able to duplicate the user's issue. I requested the bridge XML file and the Analysis Settings.

FROM: Brian Goodrich DATE: 12/15/2009 4:26:05 PM Mountain Standard Time  
Added Watchung.xml and Watchung Analysis.JPG files.

FROM: Brian Goodrich DATE: 1/25/2010 12:15:26 PM Mountain Standard Time  
Dec. 14 e-mail from Andrea Grunau:

When I set the analysis settings to include HL-93 for the design, a permit truck for the permit loading and the fatigue truck for the fatigue setting, why when I look at the tables does it publish the fatigue truck as governing for strength I? and the HL-93 for the fatigue load combination?

FROM: Brian Goodrich DATE: 1/25/2010 12:33:26 PM Mountain Standard Time  
I am able to duplicate the LRFD Critical Loads issue where the HL-93 truck is showing up as the critical load for the Fatigue limit state. I still don't see where the Fatigue truck is critical for Strength I though.

FROM: Brian Goodrich DATE: 1/25/2010 1:14:17 PM Mountain Standard Time  
The vehicle IDs are set in BRASS to the ID matching a specified name. When the LRFD Critical Loads are set, these are for a particular live load combination such as Design Truck plus Design Lane. For the HL-93 vehicle there are generally four individual live loads: truck, tandem, train, and lane, which result in three combinations. The Fatigue truck becomes live load 5 and combination 4. For the Fatigue limit state, the fatigue truck combination (Combo 4) is critical, but BRASS is getting the vehicle ID for live load 4 instead, which is for HL-93. BRASS must be revised to get the vehicle ID assigned to to the truck portion of the live load combination. I will forward this issue to WYDOT.

1/5/2016 11:08:06 AM

HRS AASHTO

346

Complete Issue Information

FROM: Brian Goodrich DATE: 1/28/2010 10:03:04 AM Mountain Standard Time  
 WYDOT assigned this issue to BRASS Problem Log 934.

FROM: Brian Goodrich DATE: 1/28/2010 3:33:17 PM Mountain Standard Time  
 This appears to be related to Incident 9509.

FROM: Brian Goodrich DATE: 3/23/2010 1:43:25 PM Mountain Daylight Time  
 This issue was addressed in BRASS-GIRDER(LRFD) 2.0.3. Fixed for Virtis 6.2.

|                                             |
|---------------------------------------------|
| Issue ID: 9607                              |
| Subject: code failures not showing up "red" |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Li, Xinmei         |                       |
| Submitted By: Olsen, Jeff           | 12/24/2009 3:43:17 PM |
| Modified By: xli                    | 2/17/2010 3:08:20 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Jeff Olsen DATE: 12/24/2009 10:47:21 AM Eastern Standard Time  
 In the spec check summary, the failures in the summary table show as red text, but below in the shear table, they are not showing up as red text.

## Complete Issue Information

FROM: Xinmei Li DATE: 2/17/2010 9:47:27 AM Eastern Standard Time  
Resolved for 6.2.

|                       |
|-----------------------|
| Issue ID: 9625        |
| Subject: Substructure |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Grunau, Andrea        | 1/22/2010 7:11:58 PM |
| Modified By: hlee                   | 1/25/2010 1:00:55 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Lee, Herman     | New                | High     | Bug      |
|                 | Information Needed |          |          |
|                 | Closed             |          | Support  |

### Contacts

1/5/2016 11:08:07 AM

HRS AASHTO

348

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Spec Check Error.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Andrea Grunau DATE: 1/22/2010 2:13:40 PM Eastern Standard Time  
 After I analyze the pier it does not appear like the results in the Tabular report generated are equal to the results in the Specification Check section located under the substructure tab

FROM: Herman Lee DATE: 1/22/2010 2:55:43 PM Eastern Standard Time  
 Please export the bridge to a XML file and attach to this incident and also provide more information on what doesn't agree.

FROM: Herman Lee DATE: 1/25/2010 7:59:37 AM Eastern Standard Time  
 Received e-mail from Andrea Grunau:

=====  
 Thanks, but I think I figured out the problem.

Andrea Grunau  
 =====

|                               |
|-------------------------------|
| Issue ID: 9683                |
| Subject: Spec Checking Errors |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Teal, Dean            | 3/23/2010 6:52:58 PM |
| Modified By: mordoobadi             | 5/10/2011 9:07:54 PM |

1/5/2016 11:08:07 AM

HRS AASHTO

349

Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Lee, Herman      | New       | High     | Bug         |
| Kennelly, Krisha | Assigned  |          |             |
|                  | Resolved  |          | Support     |
|                  | Assigned  |          | Enhancement |
|                  |           |          | Maintenance |
|                  | Suspended |          |             |
|                  | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Task FP7 Mockups Version 4.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Dean Teal DATE: 3/23/2010 2:54:28 PM Eastern Daylight Time  
 In the attached bridge using member 2 of shelby's bridge  
 Perform an LRFD design review. Bring up the Spec-Checker Viewer filter, turn on everything in the general Tab and in the spec articles clear all and then select 6.10.9.3.2-2 (one spec article)

When I select stage 3 the one spec in the reference window is "Reinforcement Spacing"  
 When I clear all so no specs are selected, "Reinforcement Spacing is still there, it should be empty.  
 The only time the spec viewer works on this bridge is when I select all specs without a filter.

## Complete Issue Information

The second bridge definition is our old TraingBridge1 I used to check out the spec checker with – spec checker/viewer works fine with this test bridge.

FROM: Joseph Ihnat DATE: 3/24/2010 1:43:48 PM Eastern Daylight Time  
I think this is happening because the "Reinforcement Spacing" article isn't in the database.  
Add a row to abw\_lib\_spec\_article table: 5,2141,"Reinforcement Spacing","None"  
spec\_id's 6 and 7 already have a similar row.

FROM: Dean Teal DATE: 3/26/2010 8:53:20 AM Eastern Daylight Time  
My pc brings up the Reinforcement article  
Another designers pc brings up article 6.6.(can't remember the rest of the spec number)

Why would it be different on different pc's?

FROM: Dean Teal DATE: 3/29/2010 9:26:22 AM Eastern Daylight Time  
I verified that with another PC, when I select 6.10.9.3.2-2, the spec checker returns 6.6.1.2.1

FROM: Joseph Ihnat DATE: 3/29/2010 9:54:54 AM Eastern Daylight Time  
I'm able to reproduce your first result but not your second. Is it the same bridge, analyzed the same way?

FROM: Dean Teal DATE: 3/29/2010 10:01:40 AM Eastern Daylight Time  
Same bridge from our Oracle database - different PC

FROM: Mehrdad Ordoobadi DATE: 5/20/2010 1:36:50 PM Eastern Daylight Time  
The results does not have anything for the article "6.10.9.3.2-2". (spec\_article\_id = 1352)  
We need to investigate this by using the debugger.

FROM: Dean Teal DATE: 7/12/2010 12:49:23 PM Eastern Daylight Time  
??

FROM: Dean Teal DATE: 8/24/2010 11:59:06 AM Eastern Daylight Time  
any progress on this bug?

FROM: Joseph Ihnat DATE: 8/24/2010 1:32:51 PM Eastern Daylight Time  
No progress. This is scheduled to be fixed in the 6.3 release.

FROM: Joseph Ihnat DATE: 10/14/2010 8:43:38 AM Eastern Daylight Time  
I looked at this again and came to the same conclusion.  
The issue is not that the results do not contain article 6.10.9.3.2-2.  
The issue is that the results do contain article Reinforcement Spacing, but there's no way to filter those out (you don't see "Reinforcement Spacing" in the Spec Article list in the filter).  
Works OK with the database change I described on 3/24.

FROM: Mehrdad Ordoobadi DATE: 2/1/2011 3:36:20 PM Eastern Standard Time  
Added new row as suggested by Joe. in 6.3.

FROM: Xinmei Li DATE: 3/28/2011 2:42:39 PM Eastern Daylight Time  
Verified fixed for 6.3 Alpha6.

FROM: Dean Teal DATE: 5/10/2011 4:26:58 PM Eastern Daylight Time

1/5/2016 11:08:07 AM

HRS AASHTO

351



Complete Issue Information

Accepted 6.3 beta 2

|                                    |
|------------------------------------|
| Issue ID: 9704                     |
| Subject: Dist Factor Wizard - Skew |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Teal, Dean            | 4/1/2010 7:04:51 PM  |
| Modified By: hlee                   | 5/16/2014 7:43:51 PM |
| Priority: High                      |                      |
| Category: Maintenance               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 4/1/2010 3:14:44 PM Eastern Daylight Time  
 The Distribution Factor Wizard for RC is missing the skew reduction capability.  
 On heavily skewed slabs, like a 45 skew, you can decrease the DF by 20%.

Was this an oversight or did we leave this out for a reason?

FROM: Krisha Kennelly DATE: 4/7/2010 10:31:36 AM Eastern Daylight Time  
 Is this regarding rc slabs? For rc slabs there is no way to enter the skew value in Opis (since they are girderline only) so the skew reduction factor is not included in the computed distribution factors.

FROM: Dean Teal DATE: 4/14/2010 7:51:37 AM Eastern Daylight Time  
 When computing DF's for a RC slab we have a wizard pop up with 3 possible input fields. Overall slab width, Number of lanes and Slab width. Skew could have been added in this pop up wizard.

FROM: Krisha Kennelly DATE: 4/14/2010 8:52:16 AM Eastern Daylight Time  
 I guess it was an oversight, I've attached the mockups for this wizard that were reviewed by the TAG

1/5/2016 11:08:07 AM

HRS AASHTO

352

Complete Issue Information

for version 6.1.

FROM: Dean Teal DATE: 5/13/2010 11:00:22 AM Eastern Daylight Time  
 As per TAG review May 12 2010  
 Change the category to Maintenance

FROM: Herman Lee DATE: 5/16/2014 3:38:13 PM Eastern Daylight Time  
 Skew input for the girderline RC slab Dist Factor Wizard implemented for the 6.6 release.

|                             |
|-----------------------------|
| Issue ID: 9868              |
| Subject: Saving to Database |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Grunau, Andrea        | 5/4/2010 1:55:45 PM  |
| Modified By: hlee                   | 8/23/2012 1:04:33 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact    | Status             | Priority | Category |
|--------------------|--------------------|----------|----------|
| Lee, Herman        | New                | High     | Bug      |
| Ordoobadi, Mehrdad | Information Needed |          |          |
|                    | Assigned           |          |          |
|                    | Information Needed |          |          |
|                    | Closed - Inactive  |          |          |
|                    | Closed             |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

1/5/2016 11:08:08 AM

HRS AASHTO

353

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Unable to Save.xml  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|      |               |         |

Description

FROM: Andrea Grunau DATE: 5/4/2010 9:57:31 AM Eastern Daylight Time  
 We are having trouble saving to the database. We are using the MSSQL Database. Please let me know how to resolve this issue. Thanks. If you need any more information please give me a call. My number is 201-334-1465.

FROM: Herman Lee DATE: 5/4/2010 10:05:04 AM Eastern Daylight Time  
 Are you having trouble saving a bridge or saving rating results to the database? If you are not able to save a bridge, please export the bridge to a XML file and attach to this incident.

FROM: Andrea Grunau DATE: 5/4/2010 11:05:35 AM Eastern Daylight Time  
 It is a bridge I am having trouble saving. I checked a few of our other files and it appears like this is the only one that won't save. I have attached the XML file.

FROM: Mehrdad Ordoobadi DATE: 5/20/2010 1:32:05 PM Eastern Daylight Time  
 The bridge XML file saves successfully in version 6.2 Beta 1.

FROM: Mehrdad Ordoobadi DATE: 6/17/2010 9:21:21 AM Eastern Daylight Time  
 What is the error that you are getting?

FROM: Herman Lee DATE: 8/23/2012 9:01:29 AM Eastern Daylight Time  
 Status changed to Closed.  
 Please let us know if you want to reopen this incident.

|                                                                     |
|---------------------------------------------------------------------|
| Issue ID: 10040                                                     |
| Subject: LRFD(LRFR) DF's - BRASS - Add engine property for eg value |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Duray, Jim         |                      |
| Submitted By: Thompson, Todd        | 6/8/2010 6:18:19 PM  |
| Modified By: tthompson              | 6/27/2010 2:32:51 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|                 |        |          |          |

1/5/2016 11:08:08 AM

HRS AASHTO

354

### Complete Issue Information

|                    |          |      |             |
|--------------------|----------|------|-------------|
| Duray, Jim         | New      | High | Unknown     |
|                    | Assigned |      | Enhancement |
| Lee, Herman        | New      | High | Unknown     |
| Ordoobadi, Mehrdad | Assigned |      |             |
|                    | Rejected |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 6/8/2010 2:24:36 PM Eastern Daylight Time

As I've been working in comparing BRASS, VIRTIS and other sources for Steel Girder bridges, I've noticed that I don't always get what I consider to be correct results with BRASS when the LRFD DF's are left blank in the GUI.

I tracked down that BRASS does not by default assume that  $eg = 0$  for Non-Composite sections. And while using BRASS you can allow (or not allow)  $eg = 0$  for noncomposite in BRASS, it is not exposed in Virtis GUI or in the BRASS export from Virtis.

If one uses the LRFD(LRFR) Calculator and save the DF's - one gets the results one would expect with  $eg=0$  for non-composite sections or bridges.

We should probably expose this option for the following BRASS command. (Or maybe it is and I can't find it.) It can make some reasonably different final results. Probably can be marked as an enhancement and isn't necessarily a BETA issue, but it does need to be addressed.

### BRASS

#### DIST-CONTROL-LL

6 . Set  $eg = 0$  for Enter one of the following codes to indicate if  $eg$  is to be set to zero for

Non-composite? non-composite sections. This option is provided because the BRASS

default is to calculate the distance between the centers of gravity of the beam and deck regardless of if the section is composite or non-composite. See AASHTO LRFD 4.6.2.2.1.

Y

1/5/2016 11:08:08 AM

HRS AASHTO

355

Complete Issue Information

YES = Set eg = 0 for non-composite

N  
NO = DO NOT set eg = 0 for non-composite

FROM: Krisha Kennelly DATE: 6/9/2010 9:00:15 AM Eastern Daylight Time  
I've changed the project to Support Center since this is not a 6.2 beta issue.

FROM: Herman Lee DATE: 6/18/2010 1:10:20 PM Eastern Daylight Time  
Duplicate of Incident 9551.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 10097                                         |
| Subject: Opis LRFD Spec Check results can't be reloaded |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Ihnat, Joseph         | 7/1/2010 3:07:39 PM  |
| Modified By: mordoobadi             | 3/11/2011 4:32:01 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Joseph Ihnat DATE: 7/1/2010 11:08:51 AM Eastern Daylight Time  
Run Opis LRFD on PCITrainingBridge1, save the results, close the BWS.  
Reopen the BWS, open Analysis Events, click Set as Current.  
View Speck Check, nothing there.

FROM: Mehrdad Ordoobadi DATE: 7/6/2010 8:30:38 AM Eastern Daylight Time  
The Opis LRFD/LRFR results are read from a file on the hard disk. Need to add a mechanism to be

1/5/2016 11:08:08 AM

HRS AASHTO

356

Complete Issue Information

able to display the spec check results after the BWS is reopened.

FROM: Mehrdad Ordoobadi DATE: 2/16/2011 8:49:03 AM Eastern Standard Time  
Do we need to fix this for 6.3?

For BRASS results that were saved to the database we, make the spec check results available after the user loads the results from the database. For the AASHTO engines, we don't have a way to display the spec check results after the BWS is closed. I think that we could look for .SpecCheckResults files on the disk for a bridge and load them into memory while opening a bridge. This code will be in the GUI.

FROM: Mehrdad Ordoobadi DATE: 2/21/2011 12:07:39 PM Eastern Standard Time  
From: Duray, Jim  
Sent: Wednesday, February 16, 2011 9:09 AM  
To: Ordoobadi, Mehrdad; Kennelly, Krisha; Lee, Herman; Ihnat, Joseph  
Subject: RE: VI 10097 - Opis LRFD Spec Check results can't be reloaded

As far as I know we have never been able to display BRASS spec check results after the BWS is closed.

I don't think this is a bug.

Issue ID: 10172  
Subject: Check critical sections for shear by default

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Price, Adam 7/30/2010 7:47:20 PM  
Modified By: hlee 10/15/2010 1:39:07 PM  
Priority: High  
Category: Enhance BRASS

History

| Primary Contact | Status    | Priority | Category                     |
|-----------------|-----------|----------|------------------------------|
| Lee, Herman     | New       | High     | Unknown                      |
|                 | Suspended |          | Enhancement<br>Enhance BRASS |

Contacts

1/5/2016 11:08:09 AM

HRS AASHTO

357

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Adam Price DATE: 7/30/2010 3:51:57 PM Eastern Daylight Time

Currently Virtis/Opis only checks span tenth points by default. Any other span points may be checked by using the point of interest option. I believe it would be very beneficial to check the critical sections for shear by default. I always want to check them, so I always have to enter them as points of interest. Would you please consider this?

Thanks,  
Adam Price

|                                                    |
|----------------------------------------------------|
| Issue ID: 10173                                    |
| Subject: Shear Stirrup Design Wizard for Prestress |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis |                     |
| Primary Contact: Lee, Herman        |                     |
| Submitted By: Olsen, Jeff           | 8/3/2010 3:21:58 PM |
| Modified By: hlee                   | 6/9/2011 8:58:03 PM |

1/5/2016 11:08:09 AM

HRS AASHTO

358

### Complete Issue Information

|                                         |
|-----------------------------------------|
| Priority: High<br>Category: Enhancement |
|-----------------------------------------|

### History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Information Needed |          |          |
|                  | Assigned           |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier     | Description |
|------|-------------------------|-------------|
|      | harped_debond_issue.xml |             |
|      | harped_only.xml         |             |
|      | harped+debonded.xml     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Olsen DATE: 8/3/2010 11:27:31 AM Eastern Daylight Time  
Add a Shear Stirrup Wizard that computes a shear pattern for Prestressed Concrete Beams, similar to the Shear Stud Wizard for Steel Girders.

FROM: Herman Lee DATE: 8/10/2010 3:12:57 PM Eastern Daylight Time  
Duplicate of Incident 4766.

FROM: Herman Lee DATE: 6/9/2011 4:57:31 PM Eastern Daylight Time  
This is in the 6.3 Work Plan.

1/5/2016 11:08:09 AM

HRS AASHTO

359



Complete Issue Information

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 10174                                                    |
| Subject: Support both harped and debonded strands in AASHTO engine |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Olsen, Jeff           | 8/3/2010 3:27:51 PM  |
| Modified By: jolsen                 | 9/12/2012 7:13:27 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Olsen DATE: 8/3/2010 11:34:24 AM Eastern Daylight Time  
 AASHTO engine does not support both harped and debonded strands in prestressed design at the same time.

FROM: Herman Lee DATE: 8/10/2010 3:18:15 PM Eastern Daylight Time  
 AASHTO Engine does support harped and debonded strands at the same time. The Virtis Std Engine (Virtis LFD/ASD) doesn't support this configuration.  
 Jeff, please attach the bridge file to this incident and specify the spec article in question.

FROM: Jeff Olsen DATE: 8/12/2010 7:02:00 PM Eastern Daylight Time  
 Herman, I have included a bridge that contains 2 member alts for beam #2. One has harped strands only. the other has harped and debonded strands. they both produce the same stresses in the dedonded area. I believe that the program is not condisering the debonded strands.

1/5/2016 11:08:10 AM

HRS AASHTO

360

Complete Issue Information

FROM: Herman Lee DATE: 8/13/2010 8:06:04 AM Eastern Daylight Time

FROM: Jeff Olsen DATE: 10/21/2010 1:13:46 PM Eastern Daylight Time  
Any resolution to this issue? This should be considered a critical bug and resolved ASAP.

FROM: Krisha Kennelly DATE: 10/25/2010 2:15:07 PM Eastern Daylight Time  
I'm looking into this.

FROM: Krisha Kennelly DATE: 10/26/2010 11:19:37 AM Eastern Daylight Time  
Bug has been fixed for 6.3 and 6.2.

I'm starting the process to get a patch issued.

FROM: Krisha Kennelly DATE: 10/26/2010 4:00:57 PM Eastern Daylight Time  
This issue deals with harped and debonded strand configuration not being handled correctly by the AASHTO LRFD/LRFR engine.

The debonded strands are being considered as straight strands over the whole length of the beam.

Effects:

Rating for moment: The critical moment rating factor is not typically found near the ends of the beams so the unconservative moment capacity is probably not critical.

Rating for shear: The beam will have slightly higher shear capacity than it really should within the debonded length. In this bridge it does take the shear rating down from 1.01 to 0.99.

Design: Designers debond at the end to reduce the tensile stress in the top of the beam at release. The bug results in higher (conservative) tensile stress in the top of the beam at release.

FROM: Krisha Kennelly DATE: 10/27/2010 10:52:34 AM Eastern Daylight Time  
I've tested this fix on the attached bridge and also on BID5 and BID9 in the sample db to ensure that the fix did not break anything for straight/debonded and harped strand configurations. LRFD and LRFR spec check results for BID5 and BID9 before and after the fix are identical so nothing was broken.

FROM: Jeff Olsen DATE: 10/28/2010 5:18:32 PM Eastern Daylight Time  
I tested the dll on a couple different bridges and the debonded strands are now being accounted for. The bug appears to be fixed. Thanks Krisha.

FROM: Herman Lee DATE: 12/3/2010 9:26:36 PM Eastern Standard Time  
Resolved for 6.3 Release.

FROM: Xinmei Li DATE: 3/28/2011 10:51:35 AM Eastern Daylight Time  
Verified with 6.3 Alpha 6, I can rate BID5 and BID9 successfully. I did LRFR rating with attached bridge, "Harped only" member alt and "Harped+debonded" member alt. They produce different rating results and stresses.

|                 |
|-----------------|
| Issue ID: 10209 |
|-----------------|

1/5/2016 11:08:10 AM

HRS AASHTO

361

### Complete Issue Information

Subject: LL DF factors

Folder: /Virtis/Support Center/Opis  
Primary Contact: Goodrich, Brian  
Submitted By: Befikadu, Elizabeth 8/20/2010 2:32:34 PM  
Modified By: bgoodrich 8/20/2010 2:38:09 PM  
Priority: High  
Category: Support

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | New      | High     | Support  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description     |
|------|---------------------|-----------------|
|      | 26095.xml           | Bridge XML file |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 8/20/2010 8:33:00 AM Mountain Daylight Time  
Issue submitted for Elizabeth Befikadu:

Hi All,

Could you clarify what Brass is doing in calculating the LLDF factor using Lever rule for adjacent box beams.

The wheel is 3ft away from the curb for beam G2 and 6ft away from the curb for beam G3. Is there any reason or I misunderstood the concept.

I have attached the XML file and my sketch.

1/5/2016 11:08:10 AM

HRS AASHTO

362

Complete Issue Information

Thanks for your help.

Elizabeth Befikadu

FROM: Brian Goodrich DATE: 8/20/2010 8:37:17 AM Mountain Daylight Time  
The BRASS LRFD engine will calculate the distribution factors only if there are no LRFD distribution factors input on the Live Load Distribution factor window. Regarding the lever rule, BRASS moves the 12' lanes across the structure with a 10' lane within. These are moved at 6" increments across the structure. Then, the lanes are positioned such that one wheel line is directly over the girder in order to get the maximum effect.

There is enough room to position wheel line directly over the G2 beam. The distribution factor would then be  $0.5 \times 1.2 = 0.6$  for one-lane loaded or  $0.5 \times 1.0 = 0.5$  for two-lanes loaded. For the G3 beam and one-lane loaded, the left wheel line can be positioned directly over the beam, which results in the 0.6 distribution factor. However, for G3 with two-lanes loaded, the left wheel line can be positioned at 81 inches from the left edge of the deck, which results in  $30.34'' / 2 \times 33.5'' = 0.453$ . Note that these calculations are shown in the BRASS Load Distribution File.

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS

Method: Lever Rule

Girder of Interest: 3  
No. Lanes Loaded : 1

| Truck No. | Wheel Positions, in |         |
|-----------|---------------------|---------|
|           | Left                | Right   |
| 1         | 84.161              | 156.161 |

Distribution Factor Summary:  
Critical Load to Girder = 0.5000

$$mg = m * g$$

$$= 1.20 * 0.500 = 0.600$$

Notes:  
=> The wheel positions reference the left edge of the deck.

PERFORMING AASHTO LIVE LOAD DISTRIBUTION FACTOR COMPUTATIONS

Method: Lever Rule

Girder of Interest: 3  
No. Lanes Loaded : 2

| Truck No. | Wheel Positions, in |       |
|-----------|---------------------|-------|
|           | Left                | Right |

Complete Issue Information

|   |         |         |
|---|---------|---------|
| 1 | 81.000  | 153.000 |
| 2 | 201.000 | 273.000 |

Distribution Factor Summary:  
 Critical Load to Girder = 0.4528

$$mg = m * g$$

$$= 1.00 * 0.453 = 0.453$$

Notes:  
 => The wheel positions reference the left edge of the deck.

FROM: Brian Goodrich DATE: 8/20/2010 8:38:00 AM Mountain Daylight Time  
 E-mail from Elizabeth Befikadu:

Thanks this is very helpful

Elizabeth Befikadu

|                         |
|-------------------------|
| Issue ID: 10210         |
| Subject: Slab bridge DF |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Befikadu, Elizabeth   | 8/20/2010 2:39:27 PM |
| Modified By: bgoodrich              | 8/20/2010 2:44:18 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brian Goodrich DATE: 8/20/2010 8:39:30 AM Mountain Daylight Time  
Issue submitted for Elizabeth Befikadu:

I have a question regarding LL DF for slab bridges.

I am working on a bridge which is three span continuous RC slab bridge. The LL distribution factor calculated by Brass engine is based on the span length for each span versus AASHTO LRFD 4.6.2.1 indicates that the moments by region which is positive moment and negative moment region. I have attach the XML file for your review.

I would like to know your opinion on this.

With Regards

Elizabeth Befikadu

FROM: Brian Goodrich DATE: 8/20/2010 8:41:33 AM Mountain Daylight Time

I reviewed your bridge, which is an R/C slab entered as a girder line. For this structure, BRASS is not being used to calculate the distribution factors. The "Compute from Typical Section..." button computes these as indicated in the help. The "View Calcs" button shows exactly how these factors are calculated. The equations from Article 4.6.2.3 are dependent on the span length, not the moment region. The stand-alone version of BRASS can calculate distribution factors for a slab bridge and these are done the same way as with the Virtis "Compute" button.

FROM: Brian Goodrich DATE: 8/20/2010 8:42:54 AM Mountain Daylight Time  
E-mail from Elizabeth Befikadu:

The equation are dependent on the span length but the span length that should be used is different for positive and negative moment region.  
For positive moment region, the span length is the maximum span length, for negative moment region the span length is the average span L between the adjacent span.  
I have attached one document that I found on line which I believe is the right approach and let me know what your opinion on this.

Thanks for your help

Elizabeth Befikadu

FROM: Brian Goodrich DATE: 8/20/2010 8:44:18 AM Mountain Daylight Time

For slab-on-beam bridges (as in the example you sent), the specification states the following from Article 4.6.2.2.1:

"Table C1 describes how the term L (length) may be determined for use in the live load distribution factor equations given in Articles 4.6.2.2.2 and 4.6.2.2.3."

This table outlines the span length to use depending on the action and moment region. However, this

1/5/2016 11:08:10 AM

HRS AASHTO

365

Complete Issue Information

doesn't seem to apply to the slab bridges of Article 4.6.2.3. Here, L1 is defined as:

"modified span length taken equal to the lesser of the actual span or 60.0 (ft.)"

|                                                |
|------------------------------------------------|
| Issue ID: 10211                                |
| Subject: Design Ratio Computations (Pass/Fail) |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Goodrich, Brian    |                      |
| Submitted By: Goodrich, Brian       | 8/20/2010 3:18:01 PM |
| Modified By: bgoodrich              | 8/20/2010 3:25:35 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Goodrich, Brian | New      | High     | Support  |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier           | Description                  |
|------|-------------------------------|------------------------------|
|      | Caney Creek Bridge.xml        | Bridge XML file              |
|      | Design Ratio Check.txt        | BRASS output                 |
|      | Design Ratio Computations.JPG | Spec check window screenshot |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brian Goodrich DATE: 8/20/2010 9:18:27 AM Mountain Daylight Time  
Issue submitted via BridgeWare for Faisal Aziz:

Dear Sir or Madam,

1/5/2016 11:08:11 AM

HRS AASHTO

366

## Complete Issue Information

In my output file the "Design Ration Computation" for same location has been shown as "Fail" along with "Pass". (See attached JPEG and xml).

Looking into the computations they both have the exact numbers. (See attached txt file).

While for some locations (near supports), it shows twice "Passes".

I looked into BRASS LRFR manual but couldn't get an affirmative answer.

Please comment. Thanks.

Faisal Aziz, E.I., M.E.  
HUVAL & Associates Inc.

FROM: Brian Goodrich DATE: 8/20/2010 9:24:01 AM Mountain Daylight Time

I opened your bridge, ran it with BRASS, and reviewed the results. At a point of interest, the concrete stresses are checked for the bottom flange, top flange, and slab (if present). This is why you might see a Pass and a Fail at the same point. The "Design Ratio Check.txt" file shows the same check twice. Both of these checks would have produced a "Fail" code. Anytime the design ratio is less than 1.0, the check fails. Please verify that this is the case.

FROM: Brian Goodrich DATE: 8/20/2010 9:24:17 AM Mountain Daylight Time  
E-mail from Faisal Aziz:

Thanks Brian,

Thank you for your valuable feedback and information.

A clarification: I have run my bridge using Virtis LRFR analysis engine. Is there any specific difference between BRASS LRFR and Virtis LRFR analysis engines? I am asking this for the same bridge, keeping all the input parameters same, my Virtis LRFR RF is like 0.25 times the BRASS LRFR RF, shouldn't they be the same?

And one thing beyond engineering judgment is that if the Design Ration is less than 1.0, why the RF shown is greater than one, shouldn't they both be proportional.

Please let me know if need additional information.

Faisal Aziz, E.I., M.E.

FROM: Brian Goodrich DATE: 8/20/2010 9:25:13 AM Mountain Daylight Time

I don't know of any differences that would cause such a drastic difference in the ratings. My only suggestion would be to turn on as much intermediate output as possible to find out where the differences are. Distribution factors, section properties, and losses are two possible areas to verify.

Regarding the design ratio vs. rating factor for the same check, if one is less than 1.0, the other should also be. The same holds true if one is greater than 1.0. However, a critical design ratio could be less than 1.0 for a dead load stage. This can happen for the concrete stress checks (DL + PS). There wouldn't be a rating factor for this because there is no live load for this combination.

|                 |
|-----------------|
| Issue ID: 10330 |
|-----------------|

1/5/2016 11:08:11 AM

HRS AASHTO

367



### Complete Issue Information

Subject: Opis/LRFD - Steel Design with 6.2

Folder: /Virtis/Support Center/Opis  
Primary Contact: Kennelly, Krisha  
Submitted By: Woldemichael, Berhanu 12/16/2010 5:28:26 PM  
Modified By: hlee 2/8/2011 9:51:50 PM  
Priority: High  
Category: Unknown

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | Assigned  | High     | Bug         |
|                 | Suspended |          | Maintenance |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 6.2 shear studs 2.JPG |             |
|      | 6.2 shear studs.JPG   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Berhanu Woldemichael DATE: 12/16/2010 12:33:18 PM Eastern Standard Time  
Unexpected error message in Opis/LRFD - Steel Desgn is noted while running code check for shear. The bridge (the same bridge reported earlier) passed all earlier versions and also was checked using hand calculations.

FROM: Herman Lee DATE: 12/17/2010 9:52:01 AM Eastern Standard Time  
Opis LRFD Engine for steel multi-girder superstructure is implemented in version 6.2. Are you comparing Opis LRFD results in 6.2 with earlier version's BRASS LRFD results? Please attach the earlier version of the bridge to this incident or specify which incident you reported earlier to obtain the bridge. Thanks.

1/5/2016 11:08:11 AM

HRS AASHTO

368

Complete Issue Information

FROM: Herman Lee DATE: 2/6/2011 2:58:31 PM Eastern Standard Time  
Information Needed E-mail sent on 2/6/11.

FROM: Herman Lee DATE: 2/8/2011 4:49:57 PM Eastern Standard Time  
E-mail from Berhanu Woldemichael on 2/8/2011:

=====  
The problem with shear is resolved.  
=====

Issue ID: 10332  
Subject: Unable to retrieve vehicles for Shear Stud Wizard.

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Warner, David 12/17/2010 5:41:11 PM  
Modified By: hlee 5/3/2011 12:28:08 PM  
Priority: High  
Category: Maintenance

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 12/17/2010 12:42:01 PM Eastern Standard Time  
Submitted on behalf of David Warner, Montana DOT.

Complete Issue Information

Currently, the Shear Stud Wizard uses the HL-93 and LRFD Fatigue Truck in the Standard Library. The Shear Stud Wizard should recreate these vehicles at runtime instead of searching in the library since the ID for identifying these vehicles may be different than what the wizard expected.

FROM: Herman Lee DATE: 2/6/2011 3:15:53 PM Eastern Standard Time

From the Jan. 2011 Task Force Meeting draft minutes:

6f. The Task Force directed the Contractor to develop a mockup and estimate for vehicle selection for use with all design tools.

|                                                              |                       |
|--------------------------------------------------------------|-----------------------|
| Issue ID: 10340                                              |                       |
| Subject: Shear Stud Wizard Enhancement for Splice Plate Gaps |                       |
| Folder: /Virtis/Support Center/Opis                          |                       |
| Primary Contact: Kennelly, Krisha                            |                       |
| Submitted By: Teal, Dean                                     | 12/29/2010 1:53:40 PM |
| Modified By: kkennelly                                       | 9/18/2012 5:18:11 PM  |
| Priority: High                                               |                       |
| Category: Enhancement                                        |                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
|                  | Assigned           |      |         |
| Kennelly, Krisha | Resolved           |      |         |
| Lee, Herman      | New                | High | Unknown |
|                  | Information Needed |      |         |
|                  | Assigned           |      |         |
|                  | Resolved           |      | Support |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier         | Description |
|------|-----------------------------|-------------|
|      | VIRTIS-OPIS.pdf             |             |
|      | 00896 - 38138101000S110.xml |             |
|      | OpisBridge.bmp              |             |
|      | 38138101000S100.xml         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 12/29/2010 8:54:40 AM Eastern Standard Time

There are no options in the wizard interface to account for gaps in the stud spacing at bolted field splice locations. The workaround that I found is to manually go in and alter the table that the wizard creates to put the gaps in. I found that in order for the engine to continue to work properly, you MUST assign the gap areas as "Composite". If you just code them in as gap in spacing, the engine goes into non-composite for negative moment analysis mode and everything goes out of whack. Doing this manual manipulation of the table works for me and was able to get the analysis to run just fine.

\*\*A nice future improvement: ability to specify how big of a gap to put on either side of the bolted field splice locations in the wizard interface so we wouldn't have to do this manually in the resulting table.

FROM: Herman Lee DATE: 6/30/2012 9:39:14 AM Eastern Daylight Time  
Implemented for 6.4 release.

FROM: Jeff Ruby DATE: 8/6/2012 4:46:28 PM Eastern Daylight Time

I think this has been a problem from the beginning. The attached bridge was coded in metric. But I set the default units to english for my convenience. Using member G2, if I try to run the shear stud wizard, I get the error box as shown in the attached screen shot. I think it is a tolerance issue. I can get it to work if I change the units box to SI. But, when the wizard calculates the ranges, it all is in feet.

2 Issues:

1/5/2016 11:08:12 AM

HRS AASHTO

371

Complete Issue Information

- 1) fix the tolerance issue
- 2) the wizard should check to see what current units are for the dialog box in question and return the appropriate results.

FROM: Krisha Kennelly DATE: 8/7/2012 9:12:01 PM Eastern Daylight Time  
 The items listed by Jeff above are not associated with the splice gap enhancement in this issue. They have been moved to issue 11792 as release bugs.

FROM: Jeff Ruby DATE: 8/8/2012 2:24:32 PM Eastern Daylight Time  
 After doing an LRFD design check with the "wizard" results, I get a Strength Limit State failure for not enough studs. The number of studs are not calculated correctly for Article 6.10.10.4. It appears to be a straight forward calculation once you have the inflection points from the wizard design run. I will attach the file shortly.

FROM: Krisha Kennelly DATE: 9/18/2012 12:44:17 PM Eastern Daylight Time  
 The comments from 8/8/12 are a bug in the shear stud wizard not related to the enhancement for splice gaps. Those comments have been moved to issue 11930 as a release bug.

|                                                  |
|--------------------------------------------------|
| Issue ID: 10342                                  |
| Subject: Imported bridge do not show in database |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis |                     |
| Primary Contact: Lee, Herman        |                     |
| Submitted By: Wagner, Brad          | 1/4/2011 1:12:22 PM |
| Modified By: hlee                   | 1/4/2011 6:22:43 PM |
| Priority: High                      |                     |
| Category: Support                   |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

1/5/2016 11:08:12 AM

HRS AASHTO

372

Complete Issue Information

FROM: Brad Wagner DATE: 1/4/2011 8:24:30 AM Eastern Standard Time  
Two bridges were exported to .xml files from Virtis 6.2.

I opened Opis using Opis.exe and imported the two bridges. Opis confirmed that the bridges were imported, but they do not show up in the bridge explorer window. Repeated attempts to re-import the bridges results in the error "Bridge ID is not Unique". A search of the All Bridges folder yields the imported bridges, which can be opened, but they still do not show up in the Bridge Explorer window.

I closed OPIS and re-opened the program using the Virtis.exe and VirtisOpis.exe files, and the bridges appear in the Bridge Explorer window and can be opened.

FROM: Herman Lee DATE: 1/4/2011 8:56:41 AM Eastern Standard Time  
I'm not able to reproduce the problem. Please attach the two bridge XML files to this incident for us to investigate further. Thanks.

FROM: Herman Lee DATE: 1/4/2011 12:44:18 PM Eastern Standard Time  
Attached are the two bridge XML files from Brad Wagner.

Looks like the bridges were created using VirtisOpis.exe. Both bridges don't have the "available to Opis" checkbox selected. To fix this problem, please use VirtisOpis.exe to open each bridge, check the "available to Opis" selection and save the bridge back to the database (please see attached bmp file). You should be able to see the bridges next time you use Opis.exe.

Issue ID: 10579  
Subject: The Percent Concrete for shear on the Mbr Alt Point of Interest window is not being used by the AASTHO LRFD/LRFR engine

Folder: /Virtis/Support Center/Opis  
Primary Contact: Mlynarski, Mark  
Submitted By: Kennelly, Krisha 3/21/2011 5:59:27 PM  
Modified By: hlee 6/10/2011 12:23:48 PM  
Priority: Critical  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

1/5/2016 11:08:12 AM

HRS AASHTO

373

### Complete Issue Information

|                  |          |          |         |
|------------------|----------|----------|---------|
| Kennelly, Krisha | Assigned | High     | Unknown |
| Mlynarski, Mark  |          |          |         |
| Lee, Herman      | New      | High     | Unknown |
| Kennelly, Krisha | Assigned |          |         |
| Skow, Wayne      | Resolved | Critical | Bug     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Wind Effects.xml    |             |
|      | Wind Effects.pdf    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 3/21/2011 2:00:08 PM Eastern Daylight Time  
the Vc computed by the engine should be adjusted by the percentage of concrete shear entered by the user.

FROM: Krisha Kennelly DATE: 3/22/2011 9:23:49 AM Eastern Daylight Time  
See attached screenshot for an example of adding this value to an article. Please make similar changes to all LRFD articles that compute Vc (and all editions of those articles).

FROM: Mark Mlynarski DATE: 3/31/2011 1:47:14 PM Eastern Daylight Time  
added to the calculation of Vc to include the PercentShear (part of the section property object).  
Made changes for all versions of ALRFD\_05\_08\_03\_05.cs

FROM: Bin Zhang DATE: 5/12/2011 5:09:53 PM Eastern Daylight Time  
I tested using the member alt of G1 in BID 11 bridge.  
I set the shear percentage override by 50% at POI 20ft, and run LRFD with HI93 vehicle. I got an system error.  
Please read the attached document for details.

FROM: Herman Lee DATE: 6/10/2011 8:18:48 AM Eastern Daylight Time  
Ben, you need to enter shear reinforcement data in the POI's Shear tab when you select to override the shear schedule.

1/5/2016 11:08:13 AM

HRS AASHTO

374

Complete Issue Information

|                                             |
|---------------------------------------------|
| Issue ID: 10586                             |
| Subject: Wind Effects Calculations, 6.2 Bug |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Skow, Wayne        |                      |
| Submitted By: Teal, Dean            | 3/23/2011 3:30:22 PM |
| Modified By: kkennelly              | 5/11/2011 1:23:32 PM |
| Priority: Critical                  |                      |
| Category: Bug                       |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
| Skow, Wayne      |          |          |          |
| Kennelly, Krisha |          |          | Bug      |
|                  | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Opis Output.JPG     |             |
|      | Charlie Woods.xml   |             |
|      | BRASS Output.JPG    |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 3/23/2011 11:32:44 AM Eastern Daylight Time  
 One of my designers uncover this bug in the way wind effect are applied and calculated on both top and bottom steel flanges.  
 The bug incorrectly passes the specification checks when it should fail.

1/5/2016 11:08:13 AM

HRS AASHTO

375



Complete Issue Information

PDF of output and calculations applies along with xml of associated model.

Notes for me:

Steve B.  
 BID 1492

FROM: Krisha Kennelly DATE: 4/3/2011 2:42:10 PM Eastern Daylight Time  
 Wayne - please investigate

FROM: Wayne Skow DATE: 4/6/2011 8:30:29 AM Eastern Daylight Time  
 Two bugs were found.

- 1) the minimum wind load of .3klf (LRFD 3.8.1.2.1) was being applied to each flange rather than to the beam as a whole.
- 2) when appendix A controled member resistance, fl (flange stress due to wind) in 6.10.1.6 was incorrectly calculated.

Changes were made to articles LRFD 4.6.2.7.1 and 6.10.1.6 for all 4E versions, 5E and 5E 2010.

FROM: Dean Teal DATE: 5/10/2011 4:31:38 PM Eastern Daylight Time  
 This is marked as resolved - what version should i test it with?

FROM: Krisha Kennelly DATE: 5/11/2011 9:24:45 AM Eastern Daylight Time  
 You should be able to test this in beta 2

|                                |
|--------------------------------|
| Issue ID: 10657                |
| Subject: Vsr Should not = zero |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Teal, Dean            | 4/7/2011 2:04:18 PM  |
| Modified By: mkolis                 | 8/30/2012 6:53:30 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

---

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 4/7/2011 10:11:26 AM Eastern Daylight Time  
Note for me - Charlie Woods, BID #4187

From one of my designers:

1. Discrepancies between the outputs for the Brass and Opis Engines. The first attached screen shot is of the Brass output, which shows the calculated section properties. The second attached screen shot is taken from the Opis output, same location on the bridge, same girder line. It appears not to have any section properties calculated. It indicated that this particular article of 6.10.10.1 is not applicable since  $V_{sr} = 0$ ; however, it appears  $V_{sr} = 0$  due to the fact that the section properties aren't calculated, which results in zero stress range. It seems odd given that Brass calculated section properties at this same location, but Opis did not—maybe user input if a different analysis method is chosen?

Bridge Attached

FROM: Krisha Kennelly DATE: 4/7/2011 10:59:07 AM Eastern Daylight Time  
please investigate.

FROM: Wayne Skow DATE: 4/8/2011 1:56:30 PM Eastern Daylight Time

There appears to be a logic problem in ScSuperSteelGirderElement. Notice in the output:

```
Info - Performing LRFD specification checking...
Building Spec Check Domain objects.
  Welded Plate Girder A - Stage 1
  Welded Plate Girder A - Stage 2
  Welded Plate Girder A - Stage 3
Generic composite ranges found!
The shear connector specification checking will not be performed.    <-----
Performing Specification Check.
- STAGE 1 : Computing Steel Stresses
  - Location - 0.0000 (ft)
```

However, 6.10.10.1.2 gets called anyway:

```
0.000
Article 6.6.1.2.2 completed - stage 3, round 1
Article 6.10.10.1 completed - stage 3, round 1
Article 6.10.10.2 completed - stage 3, round 1
Article 6.10.10.1.2 completed - stage 3, round 1    <-----
Article 6.10.2 completed - stage 3, round 1
Article 6.10.6.2.2 completed - stage 3, round 1
Article 1.3.2.1 completed - stage 3, round 1
Article 4.6.2.7.1 completed - stage 3, round 1
```

Complete Issue Information

Article 6.10.8.2.2 completed - stage 3, round 1

But the ShearConnFlexureType value hasn't been set properly. So 6.10.10.1.2 doesn't process properly.

FROM: Krisha Kennelly DATE: 6/19/2012 10:56:58 AM Eastern Daylight Time  
fixed for 6.4 beta 2

FROM: Matt Kolis DATE: 8/30/2012 2:53:30 PM Eastern Daylight Time  
Verified in VO64, Beta 4.

|                            |
|----------------------------|
| Issue ID: 10658            |
| Subject: Calculation of Zr |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Teal, Dean            | 4/7/2011 2:11:31 PM  |
| Modified By: kkennelly              | 5/11/2011 1:24:26 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          | Support  |
|                  | Closed   |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Charlie Woods.xml   |             |
|      | Opis Output.JPG     |             |

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 4/7/2011 10:15:30 AM Eastern Daylight Time  
 Note for me - Charlie Woods, BID #4187

Recieved this from one of my designers:

2. Deals with the calculation of Zr, the fatigue resistance of an individual stud. My assumption is that the new release already takes care of this since the '09 interims included the change to this article and the analyses are being computed based upon '08 interims. In case you need specifics, the Zr is defaulted to  $5.5 \cdot d^2$  when the single lane average daily truck traffic exceeds or is equal to 960. In this case, the exact value of Zr is 4.2 kips, instead of 2.105 kips shown in attachment. This appears to be an addition in the '09 interims. Below, the outputs are still referencing the older Fatigue II, alpha computations. The new Code specifies using Fatigue I (larger load modifier) with the increased resistance, when the number of trucks exceeds 960.

Bridge Attached

FROM: Krisha Kennelly DATE: 4/7/2011 10:46:28 AM Eastern Daylight Time  
 As shown at the top of the attached sceenshot, Version 6.2 is using the 2008 interims. The 2009 interims with the new Fatigue I limit state will not be available until 6.3 is released later this summer.

FROM: Krisha Kennelly DATE: 5/11/2011 9:25:54 AM Eastern Daylight Time  
 closed based on accepted in the reviewer status

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 10662                                                                            |
| Subject: Opis LRFD - PS Girder Bridge - DL moments not being computed or used at locations |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Thompson, Todd        | 4/7/2011 6:45:13 PM  |
| Modified By: hlee                   | 5/12/2011 3:01:54 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |

Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
| Duray, Jim       | New       | High | Bug         |
| Kennelly, Krisha |           |      | Unknown     |
|                  | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 4/7/2011 2:48:56 PM Eastern Daylight Time

I had a designer working on a prestressed girder bridge and he came across a bug with PS Girder bridges using Opis LRFD Engine.

from Designer

After analyzing the G1 member of the Superstructure(continuous and simple, 5.2, 6.2, 7.0 & 7.5) there was intial stress failure at transfer of prestress at the 5 percent location of Span 2, but not at the 3.5 or 10.0 location. From looking at the calculations under the spec check, the opis engine is producing a MDL1 = 0 at the 5 percent location only. After reviewing the Results Graph, all moments for the 5 & 95 percent locations of all the spans are blank.

-----

I have attached the bridge XML, along with scanned copies of the output showing the blank values for all the DL moments (At the reported problem spots) along with the Initial PS forces report that show the DL being blank (or zero) and resulting in failures.

FROM: Herman Lee DATE: 4/7/2011 4:54:02 PM Eastern Daylight Time

Krisha, please see whether spec check requires additional nodes in the finite element model.

FROM: Krisha Kennelly DATE: 5/12/2011 9:23:45 AM Eastern Daylight Time

This bug has been fixed as part of the work we are doing for the 6.3 release. The fix was in the updates to beta 1 and is in Beta 2 for 6.3.

See attached screenshot for the spec article in question under the beta2 release testing.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 10681                                                       |
| Subject: Designing for a permit vehicle using Service III limit state |

Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Crudele, Brenda       | 4/12/2011 5:35:01 PM |
| Modified By: hlee                   | 5/7/2011 12:32:53 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 4/12/2011 2:02:16 PM Eastern Daylight Time  
 In New York State we are required during design to check a design permit vehicle for strength II as well as for the Service III limit state with an increase stress limit - prestress bridges only.

The AASHTO Engine does not seem to be able to accomplish this. There is no place to choose a specific limit state to be run. It also doesn't allow the user to choose the same vehicle for the design and permit vehicle.

FROM: Krisha Kennelly DATE: 4/26/2011 10:41:12 AM Eastern Daylight Time  
 In 6.4 users will be able to select the Limit States they want to have considered in the LRFD analysis. Maybe this request should be incorporated into that new feature if the TF agrees.

Perhaps this should go into the System Defaults somehow since you also want to increase the stress limit for this vehicle and limit state only and it is for prestressed bridges only.

FROM: Herman Lee DATE: 5/7/2011 8:32:47 AM Eastern Daylight Time

1/5/2016 11:08:14 AM

HRS AASHTO

381

Complete Issue Information

Switched Folder to /Support Center/Opis.

|                      |
|----------------------|
| Issue ID: 10691      |
| Subject: Weld Design |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Duray, Jim         |                       |
| Submitted By: Crudele, Brenda       | 4/12/2011 7:40:30 PM  |
| Modified By: hlee                   | 4/25/2013 12:51:15 PM |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 4/12/2011 3:44:46 PM Eastern Daylight Time  
6.3 beta does not include web to flange weld design or a fatigue check for welds.

Request as an enhancement to add web to flange weld design as per AASHTO LRFD and fatigue check of welds specified (web to flange, stiffener to bottom flange, stud to top flange, ect.)

FROM: Herman Lee DATE: 4/12/2011 4:55:20 PM Eastern Daylight Time

1/5/2016 11:08:15 AM

HRS AASHTO

382

Complete Issue Information

Changed Folder from Beta Testing to Support Center/Opis.

FROM: Herman Lee DATE: 4/25/2013 8:49:32 AM Eastern Daylight Time  
Resolved for 6.5 release.

|                         |
|-------------------------|
| Issue ID: 10745         |
| Subject: Fatigue Design |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Thogaru, Srujana   |                       |
| Submitted By: Crudele, Brenda       | 4/14/2011 12:47:16 PM |
| Modified By: bcrudele               | 8/6/2012 7:21:22 PM   |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Assigned  |          |             |
| Trees, Geoffrey |           |          |             |
| Ihnat, Joseph   |           |          |             |

1/5/2016 11:08:15 AM

HRS AASHTO

383



### Complete Issue Information

|                  |                    |      |         |
|------------------|--------------------|------|---------|
| Thogaru, Srujana | Resolved           |      |         |
| Duray, Jim       | New                | High | Unknown |
| Kennelly, Krisha | Assigned           |      |         |
|                  | Information Needed |      |         |
|                  | Assigned           |      |         |
| Skow, Wayne      | Resolved           |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 10838 email.png     |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brenda Crudele DATE: 4/14/2011 8:50:45 AM Eastern Daylight Time  
Opis does not display calculated stress ranges for Fatigue I and Fatigue II limit states.

1. Enhancement would be to have tables for stress ranges for the length of the girder for both the top and bottom flanges for the Fatigue I and Fatigue II Limit States.
2. In addition of the tables for stress ranges checking the stress ranges for specified fatigue categories along the girder would be helpful.

FROM: Krisha Kennelly DATE: 10/18/2011 9:52:14 AM Eastern Daylight Time  
Developer notes for estimating:

1. Art. 6.10.1.1.1b currently contains the fatigue LL stress at the top and bottom of the web. See attached 10745.png. The table requested by Brenda would be a compilation of these computed stresses.
2. I think this ability already exists. User can enter fatigue details on the Point Of Interest: Fatigue tab. If the user enters fatigue details and a Design ADTT on the Bridge: Traffic tab, Art. 6.6.1.2.2 is evaluated for the details. See attached 10745 Art 6 6 1 2 2.png

FROM: Krisha Kennelly DATE: 11/2/2011 11:22:43 AM Eastern Daylight Time  
Task Force has approved item #1 for inclusion in Version 6.4.

1/5/2016 11:08:15 AM

HRS AASHTO

384

Complete Issue Information

FROM: Krisha Kennelly DATE: 12/6/2011 9:21:27 AM Eastern Standard Time  
From email I sent out internally on 11/17:

- 1. Geoff/Mehrdad – add the new report selections to the db/etc.
- 2. Joe – add the report selections to the UI
- 3. Srujana – create the reports

I also attached the mockups to this issue.

FROM: Geoffrey Trees DATE: 12/9/2011 10:45:08 AM Eastern Standard Time  
I added the following types to the database:

TYP\_ANALREPORT\_FATIGUESTRESS      34249      // Fatigue Stress Ranges  
 TYP\_ANALREPORT\_SERVICEIISTRESS    34250      // Service II Stress Ranges

FROM: Joseph Ihnat DATE: 12/13/2011 12:12:21 PM Eastern Standard Time  
(2) UI is updated.

FROM: Srujana Thogaru DATE: 1/19/2012 3:32:56 PM Eastern Standard Time  
Report has been created for 6.4 release.

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Issue ID: 10838                                                                             |
| Subject: Unexpected Error Message in Opis LRFD Steel Girder Design using version 6.3 Beta 2 |

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis                                                          |
| Primary Contact: Skow, Wayne                                                                 |
| Submitted By: Woldemichael, Berhanu                      5/10/2011 7:42:23 PM                |
| Modified By: wskow                                                      6/21/2011 5:46:42 PM |
| Priority: High                                                                               |
| Category: Unknown                                                                            |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

1/5/2016 11:08:15 AM

HRS AASHTO

385

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Berhanu Woldemichael DATE: 5/10/2011 3:50:31 PM Eastern Daylight Time  
 Unexpected error message in Opis LRFD Steel Girder Design. This incident was reported earlier. The program reports an error message in the positive moment region. There is no negative flexure there. The whole report is pasted below. The bridge is the same test bridge I have been using to test the program.

6 Steel Structures

6.10 I-Section Flexural Members

6.10.1 General

6.10.1.7 Minimum Negative Flexure Concrete Deck Reinforcement

(AASHTO LRFD Bridge Design Specifications, Fifth Edition - 2010, with 2010 interims)

Steel Plate - At Location = 33.7750 (ft) - Left Stage 3

INPUT:

Slab eff. width = 90.7500 (in)  
 Slab eff. thick = 7.5000 (in)  
 fr = 0.4800 (ksi)  
 phi = 0.9000  
 As = 0.0000 (in^2)  
 Reinf. Fy = 0.0000 (ksi)  
 Min Reinf. Fy = 0.0000 (ksi)  
 Max Reinf. Bar Size = NA

SUMMARY:

Asmin = 0.01\*Aslab = 6.8063 (in^2)

| Limit State | Load Combo | MDL2 (kip-ft) | MLL+I (kip-ft) | fslab (ksi) | Phi*fr | fslab >= Phi*fr | As/Asmin | Code     |
|-------------|------------|---------------|----------------|-------------|--------|-----------------|----------|----------|
| SER-II      | 1          | 0.00          | 4128.92        | -5.22       | 0.43   | No              | ---      | Not Req. |
| SER-II*     | 1          | 0.00          | -732.01        | 0.92        | 0.43   | Yes             | 0.00     | Fail     |
| SER-II      | 2          | 0.00          | 3468.80        | -4.38       | 0.43   | No              | ---      | Not Req. |
| SER-II*     | 2          | 0.00          | -618.41        | 0.78        | 0.43   | Yes             | 0.00     | Fail     |
| SER-II      | 3          | 0.00          | 0.00           | 0.00        | 0.43   | No              | ---      | Not Req. |
| SER-II      | 3          | 0.00          | 0.00           | 0.00        | 0.43   | No              | ---      | Not Req. |

\* Article fails due to bar size greater than No.6 bar or Minimum yield strength less than 60.0 Ksi

Complete Issue Information

Load Combination Legend:

| Code | Vehicle                             |
|------|-------------------------------------|
| 1    | HL-93 (US) - Truck + Lane           |
| 2    | HL-93 (US) - Tandem + Lane          |
| 3    | HL-93 (US) - 90%(Truck Pair + Lane) |

Steel Plate - At Location = 33.7750 (ft) - Right Stage 3

INPUT:

Slab eff. width = 90.7500 (in)  
 Slab eff. thick = 7.5000 (in)  
 fr = 0.4800 (ksi)  
 phi = 0.9000  
 As = 0.0000 (in^2)  
 Reinf. Fy = 0.0000 (ksi)  
 Min Reinf. Fy = 0.0000 (ksi)  
 Max Reinf. Bar Size = NA

SUMMARY:

Asmin = 0.01\*Aslab = 6.8063 (in^2)

| Limit State | Load Combo | MDL2 (kip-ft) | MLL+I (kip-ft) | fslab (ksi) | Phi*fr | fslab >= Phi*fr | As/Asmin | Code     |
|-------------|------------|---------------|----------------|-------------|--------|-----------------|----------|----------|
| SER-II      | 1          | 0.00          | 4128.92        | -5.22       | 0.43   | No              | ---      | Not Req. |
| SER-II*     | 1          | 0.00          | -732.01        | 0.92        | 0.43   | Yes             | 0.00     | Fail     |
| SER-II      | 2          | 0.00          | 3468.80        | -4.38       | 0.43   | No              | ---      | Not Req. |
| SER-II*     | 2          | 0.00          | -618.41        | 0.78        | 0.43   | Yes             | 0.00     | Fail     |
| SER-II      | 3          | 0.00          | 0.00           | 0.00        | 0.43   | No              | ---      | Not Req. |
| SER-II      | 3          | 0.00          | 0.00           | 0.00        | 0.43   | No              | ---      | Not Req. |

\* Article fails due to bar size greater then No.6 bar or Minimum yield strength less than 60.0 Ksi

Load Combination Legend:

| Code | Vehicle |
|------|---------|
|------|---------|

Complete Issue Information

- 1 HL-93 (US) - Truck + Lane
- 2 HL-93 (US) - Tandem + Lane
- 3 HL-93 (US) - 90%(Truck Pair + Lane)

-----

FROM: Krisha Kennelly DATE: 6/12/2011 12:02:13 PM Eastern Daylight Time  
 I see in the above report that there is negative LL moment at this point. For the load cases that don't have neg LLmoment, the Code for that row says "Not Req"

if you still think there is a problem here, please attach your bridge.

FROM: Krisha Kennelly DATE: 6/13/2011 12:00:48 PM Eastern Daylight Time  
 This is not new to 6.3. Folder changed to Opis Support Center.

FROM: Krisha Kennelly DATE: 6/21/2011 12:57:05 PM Eastern Daylight Time  
 email from Berhanu, Mon 6/13/2011 11:35 AM:

Krisha,

The design is made without the dead load components (see the marked in red below). That is where the problem arises.

Thanks,

Berhanu

FROM: Wayne Skow DATE: 6/21/2011 1:45:24 PM Eastern Daylight Time  
 The 5th edition commentary for article 6.10.1.7 makes it clear that minimum reinforcement is required if there will be tension in the slab at any time either during construction or after. Areas defined as positive moment regions (inflection points based on dead load) were previously excluded, but no longer are. It is appropriate to assume the slab is wet during stage 1 loading and, therefore, any stage 2 + 3 loading causing negative moment needs to be resisted by minimum reinforcement. Note, in the example shown above, that no stage 2 load was defined. Therefore, in this case, the determination of moment direction is based on the stage 3 load alone and minimum reinforcing calculated accordingly.

|                                                  |
|--------------------------------------------------|
| Issue ID: 10997                                  |
| Subject: Inappropriate error message in 6.10.1.7 |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Thogaru, Srujana   |                      |
| Submitted By: Skow, Wayne           | 6/21/2011 6:14:55 PM |
| Modified By: xli                    | 8/30/2012 5:20:19 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

Complete Issue Information

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 47515.xml           |             |
|      | 09-203.xml          |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Wayne Skow DATE: 6/21/2011 2:18:12 PM Eastern Daylight Time

The note at the bottom of the table is really not accurate. While the failure is correct, the note references #6 bars or minimum yield strength. The real problem is not enough reinforcing. The note should not display in this case. (I suspect it's testing the Fy value without considering there is no rebar specified).

INPUT:

Slab eff. width = 90.7500 (in)  
 Slab eff. thick = 7.5000 (in)  
 fr = 0.4800 (ksi)  
 phi = 0.9000  
 As = 0.0000 (in^2)  
 Reinf. Fy = 0.0000 (ksi)  
 Min Reinf. Fy = 0.0000 (ksi)  
 Max Reinf. Bar Size = NA

SUMMARY:

Asmin = 0.01\*Aslab = 6.8063 (in^2)

| Limit State | Load Combo | MDL2 (kip-ft) | MLL+I (kip-ft) | fslab (ksi) | Phi*fr | fslab >= Phi*fr | As/Asmin | Code     |
|-------------|------------|---------------|----------------|-------------|--------|-----------------|----------|----------|
| SER-II      | 1          | 0.00          | 4128.92        | -5.22       | 0.43   | No              | ---      | Not Req. |

Complete Issue Information

|         |   |      |         |       |      |     |      |          |
|---------|---|------|---------|-------|------|-----|------|----------|
| SER-II* | 1 | 0.00 | -732.01 | 0.92  | 0.43 | Yes | 0.00 | Fail     |
| SER-II  | 2 | 0.00 | 3468.80 | -4.38 | 0.43 | No  | ---  | Not Req. |
| SER-II* | 2 | 0.00 | -618.41 | 0.78  | 0.43 | Yes | 0.00 | Fail     |
| SER-II  | 3 | 0.00 | 0.00    | 0.00  | 0.43 | No  | ---  | Not Req. |
| SER-II  | 3 | 0.00 | 0.00    | 0.00  | 0.43 | No  | ---  | Not Req. |

\* Article fails due to bar size greater then No.6 bar or Minimum yield strength less than 60.0 Ksi

FROM: Srujana Thogaru DATE: 6/28/2011 10:26:01 AM Eastern Daylight Time  
Fixed for 6.4 Release

FROM: Xinmei Li DATE: 8/30/2012 10:06:54 AM Eastern Daylight Time  
Verified the fix for Beta4.  
I used attached bridge, G1, changed modulus ratio to 1 in deck profile window. Analyzed with LRFR, article 6.10.1.7 has correct error message now.

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 11012                                                                              |
| Subject: Shear Stud Design Tool gives solution where the transverse stud spacing is violated |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krishna  |                      |
| Submitted By: Armbrecht, Tim        | 6/29/2011 2:10:20 PM |
| Modified By: kkennelly              | 6/29/2011 2:13:02 PM |
| Priority: High                      |                      |
| Category: Unknown                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Krishna Kennelly DATE: 6/29/2011 10:10:52 AM Eastern Daylight Time  
Found in 10971 during beta testing. This issue focuses on the transverse stud spacing failing in the solution generated by the Stud Design Tool

From: Staggemeyer, Adam L.  
Sent: Tuesday, June 28, 2011 10:29 AM  
To: Armbrecht, Tim A  
Subject: RE: AASHTO Virtis/Opis - Michael Baker Jr., Inc. - priority has been resolved.

Tim,  
I have attached the .xml files for the structures listed below. I ran the wizard 4 times for each structure (using 0.75" or 0.875" diam. Studs and with or without studs at negative moment areas). The combinations of these options that resulted in errors or incorrect data have been summarized below.

1. Bridge: 48341.xml  
Member: Interior Girder – West  
Member Alt.: W24x76 (E)(C)  
Errors: Missing Data Error for 0.75" and 0.875" studs with no studs at negative moment areas
  
2. Bridge: 47515.xml  
Member: Interior Girder – 1st NW  
Member Alt.: W27x102 (E)(C)  
Errors: Did not reach an optimized solution for 0.75" and 0.875" studs with no studs at negative moment areas  
Wizard ran with no errors but used incorrect spacing for 0.75" studs with studs at negative moment areas
  
3. Bridge: 09-203.xml  
Member: Interior Girder – 1st North  
Member Alt.: W24x94 (E)(C)  
Errors: Missing Data Error for 0.75" and 0.875" studs with no studs at negative moment areas  
Wizard ran with no errors but used incorrect spacing for 0.75" and 0.875" studs with studs at negative moment areas

|                                                                                                        |
|--------------------------------------------------------------------------------------------------------|
| Issue ID: 11021                                                                                        |
| Subject: BRASS LRFD - Different HL-93 Axle Deflections depending if Fatigue Truck is included (or not) |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Opis |                        |
| Primary Contact: Goodrich, Brian    |                        |
| Submitted By: Thompson, Todd        | 7/7/2011 2:03:40 PM    |
| Modified By: hlee                   | 10/15/2011 10:37:14 PM |
| Priority: High                      |                        |
| Category: Third Party               |                        |



## Complete Issue Information

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Assigned  | High     | Unknown     |
|                  | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                           | Description |
|------|-----------------------------------------------|-------------|
|      | PSShearStirrupWizardProbs<br>(0550052)63.pdf  |             |
|      | PSShearStirrupWizardProbs<br>(0550052)-63.xml |             |
|      | FW_ PSC Shear Stirrup Wizard<br>Problems.pdf  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 7/7/2011 10:11:18 AM Eastern Daylight Time

I have a designer working on a new RC Slab bridge. (6.2 -- BRASS LRFD Engine)

He noticed when he has a Cross Section Based RC Slab - that he gets different HL-93 Axle/Truck Deflections when he includes or doesn't include the Fatigue Truck. In examining the BRASS.dat file that is created, when one doesn't include the Fatigue Truck - the BRASS file created uses different distribution factors when comparing the BRASS file created when one includes the Fatigue Truck.

And then upon further investigation, he created a Cross Section Based RC Slab and including or not including the fatigue truck makes no difference in the deflections for the HL-93 Axle/Truck.

So it appears that the BRASS files being created for Cross Section based does not work correctly when including or not including the Fatigue Truck.

### For attached XML

-- Use the Interior Strip member definition

---- the two member alternatives are

(1) 12" INTERIOR STRIP (cross section based)

(2) 12" INTERIOR STRIP SCHEDULE (schedule based)

FROM: Todd Thompson DATE: 7/7/2011 10:13:07 AM Eastern Daylight Time

Also attached the BRASS dat and out files for runs with and without Fatigue Truck.

1/5/2016 11:08:17 AM

HRS AASHTO

392

Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 11044                            |
| Subject: PSC Shear Stirrup Wizard Problems |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Armbrecht, Tim        | 7/29/2011 2:36:25 PM |
| Modified By: hlee                   | 6/4/2012 8:07:07 PM  |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Kennelly, Krisha | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 7/29/2011 10:37:28 AM Eastern Daylight Time  
 Submitted on behalf of Tim Armbrecht, IL DOT.

Please see attached PDF file for the e-mail with embedded graphics.

=====  
 From: Souther, Timothy E  
 Sent: Thursday, July 28, 2011 11:24 AM  
 To: Armbrecht, Tim A  
 Subject: PSC Shear Stirrup Wizard Problems

Tim,  
 There are multiple problems with the shear stirrup wizard for prestressed beams in Virtis 6.3, which render it virtually unworkable for multi-span continuous PS I-beams. Refer to the Virtis model export, PSShearStirrupWizardProbs(0550052)-63.xml.  
 Stirrup Wizard Entry, A = 0.00 ft Start distance; B = 0.166667 ft Start distance:

Complete Issue Information

A B

Then, here's the result after <OK> is clicked:

A B

Applying the Stirrup Wizard deletes the existing stirrup reinforcement in all spans, even though it may be desired to do only one span. Also, the "Symmetry" selections applied to one span are automatically applied to all spans, which is totally unacceptable. It's highly probable that, in the same continuous PS I-beam unit, "Even..." could be selected for one span and "Odd..." would be appropriate for another. This would make the Stirrup Wizard impossible to use for all spans. It is therefore essential that the program be modified to apply the Stirrup Wizard to each span separately.

Second, when "Extends to deck" is selected it applies to all stirrups, even though all stirrups may not extend into the deck. This should be like in the manual stirrup entry where it's only selected for the applicable bars. Remove the global "Extends to deck" and replace it with an "Extends to deck" column to allow it to be selected or not for each entry.

Third, with regard to "Start Distance", the operation of the Wizard is inconsistent with the way that stirrups are and have always been entered. When entering stirrups manually, there is and has never been a stirrup added at the Start location but only at the spacing specified to the right of it. Conversely, as can be seen in the screen shots of the two possible ways of doing "Start Distance", when the Wizard is applied, the results are incorrect. In the example, when 0.00 is used, an extra G2 bar is placed at 0.00 and a 3/4" Thr Rods bar is placed at the very end. When 0.166667 is used for Start Distance, two 3/4" Thr Rods are placed at 0.166667. Both are erroneous and must be manually revised by the user. This is unacceptable. Make the Wizard work consistently with manual entry so that either way of entry yields a correct result.

Tim Souther, PE  
%IDOT Bridge Ratings Unit  
timothy.souther@illinois.gov

=====

FROM: Herman Lee DATE: 7/29/2011 1:50:09 PM Eastern Daylight Time  
The Stirrup Wizard was added in Virtis/Opis 6.1.

- During 6.1 Beta testing, the TAG approved deleting all stirrups and the way the Symmetry button works.
- The original mockups had each row extending into the deck. The TAG decided to move it out and make it a global selection.
- From the Help, Start Distance - Enter the distance from the end of the precast beam to the first stirrup.

FROM: Herman Lee DATE: 6/4/2012 4:05:56 PM Eastern Daylight Time  
Beta TAG May 2012 discussion:  
10813 and 11044 should be combined.

|                                  |
|----------------------------------|
| Issue ID: 11054                  |
| Subject: Prestressed Design Tool |

Complete Issue Information

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis |                     |
| Primary Contact: Kennelly, Krisha   |                     |
| Submitted By: Duray, Jim            | 8/9/2011 7:37:23 PM |
| Modified By: hlee                   | 8/9/2011 8:04:34 PM |
| Priority: High                      |                     |
| Category: Enhancement               |                     |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                | Description |
|------|----------------------------------------------------|-------------|
|      | 6.3_release_6.10.1.<br>7_modular_ratio_problem.xml |             |
|      | 6.3_release_ScreenShot_002.<br>jpg                 |             |
|      | 6.3_release_ScreenShot_003.<br>jpg                 |             |
|      | 6.3_release_ScreenShot_001.<br>jpg                 |             |
|      | 6.3_release_ScreenShot_004.<br>jpg                 |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jim Duray DATE: 8/9/2011 3:37:33 PM Eastern Daylight Time

Complete Issue Information

From Jeff Olsen during the UG mtg:

This tool will ask for basic geometric and material parameters, then iterate a beam depth and strand pattern. It could use the beams that are copied into to the structure's beam library for the iteration.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 11131                                                           |
| Subject: Critical Error in Calculation of AASHTO 6.10.1.7 / AASHTO Engine |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Skow, Wayne        |                       |
| Submitted By: Ruby, Jeff            | 10/11/2011 3:40:03 PM |
| Modified By: jruby                  | 11/7/2011 2:06:41 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 10/11/2011 11:48:22 AM Eastern Daylight Time

I believe there is a critical bug in the calculation for Minimum Negative Flexure Concrete Deck Reinforcement AASHTO 6.10.1.7.

The problem may relate to Incident 10670 where the stress calculation didn't include the modular ratio. Or it may be a database problem.

## Complete Issue Information

At any rate, the stress calculations for the concrete slab need to include the modular ratio.

The attached screenshots show the BRASS output and the AASHTO Engine output at the 1.4 point, 68ft into span 1. The bridge is attached as well. I used the "MAI Design Check, As Rated DRT Aug 2011" superstructure definition with the "Steel Plate Interior" member alternative for member "G2".

The attached "6.3\_release\_ScreenShot\_004.jpg" shows the section modulus towards the bottom for "Slab" as 7911.75 in<sup>3</sup>. If I may be so bold as to make a suggestion, how about changing "Slab" to "Slab (Transformed)" and changing "-7911.75" to "-63294.00". This would certainly be appropriate for the listed "Fy" of 4.0 ksi.

Maybe like this:

NA from Bot of Beam = 62.8252 (in)  
Moment of Inertia, I = 205110.82 (in<sup>4</sup>)

| Component  | C                  | S         | Fy    |
|------------|--------------------|-----------|-------|
| (in)       | (in <sup>3</sup> ) | (ksi)     |       |
| *Slab      | 25.92              | -63294.00 | 4.00  |
| Reinf Row1 | 22.49              | -9121.17  | 60.00 |
| Reinf Row2 | 20.30              | -10104.06 | 60.00 |
| Top Flange | 15.67              | -13085.36 | 50.00 |
| Web Top    | 14.67              | -13977.04 | 50.00 |
| Web Bot    | -61.33             | 3344.64   | 50.00 |
| Bot Flange | -62.83             | 3264.79   | 50.00 |

\* Section modulus has Transformed to Concrete

For more information see "6.3\_release\_Screenshot\_002.jpg" for the BRASS output of section properties.

Just for clarification:

"6.3\_release\_Screenshot\_001.jpg" shows the BRASS calculation for 6.10.1.7 slab stress as 0.147 ksi Tension.

"6.3\_release\_Screenshot\_003.jpg" shows the AASHTO engine calculation for 6.10.1.7 slab stress as 1.18 ksi Tension. If you divide 1.18 by the modular ratio of 8, you get 0.147 ksi.

FROM: Wayne Skow DATE: 11/3/2011 10:20:12 AM Eastern Daylight Time  
Jeff was correct. The modular ratio was not being applied. This bug produces conservative results. It will flag 6.10.1.7 as failed at times, but it has no other affect. Design ratios and rating factors are unaffected.

Fixed in 6.4.

FROM: Herman Lee DATE: 11/3/2011 3:28:29 PM Eastern Daylight Time  
The fix will be included in the 6.3 Service Pack.

1/5/2016 11:08:17 AM

HRS AASHTO

397

Complete Issue Information

FROM: Srujana Thogaru DATE: 11/4/2011 8:37:45 AM Eastern Daylight Time  
 Tested with 6.3 service pack Beta Build 3 updates. The above problem was found to be fixed for 6.3.1.

FROM: Jeff Ruby DATE: 11/7/2011 9:06:40 AM Eastern Standard Time  
 Accepted in version 6.3.1

Thank you.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Issue ID: 11191                                                                            |
| Subject: Continuous PS Beams - critical shear should be measured from simple span bearings |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Kennelly, Krisha   |                       |
| Submitted By: Warner, David         | 12/16/2011 4:51:55 PM |
| Modified By: dwarner                | 10/1/2012 3:04:19 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact  | Status             | Priority | Category |
|------------------|--------------------|----------|----------|
| Lee, Herman      | New                | High     | Unknown  |
| Kennelly, Krisha | Assigned           |          |          |
| Mlynarski, Mark  | Information Needed |          |          |
| Kennelly, Krisha | Assigned           |          | Bug      |
|                  | Resolved           |          |          |
|                  | Verified           |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | STIRRUP.ZIP          |             |
|      | VI-11191-MM-Menu.jpg |             |

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 12/16/2011 11:57:01 AM Eastern Standard Time

The attached .xml bridge and the shear stirrup design tool have a problem. I've attached screen captures of the error which says to contact tech support, and of the cross frame layout.

Seems the stirrup design tool can't handle reinforced concrete pier tables. Yet continuity diaphragms, stage 1 vs. stage 3 loading, and other continuous for live program calculations are flawless. Perhaps the shear stirrup wizard needs to only place stirrups in the beam length, not into the pier table.

Thanks,

Dave W.

FROM: Mark Mlynarski DATE: 12/20/2011 2:15:22 PM Eastern Standard Time

Dave,

could you send me the input for the first menu in the 'Shear Stirrup Design Tool'. This could be in the form of a screen capture.

This is the menu that first pops up when you click on the 'Stirrup Design tool' button on the 'PS Shear Reinforcement Ranges' menu

(see attached file VI-11191-MM-Menu.jpg).

Thanks,

Mark

FROM: Mark Mlynarski DATE: 12/20/2011 2:20:10 PM Eastern Standard Time

P.S Also which girder/member alternative are you running?

Thanks,

Mark

FROM: Mark Mlynarski DATE: 1/11/2012 11:43:27 AM Eastern Standard Time

This is a bug and there is currently no workaround for it.

The root of this issue is that the critical shear location on the right end of the first span is being measured from the c.l. of the first pier. It should be measured from the c.l. of simple span bearing. This eventually causes an issue with the stirrup design tool.

FROM: Krisha Kennelly DATE: 8/26/2012 2:10:45 PM Eastern Daylight Time

Fixed for 6.4 beta build 4. I've changed the subject of this issue to reflect what changed for all users.

For continuous prestressed beams: Critical distance for shear ( $d_v$  for LRFD/LRFR and  $h/2d$  for LFD) is now measured from simple span bearings instead of the final continuous bearing location (ie, CL of pier). Previous versions of AASHTO engine checked shear at conservative location closer to the pier than it should have.

FROM: Bin Zhang DATE: 8/29/2012 9:21:06 AM Eastern Daylight Time

Verified for acceptance build

1/5/2016 11:08:18 AM

HRS AASHTO

399



Complete Issue Information

|                                                        |
|--------------------------------------------------------|
| Issue ID: 11198                                        |
| Subject: File runs for 30 minutes and then gets error. |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Trees, Geoffrey    |                       |
| Submitted By: Crudele, Brenda       | 12/20/2011 4:08:52 PM |
| Modified By: gtrees                 | 12/21/2011 3:20:31 PM |
| Priority: High                      |                       |
| Category: Support                   |                       |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Resolved |          | Support  |
|                 | Accepted |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name                      | Resource Identifier | Description |
|---------------------------|---------------------|-------------|
| Shear Stud Tool Error.png |                     |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 12/20/2011 11:21:44 AM Eastern Standard Time  
 File is first run with opis engine in 6.2. Girder 1 takes thirty minutes to run and then you get an error (see G1 error.bmp and G1.log). The spec check is not populated.

File is run with aashto engine in 6.3 with the same result.

File runs successfully with aashto engine in 6.3.

I was able to get G2 to run in Version 6.3 by simplifying the deck reinforcement schedule. The problem is I don't account for all the steel like the original, which has top and bottom steel and the extra steel over the pier. . It must have reduced the calculations and saved on memory.

Complete Issue Information

FROM: Herman Lee DATE: 12/20/2011 11:44:23 AM Eastern Standard Time  
Brenda, are you using the 32-bit version of Opis? Are you looking for ideas/options that you can try to minimize memory usage or you would like us to confirm the error is not caused by other issues?

FROM: Herman Lee DATE: 12/20/2011 12:28:44 PM Eastern Standard Time  
E-mail from Brenda Crudele:

=====  
Herman,  
I am running 32 bit. I would like to know if it is my system or a problem with the aashto engine. How long does it take to run on your machine? Any suggestions for minimizing time will also be appreciated.

Thanks,  
Brenda

=====  
FROM: Geoffrey Trees DATE: 12/20/2011 2:39:18 PM Eastern Standard Time  
Brenda,

I am going to need more information to test your setup. Would you be able to provide me with the analysis settings you are using, the version of windows and service pack, the page-file size, how much RAM your machine has, how much free hard drive space and what your CPU specs are? If you need help finding any of this information, please let me know.

I am able to run your bridge to completion in v6.3.0 - 32 bit and it took about 16 minutes using the HL-93 Design-Review template. The issue may be related to your machine specs.

FROM: Geoffrey Trees DATE: 12/21/2011 10:03:54 AM Eastern Standard Time  
E-mail from Brenda Crudele: (All images are attached to this incident)

=====  
Geoff,  
I took screen shots of all that I could find. I don't know how to find how much RAM I have. Any other information you need please send instructions.

Thanks,  
Brenda

=====  
FROM: Geoffrey Trees DATE: 12/21/2011 10:04:54 AM Eastern Standard Time  
Brenda,

Try going to your start menu, right click "My Computer" and click properties. Please take a screen shot of what is listed on the General tab. I took a screenshot of a Windows XP Virtual Machine I have so you can see what it looks like. Also after you take a picture of that, press the 'Advanced' tab on that window and then under Performance press the 'Settings' button. Once the Performance Options dialog appears, press the 'Advanced' tab and take a screenshot of that as well. That should give me all the information I need in addition to what you gave me below for your system specs.

Complete Issue Information

I also need more information about how you run the bridge(or girder in this case). What vehicles and settings do you use? I was able to run successfully yesterday but I would like to test it doing exactly what you are. It may be easiest if you setup the Analysis Settings exactly how you use it and then take screenshots of each page.

Thanks,  
Geoffrey Trees

E-mail from Brenda Crudele: (All images are attached to this incident)

=====  
Here is the requested info. Let me know if you need anything else.

Thanks for the help,  
Brenda

=====  
Brenda,

A few suggestions I have would be you can try increasing your page file size from 1024 to 2048. See my screenshot below for what the settings should look like. Also I see from your Control Options screenshot you have all three points-of-interest options selected. Try un-checking all but one and running the analysis. If that works, you can run the analysis with one POI control option selected at a time. Finally, try to close any additional programs running on your machine to free up some memory. Other than that, I would suggest speaking to your IT department about your system. Since we can run it here in a Virtual Machine of similar specs, the problem seems to be isolated to your computer.

Thanks,  
Geoff

|                                       |
|---------------------------------------|
| Issue ID: 11499                       |
| Subject: Shear Stud Design Tool fails |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Ihnat, Joseph         | 5/23/2012 1:17:35 PM |
| Modified By: jihnat                 | 6/20/2012 6:24:04 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

1/5/2016 11:08:19 AM

HRS AASHTO

402

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 03574 - 1026900.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Joseph Ihnat DATE: 5/23/2012 9:18:11 AM Eastern Daylight Time

Open TraningBridge2, go to Cross Section Ranges window, Shear Connectors tab, run Shear Stud Design Tool, get error:

Error performing LRFD specification checking!

Analysis failed!

FROM: Herman Lee DATE: 5/23/2012 9:32:16 AM Eastern Daylight Time

A solution cannot be found by the Design Tool for TraningBridge2. Tested TraningBridge1, Shear Stud Design analysis completed ok.

Issue ID: 11551

Subject: Spec Check does not check for Strength II when choosen

Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Crudele, Brenda       | 5/30/2012 5:20:57 PM |
| Modified By: hlee                   | 10/9/2012 6:56:20 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Li, Xinmei      | Assigned  |          |             |
|                 | Resolved  |          |             |
|                 | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier       | Description |
|------|---------------------------|-------------|
|      | Reinforcing Schematic.gif |             |
|      | DesignTool2.gif           |             |
|      | DesignTool1.gif           |             |
|      | FillHeightDesignTool.gif  |             |
|      | depthMeasuredFromTop.bmp  |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 5/30/2012 1:57:17 PM Eastern Daylight Time  
 In NYS we have a Design Permit Vehicle that we run for new designs. For prestressed bridges we are required to check the Strength II and Service III limits states with the design permit vehicle.

Complete Issue Information

If I change the Limit States Checks to include only Strength II and Service III and then run the design permit vehicle as a design vehicle, Strength II is not checked.

If I run the design permit vehicle under a permit load then it will check strength II, but it doesn't seem to check Service III.

Is there a way to check Service III and Strength II for one vehicle with one run?

The program won't run if I put the same vehicle as a design load and permit load.

FROM: Krisha Kennelly DATE: 6/21/2012 2:03:06 PM Eastern Daylight Time  
Virtis/Opis does not allow you to enter the same vehicle in the design and permit load categories.

FROM: Herman Lee DATE: 10/9/2012 2:48:44 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center/Opis.  
Similar request for AASHTO LRFR Engine in Incident 10121.

|                                               |
|-----------------------------------------------|
| Issue ID: 11706                               |
| Subject: Culvert Design Tool - Various Issues |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Li, Xinmei         |                      |
| Submitted By: Kemna, Aaron          | 7/12/2012 2:53:56 PM |
| Modified By: hlee                   | 10/9/2012 8:08:19 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 7/12/2012 10:58:55 AM Eastern Daylight Time

1/5/2016 11:08:19 AM

HRS AASHTO

405

## Complete Issue Information

I had our culvert expert take a look at the design tool and we came up with the following issues that need serious consideration. The review was not extensive so some of these may not be entirely accurate. Note that we do not license Opis here at MoDOT and I don't know if that will change anytime soon. Thus, additional feedback from Opis users would be helpful.

1. Design tool only has one cover other than bottom slab cover. Typically culverts can have up to four different covers: Top of Top Slab, Outside Exterior Wall, Bottom of Bottom Slab & Inside Cell Cover. This pretty much follows AASHTO.
2. Surcharge height should be calculated by the program. Appears that currently the user would have to calculate this value. An override by the user would make sense, too.
3. Design of culverts should include with and without water checks. It appears that the design tool will use whatever water level is entered as a static condition. Exterior walls designed with water can give significantly smaller thickness than designed without.
4. There needs to be Help for the design tool. For instance, the fill depth for the design tool is different than the value entered for an analysis. One is measured from bottom of slab and the other from top of slab.
5. Not sure that the reinforcing scheme is being populated correctly. I am attaching an image of the reinforcing scheme created by the design tool. The top and bottom slab reinforcement appears to be flipped. I would expect the top bottom slab reinforcement to extend the full length to resist mid cell moments. Also, bottom reinforcement for the top slab was created and centered over the walls. This would be compression reinforcement and does not seem logical.
6. It would be nice if the user could choose to use the General Procedure for shear analysis. This is required by AASHTO for slabs 16" and greater. It might be better to have this option for analysis as it may be difficult to use for a design tool.
7. The program must be able to perform a design review.

FROM: Herman Lee DATE: 7/12/2012 1:09:59 PM Eastern Daylight Time  
1-3, 6 and 7 are enhancement requests for the AASHTO Culvert Engine. 4 and 5 need to be investigated. 5 might be duplicate of Incident 11654.

FROM: Xinmei Li DATE: 7/12/2012 1:14:09 PM Eastern Daylight Time  
4, The fill depth for the design tool is the same as the value entered for an analysis. Both are measured from the top of the slab. See attached bmp file, it's comparison of that in design tool window and RC box culvert loads window.  
5, duplicate of Incident 11654, it's resolved when next beta version is available.

FROM: Herman Lee DATE: 7/13/2012 9:07:50 AM Eastern Daylight Time  
May, please hook up the Help button in the Design Tool.

FROM: Aaron Kemna DATE: 7/13/2012 9:54:16 AM Eastern Daylight Time  
While I consider 1-3 & 7 near necessities for any culvert design program, I am not sure how 3 can be considered an enhancement considering that a design review cannot be performed. Every culvert must be designed with and without water (or high and low water levels for a more exact analysis). With the current set-up, the user would have to run the design tool twice and use the combination of the two

1/5/2016 11:08:19 AM

HRS AASHTO

406

Complete Issue Information

which they would not be able to check with a design review.

As for the fill depth, I attached a summary report which shows the Depth of Fill = 3.5', the slab thickness = 12.5" and the Depth of Backfill for EV Loads = 2.458'. This leads me to believe that the design tool is measuring the fill depth to the bottom of the slab. This would actually make sense for a design tool since this input would not change as the slab depth changes.

FROM: Herman Lee DATE: 7/13/2012 2:02:54 PM Eastern Daylight Time  
Aaron, I should be more clear when I said 1-3, 6 and 7 are enhancement requests for the AASHTO Culvert Engine. In the context of the 6.4 work plan, 1-3, 6 and 7 are considered as enhancement requests.

We will investigate the fill depth issue you identified.

FROM: Xinmei Li DATE: 7/23/2012 2:51:45 PM Eastern Daylight Time  
Help is hooked up.

FROM: Herman Lee DATE: 8/30/2012 9:40:37 AM Eastern Daylight Time  
Implemented culvert design review in Beta 4.  
In the context of the 6.4 work plan, 1-3 and 6 are considered as enhancement requests.

FROM: Herman Lee DATE: 10/9/2012 2:56:59 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center/Opis.

Issue ID: 11774  
Subject: Unable to define girder or deck loads as composite loads

Folder: /Virtis/Support Center/Opis  
Primary Contact: Lee, Herman  
Submitted By: Crudele, Brenda 7/31/2012 8:38:23 PM  
Modified By: hlee 5/13/2014 5:59:39 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
|                 | Resolved  |          |             |

Contacts

1/5/2016 11:08:20 AM

HRS AASHTO

407



Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 7/31/2012 4:47:26 PM Eastern Daylight Time  
This is an enhancement request for shored construction design.

We have been doing some precast bridge systems, formerly called inverset. Typicall there are two girders and a precast deck that is transported to the construction site. For this type of design the girders are shored at the fabrication plant until after the deck is poured making the girder and deck loads composite.

Right now the girder and deck are hard coded to be non-composite loads. Is it possible to add an option to make the girder and/or deck loads composite?

FROM: Herman Lee DATE: 5/13/2014 1:58:41 PM Eastern Daylight Time  
Implemented the option to specify composite self-load and concrete deck load in the upcoming 6.6 release.

|                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------|
| Issue ID: 11779                                                                                                       |
| Subject: When running RC Tee beam spec check summary, the top table shows fail but the listing shows pass everywhere. |

|                                     |                     |
|-------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis |                     |
| Primary Contact: Thogaru, Srujana   |                     |
| Submitted By: Mullins, Randall      | 8/3/2012 7:51:07 PM |

Complete Issue Information

|                   |                     |
|-------------------|---------------------|
| Modified By: hlee | 4/2/2013 9:13:12 PM |
| Priority: High    |                     |
| Category: Unknown |                     |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krisha   | Assigned | High     | Unknown  |
| Ruby, Jeff         |          |          |          |
| Kennelly, Krisha   |          |          | Bug      |
| Bhanushali, Girish | Resolved |          |          |
|                    | Verified |          |          |
|                    | Accepted |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | 6.4_beta3_ScreenShot_004.jpg            |             |
|      | ShearStudWizardProblem.xml              |             |
|      | VI-11792-V641-SubstructureExample01.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/5/2012 6:25:23 PM Eastern Daylight Time  
Hi Randall, please attach the xml file that we viewed at the UG meeting.

FROM: Herman Lee DATE: 10/9/2012 4:50:29 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/9/12.

FROM: Herman Lee DATE: 1/2/2013 8:53:21 AM Eastern Standard Time

1/5/2016 11:08:20 AM

HRS AASHTO

409

Complete Issue Information

Information Needed E-mail sent on 1/2/13.

FROM: Herman Lee DATE: 4/1/2013 10:52:17 AM Eastern Daylight Time  
No response to Information Needed E-mail. Status changed to Closed.  
Please let us know if you want to reopen this incident.

FROM: Herman Lee DATE: 4/2/2013 5:11:46 PM Eastern Daylight Time  
Received Randall's email on 4/2:

=====  
Thank you I could not make it happen again.  
=====

|                            |
|----------------------------|
| Issue ID: 11792            |
| Subject: Shear Stud Wizard |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Ruby, Jeff            | 8/8/2012 1:12:42 AM  |
| Modified By: gbhanushali            | 5/30/2013 8:40:56 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/7/2012 9:12:51 PM Eastern Daylight Time  
Originally submitted by Jeff Ruby in Issue 10340 but that issue was for the splice gap enhancement only. Jeff submitted the following release bugs in the wizard:

Complete Issue Information

I think this has been a problem from the beginning. The attached bridge was coded in metric. But I set the default units to english for my convenience. Using member G2, if I try to run the shear stud wizard, I get the error box as shown in the attached screen shot. I think it is a tolerance issue. I can get it to work if I change the units box to SI. But, when the wizard calculates the ranges, it all is in feet.

2 Issues:

- 1) fix the tolerance issue
- 2) the wizard should check to see what current units are for the dialog box in question and return the appropriate results.

FROM: Girish Bhanushali DATE: 1/25/2013 11:10:58 PM Eastern Standard Time  
Both issues are fixed and tested.

Under Item 2):

Result window did not only return the results in US units when SI was selected, but results were incorrect for SI run when diameter was entered to match that of US default of 0.875".

Fix also needed to get correct results from the design module for SI unit run.

Testing was done using Training Bridge 1 and attached bridge from Jeff. Test successfully ran on SI and US units. Results now match when exactly same stud diameter is entered for SI as for US run.

Fix has been checked in to be available in 6.5 release for validation by Jeff.

FROM: Melanie Berry DATE: 4/18/2013 3:20:39 PM Eastern Daylight Time  
Verified that the shear stud wizard worked with US and SI units.

FROM: Jeff Ruby DATE: 5/30/2013 4:39:09 PM Eastern Daylight Time  
Accepted Version 6.5.0 Beta 2

Issue ID: 11876  
Subject: Error loading influence lines

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Lee, Herman  
 Submitted By: Kennelly, Krisha 8/21/2012 8:45:50 PM  
 Modified By: sthogaru 8/29/2012 4:56:38 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | Assigned | High     | Unknown  |
|                 | Resolved |          | Bug      |
|                 | Verified |          |          |

## Complete Issue Information

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | VI-11792-V641-SubstructureExample01.xml |             |
|      | FromDev3_New_Results.jpg                |             |
|      | enteredGaps.jpg                         |             |
|      | ShearStudWizardProblem.xml              |             |
|      | StudWizardDesignRanges.jpg              |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/21/2012 4:46:02 PM Eastern Daylight Time

For the bridge attached to 11191, use the Stirrup Design Tool on G1. (Don't need to enter any data in the Sitrrup Design Tool) Will get an 'Error Loading influence lines' for the HL93 loading. Running a line girder on G1 runs ok.

FROM: Herman Lee DATE: 8/22/2012 9:04:33 AM Eastern Daylight Time

Stirrup Design Tool should include the library Pedestrian vehicle in the Analysis Event. Same issue in the Shear Stud Design Tool.

Resolved for 6.4 Release.

FROM: Srujana Thogaru DATE: 8/29/2012 11:42:37 AM Eastern Daylight Time

Fix verified with 6.4 Beta 4

Issue ID: 11930

Subject: Shear Stud Wizard produces design without enough studs

Folder: /Virtis/Support Center/Opis

Primary Contact: Bhanushali, Girish

1/5/2016 11:08:21 AM

HRS AASHTO

412

### Complete Issue Information

|                          |                      |
|--------------------------|----------------------|
| Submitted By: Ruby, Jeff | 9/18/2012 5:00:48 PM |
| Modified By: jruby       | 12/6/2013 9:17:14 PM |
| Priority: High           |                      |
| Category: Bug            |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Ex04_PSBox.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 9/18/2012 1:01:24 PM Eastern Daylight Time  
Split out from comments in 10340:

FROM: Jeff Ruby DATE: 8/8/2012 2:24:32 PM Eastern Daylight Time  
After doing an LRF design check with the "wizard" results, I get a Strength Limit State failure for not enough studs. The number of studs are not calculated correctly for Article 6.10.10.4. It appears to be a straight forward calculation once you have the inflection points from the wizard design run. I will attach the file shortly.

FROM: Girish Bhanushali DATE: 2/22/2013 12:29:36 PM Eastern Standard Time  
Hi Jeff,  
This issue has been fixed to be verified in next release (6.5).

6.10.10.4 passes at all check-points after the fix. See attached document with "From Dev".

1/5/2016 11:08:21 AM

HRS AASHTO

413

## Complete Issue Information

Fix was tested on x64 bit development build (was necessary to run the provided bridge) without making any changes to the bridge you provided, except shear stud design wizard was run and new results were stored.

Please let us know should you have any further questions or concerns

Thanks.

FROM: Melanie Berry DATE: 4/18/2013 4:15:53 PM Eastern Daylight Time  
Verified that Article 6.10.10.4 passed after using the shear stud design wizard.

FROM: Jeff Ruby DATE: 5/30/2013 3:57:29 PM Eastern Daylight Time  
Steps I took to "break" it.

- 1) import VI-11792-V641-SubstructureExample01.xml
- 2) open Deck Profile for G2
- 3) change units to SI/Metric
- 4) Click "shear stud tool wizard"
- 5) Enter gaps as shown in my screenshot
- 6) Hit continue
- 7) Apply
- 8) change units to US Customary
- 9) perform analysis

### Observations:

The stud wizard produces the same spacing for all ranges. (see StudWizardDesignRanges.jpg)  
As an example the first range from 0 to 59 ft doesn't have enough studs

### Resubmitted Version 6.5.0 Beta 2

FROM: Jeff Ruby DATE: 6/18/2013 3:27:26 PM Eastern Daylight Time  
After reading some more at Issue 12623, some of this may be fixed, but I am not sure this is just a "metric" issue. It appears maybe the "gaps" are causing some problems? Don't know. I have only tested the wizard with gaps.

This is listed as a verified bug since Beta 1. I am assuming this is going to be fixed for 6.5.0 release.

I noticed that Issue 12102 isn't in the list of "fixed" bugs, but is definitely related.

FROM: Jeff Ruby DATE: 6/20/2013 4:55:44 PM Eastern Daylight Time  
Actually, I again tried to trace the whole history of this and related bugs. I came up with these related issues:

10430 -> split to 11792 and 11930 (this one, currently needs some fixing of some sorts)  
12101  
12155  
12166  
12169

It is getting confusing. I will try to keep up.

1/5/2016 11:08:21 AM

HRS AASHTO

414

Complete Issue Information

FROM: Girish Bhanushali DATE: 6/25/2013 4:07:48 PM Eastern Daylight Time

Thank you Jeff.

Kindly note as my comment in Issue 12102 regarding a fix that we had to roll back for further evaluation due to interdependencies.

We have a comprehensive fix in place and we are in the process of verifying related bugs. We'll also review your list to see if any of the resolutions were affected.

I'll keep you posted.

Thanks.

FROM: Girish Bhanushali DATE: 7/2/2013 12:36:48 PM Eastern Daylight Time

Hi Jeff,

For better tracking, we have split this incident into two new ones: VI# 12733 and 12734.

This incident will represent first four comments that were related to attached bridge "ShearStudWizardProblem.xml".

We are in the process of re-verifying initial issue with "ShearStudWizardProblem.xml" bridge.

Gaps related problems will be addressed under VI# 12733 with newer related bridge that you have attached "VI-11792-V641-SubstructureExample01.xml".

Thank you.

Regards

FROM: Jeff Ruby DATE: 12/6/2013 4:17:14 PM Eastern Standard Time  
Accepted 6.5.1 Beta 1

|                                                                                |                       |
|--------------------------------------------------------------------------------|-----------------------|
| Issue ID: 11934                                                                |                       |
| Subject: prestress streses not available in LRFD report tool after 3d analysis |                       |
| Folder: /Virtis/Support Center/Opis                                            |                       |
| Primary Contact: Kennelly, Krisha                                              |                       |
| Submitted By: Kennelly, Krisha                                                 | 9/25/2012 1:35:48 PM  |
| Modified By: bzhang                                                            | 4/24/2013 10:04:58 PM |
| Priority: High                                                                 |                       |
| Category: Bug                                                                  |                       |

History

1/5/2016 11:08:21 AM

HRS AASHTO

415



### Complete Issue Information

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Splice Request.doc  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 9/25/2012 9:36:20 AM Eastern Daylight Time  
broken out from 11587

FROM: Matt Kolis DATE: 9/24/2012 1:59:14 PM Eastern Daylight Time  
In VO64, Beta 5, all options are selected, however, the LRFD analysis output only shows the following tables: Reactions, Moment Summary, and Shear Summary. See attached bridge.

FROM: Krisha Kennelly DATE: 4/16/2013 12:22:00 PM Eastern Daylight Time  
Fixed for 6.5.0. (Note: PS Concrete Stress report should be checked on the Analysis Settings: Output tab to generate this report.)

FROM: Bin Zhang DATE: 4/24/2013 5:17:34 PM Eastern Daylight Time  
Verified for version 6.5 beta 1. Concrete stresses, Flexure, Shear are in the report after the 3D analysis now.

Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 11975                                  |
| Subject: Request for Splice Analysis Enhancement |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Lee, Herman        |                       |
| Submitted By: Crudele, Brenda       | 10/16/2012 2:34:28 PM |
| Modified By: hlee                   | 3/27/2015 6:56:47 PM  |
| Priority: High                      |                       |
| Category: Enhancement               |                       |

History

| Primary Contact | Status                    | Priority | Category |
|-----------------|---------------------------|----------|----------|
| Lee, Herman     | New<br>Information Needed | High     | Unknown  |
| Zhang, Bin      | Assigned<br>Resolved      |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                                                      | Description |
|------|--------------------------------------------------------------------------|-------------|
|      | 01647 - 0433281.xml                                                      |             |
|      | Steel Limit State Summary Report (SN038-5157 Job 11-137).pdf             |             |
|      | 11978.docx                                                               |             |
|      | Steel Limit State Summary Report (missing information - SN043-3281).docx |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Brenda Crudele DATE: 10/16/2012 10:37:47 AM Eastern Daylight Time  
NYSDOT would like to request a LRFD splice analysis to be added to the program as an enhancement.  
We would be willing to use service units. Full description of request in attached as a word file.

Features of the enhancement would include the following:

- Hybrid girder splice capability
- Curved girder splice capability
- Follows AASHTO LRFD Section 6.13.6 including the commentary of Section C6.13.6.1.4c
- LRFR capability
- Has a simple input with a viewer that shows the input.

In addition to the LRFD ability we would like to have it priced out as to how much it would cost for LFD analysis and load rating. This would include a normal splice and a continuous for live load splice at a pier.

FROM: Herman Lee DATE: 3/27/2015 2:56:41 PM Eastern Daylight Time  
This enhancement has been implemented in the 6.7 release.

|                                           |
|-------------------------------------------|
| Issue ID: 11978                           |
| Subject: Steel Limit State Summary Report |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Zhang, Bin         |                       |
| Submitted By: Litchfield, Phil      | 10/16/2012 8:51:40 PM |
| Modified By: hlee                   | 10/31/2012 7:48:11 PM |
| Priority: High                      |                       |
| Category: Support                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Phil Litchfield DATE: 10/16/2012 5:05:14 PM Eastern Daylight Time  
From consultant (Staggemeyer):

I have noticed that the Steel Limit State Summary Report in OPIS isn't displaying everything that it has in the past. I have attached the .xml file and a screenshot. This was also checked and found not working in 6.4 Beta 5.

FROM: Herman Lee DATE: 10/17/2012 9:00:32 AM Eastern Daylight Time  
The data in the Steel Limit State Summary Report is populated by the analysis engine used for the Design Review. Are you comparing the report populated by the AASHTO LRFD Engine with the report populated by the BRASS LRFD Engine?

FROM: Phil Litchfield DATE: 10/22/2012 10:50:08 AM Eastern Daylight Time  
I'm not sure which engine the previous report was ran using. I attached a copy of the previous report that includes much more information in it than the current report generated.

FROM: Bin Zhang DATE: 10/31/2012 9:14:16 AM Eastern Daylight Time  
The previous report is generated from the BRASS LRFD engine. AASHTO engine provides less information in the Analysis Results window. However, you can use the report tool to generate a detailed report from AASHTO engine. Please refer to figure 1 and figure 2 regarding the generation of the report. I also provided a snapshot of the report in figure 3.  
Please read the attached 11978.docx for details.

|                                                                                   |
|-----------------------------------------------------------------------------------|
| Issue ID: 12008                                                                   |
| Subject: Missing reinforcements in the culvert model generated by the Design Tool |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Thogaru, Srujana   |                       |
| Submitted By: Hasan, Mac            | 10/31/2012 6:59:21 PM |
| Modified By: mmlynarski             | 4/24/2013 2:38:32 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

1/5/2016 11:08:22 AM

HRS AASHTO

419

Complete Issue Information

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
| Lee, Herman      | New      | High     | Unknown  |
| Ihnat, Joseph    | Assigned |          | Bug      |
| Goodrich, Brian  |          |          |          |
| Ihnat, Joseph    | Resolved |          |          |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | Spec Check Crash.xml |             |
|      | Spec Check Crash.jpg |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/31/2012 2:59:58 PM Eastern Daylight Time  
 Submitted on behalf of An Tran, CO DOT.

Part of the Bridgeware e-mail received on 10/30/2012:

=====  
 1/ The Culvert Design Tool does not design for reinforcement bars at the inner face of the exterior walls, resulting in a Rating Factor = 0.  
 =====

Reply e-mail:

=====  
 I see reinforcements specified at the inner face of the exterior walls in the culvert output file. I suspect there's a problem in translating the design output when creating the culvert model.  
 =====

FROM: Srujana Thogaru DATE: 2/1/2013 2:55:41 PM Eastern Standard Time  
 Above mentioned problem was fixed for 6.5 release. For internal testing fixed for 6.5 Alpha Build 1

Complete Issue Information

FROM: Melanie Berry DATE: 4/18/2013 4:29:13 PM Eastern Daylight Time  
I input the example attached in the RC Box Culvert Design Tool, ran the analysis for the created member alternative and checked the ratings.

|                                         |
|-----------------------------------------|
| Issue ID: 12029                         |
| Subject: Spec Check Fatal Crash – BRASS |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Ihnat, Joseph      |                       |
| Submitted By: Teal, Dean            | 11/6/2012 6:34:52 PM  |
| Modified By: jruby                  | 12/14/2012 2:23:38 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 11/6/2012 1:36:33 PM Eastern Standard Time  
With the attached structure  
BRASS used as LRFD engine on Girder line #2  
View the spec checker and the Specification Reference column is blank  
If you double click on a particular line item you get a blanked out Spec Info window then a fatal error that crashes Virtis.

FROM: Dean Teal DATE: 11/8/2012 3:44:09 PM Eastern Standard Time  
Is this a BRASS issue or a GUI issue?

FROM: Dean Teal DATE: 11/9/2012 8:05:07 AM Eastern Standard Time  
I confirmed that this is a brass error that I reported (and they fixed it) inversion 6.3.0  
BRASS Incident #280  
I reopened the brass incident

1/5/2016 11:08:23 AM

HRS AASHTO

421

Complete Issue Information

FROM: Brian Goodrich DATE: 11/9/2012 11:10:08 AM Mountain Standard Time  
I don't have access to the AASHTO engine. Can someone check if the crash is happening for that engine too?

FROM: Herman Lee DATE: 11/11/2012 2:12:31 PM Eastern Standard Time  
For the AASHTO Engine, the Spec Check Detail window is not blanked out and Opis doesn't crash after that.

FROM: Joseph Ihnat DATE: 11/14/2012 1:48:42 PM Eastern Standard Time  
Crash is fixed for 6.4.1

FROM: Herman Lee DATE: 11/20/2012 9:41:43 AM Eastern Standard Time  
There are two issues in this incident.  
1. Spec check window crash when opening BRASS results – AASHTO issue. This is fixed for 6.4.1 (Beta 2).  
2. Blank spec names – BRASS issue (BRASS Incident #280). Seems like the scripts provided by BRASS installation have issues with Oracle database.

This incident is for issue #1. Please track issue #2 using BRASS Incident #280.

FROM: Dean Teal DATE: 11/21/2012 1:05:31 PM Eastern Standard Time  
I tested the BRASS incident #280 with my oracle 11g test server and it failed - same results

FROM: Geoffrey Trees DATE: 12/4/2012 2:57:35 PM Eastern Standard Time  
1. I am able to run the bridge with the BRASS engine and open the Spec Check window without any crash.  
2. We do not have the updated BRASS Script.

Verified.

FROM: Geoffrey Trees DATE: 12/4/2012 3:32:58 PM Eastern Standard Time

FROM: Jeff Ruby DATE: 12/14/2012 9:23:37 AM Eastern Standard Time  
Accepted Issue #1  
Works in 6.4.1 Beta 2

|                                                    |
|----------------------------------------------------|
| Issue ID: 12090                                    |
| Subject: Spec check for 6.10.10.2 using wrong data |

|                                     |                       |
|-------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis |                       |
| Primary Contact: Thogaru, Srujana   |                       |
| Submitted By: Ruby, Jeff            | 12/5/2012 2:40:47 PM  |
| Modified By: jruby                  | 12/19/2012 6:15:25 PM |
| Priority: High                      |                       |
| Category: Bug                       |                       |

## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | 00082 - Design.xml                           |             |
|      | CulvertSpecCheckResults.<br>SpecCheckResults |             |
|      | S3 - Center<br>Roadway-Extended.txt          |             |
|      | S3 - Center Roadway.txt                      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 12/5/2012 9:54:11 AM Eastern Standard Time

I discovered that the Spec check for Article 6.10.10.2 is not using the calculated values from the "Spec Check Detail for 6.6.1.2.2 Design Criteria." Screen shot 006 shows:

ADTT = 1248  
p = 1  
n = 1.0  
ADTTsl = 1248  
N = 34164000

But "Spec Check Detail for 6.10.10.2 Fatigue Resistance" in screen shot 007 shows:

ADTT = 1248  
p = 1  
n = 2  
ADTTsl = 624  
N = 34164000

I notice 2 problems in 6.10.10.2 calculations:

1/5/2016 11:08:23 AM

HRS AASHTO

423



Complete Issue Information

- 1) n is wrong
- 2) ADTTsl is calculated wrong.

I propose not recalculating values that have already been calculated, especially when not done the same.

I used "Design Check SMA 10/21012" Superstructure Definition on G2, Haunched Plate Girder. But any steel bridge with stud should do.

FROM: Herman Lee DATE: 12/6/2012 8:36:07 AM Eastern Standard Time

FROM: Srujana Thogaru DATE: 12/12/2012 11:08:09 AM Eastern Standard Time  
Above mentioned error is caused in 5E 2010I 6.10.10.2 article only. Fixed for 6.4.1 release.

FROM: Geoffrey Trees DATE: 12/18/2012 2:40:02 PM Eastern Standard Time  
Verified.

FROM: Jeff Ruby DATE: 12/19/2012 1:15:25 PM Eastern Standard Time  
Accepted 6.4.1 Beta 3

|                                |
|--------------------------------|
| Issue ID: 12100                |
| Subject: Culvert Design Issues |

|                                     |                        |
|-------------------------------------|------------------------|
| Folder: /Virtis/Support Center/Opis |                        |
| Primary Contact: Lee, Herman        |                        |
| Submitted By: Thompson, Todd        | 12/12/2012 7:58:31 PM  |
| Modified By: hlee                   | 12/13/2012 12:43:24 PM |
| Priority: High                      |                        |
| Category: Unknown                   |                        |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

1/5/2016 11:08:24 AM

HRS AASHTO

424

## Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 12/12/2012 3:13:28 PM Eastern Standard Time

I have only done load ratings up to this point and since I had some extra time - decided to try a culvert Design. Noticed a few issues, some of which may be user education issues, some of which may be bugs and some which may need to be enhancement requests.

As necessary - you can break apart these 7 issues into separate incidences.

(1) I checked - consider haunches on the first screen of the Design - but in reviewing the output - the log file stated "no haunches" - Either the design tool doesn't use the information entered on the GUI? Or maybe the design decided haunches were not necessary as part of the design. If it's the later - the output log should state that while haunches were to be considered, they were not used or necessary in the design.

(2) I observed that there was no resteel placed/designed for the inside face of the exterior walls - this seems to be an omission/error.

(3) After the Design Tool runs - One is given a choice of Apply or Close. Help states that Apply will populate the explorer tree. I've tried hitting Apply and nothing ever seems to happen. ONLY when I hit close - does the tree get populated with the culvert design. Either the help is wrong or the apply button is not functioning as intended.

(4) There is no option in the Design to consider the new NCHRP 647 LL DF for culverts.

(5) There is no option to ignore Shear, if the user so chooses

(6) Two of the rebars generated by the design tool - project outside of the box culvert. Clearly a bug. Warning - Rebar(s), B509, B510 projects out of the Culvert

(7) A quick LRFR Analysis produces 0.000 RF's for HL-93 truck (and all trucks). The controlling member(s) appears to be the Exterior Wall - approximately 5.2 ft up --- Not sure why one would get ZERO RF's when OPIS just did a successful design. (Related to missing exterior wall resteel maybe?) A quick check shows that the top slab also fails in Flexure.

I've attached my culvert XML with two test alternatives that I used to try to do a successful design and analysis.

FROM: Todd Thompson DATE: 12/12/2012 3:17:28 PM Eastern Standard Time

I'll attach two of the txt files generated from the Design also from my Test 2

FROM: Todd Thompson DATE: 12/12/2012 4:12:02 PM Eastern Standard Time

Item (2) - I do see that the design document does not list a bar being generated here - so I guess the Designs will almost always fail after doing them and then running an analysis. I guess Item (2) will be a needed enhancement or system shortcoming.

But I'm not sure why the Top Slab passes in Design Review but fails in Analysis for HL-93

|                 |
|-----------------|
| Issue ID: 12102 |
|-----------------|

1/5/2016 11:08:24 AM

HRS AASHTO

425

Complete Issue Information

Subject: 6.10.10.4 Shear Connectors Counted Wrong

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Bhanushali, Girish  
 Submitted By: Ruby, Jeff 12/12/2012 10:12:57 PM  
 Modified By: gbhanushali 7/9/2013 7:21:02 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Assigned |          | Bug      |
|                 | Resolved |          |          |
|                 | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | CulvertCrash Error.jpg |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 12/12/2012 5:25:34 PM Eastern Standard Time  
 For Attached Bridge at Span 1 (60ft) Article 6.10.10.4 calculates the number of studs incorrectly. If you see the screenshot, you will see that the statement "Region between point of max. LL+I moment and CL of adjacent interior support." Is CORRECT. But the "Region Start Distance" is wrong.

Region Start Distance = 42.7033 (ft) <---- Should be 24 ft (max LL+I moment)  
 Region End Distance = 60.0000 (ft)  
 Number connectors in region = 52 <----- Should be about 110 to 122 (+/-)

FROM: Jeff Ruby DATE: 12/12/2012 5:27:59 PM Eastern Standard Time

Complete Issue Information

Attached Bridge. Used Revised Design Check JSR, 11/07, G2 Member Alt and Member.

FROM: Jim Duray DATE: 12/13/2012 10:36:33 AM Eastern Standard Time  
If this is new to 6.4.1 (i.e. not in 6.4.0) we should fix now. If it also in 6.4 it can wait for the 6.5 release.

FROM: Jeff Ruby DATE: 12/13/2012 1:51:03 PM Eastern Standard Time  
Whatever the Task Force thinks. It looks like it has been broke for a while. It should at least make it to the list of critical bugs so that all users know that the stud spec checking does not work.

FROM: Jeff Ruby DATE: 12/13/2012 2:04:10 PM Eastern Standard Time  
I think 10340, 11792, and 11930 are related somehow. But, this issue is a serious bug. The others are annoyances at best.

FROM: Girish Bhanushali DATE: 2/8/2013 3:36:09 PM Eastern Standard Time  
Hi Jeff,

Thank you very much for your detailed feedback.

After fixing numerous related issues, this issue has been resolved to be verified in next release (6.5).

Please refer to the attached document(s) - name starting with "FromDev".

Kindly note that new results are as expected while no other changes were made to the bridge that you provided.

Also, check point region in question (60 ft) is a negative flexure region while connectors are still designed using maximum positive moment range as per the spec.

Please feel free to let us know, should you have any other concerns.

Regards

FROM: Subhadeep Ghosh DATE: 5/6/2013 5:12:46 PM Eastern Daylight Time  
Number of shear studs computed were verified and the region start distance were verified as per the attached screen shots. Verified for Beta 1 6.5.

FROM: Jeff Ruby DATE: 5/7/2013 2:05:00 PM Eastern Daylight Time  
I tried the exact same point mentioned at the start. See FromJeff\_6.10.10.4\_6.5.0beta1.txt file attached.  
In version 6.5.0 Beta 1 with new dll's, the results appear the same as before. Not fixed.

FROM: Girish Bhanushali DATE: 6/25/2013 12:03:53 PM Eastern Daylight Time  
Hi Jeff,

Thank you for your feedback.

We investigated this and it turned out that one of the fixes that was positively affecting this incident and

1/5/2016 11:08:24 AM

HRS AASHTO

427

Complete Issue Information

others similar, had to be rolled back for further evaluation.

We are working on a comprehensive fix and it is going through our testing.

Current fix that is under testing, addresses both correct range distances and number of studs in the spec check report for the above case.

I'll definitely keep you posted.

Thanks again.

FROM: Girish Bhanushali DATE: 6/27/2013 2:21:18 PM Eastern Daylight Time  
Issue is resolved to be verified in next beta or updates. (Fix is connected to 11524).  
Please see attached file: Post\_Fix\_Results\_06\_26\_2013.txt

FROM: Jeff Ruby DATE: 7/9/2013 12:20:21 PM Eastern Daylight Time  
Thanks,

Accepted 6.5.0 Beta 3 with updated dlls

FROM: Girish Bhanushali DATE: 7/9/2013 3:20:35 PM Eastern Daylight Time  
Status changed to Accepted based on previous comment from Jeff.

|                                  |
|----------------------------------|
| Issue ID: 12141                  |
| Subject: Culvert LRFD Spec Check |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Litchfield, Phil      | 1/17/2013 4:45:36 PM |
| Modified By: plitchfield            | 1/18/2013 3:45:27 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Phil Litchfield DATE: 1/17/2013 11:49:09 AM Eastern Standard Time  
After running a LRFD design review on a culvert and the analysis is complete. When you click on the spec check button the program crashes. Crash message attached.

FROM: Herman Lee DATE: 1/17/2013 11:51:07 AM Eastern Standard Time  
This issue has been fixed. After verifying the fix, we will provide an updated 6.4.1 DLL for fixing this issue.

FROM: Bin Zhang DATE: 1/17/2013 1:36:09 PM Eastern Standard Time  
Verified for version 6.4.1 with the DLL updates.

FROM: Phil Litchfield DATE: 1/18/2013 10:45:27 AM Eastern Standard Time  
Update resolved this issue.

|                                            |
|--------------------------------------------|
| Issue ID: 12142                            |
| Subject: Application Error Crash - Culvert |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Teal, Dean            | 1/17/2013 5:25:36 PM |
| Modified By: hlee                   | 1/21/2013 5:33:46 PM |
| Priority: High                      |                      |

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Lee, Herman       | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          | Bug      |
| Thogaru, Srujana  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | P00003068_03001-a.pdf |             |
|      | P00003068_03001-b.pdf |             |
|      | P00003068_03001.xml   |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 1/17/2013 12:27:04 PM Eastern Standard Time

Reproducible

Using provided SQL database on windows 7 64 bit

Analyze a culvert LRFD with HL93 loading

After completion I selected from the tool bar the View Spec Check

VirtisOpis Application has stopped working window appears

Screen shot attached

FROM: Herman Lee DATE: 1/17/2013 12:29:53 PM Eastern Standard Time

This is a duplicate of Incident 12141. This issue has been fixed. After verifying the fix, we will provide an updated 6.4.1 DLL for fixing this issue.

FROM: Bin Zhang DATE: 1/17/2013 1:41:11 PM Eastern Standard Time

Verified for version 6.4.1 with the DLL updates.

1/5/2016 11:08:25 AM

HRS AASHTO

430

Complete Issue Information

|                                                                                |
|--------------------------------------------------------------------------------|
| Issue ID: 12149<br>Subject: prestressed beams LRFD 5.5.3.1, 5.5.3.2 & 5.8.3.5. |
|--------------------------------------------------------------------------------|

|                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis<br>Primary Contact: Thogaru, Srujana<br>Submitted By: Warner, David 1/18/2013 10:19:55 PM<br>Modified By: hhu 4/18/2014 12:57:36 PM<br>Priority: High<br>Category: Bug |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 1/18/2013 5:40:08 PM Eastern Standard Time  
When analyzing the attached prestressed beams in P00003068\_03001.xml.

The only spec check failures are the following (2) PDF's, described below.

LRFD 5.5.3.1 and 5.5.3.2: Calculating concrete stresses for fatigue loading, V/O is choosing flexure from a Service I truck/lane configuration rather than the fatigue truck causing overstress "failure" in prestressed beams.

LRFD 5.8.3.5: when determining the amount of longitudinal reinforcing needed in a prestress beam, V/O is using a resistance factor of 0.9 for flexure, rather than 1.0 resulting in "failure" for certain configurations.

Thank you.

1/5/2016 11:08:25 AM

HRS AASHTO

431



Complete Issue Information

FROM: Srujana Thogaru DATE: 3/27/2014 4:13:10 PM Eastern Daylight Time

Issue 1: LRFD 5.5.3.1 and 5.5.3.2: Calculating concrete stresses for fatigue loading, V/O is choosing flexure from a Service I truck/lane configuration rather than the fatigue truck causing overstress "failure" in prestressed beams.

=====  
 Issue 1 has been fixed for 6.6 release. (For internal testing Issue 1 has been fixed for 6.6 alpha 4 updates. Note to tester: Please use attached bridge with the incident and perform Design review with 5th edition 2010I to verify)

Issue 2: LRFD 5.8.3.5: when determining the amount of longitudinal reinforcing needed in a prestress beam, V/O is using a resistance factor of 0.9 for flexure, rather than 1.0 resulting in "failure" for certain configurations.

=====  
 Reason for using resistance factor of 0.9 instead of 1.0 is that resistance factor in LRFD Factors window under concrete tab is entered as 0.9. To use value of 1.0 please change the resistance factor to 1.0 in factors window.

FROM: Hanjin Hu DATE: 4/18/2014 8:57:27 AM Eastern Daylight Time  
 Backchecked for V6.6.0 Beta Build 1.

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 12155                                                                              |
| Subject: Problems while running shear stud wizard the second time after first successful run |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Bhanushali, Girish    | 1/28/2013 4:31:15 PM |
| Modified By: bzhang                 | 4/25/2013 2:41:49 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Kennelly, Krishna  | New      | High     | Unknown  |
| Bhanushali, Girish | Assigned |          | Bug      |

1/5/2016 11:08:25 AM

HRS AASHTO

432

### Complete Issue Information

|                    |               |      |         |
|--------------------|---------------|------|---------|
|                    | Resolved      |      |         |
| Bhanushali, Girish | New           | High | Unknown |
|                    | Investigation |      |         |
| Kennelly, Krisha   | Resolved      |      | Bug     |
|                    | Verified      |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                                  | Description |
|------|------------------------------------------------------|-------------|
|      | Wizard_Generated_Results_De<br>signReview_Errors.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Girish Bhanushali DATE: 1/28/2013 11:31:43 AM Eastern Standard Time

This issue was found during the testing after investigation and fixing of VI#11792 (linked).

The following issues were found using User's provided bridge (Jeff Ruby).  
Problems did not occur with Training Bridge 1.

After first successful run of shear stud design wizard :

Case 1:

1. Results applied
2. Run the wizard again (keep the bridge open). Don't delete previous results applied.
3. Received multiple assertions (see attached)
4. At the end V/O crashed

Case 2:

1. Close the bridge
2. Close the V/O
3. Open the bridge (Fresh start with wizard previously run and applied)
4. Delete the results from last run on Shear Connectors tab on deck profile
5. Run the wizard
6. Problems occurred as in Case 1, step 3 and 4.

1/5/2016 11:08:25 AM

HRS AASHTO

433

Complete Issue Information

Errors encountered in (originated from) ShearStudFitness.cs and SCSuperSteelGirderElement.cpp

See attached documents.

FROM: Girish Bhanushali DATE: 1/30/2013 1:18:58 PM Eastern Standard Time  
Crashed has been fixed. This was related to tolerance. Unit testing was done on Mr. Jeff's bridge (VI# 11792) for US and SI units.  
New results varied from the pre fix but they PASS. From Calcs, design ratios were greater than 1.  
Code has been checked in for next release. (6.5)

FROM: Girish Bhanushali DATE: 1/31/2013 12:35:26 PM Eastern Standard Time

FROM: Bin Zhang DATE: 4/25/2013 10:23:15 AM Eastern Daylight Time  
Verified for version 6.5 beta 1.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 12166                                                      |
| Subject: Design Review failed on Shear Stud Wizard generated Results |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Kennelly, Krisha   |                      |
| Submitted By: Bhanushali, Girish    | 1/31/2013 5:41:10 PM |
| Modified By: sghosh                 | 4/25/2013 9:38:10 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

1/5/2016 11:08:26 AM

HRS AASHTO

434

Complete Issue Information

FROM: Girish Bhanushali DATE: 1/31/2013 12:42:11 PM Eastern Standard Time

Notes:

1. This incident is after fixing VI#12155, that was a crash during the wizard run ( in VI#11792 Jeff's bridge). Review of Calcs indicated everything passed. Wizard ran successfully.

2. After looking in to VI#12101 (& linked VI#10430), I was able to reproduce errors in Design Review of Ruby's bridge with his manually entered results. However, Jeff's comment indicated that his errors were based on "wizard" results. I think that is not correct. Since I found the errors he posted were based on his manually entered studs. his connectors data included splice gaps as composite.

3. This led me to check his other copy of the bridge that had "wizard" generated bridge, from my VI#11792, VI# 12155 work. Interestingly the design review with "wizard" results exhibited different errors with more information (as in attached). Related to Missing data in article: 6.10.8.2.3 Lateral Torsional Buckling Resistance. (No splice gap included in wizard generated results refered here)

I suspect that problems are due to tolerance related since missing data error is being thrown while getting cross section locations.

FROM: Girish Bhanushali DATE: 2/2/2013 1:17:43 PM Eastern Standard Time

This issue was due to missing tolerance and hence some of the support locations were being incorrectly marked for spec check, which ended up excluding stress related article causing spec check to fail.

Incident has been fixed for next release (6.5).

Fix was unit tested by stepping through to make sure it worked. Also, fix enable the analysis to continue beyond the errors but at the end produced issue documented in VI#12169.

Completion of design review analysis needs to be verified as a part of VI# 12169 on x64 bit build to see the design review successful.

FROM: Girish Bhanushali DATE: 2/4/2013 1:29:23 PM Eastern Standard Time

FROM: Girish Bhanushali DATE: 2/6/2013 4:21:59 PM Eastern Standard Time

Completion of design review analysis was successfully verified using x64 bit build.

FROM: Subhadeep Ghosh DATE: 4/25/2013 4:46:46 PM Eastern Daylight Time  
Verified for 6.5 Beta 1.

|                                         |
|-----------------------------------------|
| Issue ID: 12179                         |
| Subject: LRFD Load Modifiers - Culverts |

### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Skow, Wayne        |                      |
| Submitted By: Litchfield, Phil      | 2/8/2013 4:24:45 PM  |
| Modified By: wskow                  | 7/22/2013 3:16:30 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

### History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Mlynarski, Mark | New              | High     | Unknown  |
| Skow, Wayne     | Assigned         |          |          |
|                 | Not Reproducible |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                        | Description |
|------|--------------------------------------------|-------------|
|      | 12221.png                                  |             |
|      | VI12211_bearing stiffener pair_updated.xml |             |
|      | bearing stiffener pair.xml                 |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 2/8/2013 11:25:33 AM Eastern Standard Time

I don't see where the LRFD load modifiers are being applied in the LRFD design review of culverts. I changed the load modifiers in the LRFD factors and nothing is being applied to the culvert.

FROM: Wayne Skow DATE: 2/18/2013 3:23:14 PM Eastern Standard Time

This appears to be a duplicate of 12119. The override factors are not being passed into AashtoBridge from the GUI.

FROM: Herman Lee DATE: 3/11/2013 4:40:40 PM Eastern Daylight Time

This issue is not a duplicate of Incident 12119.

1/5/2016 11:08:26 AM

HRS AASHTO

436

Complete Issue Information

The WisDOT Box Culvert program that the AASHTO Culvert Engine based on doesn't have inputs for load modifiers.

FROM: Herman Lee DATE: 4/29/2013 8:04:13 AM Eastern Daylight Time  
Resolved for 6.5 release.

FROM: Herman Lee DATE: 5/24/2013 2:25:04 PM Eastern Daylight Time  
I changed the load modifiers for Service I but kept the max and min products to 1.0. The resulting Service I loads should be the same as before.

FROM: Wayne Skow DATE: 5/28/2013 7:18:13 AM Eastern Daylight Time  
The max/min calculation was fixed.

FROM: Phil Litchfield DATE: 6/3/2013 6:59:45 PM Eastern Daylight Time  
Checked in 6.5 Beta 2 and load modifiers were not used in the calculation in the spec check.

FROM: Wayne Skow DATE: 6/10/2013 9:19:40 AM Eastern Daylight Time  
This change hasn't been added to Beta 2 updates. I don't think you'll see it until Beta 3 is released.

FROM: Phil Litchfield DATE: 7/18/2013 10:41:47 AM Eastern Daylight Time  
This still appears to not be working in Beta 4.

FROM: Wayne Skow DATE: 7/19/2013 9:17:05 AM Eastern Daylight Time  
When performing design review, the user can control which set of factors is used for the LRFR articles (from the Specs tab of the Culvert Alternatives dialog), but not which set of factors are used for the LRFD articles. When specifying the spec version to use with LRFR (see the Spec tab), you currently have 3 choices:

- MBE 2nd 2011i, LRFD 5th (2010 AASHTO LRFD Specifications)
  - MBE 2nd 2011i, LRFD 5th 2010i (2010 AASHTO LRFD Specifications)
  - MBE 2nd 2011i, LRFD 6th (2012 AASHTO LRFD Specifications)
- For each of those LRFD specs, there's a corresponding factor set that is not user specifiable.

So, if you're running LRFR, you cannot change the default modifiers. You can, however, specify a user created set of factors when doing an LRFD design analysis.

How are you running it?

FROM: Phil Litchfield DATE: 7/22/2013 11:15:11 AM Eastern Daylight Time  
Ok, got it to work right. I didn't change the factors enough to see a change in the results.

|                                                                           |
|---------------------------------------------------------------------------|
| Issue ID: 12211<br>Subject: Art. 6.9.4.1 for a pair of bearing stiffeners |
|---------------------------------------------------------------------------|

|                                                                     |
|---------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis<br>Primary Contact: Skow, Wayne |
|---------------------------------------------------------------------|

Complete Issue Information

|                                 |                      |
|---------------------------------|----------------------|
| Submitted By: Kennelly, Krishna | 2/26/2013 2:15:06 PM |
| Modified By: wskow              | 3/28/2013 1:23:49 PM |
| Priority: High                  |                      |
| Category: Unknown               |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Mlynarski, Mark  | New      | High     | Unknown  |
| Ghosh, Subhadeep | Assigned |          |          |
|                  | Resolved |          | Bug      |
|                  | Verified |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                          | Description |
|------|----------------------------------------------|-------------|
|      | Fatigue Stress with 2008 specifications.docx |             |
|      | FatigueStress0.xml                           |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krishna Kennelly DATE: 2/26/2013 9:15:32 AM Eastern Standard Time  
 Found during alpha testing of 6.5. attached bridge has a pair of bearing stiffeners at the first pier. Art. 6.9.4.1 has some negative values. Please investigate.

FROM: Krishna Kennelly DATE: 2/26/2013 9:17:59 AM Eastern Standard Time

FROM: Wayne Skow DATE: 3/15/2013 9:53:25 AM Eastern Daylight Time  
 There was trouble importing the .xml file originally attached. Geoff said some name changes were made in the database causing the import problem. A new version of the file is attached.

Complete Issue Information

FROM: Wayne Skow DATE: 3/28/2013 9:19:17 AM Eastern Daylight Time  
I'm running from code extracted from TFS on 3/25/2013. I can't reproduce the problem. The numbers currently reported seem reasonable.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 12253                                         |
| Subject: Fatigue stress is 0.0 for older specifications |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ghosh, Subhadeep   |                      |
| Submitted By: Foremsky, Dave        | 3/19/2013 8:23:53 PM |
| Modified By: b Zhang                | 4/26/2013 5:15:13 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dave Foremsky DATE: 3/19/2013 4:24:11 PM Eastern Daylight Time  
See the attached word document for screenshots and full description.

Fatigue live load stress prints as 0.0 ksi for 4th edition, 2008i specifications. Gives "good" (nonzero) results for 5th edition, 2010i specifications.

Note: Changing the specs to 4th edition with 2009 interims gives nonzero results as well.

FROM: Krishna Kennelly DATE: 3/22/2013 9:52:14 AM Eastern Daylight Time  
Please investigate. I suspect this is due to the 2008 specs only had 1 Fatigue limit state, Fatigue. then

1/5/2016 11:08:27 AM

HRS AASHTO

439



Complete Issue Information

the 2009 interims changed it to have 2, a Fatigue I and a Fatigue II. Try to determine if when using the 2008 interim specs, the correct load factor is not being retrieved for the Fatigue limit state. Look in abaspecctrl/ScSuperSteelGriderElement and maybe ScSuperstructure, ScSuperstructureElement.

FROM: Subhadeep Ghosh DATE: 3/25/2013 4:10:15 PM Eastern Daylight Time  
For Article 6.6.1.2.2 2008i: No load factor set for "Fatigue" limit state when considering Article 6.6.1.2.2 2008i specifications when considering 1994, 1998, 2004, 2007, 2010 and 2012 AASHTO LRFD Specifications (Factors). Also the the MaxLL+I and MinLL+I is only read in the article when the fatigue category is undefined, other wise it turns out to be zero. Code change required to handle this discrepancy.

FROM: Subhadeep Ghosh DATE: 4/2/2013 10:15:02 AM Eastern Daylight Time

Changes were made to the following LRFD articles:

- Article 6.6.1.2.2 4th 2008i: "Fatigue" limitstate was changed to "Fatigue I" since no load factor is assigned for "Fatigue"
- Article APPD6.2 4th 2008i; 5th: Changed limit state "Fatigue" to limitstatecategory "Fatigue" to exclude all cases of "Fatigue"
- Article 6.10.1.1.1b 4th 2008i, 2009i; 5th 2010i: Changed limit state "Fatigue" to limitstatecategory "Fatigue" to exclude all cases of "Fatigue"

FROM: Bin Zhang DATE: 4/26/2013 1:15:00 PM Eastern Daylight Time  
Verified for version 6.5 beta 1.

Issue ID: 12475  
Subject: Shear stirrup design tool range generator error

Folder: /Virtis/Support Center/Opis  
 Primary Contact: Bhanushali, Girish  
 Submitted By: Olsen, Jeff 5/7/2013 8:45:53 PM  
 Modified By: jolsen 1/15/2014 11:41:34 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Unknown  |
| Bhanushali, Girish | Assigned |          |          |

### Complete Issue Information

| Information Needed |          |      |         |
|--------------------|----------|------|---------|
| Investigation      |          |      |         |
| Duray, Jim         | New      | High | Unknown |
| Kennelly, Krisha   | Assigned |      |         |
| Mlynarski, Mark    |          |      |         |
|                    |          |      | Bug     |
| Thogaru, Srujana   | Resolved |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Olsen DATE: 5/7/2013 5:02:45 PM Eastern Daylight Time

When I run the shear stirrup design tool, the stirrup spacing that is generated has errors in the table.

The end distance of one range does not equal the beginning of the next. Therefore, when you apply the ranges, the spacing goes beyond the end of the beam. See the attached screen shots. See girder G2 in the bridge file.

FROM: Girish Bhanushali DATE: 5/24/2013 2:24:18 PM Eastern Daylight Time

Hi Jeff,

Thank you for posting the incident and related information.

I'd like to kindly request if you could provide us the capture of first window that shows the actual input you entered, that would be great.

Thanks

FROM: Jeff Olsen DATE: 7/9/2013 3:36:36 PM Eastern Daylight Time

I added a screen capture of the input screen and the resulting ranges.

FROM: Girish Bhanushali DATE: 7/12/2013 3:59:58 PM Eastern Daylight Time

This incident is moved to support center from 6.5 beta since this is pre-existing and related to earlier release than 6.5.

1/5/2016 11:08:27 AM

HRS AASHTO

441

Complete Issue Information

FROM: Girish Bhanushali DATE: 7/16/2013 3:25:15 PM Eastern Daylight Time  
This issue has been resolved for 6.5.1.  
Fix included code chagnes and help updates.

FROM: Kane Gyovai DATE: 11/14/2013 11:56:13 AM Eastern Standard Time  
Verified for V6.5.1.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 12522                                                                    |
| Subject: AASHTO LRFD - Pretensioned Members - Anchtage Zone Spec Check is missing. |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Thogaru, Srujana   |                      |
| Submitted By: Woldemichael, Berhanu | 5/14/2013 3:50:28 PM |
| Modified By: sthogaru               | 3/26/2014 2:52:55 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Berhanu Woldemichael DATE: 5/14/2013 11:54:51 AM Eastern Daylight Time  
AASHTO LRFD doesn't check Article 5.10.10.1 for splitting resistance in prestensioned mebers. It should be part of Stage 1 spec check list. I run a BrDR and couldn't see this speck check done.

FROM: Krisha Kennelly DATE: 7/2/2013 9:49:57 PM Eastern Daylight Time  
Folder changed to Support Center since this is not new to 6.5

FROM: Srujana Thogaru DATE: 3/26/2014 10:47:57 AM Eastern Daylight Time  
Fixed for 6.6 release (for internal testing fixed for 6.6 alpha 4 updates - use PCITrainingBridge1 with

1/5/2016 11:08:27 AM

HRS AASHTO

442

Complete Issue Information

Consider Splitting resistance option checked in control options for LRFD and LRFR analysis accordingly).

Article 5.10.10.1 now shows up in stage 1 at start and end locations

|                                  |
|----------------------------------|
| Issue ID: 12532                  |
| Subject: Culvert Output quesiton |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Skow, Wayne        |                      |
| Submitted By: Thompson, Todd        | 5/16/2013 5:57:12 PM |
| Modified By: tthompson              | 6/18/2013 8:04:27 PM |
| Priority: High                      |                      |
| Category: Support                   |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          | Support  |
|                 | Resolved |          |          |

Contacts

1/5/2016 11:08:27 AM

HRS AASHTO

443

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Todd Thompson DATE: 5/16/2013 1:59:13 PM Eastern Daylight Time  
 Using 6.4.1  
 LRFD Design Rewview on a Culvert

One of our designers using Culvert for an LRFD Design had a question from the extended output.

In the section that has the Maximum and Minimum Envelopes -  
 There are three values listed at each point -  
 what are these three different values?

Load Combinations

-----

DC,  
 EV,  
 DW,  
 EH,  
 LS,  
 LL1M+,LL1M-,LL1V+,LL1V-,LL1N+,LL1N-,LL2M+,LL2M-,LL2V+,LL2V-,LL2N+,LL2N-,

Limit State: STRENGTH-I

Component: Ext. Wall 1

Max Envelope

| Distance<br>(feet) | Moment<br>(KipFeet) | Axial<br>(Kips) | Shear<br>(Kips) |
|--------------------|---------------------|-----------------|-----------------|
| -0.563             | -16.682             | -12.464         | 7.773           |
|                    | -16.781             | -12.392         | 7.792           |
|                    | -26.023             | -14.580         | 13.038          |
| 0.000              | -12.544             | -12.401         | 6.942           |
|                    | -12.633             | -12.332         | 6.961           |
|                    | -19.074             | -14.496         | 11.673          |
| 1.100              | -5.780              | -12.276         | 5.367           |
|                    | -5.848              | -12.214         | 5.385           |
|                    | -7.670              | -14.333         | 9.078           |
| 2.200              | 1.565               | -13.042         | 6.522           |

Complete Issue Information

-0.761 -12.097 3.874  
 0.934 -14.170 6.581

FROM: Wayne Skow DATE: 5/17/2013 2:52:30 PM Eastern Daylight Time

Line 1 = Max moment with corresponding axial and shear

Line 2 = Max axial with corresponding moment and shear

Line 3 = Max shear with corresponding moment and axial

Note that max is defined as largest value in positive direction and min is largest value in negative direction.

FROM: Todd Thompson DATE: 6/18/2013 4:04:27 PM Eastern Daylight Time

Thanks for the explanation. Too bad we couldn't have gotten some headers in this report to explain this.

|                                                 |
|-------------------------------------------------|
| Issue ID: 12559                                 |
| Subject: Enhancement request for reports/charts |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Thompson, Todd        | 5/23/2013 7:48:22 PM |
| Modified By: hlee                   | 5/23/2013 8:02:40 PM |
| Priority: High                      |                      |
| Category: Enhancement               |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Lee, Herman     | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

1/5/2016 11:08:28 AM

HRS AASHTO

445

Complete Issue Information

FROM: Todd Thompson DATE: 5/23/2013 3:49:54 PM Eastern Daylight Time

6.4.1

One of our designers had a good idea for reporting/output/charts

the option of providing a Service I line to your output "Results Graph" screen in the "Critical LRFD" loads. This will be very helpful in design since the code requires crack control on design sections.

Please add this to the Reports bucket. I'm not sure if this is a duplicate or not.

|                                      |
|--------------------------------------|
| Issue ID: 12608                      |
| Subject: LRFD Culvert - Limit States |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Lee, Herman        |                      |
| Submitted By: Litchfield, Phil      | 6/3/2013 11:00:35 PM |
| Modified By: hlee                   | 5/29/2014 5:14:34 PM |
| Priority: High                      |                      |
| Category: Maintenance               |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Lee, Herman     | Assigned |          |          |

1/5/2016 11:08:28 AM

HRS AASHTO

446

### Complete Issue Information

|                  |           |      |             |
|------------------|-----------|------|-------------|
|                  | Suspended |      | Enhancement |
| Kennelly, Krisha | New       | High | Unknown     |
|                  | Assigned  |      |             |
| Ghosh, Subhadeep | Resolved  |      | Bug         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Before fix.txt      |             |
|      | After fix.txt       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Phil Litchfield DATE: 6/3/2013 7:07:36 PM Eastern Daylight Time

I added additional limit states to be checked in the LRFD spec. None of the additional limit states were considered.

FROM: Phil Litchfield DATE: 6/6/2013 10:48:05 AM Eastern Daylight Time

By default Strength I & II, Service I and Fatigue I & II are selected for Reinforced Concrete in the 2012 AASHTO LRFD Specifications. Yet in a culvert analysis only Strength I and Service I look like they are being checked. Is the culvert analysis limited to Strength I and Service I only?

FROM: Herman Lee DATE: 6/6/2013 10:48:24 AM Eastern Daylight Time

Yes, this is another case that user specified selection in the user interface is not being considered due to the original limitations of the box culvert program. I will prepare an estimate for the Task Force to review in next week meeting.

FROM: Herman Lee DATE: 5/29/2014 1:11:11 PM Eastern Daylight Time

2014 TAG decision: Change Category to Maintenance.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 12623                                                |
| Subject: Computation of Nominal Shear Force (LRFD 6.10.10.4.2) |

1/5/2016 11:08:28 AM

HRS AASHTO

447



### Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Ghosh, Subhadeep   |                      |
| Submitted By: Ghosh, Subhadeep      | 6/6/2013 12:37:31 PM |
| Modified By: jruby                  | 6/18/2013 7:16:45 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

### History

| Primary Contact    | Status      | Priority | Category |
|--------------------|-------------|----------|----------|
| Bhanushali, Girish | Development | High     | Unknown  |
|                    | Resolved    |          | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                     | Description |
|------|-----------------------------------------|-------------|
|      | StudWizardDesignRanges.jpg              |             |
|      | enteredGaps.jpg                         |             |
|      | VI-11792-V641-SubstructureExample01.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Subhadeep Ghosh DATE: 6/6/2013 8:49:05 AM Eastern Daylight Time  
I was reviewing LRFD 5th edition article 6.10.10.4 for implementing curved girder changes.

As per the LRFD article 6.10.10.4.2, the value of "Pn" (used to compute "P" for continuous span composite in negative flexure) has to be computed for a case where the "P" is considered between Max M LL+I and adjacent interior support.

In the code, the above region is defined under the enumerator ShearConnRegionType as Negative.

1/5/2016 11:08:28 AM

HRS AASHTO

448

Complete Issue Information

But in code ALRFD\_5E\_06\_10\_10\_04.cs (also present in 4th 2008I and 2009I) the "Pn" only gets computed for the following:

Line#375

if (shearConnRegionType == ShearConnRegionType.PositiveContinuous)

This above check is a bug and should be for corrected to:

if (shearConnRegionType == ShearConnRegionType.Negative)

I have crossed checked with LRFD edition 4th with 2008I and 6th for article 6.10.10.4.2.

Please assign it back to me, after you have verified the above. Thanks!

FROM: Jeff Ruby DATE: 6/6/2013 5:15:31 PM Eastern Daylight Time

Thank you for finding this!

Shear stud calcs have been broke for a long time.

Could it solve some of the problems referred to in Issues 11930 and 12102?

FROM: Krisha Kennelly DATE: 6/13/2013 1:19:37 PM Eastern Daylight Time

I agree with this change. 11930 looks more like a metric/English problem to me but we'll see if this helps it. Please see if 11930 and 12102 are fixed by this as well.

FROM: Subhadeep Ghosh DATE: 6/17/2013 11:21:57 AM Eastern Daylight Time

This deos not solve issues with 11930 and 12102.

This increases the nominal shear for regions between Max M LL+I and adjacent interior support and hence it increases the minimum number of shear connectors required as per strength limit state (6.10.10.4).

The before fix (Before fix.txt) after after fix (after fix.txt) shear stud wizard design computation has been attached for Training Bridge 3 (Considering composite in neg. flexure). For verification look at computation between Max M LL+I and adjacent interior support.

Fixed for 6.5 next beta release to beta 3.

FROM: Subhadeep Ghosh DATE: 6/17/2013 3:31:09 PM Eastern Daylight Time

FROM: Jeff Ruby DATE: 6/18/2013 3:16:44 PM Eastern Daylight Time

One step closer. Thanks.

Accepted in 6.5.0 Beta 3

Now let's see if we can fix 11930 and 12102.

Issue ID: 12733

Subject: Bridge with Splice Gaps Shear Stud Design Fails the Speck Check

Folder: /Virtis/Support Center/Opis

Primary Contact: Bhanushali, Girish

Submitted By: Ruby, Jeff

7/2/2013 4:39:09 PM

Modified By: jruby

12/6/2013 9:26:10 PM

1/5/2016 11:08:28 AM

HRS AASHTO

449

Complete Issue Information

|                |
|----------------|
| Priority: High |
| Category: Bug  |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | New      | High     | Unknown  |
|                    | Assigned |          | Bug      |
|                    | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Girish Bhanushali DATE: 7/2/2013 12:46:45 PM Eastern Daylight Time

Following is split (copied) from VI# 11930:  
Use the attached documents (copied from VI# 11930)

//////////

FROM: Jeff Ruby DATE: 5/30/2013 3:57:29 PM Eastern Daylight Time

- Steps I took to "break" it.
- 1) import VI-11792-V641-SubstructureExample01.xml
  - 2) open Deck Profile for G2
  - 3) change units to SI/Metric
  - 4) Click "shear stud tool wizard"
  - 5) Enter gaps as shown in my screenshot
  - 6) Hit continue
  - 7) Apply
  - 8) change units to US Customary
  - 9) perform analysis

Complete Issue Information

Observations:

The stud wizard produces the same spacing for all ranges. (see StudWizardDesignRanges.jpg)  
As an example the first range from 0 to 59 ft doesn't have enough studs

Resubmitted Version 6.5.0 Beta 2

FROM: Jeff Ruby DATE: 6/18/2013 3:27:26 PM Eastern Daylight Time  
After reading some more at Issue 12623, some of this may be fixed, but I am not sure this is just a "metric" issue. It appears maybe the "gaps" are causing some problems? Don't know. I have only tested the wizard with gaps.

This is listed as a verified bug since Beta 1. I am assuming this is going to be fixed for 6.5.0 release.  
//////////

FROM: Girish Bhanushali DATE: 7/11/2013 9:56:57 AM Eastern Daylight Time  
Resolved for 6.5.1.

FROM: Jeff Ruby DATE: 12/6/2013 4:26:10 PM Eastern Standard Time  
accepted 6.5.1 Beta 1

|                                                             |
|-------------------------------------------------------------|
| Issue ID: 12734                                             |
| Subject: Shear Stud Design Related Incidents to be Verified |

|                                     |                      |
|-------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis |                      |
| Primary Contact: Bhanushali, Girish |                      |
| Submitted By: Ruby, Jeff            | 7/2/2013 4:50:27 PM  |
| Modified By: jruby                  | 12/6/2013 9:25:41 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Girish Bhanushali DATE: 7/2/2013 12:51:31 PM Eastern Daylight Time

Following is split from VI# 11930:

//////////

FROM: Jeff Ruby DATE: 6/20/2013 4:55:44 PM Eastern Daylight Time

Actually, I again tried to trace the whole history of this and related bugs. I came up with these related issues:

10430 -> split to 11792 and 11930 (this one, currently needs some fixing of some sorts)

12101  
12155  
12166  
12169

It is getting confusing. I will try to keep up.

//////////

FROM: Girish Bhanushali DATE: 7/11/2013 9:57:34 AM Eastern Daylight Time  
Resolved for 6.5.1.

FROM: Jeff Ruby DATE: 12/6/2013 4:25:41 PM Eastern Standard Time  
accepted 6.5.1 Beta 1

|                                                                                              |                       |
|----------------------------------------------------------------------------------------------|-----------------------|
| Issue ID: 12817                                                                              |                       |
| Subject: The program is checking article 6.10.7.1.1 for negative flexure which is incorrect. |                       |
| Folder: /Virtis/Support Center/Opis                                                          |                       |
| Primary Contact: Skow, Wayne                                                                 |                       |
| Submitted By: Crudele, Brenda                                                                | 8/15/2013 2:58:13 PM  |
| Modified By: hlee                                                                            | 8/21/2013 12:51:00 PM |
| Priority: High                                                                               |                       |
| Category: Support                                                                            |                       |

History

1/5/2016 11:08:29 AM

HRS AASHTO

452

### Complete Issue Information

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
| Skow, Wayne     | Assigned |          |          |
|                 | Resolved |          |          |
|                 |          |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | Spec Check.txt                     |             |
|      | 04276 - 1079550ejl.xml             |             |
|      | LRFDSpecCheckVerboseRepor<br>t.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brenda Crudele DATE: 8/15/2013 11:09:48 AM Eastern Daylight Time

With the AASHTO LFRD engine, the program is checking article 6.10.7.1.1 for negative flexure for two locations along G2. It gives a failure at 99ft for Strength I with the negative load case for HL-93 plus lane. It is curious because at 240 feet it gives the same failure for strength 1 for the negative case of tandem plus lane, but flags strength 1 with negative live load for truck plus lane as negative and therefore no failure. Also note that when the file is run with the AASHTO LRF engine no failures are given.

Attached is the .xml file. Girder 2 is the beam in question. I have also attached the files with the output that shows a failure where it shouldn't be checked.

FROM: Wayne Skow DATE: 8/16/2013 1:44:34 PM Eastern Daylight Time

When checking a section for positive flexure capacity, a negative LL should produce a rating factor of "99." The problem is that in v641, this article did not check the sign of the live load properly and would, as this model shows, produce a negative rating factor. That problem was discovered and fixed when the capacity override enhancement was added to v65. Therefore, the problem is no longer present.

## Issue - Complete Information

### Complete Issue Information

|                                                                             |
|-----------------------------------------------------------------------------|
| Issue ID: 5742                                                              |
| Subject: Enhancement for shaft isn't centered or symmetrical on the footing |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Kennelly, Krisha       |                       |
| Submitted By: Lang, Guy                 | 12/30/2004 3:15:53 PM |
| Modified By: sthogaru                   | 7/14/2009 5:21:14 PM  |
| Priority: High                          |                       |
| Category: Enhancement                   |                       |

### History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | Low      | Bug         |
| Kennelly, Krisha | On Hold   |          |             |
|                  | Suspended |          | Enhancement |
| Kennelly, Krisha | Suspended | Low      | Enhancement |
|                  |           | High     |             |

### Contacts

| Name     | Company | Email 1             | Phone 1 |
|----------|---------|---------------------|---------|
| Guy Lang |         | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                            |
|------------|---------------|--------------------------------------------------------------------|
| 5742.13602 | Suspended     | Enhancement for shaft isn't centered or symmetrical on the footing |

### Description

FROM:glang DATE:Thursday, December 30, 2004 10:15:54 AM

1/5/2016 11:10:54 AM

HRS AASHTO

1

Complete Issue Information

When entering Bridge Alternates, Foundation Alternates, Pier Footing Geometry the geometry assumes the pier column (shaft) is centered on the footing. This may not be the case. There are cases (Fort Pitt Blvd.) where the shaft isn't centered or symmetrical on the footing. It would be advantageous to be able to input both the transverse and longitudinal dimensions from centerline of shaft to edge of footing in both directions.

|                                                               |
|---------------------------------------------------------------|
| Issue ID: 5783                                                |
| Subject: Error in superstructure not reported in substructure |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Volle, Laura              | 1/12/2005 3:58:46 PM |
| Modified By: hlee                       | 6/18/2010 4:51:05 PM |
| Priority: Medium                        |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | Medium   | Bug         |
|                 |           |          | Enhancement |
| Duray, Jim      | New       | Medium   | Enhancement |
|                 | Suspended |          |             |
|                 | Assigned  |          | Bug         |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



Complete Issue Information

|             |                       |
|-------------|-----------------------|
| Laura Volle | lvolle@mbakercorp.com |
|-------------|-----------------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary         |
|------------|---------------|-----------------|
| 5797.13548 | Suspended     | Tabular Reports |

Description

FROM:lvolle DATE:Wednesday, January 12, 2005 10:58:46 AM

In Alpha Build 5, after the second update, I entered in the superstructure and substructure for the verification bridge. I was not able to get any dead loads to compute in the superstructure loads window of the substructure. I then went into the superstructure and attempted to analyze the member alternative. I was given an error that the deflection live load distribution factor was not defined. I was able to remedy this by removing the moment and shear distribution factors and allow brass to compute these values.

I would not have known what the error was unless I analyzed the piers individually. It would be beneficial to be given a message indicating that the reason the dead loads could not be calculated was because of that problem in the superstructure.

FROM: Herman Lee DATE: 6/10/2009 10:48:32 AM Eastern Daylight Time  
Bug by Beta TAG 6/9/09.

|                          |
|--------------------------|
| Issue ID: 5797           |
| Subject: Tabular Reports |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Boukamp, Sabine        |                      |
| Submitted By: Duray, Jim                | 1/13/2005 6:01:55 PM |
| Modified By: sthogaru                   | 7/13/2009 7:48:18 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

## Complete Issue Information

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 |           |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name     | Company | Email 1             | Phone 1 |
|----------|---------|---------------------|---------|
| Guy Lang |         | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 5809.13536 | Suspended     | Superstructure Environment - WL & WS-Super |

### Description

FROM:jduray DATE:1/13/2005 12:59:54 PM

Change the default such that no load cases and load combinations are selected.

FROM:jduray DATE:1/13/2005 1:03:14 PM

Because there are possibly thousands of load cases and combinations I think we need to add some navigation features to the selection of load and combinations:

Add Next and Prev buttons to navigate to the next or previous selected item.

Add counters in the view to display the number of limit states, load cases and combinations selected.

Include the envelop yes or no.

We also should have progress bar but that is too much effort and not in scope.

Also need an abort button (again out of scope)

FROM:jduray DATE:1/13/2005 1:31:36 PM

Need to change the pointer to the hour glass while the report is processing.

FROM: Jim Duray DATE: 6/4/2009 10:04:16 AM Eastern Daylight Time

TAG discussed that this enh could be limited to the summary of selected items.

---

1/5/2016 11:10:55 AM

HRS AASHTO

4

### Complete Issue Information

|                                                     |
|-----------------------------------------------------|
| Issue ID: 5809                                      |
| Subject: Provide option to get skew from struct def |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Lang, Guy                 | 1/14/2005 3:14:18 PM |
| Modified By: sthogaru                   | 7/14/2009 1:57:48 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 |           |          | Enhancement |
|                 | Suspended |          |             |
| Klophaus, Jason | Assigned  |          |             |
|                 | Suspended |          |             |
| Klophaus, Jason | Suspended | High     | Enhancement |

### Contacts

| Name     | Company | Email 1             | Phone 1 |
|----------|---------|---------------------|---------|
| Guy Lang |         | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 5830.13515 | Suspended     | wind data: (calculations) |

### Description

FROM:glang DATE:Friday, January 14, 2005 10:14:18 AM

Under the Pier Data (Pier Skew), can this be linked to the skew data provided in the Structure Framing Plan Details Layout so the skew doesn't need to be added again? It can easily be missed by the user.

## Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 5830                     |
| Subject: wind data: (calculations) |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Klophaus, Jason        |                      |
| Submitted By: Lang, Guy                 | 1/21/2005 4:09:29 PM |
| Modified By: sthogaru                   | 7/14/2009 2:34:02 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:glang DATE:Friday, January 21, 2005 11:09:29 AM

It would be helpful to have the conditions (open country,suburban or city)as selected by the user and as

1/5/2016 11:10:55 AM

HRS AASHTO

6

### Complete Issue Information

per AASHTO Table 3.8.1.1-1 printed out in the calculations for the WS-Sub and WS-Super. This would appear in the input section of the calculations after Wind Data.

|                                         |
|-----------------------------------------|
| Issue ID: 5864                          |
| Subject: Creep Loads can not be entered |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Klophaus, Jason           | 1/25/2005 4:49:03 PM |
| Modified By: sthogaru                   | 7/14/2009 2:34:41 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Complete Issue Information

|            |           |      |  |             |
|------------|-----------|------|--|-------------|
|            | Suspended |      |  | Enhancement |
| Duray, Jim | Suspended | High |  | Enhancement |
| Duray, Jim | New       | Low  |  | Bug         |
|            | Suspended |      |  | Enhancement |
|            |           | High |  |             |
| Duray, Jim | Suspended | High |  | Enhancement |

### Contacts

| Name         | Company   | Email 1             | Phone 1 |
|--------------|-----------|---------------------|---------|
| Gregg Freeby | Texas DOT | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                   |
|------------|---------------|-----------------------------------------------------------|
| 5941.13404 | Suspended     | Graphical representation of pier/superstruct relationship |

### Description

FROM:jklophaus DATE:1/25/2005 11:49:20 AM

There is no way to enter creep loads. No creep tab as shown in the mock-ups and no CR in pull down menu under cap additional loads tab.

|                                                                    |
|--------------------------------------------------------------------|
| Issue ID: 5941                                                     |
| Subject: Graphical representation of pier/superstruct relationship |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Freeby, Gregg | 2/2/2005 3:19:17 PM  |
| Modified By: administrator  | 6/19/2008 4:14:23 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |
|                 | Discard   |          |             |

### Contacts

| Name           | Company      | Email 1             | Phone 1 |
|----------------|--------------|---------------------|---------|
| Tom Kurtenbach | Illinois DOT | unknown@unknown.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary            |
|------------|---------------|--------------------|
| 5954.13391 | Suspended     | Load Palette names |

### Description

FROM:gfreeby DATE:Wednesday, February 02, 2005 10:19:18 AM

I know we cut this but it would be really useful to have a graphical display or some sort of visual display that shows you the relationship of the pier alternatives to the structure alternatives. Right now it takes careful study of the data to be sure you've assigned the correct superstructure to the pier.

FROM:hlee DATE:7/20/2006 11:15:29 AM  
Changed Project to Support Center/Opis Sub.

Complete Issue Information

|                             |
|-----------------------------|
| Issue ID: 5954              |
| Subject: Load Palette names |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kurtenbach, Tom           | 2/2/2005 6:50:30 PM  |
| Modified By: hlee                       | 6/10/2009 2:54:29 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tkurtenbach DATE:Wednesday, February 02, 2005 1:50:30 PM  
Would it be possible to write out the load names on the load palette screen? It would be better than just the 2 letter abbreviations.

FROM:hlee DATE:7/20/2006 11:16:21 AM  
Changed Project to Support Center/Opis Sub.

FROM: Herman Lee DATE: 6/10/2009 10:52:06 AM Eastern Daylight Time  
Discarded by Beta TAG 6/9/09.

1/5/2016 11:10:56 AM

HRS AASHTO

10



## Complete Issue Information

Issue ID: 5987  
Subject: Copy Columns

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Ihnat, Joseph  
Submitted By: Western, Kevin                      2/3/2005 6:37:11 PM  
Modified By: jihnat                                      8/7/2012 11:43:48 AM  
Priority: High  
Category: Enhancement

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | On Hold  |          |          |
|                 | Assigned |          |          |

1/5/2016 11:10:57 AM

HRS AASHTO

11

Complete Issue Information

|                  |           |      |                        |
|------------------|-----------|------|------------------------|
|                  |           |      | Enhancement            |
| Duray, Jim       | New       | High | Bug                    |
| Kennelly, Krisha | Assigned  |      |                        |
| Duray, Jim       |           |      | Unknown<br>Enhancement |
|                  | Suspended |      |                        |
|                  | Resolved  |      |                        |
| Duray, Jim       | Resolved  | High | Enhancement            |

Contacts

| Name     | Company            | Email 1             | Phone 1 |
|----------|--------------------|---------------------|---------|
| Tom Koch | North Carolina DOT | unknown@unknown.com |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name       | Current State | Summary                                                                    |
|------------|---------------|----------------------------------------------------------------------------|
| 5991.13354 | Resolved      | override button for figuring BR or other loads - need an analysis log file |

Description

FROM:kwestern DATE:Thursday, February 03, 2005 1:37:12 PM

After defining the first column of a multi column pier, need to be able to copy attributes to all other columns in the frame.

FROM:jduray DATE:2/21/2005 8:01:28 AM

Joe - Let's discuss this.

FROM:jduray DATE:2/22/2005 9:15:43 AM

This is a fair amount of work to accomplish. It is too late to do for the first release because it involves significant changes to several windows that have already been tested. Suggest doing this for the second release of substructure.

FROM:jihnat DATE:2/22/2005 9:51:01 AM

The changes we discussed:

- 1) Being able to Copy on a column and then Paste on another column.
- 2) The Paste operation will replace the receiver's Properties, Components and Geometry data.
- 3) If those windows happen to be open they will need to be refreshed (see Deck Profile as possible)

1/5/2016 11:10:57 AM

HRS AASHTO

12

Complete Issue Information

example).

4) Foundation Alts will not be copied because they can already be copied individually.

FROM:hlee DATE:7/20/2006 11:17:29 AM  
Changed Project to Support Center/Opis Sub.

FROM: Herman Lee DATE: 6/30/2012 9:41:47 AM Eastern Daylight Time  
Implemented for 6.4 release.

FROM: Jeff Ruby DATE: 8/6/2012 3:43:18 PM Eastern Daylight Time  
Accepted V/O 6.4 Beta 3

|                                                                                     |
|-------------------------------------------------------------------------------------|
| Issue ID: 5991                                                                      |
| Subject: override button for figuring BR or other loads - need an analysis log file |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Koch, Tom                 | 2/3/2005 7:05:29 PM  |
| Modified By: administrator              | 6/19/2008 4:14:19 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:tkoch DATE:Thursday, February 03, 2005 2:05:30 PM  
When figuring substructure loads, if override button is enabled, analysis will not run if no loads are entered. Program should give a warning (preferred) or assume zero if no loads are entered, but instead it crashes.

FROM:kkennelly DATE:2/8/2005 8:59:10 AM

1/5/2016 11:10:57 AM

HRS AASHTO

13

Complete Issue Information

Having the override button checked with no override loads entered does not cause the analysis to fail. The analysis failing is addressed in incident 5989.

The log file we create for the analysis should simply state user chose override but then did not enter any override loads.

FROM:hlee DATE:7/20/2006 11:18:56 AM  
Changed Project to Support Center/Opis Sub.

FROM:kkennelly DATE:7/20/2006 3:45:46 PM  
This has been resolved sometime in the past

|                           |
|---------------------------|
| Issue ID: 6015            |
| Subject: re-entering data |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kurtenbach, Tom           | 2/4/2005 6:20:43 PM  |
| Modified By: hlee                       | 6/10/2009 2:42:49 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
| Duray, Jim       |          |          |          |
| Kennelly, Krisha |          |          |          |

1/5/2016 11:10:57 AM

HRS AASHTO

14

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | On Hold   |      |             |
| Duray, Jim | New       | High | Bug         |
|            | Suspended |      | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |
|            | Discard   |      |             |

### Contacts

| Name        | Company                 | Email 1               | Phone 1 |
|-------------|-------------------------|-----------------------|---------|
| Keith Gager | New York DOT            | unknown@unknown.com   |         |
| Jim Duray   | Michael Baker Jr., Inc. | jduray@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                       |
|------------|---------------|-----------------------------------------------|
| 6020.15315 | Suspended     | tabular results window additional information |

### Description

FROM:tkurtenbach DATE:Friday, February 04, 2005 1:20:43 PM

in the bridge alternatives screen, substructures tab, opis seems to know the stations that it will accept. Any other answer is "not loacted on the reference line". If Opis knows the answer that it wants, could it just fill it in?

FROM:kkennelly DATE:2/4/2005 3:01:16 PM

I guess we could fill in the superstructure span lengths after you pick the order of the substructure units.

1. Domain code can't currently compute the span length until the order of the substructure units has been saved. Will have to change code to work with non-persistent domain object.

2. Do we compute the length after the second substructure unit selection loses focus? Or do we add a compute button?

FROM:jduray DATE:2/4/2005 5:10:45 PM

So is the domain checking and the window doesn't know anything about the correct values?

How long will #1 above take? Let's discuss.

1/5/2016 11:10:58 AM

HRS AASHTO

15

Complete Issue Information

FROM:kkennelly DATE:2/7/2005 8:24:43 AM

Right now we pass the superstruct ref line data (distance, offset, angle), the superstruct span lengths entered in the grid and the substructure units selected to the domain and the domain validates the span lengths against the substructure units.

FROM:hlee DATE:7/20/2006 11:42:43 AM  
Changed Project to Support Center/Opis Sub.

FROM: Herman Lee DATE: 6/10/2009 10:41:21 AM Eastern Daylight Time  
Resolved by Beta TAG 6/9/09.

|                                                        |
|--------------------------------------------------------|
| Issue ID: 6020                                         |
| Subject: tabular results window additional information |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Gager, Keith              | 2/4/2005 7:04:13 PM  |
| Modified By: hlee                       | 6/10/2009 2:54:19 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kgager DATE:Friday, February 04, 2005 2:04:13 PM

We touched on this during morning discussion:

Need some more explanation (helpscreen or?) on the relationship between this screen and load palette.

Also, we weren't aware of meaning of 'save' feature...

May want to populate 'library' (if possible) with common tasks.

1/5/2016 11:10:58 AM

HRS AASHTO

16

Complete Issue Information

(like factors pages)

FROM:jduray DATE:Sunday, February 06, 2005 8:42:50 AM

FROM:hlee DATE:7/20/2006 11:35:02 AM  
Changed Project to Support Center/Opis Sub.

FROM: Herman Lee DATE: 6/10/2009 10:52:18 AM Eastern Daylight Time  
Discarded by Beta TAG 6/9/09.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 6037                                                                     |
| Subject: Minimize time of superstructure analysis when launched from pier analysis |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 2/10/2005 1:58:54 PM |
| Modified By: administrator              | 6/19/2008 4:20:28 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

1/5/2016 11:10:58 AM

HRS AASHTO

17

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                               |
|------------|---------------|---------------------------------------|
| 6269.15066 | Assigned      | Add eccentricity to LLReactionDetails |

Description

FROM:kkennelly DATE:2/10/2005 8:54:48 AM

It would be nice to minimize the time for the superstructure analysis when it is launched from a pier analysis by setting the engine properties to not generate pois and turn off output.

FROM:hlee DATE:7/20/2006 11:38:17 AM

Changed Project to Support Center/Opis Sub.

|                                                |
|------------------------------------------------|
| Issue ID: 6269                                 |
| Subject: Add eccentricity to LLReactionDetails |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Li, Xinmei                | 4/4/2005 8:07:11 PM  |
| Modified By: hlee                       | 6/10/2011 8:44:23 PM |

1/5/2016 11:10:59 AM

HRS AASHTO

18



### Complete Issue Information

|                       |
|-----------------------|
| Priority: High        |
| Category: Enhancement |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                         |
|------------|---------------|-----------------------------------------------------------------|
| 6365.14970 | Suspended     | Column Geometry/Wall Shaft Geometry window for varying sections |

### Description

FROM:xli DATE:4/4/2005 3:59:17 PM

It would be nice to have girder reactions eccentricity in Live load reactions output file.

FROM:hlee DATE:7/20/2006 11:41:30 AM

Changed Project to Support Center/Opis Sub.

Complete Issue Information

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 6365                                                           |
| Subject: Column Geometry/Wall Shaft Geometry window for varying sections |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 4/29/2005 2:46:49 PM |
| Modified By: administrator              | 6/19/2008 4:20:04 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:4/29/2005 10:43:09 AM

Column geometry varies linearly over its height.

Would be nice to have a listbox or something where you could specify if you want to see the cross section for the top or bottom of the column segment. Right now you have to know that you have to right click to get a list where you can pick top or bottom cross section. (I think a lot of users will have trouble with this.)

FROM:hlee DATE:7/20/2006 11:45:33 AM

Changed Project to Support Center/Opis Sub.

Complete Issue Information

|                                       |
|---------------------------------------|
| Issue ID: 6562                        |
| Subject: Fatigue limit state envelope |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 7/12/2005 8:07:01 PM |
| Modified By: administrator              | 6/19/2008 4:19:49 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status           | Priority | Category |
|-----------------|------------------|----------|----------|
| Duray, Jim      | New              | High     | Unknown  |
|                 | On Hold          |          | Bug      |
|                 | Not Reproducible |          |          |
| Duray, Jim      | Not Reproducible | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

VI6562.bbd

Tasks

| Name       | Current State | Summary                                        |
|------------|---------------|------------------------------------------------|
| 6565.14770 | Assigned      | Transverse Live load Patterns not re-generated |

Description

FROM:kkennelly DATE:7/12/2005 4:07:36 PM

Run attached bridge using "Final" design mode. Open Tabular Results, create report for just the Fatigue limit state. Fatigue limit state envelope shows garbage numbers in the generated report.

FROM:kkennelly DATE:6/4/2008 2:34:44 PM

I can't reproduce this in 6.0 Beta 3 release version. (note I didn't use attached bridge cause it needs to be migrated, I used LRFD Substructure Example 1)

Issue ID: 6565  
Subject: Transverse Live load Patterns not re-generated

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Ihnat, Joseph  
Submitted By: Kennelly, Krisha 7/13/2005 4:59:21 PM  
Modified By: jihnat 7/10/2008 8:10:21 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

1/5/2016 11:11:00 AM

HRS AASHTO

22

### Complete Issue Information

|               |                    |      |           |
|---------------|--------------------|------|-----------|
| Duray, Jim    | New                | High | Unknown   |
| Duray, Jim    | New                | High | Unknown   |
|               | Information Needed |      |           |
| Ihnat, Joseph | Resolved           |      | Education |
| Ihnat, Joseph | Resolved           | High | Education |

### Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

### Documents

| Name | Resource Identifier | Description      |
|------|---------------------|------------------|
|      | test.bbd            | Here is the file |

### Tasks

| Name       | Current State | Summary                            |
|------------|---------------|------------------------------------|
| 6575.14760 | Resolved      | Can't select inputted I beam shape |

### Description

FROM:kkennelly DATE:7/13/2005 12:58:40 PM

BID 22. Analyze pier for current LL settings with lane increment = 4 ft. Change lane increment to 1', re-analyze pier alt. The Live Load Patterns report is not re-generated with 1' increment and my total number of load combinations did not change between the 2 runs. I think it should have increased in the second run because I should have more LL positions.

FROM:jduray DATE:7/14/2005 11:00:13 AM

I suspect the data change tracker (DCT) is not aware of the change and the TL is not actually being run (or the code that checks the DCT is not working properly).

FROM:jduray DATE:6/4/2008 4:28:34 PM

Resolved for beta 4.

FROM:kkennelly DATE:6/16/2008 2:36:18 PM

This is not working in beta 4. I changed the lane increment and vehicle increment in lane and the Live Load Patterns report is not regenerated. The analysis progress log states that "Vehicle patterns were generated by a previous analysis. "

FROM: Jim Duray DATE: 7/10/2008 10:42:19 AM Eastern Daylight Time

The change tracker is not being updated from the Superstructure Loads window - LL Settings tab.

FROM: Joseph Ihnat DATE: 7/10/2008 4:04:53 PM Eastern Daylight Time

The DataChangeTracker was being updated for the substructure instead of the superstructure. Fixed

1/5/2016 11:11:00 AM

HRS AASHTO

23

Complete Issue Information  
for 6.0 release.

|                                             |
|---------------------------------------------|
| Issue ID: 6575                              |
| Subject: Can't select inputted I beam shape |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ihnat, Joseph          |                      |
| Submitted By: Obeidat, Khalid           | 8/5/2005 2:58:27 PM  |
| Modified By: administrator              | 6/19/2008 4:19:49 PM |
| Priority: High                          |                      |
| Category: Education                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kobeidat DATE:Friday, August 05, 2005 10:58:27 AM  
REPORTED BY:

DESCRIPTION: I input the prestressed I-beam data under shape information but the beam doesn't show for selection in the beam details under members. Is it installation error?

COMMENTS:

FROM:kobeidat DATE:Friday, August 05, 2005 10:58:28 AM

FROM:jihnat DATE:8/5/2005 3:03:02 PM  
Please Export the bridge and attach the BBD file to this incident.

FROM:jihnat DATE:8/5/2005 4:02:49 PM  
Make sure you haven't inadvertently created a PS Box Member Alternative (which is the default). In that case, I shapes will not appear in the drop list.

1/5/2016 11:11:00 AM

HRS AASHTO

24

Complete Issue Information

FROM:kobeidat DATE:Monday, August 22, 2005 10:52:33 AM

FROM:jihnat DATE:8/22/2005 1:43:10 PM

The member alternatives are both PS Box, so only PS Box shapes will be available in the drop down list.

If you create a PS I member alt, your shape will be appear in the list.

|                                                            |
|------------------------------------------------------------|
| Issue ID: 6577                                             |
| Subject: Copy and paste pier column details from BWS tree. |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Lee, Herman               | 8/8/2005 1:18:05 PM  |
| Modified By: administrator              | 6/19/2008 4:19:48 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
|                 | Duplicate |          |             |
| Duray, Jim      | Duplicate | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name       | Current State | Summary        |
|------------|---------------|----------------|
| 6579.14756 | Resolved      | Execution Time |

Description

FROM:hlee DATE:8/8/2005 8:54:29 AM  
Submitted on behalf of Steve Johnson South Dakota DOT.  
Requested at 2005 UG meeting.

FROM:hlee DATE:6/9/2008 8:20:08 AM  
Duplicate of Incident 5987.

|                         |
|-------------------------|
| Issue ID: 6579          |
| Subject: Execution Time |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Horton, Doug              | 8/9/2005 12:54:14 PM |
| Modified By: administrator              | 6/19/2008 4:19:48 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|



Complete Issue Information

|                  |           |      |                        |
|------------------|-----------|------|------------------------|
| Duray, Jim       | New       | High | Unknown                |
|                  | Suspended |      | Enhancement            |
| Duray, Jim       | New       | High | Bug                    |
| Kennelly, Krisha | On Hold   |      |                        |
| Duray, Jim       | Assigned  |      | Maintenance            |
|                  | Closed    |      |                        |
| Duray, Jim       | Closed    | High | Maintenance            |
|                  |           |      | Maintenance - Internal |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                           |
|------------|---------------|-----------------------------------|
| 6580.14755 | Closed        | System Defaults - Library Factors |

Description

FROM:dhorton DATE:Tuesday, August 09, 2005 8:54:14 AM  
 REPORTED BY:Doug Horton

DESCRIPTION: We have been working with the demo, testing some of the various configurations. Defaults have typically been used. The runs are being made on a P3, 1.2 GigaHertz processor w/ 256 Ram. This is a slow machine, but the results are still excessive. Completion of the final analysis for the sample Hammerhead took 2 hours to run and reported 323,456 load combinations had been investigated. Very thorough, but borders on the ridiculous. A three column pier has been running for 9 hours and still is not completed. The long run time may be due to the number of combinations tested, or there may be something wrong with the routine. With that many cases reviewed, there has to be many which are almost identical. The program needs some sort of internal decision tree that will reduce the time of analysis or we can stop development now because it will never be used. We recently reviewed BRASS Pier (evaluation version) and LEAP's RCPier, both of which have relatively short compute times. BRIDGEWare will not be used if much faster products are available.

COMMENTS:

This should be added to the Milwaukee agenda for discussion.  
 FROM:dhorton DATE:Tuesday, August 09, 2005 8:54:14 AM

Complete Issue Information

FROM:jduray DATE:8/10/2005 8:54:29 AM

I agree completely that we need to do something about the performance. We have thoroughly tested the load combinations routine and believe it is functioning properly. The issue is the number of combinations that are generated. This stems mostly from the number of live load patterns.

We have discussed this at previous TF meetings and concluded it is ok this way and I believe someone said other software takes similar time when considering all loadings. I submitted mockups for windows that would allow the user to better control the number of live load positions (patterns) which dramatically effects the number of combinations. I believe it is planned to implement these for Phase 2.

I will investigate a little more before our conference call meeting.

|                                            |
|--------------------------------------------|
| Issue ID: 6580                             |
| Subject: System Defaults - Library Factors |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 8/9/2005 2:01:13 PM  |
| Modified By: hlee                       | 5/17/2010 2:04:22 PM |
| Priority: High                          |                      |
| Category: Maintenance - Internal        |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/9/2005 9:57:35 AM

Question came up at 2005 user group training. Default library factors are 1998, should they be 2004 instead?

FROM:kkennelly DATE:6/4/2008 2:01:39 PM

1/5/2016 11:11:01 AM

HRS AASHTO

28

### Complete Issue Information

we can close this incident. Factors are defaulting to 2007 for 6.0

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6581                                          |
| Subject: Misspelled word on 3D schematic toolbar button |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Bhanushali, Girish     |                      |
| Submitted By: Kennelly, Krisha          | 8/9/2005 2:02:23 PM  |
| Modified By: administrator              | 6/19/2008 4:19:48 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | Assigned | High     | Bug      |
|                    | Resolved |          |          |
| Bhanushali, Girish | Resolved | High     | Bug      |

Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6582.14753 | On Hold       | Grids not resizing correctly |

Description

FROM:kkennelly DATE:8/9/2005 9:58:58 AM  
Toolbar button for LV plane button has Vertical misspelled.

FROM:gbhanushali DATE:9/7/2005 10:16:42 AM  
Fixed.

|                                                         |
|---------------------------------------------------------|
| Issue ID: 6582<br>Subject: Grids not resizing correctly |
|---------------------------------------------------------|

|                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub<br>Primary Contact: Ihnat, Joseph<br>Submitted By: Kennelly, Krisha 8/9/2005 2:07:01 PM |
|---------------------------------------------------------------------------------------------------------------------------------|

### Complete Issue Information

|                            |                      |
|----------------------------|----------------------|
| Modified By: administrator | 6/19/2008 4:19:48 PM |
| Priority: High             |                      |
| Category: Bug              |                      |

### History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | High     | Bug      |
| Bhanushali, Girish | On Hold   |          |          |
|                    | Duplicate |          |          |
| Bhanushali, Girish | Duplicate | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                  |
|------------|---------------|--------------------------------------------------------------------------|
| 6583.14752 | Duplicate     | Can't see dimension lines or where to enter data on Pier Geometry window |

### Description

FROM:kkennelly DATE:8/9/2005 10:00:12 AM

Users at 2005 UG training complained about the following grids not resizing properly:

Superstructure Loads - BR tab

Substructure Loads - Wind on Sub - PD column is too skinny at first

Relative Stiffness window - Bearing Types grid

Complete Issue Information

Issue ID: 6583  
Subject: Can't see dimension lines or where to enter data on Pier Geometry window

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Bhanushali, Girish  
Submitted By: Kennelly, Krisha 8/9/2005 2:08:13 PM  
Modified By: administrator 6/19/2008 4:19:48 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/9/2005 10:04:48 AM

User at 2005 UG training had screen at 1600x1200 and couldn't see the dimension lines or where to enter data on the Pier Geometry window.

FROM:kkennelly DATE:6/4/2008 1:37:07 PM

Duplicate of 8692.

## Complete Issue Information

|                                     |
|-------------------------------------|
| Issue ID: 6584                      |
| Subject: Foundation Geometry window |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Bhanushali, Girish     |                      |
| Submitted By: Kennelly, Krisha          | 8/9/2005 2:09:45 PM  |
| Modified By: administrator              | 6/19/2008 4:19:48 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
| Bhanushali, Girish | Assigned |          |          |
|                    | On Hold  |          |          |
| Bhanushali, Girish | On Hold  | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

1/5/2016 11:11:02 AM

HRS AASHTO

33

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                      |
|------------|---------------|------------------------------|
| 6585.14750 | Resolved      | Wrong LRFD factors displayed |

Description

FROM:kkennelly DATE:8/9/2005 10:06:06 AM

On Herman's laptop used in the 2005 UG training, the bot of column label overlapped with the elevation entry and the bottom of ftg elevation entry didn't appear. Had to click where I know the edit control is to enable it to enter data.

|                                       |
|---------------------------------------|
| Issue ID: 6585                        |
| Subject: Wrong LRFD factors displayed |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Li, Xinmei             |                      |
| Submitted By: Kennelly, Krisha          | 8/9/2005 2:15:15 PM  |
| Modified By: administrator              | 6/19/2008 4:19:48 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |



## Complete Issue Information

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | On Hold  | High     | Bug      |
|                 | Resolved |          |          |
| Duray, Jim      | Resolved | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                                |
|------------|---------------|------------------------------------------------------------------------|
| 6591.14744 | Resolved      | Load Combinations - factors for DL should skip DLmin if equal to DLmax |

### Description

FROM:kkennelly DATE:8/9/2005 10:10:00 AM  
Reported in 2005 UG training:

BID 23, open the Load Combinations window for the pier alt. The LRFD factors displayed at top of window show 1998 spec factors. For the Preliminary Design Setting (US) in the library, the factors are the 2004 factors.

FROM:xli DATE:8/15/2005 8:24:43 AM

In BID 23, the design settings of pier alt "Pier 1 hammerhead" is set default, so in load combinations window the system default LRFD factors are displayed.

If user creates an "LRFD substructure design setting" and assign 2004 factors as LRFD factors, and overrides design settings of this pier alt with the one that he created, then in load combination windows 2004 factors are displayed.

Is this the way that we wanted it to work?

FROM:kkennelly DATE:8/15/2005 12:46:29 PM

FROM:kkennelly DATE:8/15/2005 12:46:54 PM

No, the Load Combinations window should always display the LRFD factors that belong to the Design Setting that is displayed in the Load Combinations window.

FROM:xli DATE:8/15/2005 1:32:57 PM

Get the default LRFD factor Id from the DoLibSubStructLrfdDesignSetting object instead of DoLibDefault object.

---

1/5/2016 11:11:03 AM

HRS AASHTO

35

### Complete Issue Information

Issue ID: 6591  
Subject: Load Combinations - factors for DL should skip DLmin if equal to DLmax

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Duray, Jim 8/10/2005 3:38:11 PM  
Modified By: administrator 6/19/2008 4:19:47 PM  
Priority: High  
Category: Bug

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name        | Company      | Email 1                              | Phone 1       |
|-------------|--------------|--------------------------------------|---------------|
| Doug Horton | Virginia DOT | Douglas.Horton@VDOT.<br>Virginia.gov | (804)786-1315 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                                        |
|------------|---------------|----------------------------------------------------------------|
| 6608.14727 | Suspended     | Proposed Addition - Options for Analyze button - Super and Sub |

### Description

FROM:jduray DATE:4/18/2008 9:55:31 AM  
Later decided not to skip (vi 8561).

Complete Issue Information

Issue ID: 6608  
Subject: Proposed Addition - Options for Analyze button - Super and Sub

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Horton, Doug 8/15/2005 8:07:21 PM  
Modified By: administrator 6/19/2008 4:19:46 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dhorton DATE:Monday, August 15, 2005 4:07:21 PM  
REPORTED BY: A. Zickler

Complete Issue Information

DESCRIPTION: For the future, when super and sub will coexist, provide dropdown or option in some manner to allow only superstructure or only substructure analysis. When both exist in the tree, the analysis runs through them both as it appears now.

COMMENTS: This will definitely be needed and may already be in the plan for the final substructure. there will also have to be some sort of "option" to work with just the footing, column or cap.

FROM:dhorton DATE:Monday, August 15, 2005 4:07:31 PM

FROM:jduray DATE:12/13/2007 9:33:26 AM

Super and sub have independent Analyze buttons. Change this incident request to the need to be able to do spec-checks of individual pier components (cap, column 1, column2, etc).

|                                                             |                      |
|-------------------------------------------------------------|----------------------|
| Issue ID: 6618                                              |                      |
| Subject: LL-Distribution overrides not being used by engine |                      |
| Folder: /Virtis/Support Center/Opis Sub                     |                      |
| Primary Contact: Duray, Jim                                 |                      |
| Submitted By: Kemna, Darren                                 | 8/18/2005 3:50:36 PM |
| Modified By: administrator                                  | 6/19/2008 4:19:45 PM |
| Priority: High                                              |                      |
| Category: Bug                                               |                      |

History

| Primary Contact | Status  | Priority | Category |
|-----------------|---------|----------|----------|
| Duray, Jim      | New     | High     | Unknown  |
|                 | On Hold |          | Bug      |

Complete Issue Information

|                    |          |      |     |  |
|--------------------|----------|------|-----|--|
|                    | Assigned |      |     |  |
| Duray, Jim         | Assigned | High | Bug |  |
| Duray, Jim         | New      | High | Bug |  |
| Bhanushali, Girish | On Hold  |      |     |  |
| Bhanushali, Girish | On Hold  | High | Bug |  |
|                    | Assigned |      |     |  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 6691.14649 | On Hold       | Shear envelope doesn't look right on the 3D schematic |

Description

FROM:dkemna DATE:Thursday, August 18, 2005 11:50:36 AM  
REPORTED BY:

DESCRIPTION:

I ran the attached bridge with the computed LL values only and checked moment along cap. I then overrided the values and increased the axle contribution by tenfold while leaving the lane values the same. Reran and got the same moment values. If the overrides are working like I expect the values should have been much larger.

COMMENTS:

Important if the user designs the super in another program and wants to use minimal input for the super portion of the substructure program.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 6691                                                 |
| Subject: Shear envelope doesn't look right on the 3D schematic |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                                     |                       |
|-------------------------------------|-----------------------|
| Primary Contact: Bhanushali, Girish |                       |
| Submitted By: Kennelly, Krisha      | 9/14/2005 12:23:25 PM |
| Modified By: jduray                 | 7/10/2008 5:51:06 PM  |
| Priority: High                      |                       |
| Category: Bug                       |                       |

### History

| Primary Contact    | Status           | Priority | Category |
|--------------------|------------------|----------|----------|
| Ihnat, Joseph      | Assigned         | High     | Unknown  |
| Ordoobadi, Mehrdad |                  |          | Bug      |
| Duray, Jim         | On Hold          |          |          |
|                    | Not Reproducible |          |          |
| Duray, Jim         | Not Reproducible | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State    | Summary                     |
|------------|------------------|-----------------------------|
| 7306.16028 | Not Reproducible | Pier Alt copy after analyze |

### Description

FROM:kkennelly DATE:9/14/2005 8:17:41 AM  
BID22. Analyze the pier alt. Open 3D schematic, on Results dialog pick Limit State Envelope for Strength 1, pick shear yy. The schematic only shows forces on the left half of the pier. If I look at the envelope in the Tabular Results, there are forces on members 10, 11, 12, 13.

Complete Issue Information

|                                      |
|--------------------------------------|
| Issue ID: 7306                       |
| Subject: Pier Alt copy after analyze |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 5/19/2006 1:24:36 PM |
| Modified By: administrator              | 6/19/2008 4:27:51 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:jihnmat DATE:5/19/2006 9:22:47 AM

BID22, Open BWS, copy "Pier 1 hammerhead" to same pier. Paste works ok.  
Analyze "Pier 1 hammerhead", copy and then Paste to same pier. Pier is not copied.

FROM:jihnmat DATE:5/19/2006 9:36:23 AM

For some reason the Copy of the IDoRcSolidShaftPierStructDef fails after the Analyze.

FROM:jduray DATE:5/19/2006 10:37:14 AM

I was able to reproduce this by opening the Superstructure Loads window and clicking "Compute DL

1/5/2016 11:11:04 AM

HRS AASHTO

41

Complete Issue Information

Reactions".

FROM:jduray DATE:5/19/2006 10:39:24 AM  
Just opening the Superstructure Loads window causes the problem.

FROM:jduray DATE:5/19/2006 11:13:43 AM  
0.9 behaves the same way.

FROM:kkennelly DATE:6/4/2008 2:20:21 PM  
I cannot reproduce this in 6.0 Beta 3 release version.

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 7485                                            |
| Subject: Superstructure loads window - grids don't resize |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ihnat, Joseph          |                      |
| Submitted By: Duray, Jim                | 7/7/2006 11:59:42 AM |
| Modified By: administrator              | 6/19/2008 4:27:37 PM |
| Priority: High                          |                      |
| Category: Bug - GUI 2                   |                      |

History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Ihnat, Joseph   | Assigned | High     | Bug<br>Bug - GUI 2 |
| Ihnat, Joseph   | Assigned | High     | Bug - GUI 2        |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|



## Complete Issue Information

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Pier_Example.doc    |             |
|      | A3069sub.xml        |             |

### Tasks

| Name       | Current State | Summary                                                |
|------------|---------------|--------------------------------------------------------|
| 7514.15820 | Resolved      | Unable to generate model due to modulus of elasticity? |

### Description

FROM:jduray DATE:7/7/2006 7:59:25 AM

Load pattern and load descriptions grids do not resize with the window.

FROM:jihnata DATE:6/5/2008 3:55:55 PM

The grids are adequately sized. This is low priority.

Issue ID: 7514

Subject: Unable to generate model due to modulus of elasticity?

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Li, Xinmei

Submitted By: Kemna, Darren

7/24/2006 1:06:21 PM

Modified By: administrator

6/19/2008 4:27:34 PM

Priority: High

## Complete Issue Information

Category: Bug

## History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Resolved |          |          |
|                 | Assigned |          |          |
|                 | Resolved |          |          |
| Duray, Jim      | Closed   | High     | Bug      |

## Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                                                     |
|------------|---------------|-------------------------------------------------------------|
| 7515.15819 | Closed        | Unable to save new bridge in OpisSub within Oracle database |

## Description

FROM:dkemna DATE:Monday, July 24, 2006 9:06:21 AM

I'm trying to generate a model in the 0.9.1 demo version of the OPIS Substructure program. I get the attached error message upon generation. I searched the file over and can't find any errors in input. I need some help.

FROM:kkennelly DATE:7/24/2006 1:20:37 PM

If I use the Validate function on Pier 1 (Validate toolbar button when Pier 1 is selected) I see the following errors reported:

ERROR: Distributed load not on pier cap.

Column2 (Column)

ERROR: Concrete material not defined for column segment.

Column3 (Column)

ERROR: Concrete material not defined for column segment.

If you open the Components window for the these 2 columns you will see "Class A" listed as the concrete segment. That is because when the window is opened, we default to the first material in the list. So it looks like you have a concrete material already applied but I don't think you really do. You

1/5/2016 11:11:05 AM

HRS AASHTO

44

### Complete Issue Information

have to hit OK or Apply when this window is opened to save this concrete material.

If I hit OK to close these 2 windows, I don't get that Validation error anymore.

The error about the distributed load on the cap is due to the cap length being computed as  $7.2917+24.4167+24.4167+7.2917=63.4168'$ . The distributed load is entered with a length = 63.42' which is longer than the cap. You have to be consistent with the number of decimal places you enter throughout Opis.

If you make the above changes you can get the model to generate.

Above is a workaround. Code needs to be fixed: Since the grid is already populated for the user, they don't have to enter anything in the grid. I suspect since the user doesn't have to enter anything the grid is not being triggered to save the data. The Column Segment window should not default to the first concrete material if a material is not selected. That way the user is forced to pick a material and hit Ok or Apply. Do same for Wall windows.

FROM:xli DATE:7/27/2006 11:08:33 AM

Code is fixed.

When component window is first open, material column is blank. If user saves the window without choosing any material, a message will come up to warn user to set material type.

|                                                                      |
|----------------------------------------------------------------------|
| Issue ID: 7515                                                       |
| Subject: Unable to save new bridge in OpisSub within Oracle database |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Ordoobadi, Mehrdad        | 7/24/2006 1:23:34 PM |
| Modified By: administrator              | 6/19/2008 4:27:34 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Complete Issue Information

### Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7523.15811 | Resolved      | program crashes frequently |

### Description

FROM:mordoobadi DATE:7/24/2006 9:16:33 AM  
John Gahagan : MODOT reported this issue.

He is not able to save a new bridge to a 0.9.1 database. With the following errors:

Unable to save Bridge data!

Error updating database record set  
ORA-00001: Unique constraint (OPISADM.XPKABW\_BRIDGE\_DESIGN\_PARAM) violated,

FROM:mordoobadi DATE:7/24/2006 9:24:25 AM  
When you run the database creation scripts did you create a spool file? If so please send it to me so that I can inspect it for errors. I suspect something went wrong during database creation.

FROM:mordoobadi DATE:7/24/2006 9:26:06 AM  
I found what is happening. SQL\*Plus does not tolerate blank lines within a SQL statement. For that reason, population of two rows (BIDs 21 and 23) in the abw\_bridge table failed. Consequently, this prevented some foreign keys to be created. When a new bridge is saved, OpisSub assigns BID of 23 for the new bridge because the last BID in abw\_bridge is 22. Then it attempts to save a row with a row with BID 23 in abw\_bridge\_design\_param table. But a row with the same ID already exists, so you get an error.

I have prepared a script that will resolve the issue. Please log-in as the schema owner and run the attached script.

Please let us know whether this fixes your problem or not.

FROM:mordoobadi DATE:7/24/2006 9:26:33 AM  
Darren Kemna verified that the script resolved the issue:

I have successfully saved a file. Thanks to everyone for their help.

FROM:mordoobadi DATE:7/24/2006 9:28:39 AM  
Oracle database scripts updated to resolve this issue. An email should be sent to OpisSub participants informing them of the problem.

The Oracle database creation scripts for OpisSub version 0.9.1 contained a few errors. If the scripts are run in the Oracle's SQL\*Plus utility program some of the SQL commands may fail. If you are using an Oracle database server for your 0.9.1 database please follow the instructions listed below to resolve the issue:

- (1) Using internet explorer go to <ftp://ftp.mbakercorp.com>
- (2) Login with username/password hrsdept/jetta

1/5/2016 11:11:05 AM

HRS AASHTO

46

## Complete Issue Information

- (3) Browse to the Outgoing/OpisSub folder
- (4) Download a file called OpisSubOracleDBFix.zip to your local machine.
- (5) Extract the contents of the file to a folder on your machine (e.g. C:\Temp). Please note that the zip file is password protected and the password is "opissub".
- (6) If you have already created the OpisSub 0.9.1 database then do the following:
  - a) Start SQL\*Plus and login as the OpisSub database schema owner
  - b) At the prompt enter the following SQL commands:

```
> set echo on;
> set define off;
> prompt off;
> @ C:\Temp\Fix-091-DB-Oracle.SQL
>
```
- (7) If you haven't created the OpisSub 0.9.1 database yet, then you can just use the corrected database creation scripts:
  - \* AllScripts-ProdDB-091-Oracle.SQL
  - \* AllScripts-SampleDB-091-Oracle.SQL(that you extracted from the zip file in step 5) when you create your OpisSub database. Please refer to section 7.2 of Opis Substructure Startup Guide for detailed instructions.

|                                     |
|-------------------------------------|
| Issue ID: 7523                      |
| Subject: program crashes frequently |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Obeidat, Khalid           | 7/25/2006 1:38:45 PM |
| Modified By: administrator              | 6/19/2008 4:27:34 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

## History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
|                  | Assigned |          |          |
| Kennelly, Krisha | Resolved |          | Bug      |
| Kennelly, Krisha | Resolved | High     | Bug      |

## Contacts

| Name           | Company       | Email 1                        | Phone 1      |
|----------------|---------------|--------------------------------|--------------|
| Khalid Obeidat | Minnesota DoT | khalid.obeidat@dot.state.mn.us | 651-366-4485 |

Complete Issue Information

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | Security.JPG        |             |

Tasks

| Name       | Current State | Summary                    |
|------------|---------------|----------------------------|
| 7532.15802 | On Hold       | Tutorial Security Settings |

Description

FROM:kobeidat DATE:Tuesday, July 25, 2006 9:39:05 AM  
during our test run of OPIS sub we encountered many crashes without a meaningful help about the reason for the crash. Please advise  
Note i'm attaching both bbd and xml file of the input

FROM:kobeidat DATE:Tuesday, July 25, 2006 11:30:57 AM

FROM:kobeidat DATE:Tuesday, July 25, 2006 11:31:32 AM

FROM:kkennelly DATE:7/27/2006 12:17:54 PM  
I started to look into this. The crash occurs when I try to view the 3D schematic of the pier or when I try to generate the FE Model. I suspect some data in the db is corrupted. I did look at the input on each window for the pier and the input looked reasonable.

FROM:kkennelly DATE:8/9/2006 8:50:06 AM  
Problem is in the ModelDomain code. That code is not correctly handling the case where the superstructure girders are linked.

As a workaround for the user, try unlinking the superstructure girders and be sure to define the prestress shape assigned to the member alts for G3 and G4 in Superstructure 1. Opis is trying to compute the superstructure depth but it can't since G3 and G4 don't have a PS shape assigned in their Beam Details window and code is not recognizing that these mbrs are linked. Code is not exiting gracefully when it finds that G3 and G4 don't have PS shapes assigned.

FROM:kkennelly DATE:8/9/2006 10:48:21 AM  
Code is fixed to recognize linked girders and to recognize if beam shapes are assigned to the mbr alt.

|                                     |
|-------------------------------------|
| Issue ID: 7532                      |
| Subject: Tutorial Security Settings |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Teal, Dean                | 7/28/2006 1:55:46 PM |

### Complete Issue Information

|                   |                      |
|-------------------|----------------------|
| Modified By: hlee | 6/10/2009 2:44:48 PM |
| Priority: High    |                      |
| Category: Help    |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Unknown  |
| Kennelly, Krisha | Assigned |          |          |
|                  | On Hold  |          | Help     |
| Kennelly, Krisha | On Hold  | High     | Help     |
|                  | Resolved |          |          |

### Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary              |
|------------|---------------|----------------------|
| 7533.15801 | On Hold       | Tutorial Screen Size |

### Description

FROM:dteal DATE:Friday, July 28, 2006 9:56:03 AM

Maybe something that should be added to the readme text file on the cd for the tutorials using Pier 1 and Pier 2.

Microflash media player security on every PC I've tried it on need to be changed. The Global Security setting needed to be set to "Always Allow". See attached.

If this isn't done, the only way to exit was to use the Task Manager and end the program.

FROM:kkennelly DATE:6/4/2008 3:10:21 PM

marked as on hold since we'll have to re-generate the tutorials when we release 6.0

FROM: Herman Lee DATE: 6/10/2009 10:43:02 AM Eastern Daylight Time

Resolved by Beta TAG 6/9/09.

1/5/2016 11:11:06 AM

HRS AASHTO

49

## Complete Issue Information

|                               |
|-------------------------------|
| Issue ID: 7533                |
| Subject: Tutorial Screen Size |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Teal, Dean                | 7/28/2006 1:57:10 PM |
| Modified By: hlee                       | 6/10/2009 2:44:35 PM |
| Priority: High                          |                      |
| Category: Help                          |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:dteal DATE:Friday, July 28, 2006 9:57:10 AM

On our end we can't adjust the screen size, it doesn't auto fit. Have to do some scrolling up and down to see the whole screen on a 19" monitor.

Is there some way the user can adjust the screen size?? Fit Screen?

If not is there anyway in the future this tutorial can be sent so it does fit our screens?

Or is it just me?

FROM:hlee DATE:7/28/2006 12:44:47 PM

We've to check whether auto fit is available as a option in the software we used to make the tutorials.

The following is a work around for now:

1. Copy the tutorial files to your local machine.

1/5/2016 11:11:06 AM

HRS AASHTO

50



Complete Issue Information

2. Open "Pier1Tutorial\_Topic1.htm" with Notepad.
3. Locate the line (Line 12) that ends with:  
width="973" height="865" ID="Captive1">
4. Change the width and height to a smaller number.
5. Save the htm file.
6. Try and see whether it fits the screen. You can double-click on "Opis Substructure Tutorial 1 - Solid Shaft Pier.html" topic 1 or each topic htm file to try.

FROM:kkennelly DATE:6/4/2008 3:09:41 PM  
 marked as on hold since we'll have to re-generate the tutorials when we release 6.0

FROM: Herman Lee DATE: 6/10/2009 10:43:07 AM Eastern Daylight Time  
 Resolved by Beta TAG 6/9/09.

|                                                                               |
|-------------------------------------------------------------------------------|
| Issue ID: 7535                                                                |
| Subject: Dimension line located outside the view of the Pier Geometry window. |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Bhanushali, Girish     |                      |
| Submitted By: Mullins, Randall          | 8/4/2006 2:01:33 PM  |
| Modified By: administrator              | 6/19/2008 4:27:33 PM |
| Priority: High                          |                      |
| Category: Unknown                       |                      |

History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | High     | Unknown  |
| Bhanushali, Girish | Assigned  |          |          |
|                    | Duplicate |          |          |
| Bhanushali, Girish | Duplicate | High     | Unknown  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

1/5/2016 11:11:06 AM

HRS AASHTO

51

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | GraphicCardInfo.gif |             |

Tasks

| Name       | Current State | Summary                |
|------------|---------------|------------------------|
| 7542.15792 | Suspended     | Secondary load effects |

Description

FROM:hlee DATE:8/4/2006 9:55:02 AM  
Entered on behalf of Randall Mullins.

Attached two screen captures.  
His laptop resolution is 1920x1200.

FROM:kkennelly DATE:6/4/2008 1:37:34 PM  
Duplicate of 8692

|                                 |
|---------------------------------|
| Issue ID: 7542                  |
| Subject: Secondary load effects |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kemna, Darren             | 8/4/2006 6:54:21 PM  |
| Modified By: hlee                       | 6/10/2011 8:41:44 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

## Complete Issue Information

### History

| Primary Contact | Status           | Priority | Category    |
|-----------------|------------------|----------|-------------|
| Duray, Jim      | New              | High     | Enhancement |
|                 | Suspended        |          |             |
| Duray, Jim      | Suspended        | High     | Enhancement |
|                 | Not Reproducible |          |             |
|                 | Suspended        |          |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                 |
|------------|---------------|-----------------------------------------|
| 7543.15791 | Suspended     | Shrinkage in 3D schematic is misleading |

### Description

FROM:dkemna DATE:Friday, August 04, 2006 2:54:22 PM

Propose that application perform moment magnification on strength limit combinations for column analysis per specifications.

FROM: Herman Lee DATE: 6/10/2011 4:40:27 PM Eastern Daylight Time

Resolved in 6.2 release.

### Complete Issue Information

|                                                  |
|--------------------------------------------------|
| Issue ID: 7543                                   |
| Subject: Shrinkage in 3D schematic is misleading |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 8/7/2006 12:59:40 PM |
| Modified By: hlee                       | 7/14/2009 5:43:25 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                               |
|------------|---------------|-------------------------------------------------------|
| 7544.15790 | Suspended     | Don't show forces for rigid links in the 3D schematic |

### Description

FROM:kkennelly DATE:8/7/2006 8:55:49 AM

Suggestion from 2006 UG training. BID23, hammerhead pier analysis from Pier1 Example problem. Shrinkage forces show up on the 3D schematic and they look like big values when in fact hammerhead shouldn't have shrinkage forces. If you hover over the shrinkage the forces all show up as 0.00.

Suggestion is to not show values if they are all essentially zero.

FROM: Herman Lee DATE: 6/10/2009 10:55:43 AM Eastern Daylight Time  
Changed Status Beta TAG 6/9/09.

Complete Issue Information

Issue ID: 7544  
Subject: Don't show forces for rigid links in the 3D schematic

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 8/7/2006 1:01:19 PM  
Modified By: administrator 6/19/2008 4:27:32 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:8/7/2006 9:00:41 AM  
Suggestion from 2006 UG meeting. Pier1 training example 3D schematic shows shrinkage forces for rigid link members. Suggestion is to not show any forces for rigid links in the 3D schematic.

1/5/2016 11:11:08 AM

HRS AASHTO

55

## Complete Issue Information

Issue ID: 7545

Subject: Save 3D schematic settings

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

8/7/2006 1:03:12 PM

Modified By: administrator

6/19/2008 4:27:32 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Enhancement |
|                 | Suspended |          |             |

1/5/2016 11:11:08 AM

HRS AASHTO

56

Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
| Duray, Jim | Suspended | High | Enhancement |
|------------|-----------|------|-------------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 00025 - 81016.xml   |             |

Tasks

| Name       | Current State | Summary                                    |
|------------|---------------|--------------------------------------------|
| 7549.15785 | Resolved      | Can't import an Opis Substructure xml file |

Description

FROM:kkennelly DATE:8/7/2006 9:02:22 AM

Suggestion from 2006 UG meeting. Save 3D Schematic settings while Opis Sub is open. Don't have to save once you close Opis Sub but would be nice to save while you are working in the BWS.

|                                                                       |
|-----------------------------------------------------------------------|
| Issue ID: 7549<br>Subject: Can't import an Opis Substructure xml file |
|-----------------------------------------------------------------------|

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

Complete Issue Information

|                                     |                      |
|-------------------------------------|----------------------|
| Primary Contact: Ordoobadi, Mehrdad |                      |
| Submitted By: Kennelly, Krisha      | 8/9/2006 12:20:24 PM |
| Modified By: administrator          | 6/19/2008 4:27:32 PM |
| Priority: High                      |                      |
| Category: Bug                       |                      |

History

| Primary Contact    | Status      | Priority | Category |
|--------------------|-------------|----------|----------|
| Duray, Jim         | New         | High     | Unknown  |
| Kennelly, Krisha   | Assigned    |          |          |
| Bhanushali, Girish | Development |          |          |
| Teal, Dean         | Resolved    |          | Cosmetic |
|                    | Closed      |          |          |
| Teal, Dean         | Closed      | High     | Cosmetic |

Contacts

| Name        | Company                        | Email 1        | Phone 1       |
|-------------|--------------------------------|----------------|---------------|
| Dean Teal   | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| Paul Jensen | Montana DOT                    | pjensen@mt.gov | 406-444-9245  |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

Tasks

| Name       | Current State | Summary                 |
|------------|---------------|-------------------------|
| 7557.15778 | Closed        | Text Printed Over Lines |

Description

FROM:kkennelly DATE:8/9/2006 8:11:36 AM  
 Attached file was originally attached to incident 7523. It was exported from Opis Sub 0.9.1. I'm trying to import it into 5.6 so I can debug the problem in 7523. I changed the majorversionnumber, minorversionnumber, patchnumber, and buildnumber manually so I could import into 5.6.0. When I try to import, the DmMbrAltConcDeckRange import fails because it has a record for "eff\_width\_lrfd" instead of "eff\_width\_lrfd\_start" and "eff\_width\_lrfd\_end". Should we be handling this import even though 0.9.1 isn't a licensable product yet?



Complete Issue Information

FROM:kkennelly DATE:8/9/2006 8:23:35 AM

I was able to import for debugging by changing the tag to "eff\_width\_lrfd\_start" and "eff\_width\_std\_start".

FROM:kkennelly DATE:8/9/2006 8:26:48 AM

Can't save the bridge, get following error:  
Trying to set DIST\_FACTOR\_VARIATION\_TYPE to NULL in table ABW\_LL\_DISTFACTOR\_RANGE, but the field is not allowed to be NULL.

I tried opening each Dist Factor window, selecting the type and hitting OK. Unlinked the mbrs and tried setting their dist factor types but still get same message and can't save.

FROM:mordoobadi DATE:8/14/2006 9:18:35 AM

We do not support importing from 0.9.1 to 5.6.0.

FROM:mordoobadi DATE:8/14/2006 10:22:38 AM

You may change the version numbers in the XML file from 0.9.1.3001 to 5.4.0.3001 then try importing it.

|                                  |
|----------------------------------|
| Issue ID: 7557                   |
| Subject: Text Printed Over Lines |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Teal, Dean             |                      |
| Submitted By: Teal, Dean                | 8/10/2006 7:52:57 PM |
| Modified By: administrator              | 6/19/2008 4:27:31 PM |
| Priority: High                          |                      |
| Category: Cosmetic                      |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM:dteal DATE:Thursday, August 10, 2006 3:52:57 PM

In several GUI's I have noticed that the dimension text is being written over the top of other lines making the text hard to read. Is this supposed to be that way? Can it be printed so it's not over the top of another line?

Examples: See GUI on page 2-30 and 2-33 of the Substructure Workshop manual, look at the center, right hand side.

FROM:jduray DATE:8/11/2006 3:30:26 PM

FROM:kkennelly DATE:8/14/2006 7:48:41 AM

Dean is referring to the column cross section dimensions and footing dimensions appearing over the dashed centerlines in the plan view. I've just captured a screen shot of what is shown in the UI. Girish, can we do something to make the text easier to read in these windows? Maybe make the dashed centerlines a lighter weight or move the edit control slightly away from the line?

FROM:gbhanushali DATE:8/15/2006 4:10:13 PM

Cross section centerline lengths are reduced such that they are not touching or overlapping the dimension text. (Fixed in 5.6 code in sourcesafe.)

Please Let me know if the changes are not acceptable.

FROM:gbhanushali DATE:8/28/2006 1:19:42 PM

fixed checked in for next release.

FROM:dteal DATE:Wednesday, November 07, 2007 1:51:41 PM

Accepted

FROM:pjensen DATE:Wednesday, March 12, 2008 5:58:34 PM

i think this is still an issue...

Issue ID: 8230  
Subject: Add option to ignore compression reinforcement in the beam

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 10/22/2007 3:15:51 PM  
Modified By: sthogaru 7/13/2009 7:51:18 PM  
Priority: High  
Category: Enhancement

History

1/5/2016 11:11:09 AM

HRS AASHTO

60

### Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                  |
|------------|---------------|------------------------------------------|
| 8433.16636 | Suspended     | Spec check of individual pier components |

### Description

FROM:kkennelly DATE:4/22/2008 9:33:06 AM

this is an enhancement. We'll have to add something to the UI to allow user to pick this

## Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 8433                                    |
| Subject: Spec check of individual pier components |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kennelly, Krisha          | 1/22/2008 3:01:23 PM |
| Modified By: sthogaru                   | 7/14/2009 2:35:24 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

## History

| Primary Contact  | Status    | Priority | Category    |
|------------------|-----------|----------|-------------|
| Duray, Jim       | New       | High     | Unknown     |
| Kennelly, Krisha | Assigned  |          |             |
| Duray, Jim       | Suspended |          | Enhancement |
| Duray, Jim       | Suspended | High     | Enhancement |

## Contacts

| Name      | Company                        | Email 1        | Phone 1       |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |

## Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

## Tasks

| Name       | Current State | Summary                   |
|------------|---------------|---------------------------|
| 8437.16632 | Suspended     | Foundation Geometry, Pile |

## Description

FROM:kkennelly DATE:1/22/2008 10:05:12 AM

When you sit on the cap, columns or footings, the spec check button is available but doesn't do anything. Our original mockups specified that you would be able to sit on an individual component and do a spec check of just that component. Is that still in our workplan?

FROM:hlee DATE:6/6/2008 2:39:59 PM

Related to Incident 6608.

1/5/2016 11:11:09 AM

HRS AASHTO

62

Complete Issue Information

|                                    |
|------------------------------------|
| Issue ID: 8437                     |
| Subject: Foundation Geometry, Pile |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Teal, Dean                | 1/23/2008 8:40:02 PM |
| Modified By: sthogaru                   | 7/14/2009 2:37:07 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dteal DATE:Wednesday, January 23, 2008 3:40:02 PM

The geometry GUI for a pile cap footing only views the cap like a spread footing, no pile. Was this

1/5/2016 11:11:10 AM

HRS AASHTO

63

Complete Issue Information

intended? Sure would be nice to see a GUI showing the pile locations.

FROM:jduray DATE:3/5/2008 9:55:10 AM

I believe (Krisha - please confirm) footings are new to this development effort and schematics were removed from scope by the substructure TAG and TF to save \$.

FROM:kkennelly DATE:3/5/2008 12:29:15 PM

That is correct. The TAG and TF decided to not implement any new schematics or add to any existing schematics to save money. Piles are a new feature and no schematics were planned for them in the work plan. (Although I agree it would be very nice to see the pile locations.)

|                                             |
|---------------------------------------------|
| Issue ID: 8452                              |
| Subject: Pier 3-D Schamtic Missing the Pile |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Duray, Jim             |                       |
| Submitted By: Teal, Dean                | 1/31/2008 11:56:08 PM |
| Modified By: hlee                       | 4/7/2010 9:17:17 PM   |
| Priority: High                          |                       |
| Category: Enhancement                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

### Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Suspended |      | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |
| Duray, Jim | New       | High | Unknown     |
|            | Suspended |      | Enhancement |
| Duray, Jim | Suspended | High | Enhancement |

### Contacts

| Name         | Company                        | Email 1        | Phone 1       |
|--------------|--------------------------------|----------------|---------------|
| Dean Teal    | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
| David Warner | Montana DOT                    | dwarner@mt.gov |               |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                       |
|------------|---------------|-------------------------------|
| 8455.16614 | Suspended     | Pipe Pile Substructure Option |

### Description

FROM:dteal DATE:Thursday, January 31, 2008 6:56:10 PM  
Pier 3-D Schamtic Missing the Pile

FROM:dteal DATE:Monday, February 04, 2008 10:43:03 AM  
The pile are drawn for pile bent piers, but not for pile cap ftg's

FROM:jduray DATE:2/20/2008 8:44:15 AM  
Pile footings are being added for this release. The TF eliminated all new schematics and enhancements to existing schematics for this release to reduce costs.

FROM: Herman Lee DATE: 4/7/2010 5:15:02 PM Eastern Daylight Time  
Duplicate of Incident 8437.

|                                        |
|----------------------------------------|
| Issue ID: 8455                         |
| Subject: Pipe Pile Substructure Option |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Teal, Dean    | 2/4/2008 3:39:45 PM  |
| Modified By: sthogaru       | 7/14/2009 2:38:56 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Assigned  |          | Education   |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Duplicate | High     | Enhancement |
|                 | Duplicate |          |             |

### Contacts

| Name         | Company     | Email 1        | Phone 1 |
|--------------|-------------|----------------|---------|
| David Warner | Montana DOT | dwarner@mt.gov |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary          |
|------------|---------------|------------------|
| 8463.16606 | Duplicate     | Steel Pipe Piles |

### Description

FROM:dteal DATE:Monday, February 04, 2008 10:39:45 AM

Our steel library only has I's, angles, channels and Tee's – no pipe pile

Should be the same as H-pile but need to grey out the strong direction x-y axis. To use pipe pile all we need is an allowable load per pile.

FROM:kkennelly DATE:3/4/2008 2:49:38 PM

Pipe piles were delayed for a later release by the original substructure TAG.

FROM:dteal DATE:Tuesday, March 25, 2008 2:03:24 PM

See VI# 8463 (Duplicate)

Montana doesn't use any H-Pile.

1/5/2016 11:11:10 AM

HRS AASHTO

66



Complete Issue Information

We should give serious considerations to providing Pipe pile.

FROM:dwarner DATE:Tuesday, March 25, 2008 2:50:57 PM

We use H-Piles very rarely. All the jobs I'm working on are using Pipe Piles in pier footings and abutments.

FROM:dteal DATE:Wednesday, May 21, 2008 12:48:21 PM

|                           |
|---------------------------|
| Issue ID: 8463            |
| Subject: Steel Pipe Piles |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Warner, David             | 2/11/2008 3:27:51 PM |
| Modified By: administrator              | 6/19/2008 4:36:00 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:dwarner DATE:Monday, February 11, 2008 10:27:52 AM

I'm inputting a design that uses round steel pile piles in the footing. So far I've entered properties for a 508mm pipe pile as a W-shape that has symmetrical [I-mm^4 and Z-mm^3] in the x and y direction, and named it "508 pile". Is there a Steel Beam Shape for round pipe piles for the footing? We commonly use steel pipe piles in footings.

FROM:hlee DATE:4/3/2008 12:53:18 PM

Duplicate of Incident 8455.

## Complete Issue Information

Issue ID: 8494

Subject: Design Aid for Column Steel

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

3/6/2008 4:45:36 PM

Modified By: hlee

4/7/2010 9:26:33 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

1/5/2016 11:11:11 AM

HRS AASHTO

68

Complete Issue Information

|           |                                |                |               |
|-----------|--------------------------------|----------------|---------------|
| Dean Teal | Kansas Dept. of Transportation | teal@ksdot.org | (785)291-3001 |
|-----------|--------------------------------|----------------|---------------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8501.16568 | Assigned      | layout of dimensions in GUI -1 |

Description

FROM:dteal DATE:Thursday, March 06, 2008 11:45:37 AM

Enhancement Request:

In the GUI for Column Reinforcement

In column design it is common to use 1% steel as a minimum.

To cut down on iterations by the designer, it would be nice to have a wizard that would calculate and provide 1% steel for a starting place with a new design, that is what the designer is going to do anyway – lets save him some steps!!

After this check is done with 1% steel then the designer would have the option to increase as the designer see's fit.

FROM:kkennelly DATE:3/6/2008 1:15:49 PM

Good suggestion. Wizard could ask user what bar size and then come up with a pattern that satisfies 1%

FROM: Herman Lee DATE: 4/7/2010 5:21:07 PM Eastern Daylight Time

AI 2009-VO-088

Wizard to place Min. Steel required in columns and shafts.

|                                         |
|-----------------------------------------|
| Issue ID: 8501                          |
| Subject: layout of dimensions in GUI -1 |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Jensen, Paul              | 3/12/2008 9:48:15 PM |
| Modified By: hlee                       | 1/5/2010 2:39:56 PM  |
| Priority: High                          |                      |

1/5/2016 11:11:11 AM

HRS AASHTO

69

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

### Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | OPIS SUB Work FLow.pdf |             |
|      | PierAlt.jpg            |             |

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8534.16535 | Suspended     | OPIS SUB: Bridge Explorer Tree |

### Description

FROM:pjensen DATE:Wednesday, March 12, 2008 5:48:15 PM

I have been looking a substructure and there are some items in the GUI that are issues.

1- if you are in SI/Metric, the user can not read the dimensions of the girder spacings. they spill over into the adjoining dimension.

2- when editing the dimensional data, the window for data entry is not large enough to fit the data the the user is entering.

3-there is a consistency issue with data the user is inputing on a screen. The footing screen is typical. Vertical component is in meters and the plan view is in millimeters. Dave and myself messed up several times because of this dimensional unit issue.

4-there needs to have a better error message other than a domain error when data is incorrect or missing. I have one pier that i do not have a clue (because of my dimentional frustration) where my error is located.

5- where the heck are the graphs. After anlysis, the graphs and table are not what i expected. the values are in error and there were no graphs, any where.

FROM:kkennelly DATE:6/4/2008 1:13:11 PM

Incident split out into 5 incidents, this one and 8717 thru 8720

1- if you are in SI/Metric, the user can not read the dimensions of the girder spacings. they spill over

1/5/2016 11:11:11 AM

HRS AASHTO

70

Complete Issue Information

into the adjoining dimension.

FROM: Jim Duray DATE: 7/10/2008 11:30:59 AM Eastern Daylight Time

- 1 & 2 - Which windows?
- 3 - Substructure TAG reviewed this and was ok with it as is.
- 4 - Can you be more specific?
- 5 - Graphs were removed from the work plan by the substructure TAG to reduce costs.

FROM: Herman Lee DATE: 10/30/2009 1:16:52 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:04:56 AM Eastern Standard Time  
Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:43:34 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                         |
|-----------------------------------------|
| Issue ID: 8534                          |
| Subject: OPIS SUB: Bridge Explorer Tree |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Colgrove, George          | 4/2/2008 6:23:38 PM  |
| Modified By: sthogaru                   | 7/14/2009 2:41:00 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

1/5/2016 11:11:12 AM

HRS AASHTO

71

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:gcolgrove DATE:Wednesday, April 02, 2008 2:23:38 PM

I have an issue with the tree including the substructure components. I do not think it is consistent with what we have used with V/O w/o Sub. I think the tree should be rearranged to have Substructure definitions directly after the superstructure definitions. The flow of the tree counters a easy flow through the process of entering data. There is a lot of back and forth - which causes many errors - until you clean it all up. I think this can be streamlined. See the enclosed documentation (in the document tab) for my suggestions.

FROM:gcolgrove DATE:Wednesday, April 02, 2008 3:14:15 PM

Also in the Documents Tab is a jpeg of a suggested modification of the Pier Alternative Dialog. It adds the ability for the user to select an approaching and departing span for the pier if the bridge is comprised of multiple simple spans, or has the user select a continuous span and number of support.

FROM:jduray DATE:4/3/2008 8:28:22 AM

The tree was established 4 years ago after numerous meetings with the Substructure TAG and cannot be changed at this point without significant rework. The suggestions you are making may require an extensive redesign of the database. It would be useful for us to see a diagram of your ideas and we could then explore the possibility of revising the UI (but not for the 6.0 release). I'm setting the Category for this incident to Enhancement.

FROM:gcolgrove DATE:Thursday, April 03, 2008 2:52:14 PM

Thanks Jim I agree with you. For 6.0 this is not practical. I wish I had looked at the Sub part a little closer a few years ago, but it never got to the top of my to do list. I started many times but got pulled off to other things. A few days ago I had a brief meeting here with a couple users here and went over some gui stuff after I had used it for a week, and this was discussed. I just passed this along for future discussion. The diagram you asked for is included in the documents tab (see the PDF). I swapped some stuff around on the tree.

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 8536                                               |
| Subject: OPIS SUB: Vehicles tab for LRFD Substructure Design |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Colgrove, George          | 4/2/2008 6:41:12 PM  |
| Modified By: sthogaru                   | 7/14/2009 2:41:33 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

## Complete Issue Information

### History

| Primary Contact | Status          | Priority | Category    |
|-----------------|-----------------|----------|-------------|
| Duray, Jim      | New             | High     | Unknown     |
|                 | Suspended       |          | Enhancement |
| Duray, Jim      | Suspended       | High     | Enhancement |
|                 | Rejected by TAG |          |             |
|                 | Discard         |          |             |

### Contacts

| Name            | Company | Email 1                  | Phone 1 |
|-----------------|---------|--------------------------|---------|
| George Colgrove |         | gcolgrove@mbakercorp.com |         |

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                                      |
|------------|---------------|----------------------------------------------|
| 8538.16531 | Suspended     | OPIS SUB: Consistency in entering dimensions |

### Description

FROM:gcolgrove DATE:Wednesday, April 02, 2008 2:41:13 PM

"LRFD Substructure Design Settings" – Vehicles Tab – It is not intuitive that you need to select a limit state prior to selecting truck to analyze. I think it would be better to swap the Vehicle Selection and Vehicle Summary fields. When you click on a limit state, trucks that can be selected will show.

See pic in documents.

FROM:jduray DATE:4/3/2008 8:35:23 AM

This is as designed and not a bug. Changing to an enhancement.

Complete Issue Information

|                                                       |
|-------------------------------------------------------|
| Issue ID: 8538                                        |
| Subject: OPIS SUB: Consistency in entering dimensions |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Colgrove, George          | 4/2/2008 7:10:56 PM  |
| Modified By: sthogaru                   | 7/14/2009 7:15:01 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | Suspended | High     | Enhancement |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name         | Company     | Email 1        | Phone 1 |
|--------------|-------------|----------------|---------|
| David Warner | Montana DOT | dwarner@mt.gov |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                         |
|------------|---------------|---------------------------------|
| 8581.16488 | Suspended     | Schematic of pier reinforcement |

Description

FROM:gcogrove DATE:Wednesday, April 02, 2008 3:10:56 PM

While defining the dimensions of a pier cap, some entries are in mm and others are in m. These all should be entered in the same units. Preferably mm. This is true almost everywhere. I get a lot of errors because I enter mm instead of m. I think all entries should be in mm for metric. This is true for almost every dialog for SUB.

FROM:kkennelly DATE:6/9/2008 9:15:09 AM

We followed the dimensioning practice on sample plans that we received from the original Substructure TAG. Elevations are in meters and all other dimensions are in millimeters as per the plans we received from that TAG.



Complete Issue Information

FROM: Herman Lee DATE: 6/10/2009 10:44:59 AM Eastern Daylight Time  
Rejected by Beta TAG 6/9/09.

|                                          |
|------------------------------------------|
| Issue ID: 8581                           |
| Subject: Schematic of pier reinforcement |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Warner, David             | 4/22/2008 5:22:29 PM |
| Modified By: sthogaru                   | 7/14/2009 2:43:12 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:4/22/2008 1:27:12 PM  
This item was originally entered in 8567 and split out from that incident.

1/5/2016 11:11:13 AM

HRS AASHTO

75

## Complete Issue Information

These are a few things I found while entering a completely new pair of hammer head piers on spread footings. I had previously "copied" a finished three span steel bridge from version 5.5 over to 6.0 Beta. I was adding a foundation to this bridge and found a few areas that may speed things up, or could use some work.

1)

Pictured x-section:

This applies to column reinforcement, spread footing reinforcement, and cap/hammerheads. A pictured cross section of reinforcement placing would dramatically reduce designer and checker time.

Preferably a printable picture with dots for bars. I added a URL in the documents section. KSU\_RC is a program I use for Moment Curvature and Force deflection. It has a great interface for displaying bar placement. A picture display of bar placement drastically reduces time spent seeing if bars are located correctly.

FROM:kkennelly DATE:4/22/2008 1:29:07 PM

Our original mockups for Substructure contained windows where you could view the reinforcement in the pier cross sections. These windows were eliminated from 6.0 to reduce costs.

FROM:dwarner DATE:Thursday, May 15, 2008 12:42:09 PM

Issue ID: 8713

Subject: Locking Superstructure when Substructure is Being Entered

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Duray, Jim

Submitted By: Teal, Dean

6/3/2008 9:48:08 PM

Modified By: sthogaru

7/14/2009 2:44:14 PM

Priority: High

Category: Enhancement

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

1/5/2016 11:11:13 AM

HRS AASHTO

76

### Complete Issue Information

|            |                    |      |             |
|------------|--------------------|------|-------------|
|            | Suspended          |      | Enhancement |
| Duray, Jim | Suspended          | High | Enhancement |
| Duray, Jim | New                | High | Unknown     |
|            |                    |      | Bug         |
|            | Information Needed |      |             |
| Duray, Jim | Information Needed | High | Bug         |
|            | Closed             |      |             |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State      | Summary                        |
|------------|--------------------|--------------------------------|
| 8717.16352 | Information Needed | layout of dimensions in GUI -2 |

### Description

FROM:dteal DATE:Tuesday, June 03, 2008 5:48:09 PM

I think we need the option to lock the superstructure so certain items can't be changed. It seems like there is several places in substructure input that you can change that effects superstructure – or vice versa.

Items that are related either need to be locked or dynamically linked (if you change the span length or reference line in one place it will update ALL locations.

At Minimum we need to pop up a warning

FROM: Jim Duray DATE: 6/4/2009 11:41:05 AM Eastern Daylight Time  
We need to test the new Bridge Protection feature satisfies this request.

|                                         |
|-----------------------------------------|
| Issue ID: 8717                          |
| Subject: layout of dimensions in GUI -2 |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                             |                     |
|-----------------------------|---------------------|
| Primary Contact: Duray, Jim |                     |
| Submitted By: Jensen, Paul  | 6/4/2008 5:09:15 PM |
| Modified By: hlee           | 1/5/2010 2:39:14 PM |
| Priority: High              |                     |
| Category: Bug               |                     |

### History

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Unknown<br>Bug |
|                 | Resolved |          | Education      |
| Duray, Jim      | Resolved | High     | Education      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8718.16351 | Resolved      | layout of dimensions in GUI -3 |

### Description

FROM:kkennelly DATE:6/4/2008 1:14:21 PM  
Originally submitted in 8501 and split out into separate incidents

2- when editing the dimensional data, the window for data entry is not large enough to fit the data the user is entering.

FROM:kkennelly DATE:6/4/2008 4:05:18 PM  
Can you tell me which window has this problem?

FROM:kkennelly DATE:6/4/2008 4:09:57 PM

FROM: Herman Lee DATE: 10/30/2009 1:17:01 PM Eastern Daylight Time  
Information Needed E-mail sent on 10/30/09.

FROM: Herman Lee DATE: 12/1/2009 10:04:06 AM Eastern Standard Time

1/5/2016 11:11:13 AM

HRS AASHTO

78

Complete Issue Information

Information Needed E-mail sent on 12/1/09.

FROM: Herman Lee DATE: 1/5/2010 9:28:55 AM Eastern Standard Time  
No response to Information Needed E-mail for two months. Status changed to Closed.  
Please let us know if you want to reopen this incident.

|                                         |
|-----------------------------------------|
| Issue ID: 8718                          |
| Subject: layout of dimensions in GUI -3 |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Jensen, Paul              | 6/4/2008 5:10:19 PM  |
| Modified By: administrator              | 6/19/2008 4:35:36 PM |
| Priority: High                          |                      |
| Category: Education                     |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM:kkennelly DATE:6/4/2008 1:15:47 PM  
Originally submitted in 8501 and split out into separate incidents

3-there is a consistency issue with data the user is inputing on a screen. The footing screen is typical. Vertical component is in meters and the plan view is in millimeters. Dave and myself messed up several times because of this dimensional unit issue.

FROM:kkennelly DATE:6/4/2008 1:20:05 PM

Complete Issue Information

FROM:kkennelly DATE:6/4/2008 3:11:44 PM

We followed the dimensioning practice on sample plans that we received from the original Substructure TAG. Elevations are in meters and cross section dimensions are in millimeters as per the plans we received from that TAG.

|                                         |
|-----------------------------------------|
| Issue ID: 8719                          |
| Subject: layout of dimensions in GUI -4 |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Jensen, Paul              | 6/4/2008 5:11:24 PM  |
| Modified By: administrator              | 6/19/2008 4:35:36 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
|                 | Resolved |          | Bug      |
| Duray, Jim      | Resolved | High     | Bug      |

Contacts

1/5/2016 11:11:14 AM

HRS AASHTO

80

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name       | Current State | Summary                        |
|------------|---------------|--------------------------------|
| 8720.16349 | Resolved      | layout of dimensions in GUI -5 |

Description

FROM:kkennelly DATE:6/4/2008 1:16:56 PM

Originally submitted in 8501 and split out into separate incidents

4-there needs to have a better error message other than a domain error when data is incorrect or missing. I have one pier that i do not have a clue (because of my dimentional frustration) where my error is located.

FROM:kkennelly DATE:6/4/2008 3:54:19 PM

The Pier Alt has a Validation function that you can use to find input errors. Select the name of the Pier Alt in the BWS tree and click the 'Validation' button on the toolbar.

For Beta 4 we have added Validation to be performed before you do a pier analysis or a spec check. (I believe Dean send out an email on (6/3/08 with a document illustrating this Validation). The Validation will describe errors in your data that should be easy to follow. You then have the opportunity to cancel the Analysis and go fix your data. Advanced users can turn off this Validation on the Preferences:Analysis tab.

|                                         |
|-----------------------------------------|
| Issue ID: 8720                          |
| Subject: layout of dimensions in GUI -5 |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Jensen, Paul              | 6/4/2008 5:12:16 PM  |
| Modified By: administrator              | 6/19/2008 4:35:36 PM |
| Priority: High                          |                      |

1/5/2016 11:11:14 AM

HRS AASHTO

81

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
| Ihnat, Joseph   | Assigned  |          |             |
|                 | Resolved  |          | Education   |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM:kkennelly DATE:6/4/2008 1:17:55 PM

Originally submitted in 8501 and split out into separate incidents

5- where the heck are the graphs. After anlysis, the graphs and table are not what i expected. the values are in error and there were no graphs, any where.

FROM:kkennelly DATE:6/4/2008 4:02:48 PM

Our UI mockups had graphs for displaying the pier analysis results but these graphs were removed due to budget constraints. Dean has a copy of the original mockups showing the graphs and schematics that were removed (we gave him the mockups on 5/30/08) I think he was going to share them with the TAG

FROM:kkennelly DATE:6/5/2008 8:36:15 AM



Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 8759                                    |
| Subject: Duplicate Function in Reinforcement Tabs |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ihnat, Joseph          |                      |
| Submitted By: Ruby, Jeff                | 6/25/2008 1:56:36 PM |
| Modified By: sthogaru                   | 7/14/2009 2:51:28 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 6/25/2008 10:00:43 AM Eastern Daylight Time  
 I have observed that when you "Duplicate" a line in the Reinforcement tabs of various substructure elements that the "Start Distance" of the duplicated line doesn't get populated with the "End Distance" of the previous line. This appears to be inconsistent with the "Superstructure" windows of Opis. At least that seems to be the default behavior of the superstructure tabs. It would be nice if the substructure windows were consistent with this format. It saves on input time.

FROM: Joseph Ihnat DATE: 7/1/2008 12:15:32 PM Eastern Daylight Time  
 Not all windows behave as you describe. That behavior was not specified for this window. See also the reinforcement for a Schedule Based RC Structure.

FROM: Jeff Ruby DATE: 7/2/2008 10:46:14 AM Eastern Daylight Time  
 I would think that ALL "schedule based" input windows with the "Duplicate" button should act the way I described. If I wasn't going to start where I left off, no matter what number that carried forward with the "duplicate" would probably have to be edited anyway. So, by carrying the previous number forward

1/5/2016 11:11:15 AM

HRS AASHTO

83

Complete Issue Information

there is only a potential for saving time on input. Plus, isn't it easier for the programmers to always do it the same? I vote for always starting a "duplicate" from the previous "end of the range". At least change the Severity to Annoying. If you want your users to be annoyed, this is a sure-fire way to do it. In addition, Even though I view this as a design flaw, if you don't accept it that way at least change this to an enhancement. I would rather have a chance to fix this than just consider the issue resolved. Thanks.

FROM: Jeff Ruby DATE: 7/2/2008 10:47:03 AM Eastern Daylight Time  
Oops. Forgot to change the status to "Resubmit" before I updated.

FROM: Krisha Kennelly DATE: 7/15/2008 8:25:25 AM Eastern Daylight Time  
I'm going to mark this as a suspended enhancement.

We follow the following logic in the UI:

For items that cannot have a gap or overlap along the length of the beam (like steel flange plates) the New and Duplicate buttons populate the Start Distance with the previous end distance.

For items that can have gaps or overlaps (like schedule based reinforcement in the superstructure beam and the pier) we do not populate the Start Distance with the previous end distance. Reinforcement typically overlaps due to required development lengths before the bars are developed so we expect users to overlap bars and thought it would be annoying to force the user to change the start distance. (The superstructure Schedule based RC Girder Profile window has operated this way since it was introduced in version 5.2)

Issue ID: 8760  
Subject: 3D Schematic Doesn't Show Piling

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Ruby, Jeff 6/25/2008 2:09:19 PM  
Modified By: sthogaru 7/14/2009 2:51:53 PM  
Priority: High  
Category: Enhancement

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

1/5/2016 11:11:15 AM

HRS AASHTO

84

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier           | Description |
|------|-------------------------------|-------------|
|      | schematic properties stay.JPG |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 6/25/2008 10:11:56 AM Eastern Daylight Time

I know everything isn't totally complete. But it would be nice if the 3D schematic would at least "acknowledge" in some way that we have piling defined. With the batter and orientation options we have, it would be nice to see visually that things were entered correctly. At least for now a "line" where the piling are would be a help.

|                                        |
|----------------------------------------|
| Issue ID: 8766                         |
| Subject: 3-D schematic view properties |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Warner, David             | 6/26/2008 3:04:12 PM |
| Modified By: sthogaru                   | 7/14/2009 2:31:11 PM |

1/5/2016 11:11:15 AM

HRS AASHTO

85

Complete Issue Information

|                                         |
|-----------------------------------------|
| Priority: High<br>Category: Enhancement |
|-----------------------------------------|

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Bug         |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier   | Description |
|------|-----------------------|-------------|
|      | 5.5.4.2 phi value.JPG |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 6/26/2008 11:08:47 AM Eastern Daylight Time

When I look at my 3-D schematic of my pier, and then click properties, and make dimensioning show up, see attached JPEG, Is there anyway to make those properties stay. Each time I open the 3-d schematic I have to click properties and make dimensions show up. Those dimensions go away each time I close a 3-d Schematic. Can those properties tab choices be a little more permanent?

FROM: Jim Duray DATE: 6/26/2008 12:28:32 PM Eastern Daylight Time

I am changing the incident to an enhancement request.

Complete Issue Information

|                  |
|------------------|
| Issue ID: 8782   |
| Subject: 5.7.3.2 |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Warner, David             | 7/7/2008 4:47:22 PM  |
| Modified By: sthgaru                    | 7/14/2009 2:31:39 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 7/7/2008 1:11:55 PM Eastern Daylight Time  
Flexural resistance (5.7.3.2) has a resistance factor specified from 5.5.4.2.

Where are the calculations for this phi value? How do you know if you have a tension, compression, or transition situation? See Figure C5.5.4.3.1-1.

In the screen shot of the footing flexural resistance, it just says  $\phi \cdot M_n$ .

I happen to agree with this  $\phi \cdot M_n$  value, it's close enough. In this case it's tension controlled, and  $\phi = 0.9$ . But I would like to see how you came about gathering the phi value.

For other kinds of members this phi value can be variable, and needs checking.

Complete Issue Information

FROM: Jim Duray DATE: 7/9/2008 8:06:45 AM Eastern Daylight Time  
The current code checks for the transition region but the details for those computations are not reported, just the resulting phi value.

FROM: David Warner DATE: 7/30/2008 11:46:23 AM Eastern Daylight Time  
Enhancement? Ok, I'll accept this then...

|                                  |
|----------------------------------|
| Issue ID: 8795                   |
| Subject: Default Exposure Factor |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kurtenbach, Tom           | 7/16/2008 3:31:15 PM |
| Modified By: tkurtenbach                | 7/16/2008 3:40:33 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

1/5/2016 11:11:16 AM

HRS AASHTO

88

Complete Issue Information

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Tom Kurtenbach DATE: 7/16/2008 11:40:33 AM Eastern Daylight Time

I propose that a default exposure factor is provided for the concrete components. Perhaps class 2 (0.75) for components that are above or partially above the ground line, and class 1 (1.00) for components that are completely below the groundline. Or at least class 2 for everything and be conservative.

If it is not provided, when analyzing for service limit state I, the analysis will stop and provide the "no lines returned when 1 expected" message, which can be tough to sort out.

|                                                                                          |
|------------------------------------------------------------------------------------------|
| Issue ID: 8830                                                                           |
| Subject: Infinite section modulus for compression steel in Article 5.7.3.4 Crack Control |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 1:55:39 PM |
| Modified By: xli                        | 5/28/2009 5:37:14 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

## Complete Issue Information

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Ordoobadi, Mehrdad | Assigned | High     | Bug      |
|                    | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/11/2008 9:56:14 AM Eastern Daylight Time  
In Substructure, creep factor  $m = 0$  so the section modulus for the compression steel is Infinite in 5.7.3.4 Crack Control. See attached document for BID 20.

FROM: Krisha Kennelly DATE: 8/11/2008 3:46:28 PM Eastern Daylight Time  
Fixed for 6.1.0 and any service packs to 6.0. (Code change in abanspec/RcCrossSectionProperties.cs)

FROM: Xinmei Li DATE: 5/28/2009 1:27:03 PM Eastern Daylight Time  
Verified fix with 6.1 beta1.



Complete Issue Information

|                                                                         |
|-------------------------------------------------------------------------|
| Issue ID: 8831                                                          |
| Subject: Footing rebar material not being copied when footing is copied |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ordoobadi, Mehrdad     |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:02:58 PM |
| Modified By: xli                        | 5/28/2009 5:38:46 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |
|                 | Rejected |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:03:39 AM Eastern Daylight Time  
 BID 20. Copy the Column 1 "Foundation Alt 1" to Column 2. Open the original foundation Reinforcement window, the material is Grade 60. Open the Reinforcement window for the copy and the material is Epoxied Grade 60. I think the material is not being copied and when we open the Reinforcement window for the copy it is showing the first material in the list.

FROM: Mehrdad Ordoobadi DATE: 8/11/2008 3:04:23 PM Eastern Daylight Time  
 Fixed.

FROM: Xinmei Li DATE: 5/28/2009 1:37:25 PM Eastern Daylight Time  
 Verified fix for 6.1 Beta1.

Complete Issue Information

|                                                           |
|-----------------------------------------------------------|
| Issue ID: 8832                                            |
| Subject: Choice of LRFD Factors in Design Settings window |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Ihnat, Joseph          |                       |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:12:10 PM  |
| Modified By: jihnat                     | 9/18/2008 12:55:31 PM |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:13:15 AM Eastern Daylight Time  
BID 22, create a new LRFD Substructure Design Setting. The only choice available in the LRFD Factors drop down list is the set of Factors at the Bridge level. This list box should also include the

1/5/2016 11:11:17 AM

HRS AASHTO

92

Complete Issue Information

Factors in the Library.

FROM: Joseph Ihnat DATE: 9/18/2008 8:50:33 AM Eastern Daylight Time

We can't select library objects from the bridge workspace. only objects which are already in the BWS.

|                                                                   |
|-------------------------------------------------------------------|
| Issue ID: 8833                                                    |
| Subject: Relax validation on the Column/Wall Reinforcement window |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ihnat, Joseph          |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:14:47 PM |
| Modified By: jihnat                     | 8/13/2009 2:46:25 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Ihnat, Joseph   | Assigned |          |          |

1/5/2016 11:11:17 AM

HRS AASHTO

93

### Complete Issue Information

|                  |          |      |     |
|------------------|----------|------|-----|
|                  | Resolved |      |     |
|                  | Resubmit |      |     |
| Duray, Jim       | New      | High | Bug |
| Kennelly, Krisha | Assigned |      |     |
|                  | Resolved |      |     |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:15:31 AM Eastern Daylight Time

The window currently validates if the rebar exists within the column cross section as well as the footing or cap if the bars extend into the footing or cap. The Validation won't let you continue if it finds a rebar outside the cross section. That creates a problem in the standard entry of the pier, the footing is not created yet but user is trying to assign column rebar that extends into the footing. We should just issue the validation warning but give user the option to continue and save the rebar in the window even if it fails validation.

FROM: Joseph Ihnat DATE: 9/3/2008 10:26:02 AM Eastern Daylight Time

Fixed for 6.1.0 and 6.0.1

FROM: Xinmei Li DATE: 5/28/2009 1:38:49 PM Eastern Daylight Time

Verified the fix for 6.1 Beta1.

FROM: Krisha Kennelly DATE: 8/11/2009 1:04:02 PM Eastern Daylight Time

The warning message given can be quite long (and it made the users groan at the 2009 UG meeting for the example pier we entered).

If a current Foundation alt does not exist and the validation returns a warning we should issue a generic message like 'Reinforcement extends into the footing but a current Foundation Alternative is not defined yet.' instead of the detailed message we issue now.

If a current Foundation alt does exist, issue the message we issue now.

FROM: Joseph Ihnat DATE: 8/13/2009 10:45:16 AM Eastern Daylight Time

Done for Beta Build 4.

|                |
|----------------|
| Issue ID: 8834 |
|----------------|

1/5/2016 11:11:18 AM

HRS AASHTO

94

Complete Issue Information

Subject: Incorrect number of lanes on BR tab

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Kennelly, Krisha

Submitted By: Kennelly, Krisha 8/11/2008 2:20:57 PM

Modified By: xli 5/28/2009 5:48:44 PM

Priority: High

Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
| Li, Xinmei      | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:21:16 AM Eastern Daylight Time  
 BID20, create a new pier alt and define some geometry so the Superstructure Loads window can be opened without error. The BR tab shows 3 lanes when it should be 4.

FROM: Krisha Kennelly DATE: 8/12/2008 9:54:11 AM Eastern Daylight Time  
 Fixed for 6.0 Service Pack 1.

Can't reproduce in debug but suspect un-initialized variables are causing the problem in release.  
 (Code in abobrdg)

FROM: Xinmei Li DATE: 5/28/2009 1:40:21 PM Eastern Daylight Time  
 Verified fixed for 6.1 Beta1.

Complete Issue Information

|                                   |
|-----------------------------------|
| Issue ID: 8835                    |
| Subject: Wind on column not shown |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Li, Xinmei             |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:23:57 PM |
| Modified By: xli                        | 5/28/2009 5:50:21 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:24:25 AM Eastern Daylight Time  
BID23, open the Substructure Loads window. The PD cells for the column in both grids all show up as zero but if I use the Calcs button to open the calcs file I see that PD should have a value.

FROM: Xinmei Li DATE: 8/12/2008 10:29:37 AM Eastern Daylight Time

1/5/2016 11:11:18 AM

HRS AASHTO

96

Complete Issue Information

The Wind on pile footing should not be populated to domain. Fixed for the next release.

FROM: Xinmei Li DATE: 5/28/2009 1:48:51 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                                                                |
|----------------------------------------------------------------|
| Issue ID: 8836                                                 |
| Subject: Rebar disappears from spec check results between runs |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:33:55 PM |
| Modified By: xli                        | 5/28/2009 5:57:20 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |

Contacts

1/5/2016 11:11:18 AM

HRS AASHTO

97

Complete Issue Information

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:34:20 AM Eastern Daylight Time  
To reproduce: BID23, Analyze and then Spec Check the pier in Final Design mode.

Open the Superstructure Loads window, on LL settings tab switch from Automated to User Defined Lanes. Add 1 lane pattern.

Hit Analyze and then Spec Check, open Spec Check detail windows and none of the cross sections have rebar anymore.

There may be other ways to reproduce this, they should be investigated.

FROM: Krisha Kennelly DATE: 8/12/2008 12:56:21 PM Eastern Daylight Time  
Fixed for version 6.0 Service Pack 1.

(Problem was changing superstructure loading caused pier model domain to be rebuilt and that caused the rebar to be deleted but not rebuilt. Code fixed in abobrdg)

FROM: Xinmei Li DATE: 5/28/2009 1:50:26 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                                                                                    |
|------------------------------------------------------------------------------------|
| Issue ID: 8837<br>Subject: Re-evaluate fields on the Pier Default Materials window |
|------------------------------------------------------------------------------------|

|                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub<br>Primary Contact: Duray, Jim<br>Submitted By: Kennelly, Krisha<br>8/11/2008 2:46:33 PM |
|----------------------------------------------------------------------------------------------------------------------------------|



### Complete Issue Information

|                        |                      |
|------------------------|----------------------|
| Modified By: kkennelly | 8/12/2008 1:00:55 PM |
| Priority: High         |                      |
| Category: Bug          |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:47:08 AM Eastern Daylight Time

I think there are several fields that we don't really use due to the way we have to create some things when the pier is created.

FROM: Krisha Kennelly DATE: 8/12/2008 9:00:27 AM Eastern Daylight Time

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 8838                                    |
| Subject: Article 5.8.3.5 fails at end of pier cap |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Mlynarski, Mark        |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 2:52:13 PM |
| Modified By: xli                        | 5/28/2009 5:58:31 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 10:52:35 AM Eastern Daylight Time  
BID 23, do analysis and spec check. Article 5.8.3.5 fails at both ends of the cap. Article should pass since Vu and Mu are both zero at the cap ends.

FROM: Mark Mlynarski DATE: 8/19/2008 2:46:38 PM Eastern Daylight Time  
Added a check to pass when all loads (Vu, Mu, and Nu) are zero

FROM: Xinmei Li DATE: 5/28/2009 1:57:26 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

## Complete Issue Information

|                              |
|------------------------------|
| Issue ID: 8840               |
| Subject: Pile loads are zero |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Kennelly, Krisha          | 8/11/2008 3:29:18 PM |
| Modified By: xli                        | 5/28/2009 6:10:34 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | Assigned | High     | Bug      |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | vi8840.xml          |             |

1/5/2016 11:11:19 AM

HRS AASHTO

101

Complete Issue Information

---

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 8/11/2008 11:29:43 AM Eastern Daylight Time  
Attached bridge, Training Alt. Do Analysis and Spec Check in Prelim mode, review Spec Check Details window for 5.13.3.2. reported loads for Piles 1 - 4 are zero.

FROM: Krisha Kennelly DATE: 8/12/2008 3:12:09 PM Eastern Daylight Time  
Actually the Spec Check Details window for 5.13.3.2 is correct. Piles 1 -4 are in tension and the load in the pile is shown with a negative sign indicating tension, the allowable for tension is zero.

The Pile Forces Detail text file shows incorrect signs for Piles 1 - 4. They are shown as positive meaning compression but they should be negative for tension. That reporting has been fixed for 6.0 Service Pack 1.

FROM: Xinmei Li DATE: 5/28/2009 2:06:06 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| Issue ID: 8841                                                                          |
| Subject: Consider to remove validation errors in sample database Substructure examples. |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Li, Xinmei             |                      |
| Submitted By: Lee, Herman               | 8/11/2008 7:21:59 PM |
| Modified By: sthogaru                   | 5/5/2010 8:32:27 PM  |
| Priority: High                          |                      |
| Category: Bug                           |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Duray, Jim       | New      | High     | Bug      |
| Kennelly, Krisha | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | VI8544 Fixed.bmp    |             |
|      | vi8544 release.bmp  |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 8/11/2008 3:23:50 PM Eastern Daylight Time

In Example 1 and 4,

ERROR: Point of fixity elevation for piles is not defined.

FROM: Krisha Kennelly DATE: 8/11/2008 3:43:29 PM Eastern Daylight Time

This has already been addressed for 6.1.0 (it was backed out of 6.0.0 Release). It will be in any service packs to 6.0.0.

FROM: Krisha Kennelly DATE: 8/11/2008 3:51:08 PM Eastern Daylight Time

(Code was changed in abosubfnd/DoSubStructDefPileList.cpp)

FROM: Xinmei Li DATE: 5/28/2009 2:10:42 PM Eastern Daylight Time

Error is removed for 6.1 Beta1.

FROM: Srujana Thogaru DATE: 5/5/2010 4:29:11 PM Eastern Daylight Time

Verified for 6.2 Beta build 1.

### Complete Issue Information

|                                            |
|--------------------------------------------|
| Issue ID: 8854                             |
| Subject: Determine pile with critical load |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Kennelly, Krisha          | 8/18/2008 3:46:28 PM |
| Modified By: xli                        | 5/28/2009 6:31:43 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Lee, Herman      | New      | High     | Bug      |
| Kennelly, Krisha | Assigned |          |          |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 8/18/2008 11:46:53 AM Eastern Daylight Time

The program reports the correct values for the computed pile loads in a pile footing but the computed pile loads are shown for the incorrect piles.

This bug does not cause any incorrect pile loads or footing moments or shears to be computed for typical, symmetric pile patterns

See attached bitmaps for BID20, 2 span bridge. Pile 1 should have critical load but in 6.0 Release Pile 10 had the critical load.

FROM: Xinmei Li DATE: 5/28/2009 2:26:39 PM Eastern Daylight Time

Verified fixed for 6.1 Beta1, Pile1 has max pile load.

1/5/2016 11:11:20 AM

HRS AASHTO

104

## Complete Issue Information

|                                                 |
|-------------------------------------------------|
| Issue ID: 8879                                  |
| Subject: Spec Check files missing from LST file |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Ihnat, Joseph             | 9/18/2008 6:17:44 PM |
| Modified By: xli                        | 5/28/2009 6:56:22 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 9/18/2008 2:18:18 PM Eastern Daylight Time  
Run spec check on LRFD Substructure Example 4.  
Files get written to Column1\_Pile\_footing folder.

1/5/2016 11:11:20 AM

HRS AASHTO

105

Complete Issue Information

These files aren't included in either LST file:

Footing Long Effective Depth Section at Dist .000 Beam Capacity Summary.txt  
Footing Trans Effective Depth Section at Dist .000 Beam Capacity Summary.txt

Because they are not in the LST file, they aren't included in the Analysis Output tree (Eyeglasses window).

Also, "Delete files and folders" (when bridge is deleted) will not work correctly.

FROM: Krisha Kennelly DATE: 9/22/2008 10:39:31 AM Eastern Daylight Time  
Fixed for 6.0 service pack 1.

Eff depth files are now included in the LST file. Also the footing files are now referenced by their text in the Analysis Output tree instead of all saying at .000 Dist.

FROM: Xinmei Li DATE: 5/28/2009 2:49:48 PM Eastern Daylight Time  
Verified fixed for 6.1 Beta1.

|                              |
|------------------------------|
| Issue ID: 8909               |
| Subject: Braking Force error |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Duray, Jim             |                       |
| Submitted By: Kennelly, Krisha          | 10/27/2008 5:11:18 PM |
| Modified By: kkennelly                  | 10/27/2008 5:14:18 PM |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |



Complete Issue Information

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 10/27/2008 1:11:39 PM Eastern Daylight Time  
Found during ALDOT substructure training. Bridge is attached.

Try to open the Superstructure Loads window and get an error message about a null pointer for the braking loads. Can't do analysis.

submitted for Abdalla, Ramy S. - [abdallar@dot.state.al.us](mailto:abdallar@dot.state.al.us)

|                                                                                       |
|---------------------------------------------------------------------------------------|
| Issue ID: 8910<br>Subject: Incorrect superstructures cause cap pedestals to disappear |
|---------------------------------------------------------------------------------------|

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                                |                       |
|--------------------------------|-----------------------|
| Primary Contact: Duray, Jim    |                       |
| Submitted By: Kennelly, Krisha | 10/27/2008 5:24:48 PM |
| Modified By: kkennelly         | 10/27/2008 5:27:32 PM |
| Priority: High                 |                       |
| Category: Bug                  |                       |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 10/27/2008 1:25:11 PM Eastern Daylight Time  
Found during ALDOT training by Paul Froede.

I think it was BID 20. Under '2 span bridge' alt, create a 3rd superstructure which is the 2 span continuous option. (I think this superstructure should have been created under a new bridge alt during training)

Open Cap window, enter pedestals, hit OK, Reopen Cap window and pedestals are gone. Don't have an xml file.

Complete Issue Information

|                                                                        |
|------------------------------------------------------------------------|
| Issue ID: 8911                                                         |
| Subject: Pier Components at the 'back' of the pier should look smaller |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Duray, Jim             |                       |
| Submitted By: Kennelly, Krisha          | 10/27/2008 5:28:47 PM |
| Modified By: kkennelly                  | 10/27/2008 5:30:22 PM |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 10/27/2008 1:29:20 PM Eastern Daylight Time  
Found during ALDOT training by Paul Froede.

Open Pier 3d schematic. The portion of the pier at the far end of the component should look smaller since it is farther away from the view.

Complete Issue Information

Issue ID: 8912  
Subject: Get duplicate vehicle error when trying to run BRASS LRFD to get superstructure DL

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 10/27/2008 5:31:35 PM  
Modified By: kkennelly 10/27/2008 5:33:00 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Bug      |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

vi 8912 PS8 ERROR.xml

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 10/27/2008 1:32:00 PM Eastern Daylight Time  
Found during ALDOT training by James Boyer, boyerj@dot.state.al.us

file is attached.

Issue ID: 8913

Subject: Pier cap f'c is null in the dev length calcs and spec check even though it shows up in the UI

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Duray, Jim

Submitted By: Kennelly, Krisha

10/27/2008 5:34:18 PM

Modified By: kkennelly

10/27/2008 5:35:27 PM

Priority: High

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Duray, Jim         | New      | High     | Bug      |
|                    | Assigned |          |          |
| Ordoobadi, Mehrdad | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | TEST example.xml    |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Krisha Kennelly DATE: 10/27/2008 1:34:24 PM Eastern Daylight Time  
Jim has the xml file on his flash drive.

Complete Issue Information

Issue ID: 9207  
 Subject: The software crash and doesn't give clue on the problem

Folder: /Virtis/Support Center/Opis Sub  
 Primary Contact: Ordoobadi, Mehrdad  
 Submitted By: Obeidat, Khalid 5/28/2009 8:52:51 PM  
 Modified By: mordoobadi 9/24/2009 12:32:08 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Khalid Obeidat DATE: 5/28/2009 5:03:16 PM Eastern Daylight Time  
 I'm trying to input this example on OPUS sub to prepare for my presentation this year in VOBUG but the program can't generate a model and can't run and get stuck without giving me a clue on what is wrong. This my first input and I'm going on vacation on July so I need to finish this in the next few days and I appreciate any help in guiding me. The program need to give a clue on what is wrong with the data but it only become nonresponsive. Please note that I couldn't attach the file to your website because of a problem on your server and I'll be sending it using email

FROM: Herman Lee DATE: 5/29/2009 9:38:46 AM Eastern Daylight Time  
 Reply bridgeware e-mail:

=====  
 =====  
 Hi Khalid,

Complete Issue Information

Perform validation on the pier will reveal what is missing in the pier. Some materials and steel shapes are not defined. After I entered the required materials and steel shapes, analysis complained that PS strands are not defined in the superstructure. Attached is the updated pier, it should allow you to move on for your presentation preparation. We will investigate (Incident 9207) why Opis becomes non-responsive when there're missing materials and steel shapes.

Herman Lee

=====

FROM: Herman Lee DATE: 5/29/2009 1:48:01 PM Eastern Daylight TimeReply bridgeware e-mail: Bridgeware e-mail:

=====

I'm trying to generate super structure dead load and it is giving me an error on live load which is not related to dead load generation. Please help. Also the technical support on your web site is not working and I couldn't attach my file there.  
thanks

=====

Reply bridgeware e-mail:

=====

Looks like there's a problem in analyzing the superstructure when the members are linked. I'm able to complete the analysis and spec checks after I unlinked the members and defined the PS strands in Member1 of the right superstructure. Attached is the modified bridge. I will add the member linking issue to Incident 9207.

Herman

=====

FROM: Mehrdad Ordoobadi DATE: 9/22/2009 3:17:02 PM Eastern Daylight Time  
The problem with the analysis of linked girders was resolved in Virtis/Opis 6.1.0. We are going to verify this issue.

FROM: Mehrdad Ordoobadi DATE: 9/22/2009 3:21:05 PM Eastern Daylight Time  
Related Issue: 9381

FROM: Mehrdad Ordoobadi DATE: 9/24/2009 8:34:17 AM Eastern Daylight Time  
Verified that the linked girder issue was resolved using the attached bridge XML file in Virtis/Opis 6.1.

Issue ID: 9290  
Subject: Final Design Settings crashes OpisOpisSub



Complete Issue Information

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Obeidat, Khalid           | 6/5/2009 4:10:42 PM  |
| Modified By: jduray                     | 4/11/2011 5:19:14 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Bug      |
|                 | Assigned |          |          |
|                 | Resolved |          |          |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier                | Description |
|------|------------------------------------|-------------|
|      | spec check did not complete.JPG    |             |
|      | 00025 - I90307_06281_offset_ok.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 6/5/2009 12:12:56 PM Eastern Daylight Time  
 Bridgeware e-mail:

=====

I'm able to reproduce the crash using the OpisOpisSub executable. Last time I used VirtisOpisOpisSub executable, both analysis and spec checks for final design were completed successfully. Please try again using the VirtisOpisOpisSub executable. VirtisOpisOpisSub should be available in the AASHTOWARE Start Menu. I will enter the crash as a bug in the Support Center.

Herman

1/5/2016 11:11:23 AM

HRS AASHTO

115

Complete Issue Information

-----Original Message-----

From: Khalid Obeidat [mailto:Khalid.Obeidat@dot.state.mn.us]  
Sent: Friday, June 05, 2009 9:07 AM  
To: Bridgeware,  
Subject: RE: OPIS SUB problem

We tried running it again on another computer and it crashed again when running Spec check for final design. We could not print all the data in the tech error screen but I'm attaching the beginning of the screen. Please help.  
thanks

>>> "Bridgeware," <Bridgeware@mbakercorp.com> 6/4/2009 9:03 AM >>>

I tried the Final Design Settings, both analysis and spec checks were completed successfully but analysis took a long time to complete. The Preliminary Settings has only 1 limit state and generated 944 LRFD Combinations. On the other hand, the Final Settings has 6 limit states and generated 36124 LRFD Combinations. This is the main reason for the long analysis time.  
Could you try again to see whether Opis still crashes? If you are able to crash Opis again, we need more detail descriptions on how you initiate the analysis and spec checks so we can reproduce the crash? Could you also send us a screen capture of the crash if there is one?

Thanks,  
Herman

From: Khalid Obeidat [mailto:Khalid.Obeidat@dot.state.mn.us]  
Sent: Wednesday, June 03, 2009 3:28 PM  
To: Bridgeware,  
Subject: RE: OPIS SUB problem

The program still crashes when I run final design template and then run Spec check. No reason is given for the crash. The program perform ok when using the the preliminary design template. Please advise.  
thanks

=====  
=====

Since 6.1 will not have OpisOpisSub configuration, need to check whether the attached pier crashes VirtisOpis and Opis in 6.1.

FROM: Jim Duray DATE: 7/13/2009 3:19:37 PM Eastern Daylight Time  
Herman - Are we able to repoduce the crash?

FROM: Herman Lee DATE: 10/28/2009 10:41:00 AM Eastern Daylight Time  
I tried the Preliminary Settings analysis and spec checks for the pier attached in this incident in the 6.1 Release. The spec checks were not completed successfully.

May, please find out why the spec checks completed successfully in 6.0 but not in 6.1. Also try the Final Design Settings analysis and spec checks in both the VirtisOpis and Opis executables to see

1/5/2016 11:11:23 AM

HRS AASHTO

116

Complete Issue Information

whether you can reproduce the crash.

FROM: Xinmei Li DATE: 2/18/2010 1:26:21 PM Eastern Standard Time

I tried the following scenarios to reproduce the crash:

- 1 Opis 6.1 Release, Preliminary design setting analysis - successful
- 2 Opis 6.1 Release, Preliminary design setting spec checks - not successful, got error as below
- 3 Opis 6.1 Release, Final design setting analysis - successful
- 4 Opis 6.1 Release, Final design setting spec checks - crashed

- 5 VirtisOpis 6.1 Release, Preliminary design setting analysis - successful
- 6 VirtisOpis 6.1 Release, Preliminary design setting spec checks - not successful, got error as below
- 7 VirtisOpis 6.1 Release, Final design setting analysis - successful
- 8 VirtisOpis 6.1 Release, Final design setting spec checks - crashed

=====  
- Component 4 of 7 - Column3  
- Location - 0.0000 (ft)  
Missing data in article: "5.8.2.7 - Maximum Spacing of Transverse Reinforcement"  
Fatal error occured while processing specification checks.  
Writing Specification Check results.  
Completed.

Substructure specification check encountered errors and did not successfully complete!

=====  
FROM: Xinmei Li DATE: 2/24/2010 10:54:56 AM Eastern Standard Time  
For the error message while doing spec check was because the table "RcBeamColumnResultsTable" that should be genrated in article 5.7.4.5 is not successfully generated. If you look at spec check details for Column 3 at 0' article 5.7.4.5, there is an error message at the bottom "Failed to compute capacity of cross section!" Error occurs at AbanGeometry\Polygon.cs line 484. The work around for this error is to change the diameter of the column 3 from 3ft to 3.01ft.

FROM: Xinmei Li DATE: 2/26/2010 9:08:00 AM Eastern Standard Time  
Final design setting spec checks crash is fixed for next release. The crash was due to a block of code added to ALRFD\_4E\_05\_07\_03\_04\_Crack on Aug 23, 2009. It shouldn't be called if the beam or column is not prestress.

Jim, could you take a look at article 5.7.4.5 and see why the "RcBeamColumnResultsTable" was not generated correctly?

FROM: Jim Duray DATE: 4/11/2011 1:07:20 PM Eastern Daylight Time  
I was not able to repoduce this problem. Spec-check results are attached.

Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 9365                           |
| Subject: Pier column shear reinforcement |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Warner, David             | 7/13/2009 3:32:29 PM |
| Modified By: jduray                     | 9/2/2009 1:31:59 PM  |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 7/13/2009 11:32:42 AM Eastern Daylight Time  
submitted for Dave Warner via email:

when I look at the bridge, I have transverse reinforcement in the column.

I have 8.5m of it in a 7.5m column, some in the cap and some in the footing.

please tell me why the spec check is failing, not finishing and erroring about transverse column reinforcement.

FROM: David Warner DATE: 7/14/2009 9:32:37 AM Eastern Daylight Time  
My testing is frozen until this is resolved.

FROM: David Warner DATE: 7/15/2009 11:52:13 AM Eastern Daylight Time  
May I please have some help with this?

Complete Issue Information

FROM: Krisha Kennelly DATE: 7/15/2009 1:42:18 PM Eastern Daylight Time  
Error is being issued because article 5.8.2.7 needs the dv value which was calculated in the 5.7.4.5 biaxial flexure article but that article failed.

Failure of that article appears to be related to not having any LL on the pier.  
User defined lanes is selected on the Superstructure Loads: LL Settings tab but no lanes are defined.

Dave: If you don't want to apply LL to the pier, open the Load Palette window from the toolbar, Clear all load types and then add the DC and DW loads. Spec check will then run.

Jim:

1. User has picked 'user defined lanes' but not entered any lanes. When trying to analyze LmTransverseLiveLoader::GenerateModelLoadsHelper() will return false (not Analysis\_failed). Maybe it should return Analysis\_failed and abort?

2. Not sure why 5.7.4.5 fails to compute the section capacity when 'user defined lanes' is picked but no lanes are entered.

3. Since so many other articles depend on dv maybe we should abort the analysis when 5.7.4.5 fails to compute the capacity?

FROM: David Warner DATE: 7/20/2009 1:15:51 PM Eastern Daylight Time  
Engineers need confidence in their models. Much confidence comes from self weight calculations.

Please keep in mind a way to check self weights. DL's if you will.

Thanks.

FROM: Jim Duray DATE: 9/2/2009 8:24:25 AM Eastern Daylight Time  
This is not new to 6.1.  
I modified LmTransverseLiveLoader::GenerateModelLoadsHelper() to return ANALYSIS\_FAILED if no user-defined patterns. The analysis will abort at that point and issue a message.  
Resolved for 6.1 acceptance build.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 9429<br>Subject: Unable to determin concrete composition type. |
|--------------------------------------------------------------------------|

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Lee, Herman            |                       |
| Submitted By: Warner, David             | 8/13/2009 8:26:24 PM  |
| Modified By: dwarner                    | 8/20/2009 12:39:53 PM |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

1/5/2016 11:11:23 AM

HRS AASHTO

119

### Complete Issue Information

| Primary Contact | Status   | Priority | Category       |
|-----------------|----------|----------|----------------|
| Duray, Jim      | New      | High     | Bug            |
| Ihnat, Joseph   | Assigned | High     | Bug - GUI 2    |
|                 | Resolved |          | Bug - Warranty |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | SpecChecksWindow.png |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 8/13/2009 4:32:31 PM Eastern Daylight Time  
Made bridge substructure from scratch. Only use concrete from the materials library.

Get this system error each time.

Unable to determine concrete composition type!  
02:19:16 PM - Line 2080 in source file .MdColumn.cpp.

attached screen capture, and xml of bridge.

get error if "analyzing" or "spec checking"

FROM: Jim Duray DATE: 8/13/2009 4:34:39 PM Eastern Daylight Time  
Were you running version 6.0 (as specified above for the version name or 6.1 beta 3?)

FROM: David Warner DATE: 8/14/2009 9:14:19 AM Eastern Daylight Time  
6.1 beta 3.

just installed the other day.

see screen capture. "conc comp type error version 6.1 beta 3"

### Version number

FROM: David Warner DATE: 8/14/2009 9:24:43 AM Eastern Daylight Time  
Bridge superstructure imported from our current database of hundreds of bridges.

1/5/2016 11:11:23 AM

HRS AASHTO

120

## Complete Issue Information

Then I built the substructure piece by piece.

analysis is frozen because of the concrete composition error.

FROM: David Warner DATE: 8/14/2009 9:40:52 AM Eastern Daylight Time  
Unable to determine concrete composition type!  
07:30:28 AM - Line 2080 in source file .MdColumn.cpp.

Unable to determine concrete composition type!  
07:30:25 AM - Line 2080 in source file .MdColumn.cpp.

The concrete material library has only one type now, the deck concrete. One type of concrete used everywhere. superstructure and substructure. still won't analyze substructure. concrete composition type error.

FROM: Herman Lee DATE: 8/14/2009 9:55:29 AM Eastern Daylight Time  
Changed Folder to /Support Center/Opis Sub since the reported issue is not new in 6.1 Beta.

The start distances for Column2 flexural and shear reinforcements are causing the problem. The start distance is the distance from the bottom of column to the start of the range. All entered start distances in Column2 are negative. Opis is not able to determine the concrete material at the reinforcement locations since they are located below the column. I'm able to analyze the pier after I changed the start distances in Column2 to the same as those in Column1.

FROM: David Warner DATE: 8/14/2009 12:01:36 PM Eastern Daylight Time  
I'll rebuild the whole bridge's elevations.

The problem is the negative elevations?

Working...

FROM: David Warner DATE: 8/17/2009 3:52:40 PM Eastern Daylight Time  
I would appreciate it if you would not mark an issue resolved until I've told you things are working.

this issue is still very unresolved.

I've yet to get an analysis to work.

I've made a new incident.

FROM: Herman Lee DATE: 8/18/2009 9:12:46 AM Eastern Daylight Time  
When what described in an incident has been investigated and fixed/commented, we usually change the Status to Resolved. Resolved signifies the incident is ready for the Submitter to review. If the Submitter is not satisfy with the fix/comment, the Reviewer Status or the Track can be marked as Resubmit so we can change the Status back to Assigned. Attached (Visual Intercept Statuses.pdf) is a flow chart of the process. For assignment and bookkeeping purposes, we would like to have only one issue in an incident if possible.

FROM: David Warner DATE: 8/20/2009 8:39:53 AM Eastern Daylight Time  
First time I've seen the flow chart. I'll use it.

1/5/2016 11:11:23 AM

HRS AASHTO

121

Complete Issue Information

Negative distances for columns, got it.

|                                                       |
|-------------------------------------------------------|
| Issue ID: 9540                                        |
| Subject: Extra level in Pier Spec Checks window tree. |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Ihnat, Joseph          |                       |
| Submitted By: Lee, Herman               | 10/27/2009 8:40:11 PM |
| Modified By: jhnat                      | 4/30/2010 2:10:49 PM  |
| Priority: High                          |                       |
| Category: Bug - Warranty                |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 10/27/2009 4:40:38 PM Eastern Daylight Time  
Please see attached.

FROM: Joseph Ihnat DATE: 11/3/2009 11:19:13 AM Eastern Standard Time  
Fixed for version 6.2

FROM: Joseph Ihnat DATE: 4/30/2010 10:10:55 AM Eastern Daylight Time  
Verified - 6.2 alpha 4



## Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 9554                                    |
| Subject: Unable to enter negative pier skew angle |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Kennelly, Krisha       |                       |
| Submitted By: Lee, Herman               | 11/13/2009 3:38:35 PM |
| Modified By: hlee                       | 8/23/2012 1:42:58 PM  |
| Priority: High                          |                       |
| Category: Bug                           |                       |

### History

| Primary Contact  | Status           | Priority | Category |
|------------------|------------------|----------|----------|
| Ihnat, Joseph    | Assigned         | High     | Bug      |
| Kennelly, Krisha | Not Reproducible |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier  | Description |
|------|----------------------|-------------|
|      | 1119150 Modified.xml |             |

Complete Issue Information

|              |
|--------------|
| 1119150.xml  |
| Watchung.xml |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 11/13/2009 10:40:29 AM Eastern Standard Time  
 Submitted on behalf of Harjit Bal, NJ DOT.

To reproduce the problem, try entering -32.9 Deg in the Skew angle for Pier 1.

FROM: Herman Lee DATE: 11/13/2009 11:03:17 AM Eastern Standard Time  
 Program froze when creating a new foundation alternative.

Developer Note:

UiNewFoundationAltDescPpg.cpp Line 845 - 848 stuck in an infinite loop.

```

=====
while (lpSteelShapeDisp)
{
    if(!ShapeType != TYP_LIBSTL_WSHAPE)
        continue;
    .....
=====

```

FROM: Joseph Ihnat DATE: 11/19/2009 2:18:59 PM Eastern Standard Time  
 Fixed the New Foundation Alt problem for version 6.2  
 Krishna, please investigate the skew angle problem.

FROM: Krishna Kennelly DATE: 8/22/2012 1:21:14 PM Eastern Daylight Time  
 The skew angle problem is not reproducible in version 6.4 or in 6.3.1. I am able to enter negative values for the Pier Skew and save them.

|                                            |
|--------------------------------------------|
| Issue ID: 9626                             |
| Subject: Program Crashes during Spec Check |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Li, Xinmei             |                      |
| Submitted By: Grunau, Andrea            | 1/25/2010 2:55:58 PM |
| Modified By: agrunau                    | 5/4/2010 1:55:04 PM  |
| Priority: High                          |                      |

### Complete Issue Information

Category: Bug

### History

| Primary Contact | Status   | Priority | Category           |
|-----------------|----------|----------|--------------------|
| Goodrich, Brian | Assigned | High     | Bug<br>Bug - BRASS |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier      | Description |
|------|--------------------------|-------------|
|      | 02425 - 7F-17-WP-Sub.xml |             |
|      | Selected Plans.pdf       |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Andrea Grunau DATE: 1/25/2010 9:58:30 AM Eastern Standard Time

I am currently trying to check a pier in the final design condition. I can analyze the structure without any problems, but every time I run the specification check it crashes OPIS.

FROM: Herman Lee DATE: 1/25/2010 3:13:28 PM Eastern Standard Time

Please export the bridge to a XML file and attach to this incident for our investigation.

FROM: Andrea Grunau DATE: 1/25/2010 3:37:03 PM Eastern Standard Time

I have attached the XML file.....it is Pier 1 under the 2 span bridge option that I am having trouble with. Thanks.

FROM: Herman Lee DATE: 1/26/2010 9:52:06 AM Eastern Standard Time

We don't see the XML file in the Documents tab. Please try to attach it again or e-mail the XML file to [bridgeware@mbakercorp.com](mailto:bridgeware@mbakercorp.com). Thanks.

FROM: Andrea Grunau DATE: 2/3/2010 5:52:57 PM Eastern Standard Time

I emailed the XML file. Please let me know if you received it. Thanks.

FROM: Herman Lee DATE: 2/4/2010 11:02:32 AM Eastern Standard Time

I attached your XML file in this incident.

FROM: Andrea Grunau DATE: 3/9/2010 2:56:00 PM Eastern Standard Time

Any progress on this issue? It is still crashing when I try to run the specification check in the final design mode. Thanks.

1/5/2016 11:11:24 AM

HRS AASHTO

125

Complete Issue Information

FROM: Xinmei Li DATE: 3/10/2010 9:41:36 AM Eastern Standard Time Resolved.

FROM: Xinmei Li DATE: 3/11/2010 9:26:06 PM Eastern Standard Time Incident summary: I investigated the crash when doing the spec checks for final design mode and confirmed it is a defect in Opis Spec check. The crash was due to failure of article 5.7.3.4

Workaround: There is no workaround for now.

Resolved for: 6.2

FROM: Joseph Ihnat DATE: 4/29/2010 3:12:23 PM Eastern Daylight Time Verified - 6.2 alpha 4.

|                                                                                  |
|----------------------------------------------------------------------------------|
| Issue ID: 9670                                                                   |
| Subject: Searching for pedestrian load vehicle when analyzing for dead load only |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Goodrich, Brian        |                       |
| Submitted By: Hasan, Mac                | 3/10/2010 7:19:24 PM  |
| Modified By: hlee                       | 10/15/2011 9:47:22 PM |
| Priority: High                          |                       |
| Category: Bug - BRASS                   |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Complete Issue Information

Description

FROM: Herman Lee DATE: 3/10/2010 2:19:52 PM Eastern Standard Time  
Submitted on behalf of Golda Davydov, CDOT:

Error message during Pier 3 analysis:

=====

Unable to generate loads in the finite element model.  
02:23:22 PM - Line 194 in source file c:\vo\virtis\analytical  
tools\abamgmodelgen\mgmodelgeneration.cpp.

Computation of superstructure dead load girder reactions failed.  
02:23:22 PM - Line 1040 in source file c:\vo\virtis\analytical  
tools\abalmloadmodule\lmsuperdeadload.cpp.

Error generating LRFD load commands!  
02:23:22 PM - Line 203 in source file c:\vo\virtis\gui\abxbrass\brasslrfdloadcontrol.cpp.

Unable to determine pedestrian load id!  
02:23:22 PM - Line 1292 in source file c:\vo\virtis\gui\abxbrass\engineexport.cpp.

Error generating LOAD-LIVE-DEFINITION, LOAD-LIVE-COMBO, and/or LOAD-LIVE-DEFLECTION  
command!  
02:23:22 PM - Line 1427 in source file c:\vo\virtis\gui\abxbrass\brasslrfdloadcontrol.cpp.

Unable to get Pedestrian Load vehicle id!  
02:23:22 PM - Line 12419 in source file c:\vo\virtis\gui\abxbrass\engineexport.cpp.

=====

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| Issue ID: 9675<br>Subject: Unable to perform substructure analysis using 6.0 OpisOpisSub.exe |
|----------------------------------------------------------------------------------------------|

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Li, Xinmei             |                       |
| Submitted By: Hasan, Mac                | 3/18/2010 12:56:47 PM |
| Modified By: bzhang                     | 8/31/2012 6:53:54 PM  |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

1/5/2016 11:11:25 AM

HRS AASHTO

127

Complete Issue Information

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Li, Xinmei      | Assigned  | High     | Bug         |
| Duray, Jim      | Suspended | High     | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 3/18/2010 8:57:19 AM Eastern Daylight Time  
 Submitted on behalf of Golda Davydov, CO DOT.

=====

The program is doing the analysis for the superstructure (for the Girder 1 to the Girder 25), but I am interested in the analysis of the Substructure for the Piers 2 and 3. Please, see the attached input file. I am using Opus/Opus sub, version 6.0. I would very much appreciate your assistance in helping me make the program run so I can analyze Piers 2 and 3 in the attached input file.

Thank you,

Golda Davydov, P.E.

=====

I'm able to perform Pier 2 substructure analysis using 6.0 VirtisOpisOpisSub.exe but not 6.0 OpisOpisSub.exe.

May, please see whether you are able to reproduce the problem in 6.1 VirtisOpis.exe and 6.1 Opis.exe.

FROM: Joseph Ihnat DATE: 3/19/2010 11:17:57 AM Eastern Daylight Time  
 Neither 6.1 exe successfully runs this bridge and both do the same thing (run for awhile then crash).

FROM: Joseph Ihnat DATE: 3/19/2010 11:29:39 AM Eastern Daylight Time  
 The "crash" is that the program just disappears, with no "Send message to Microsoft" window.  
 Log file is attached.

FROM: Jim Duray DATE: 5/7/2010 1:45:37 PM Eastern Daylight Time  
 The transverse loader goes into an infinite loop (or so it seems).

FROM: Jeff Ruby DATE: 4/13/2011 11:51:18 AM Eastern Daylight Time

1/5/2016 11:11:25 AM

HRS AASHTO

128

Complete Issue Information

Testing on 6.3 Beta 1, the transverse loader did complete (after 25 minutes) with 35950 vehicle patterns and 71900 vehicle patterns. It then crashed later generating wind load on superstructure. That may or may not be a separate issue. See attached screen shot.

FROM: Jim Duray DATE: 7/13/2012 8:53:38 AM Eastern Daylight Time  
The problem is with computing the wind load. I attached a version of the xml bridge description with only one transverse vehilce position so it runs quicker.

FROM: Jim Duray DATE: 7/13/2012 2:32:23 PM Eastern Daylight Time  
I resolved the problem with wind on super and wind on live. There is a problem with computing the load due to water on substructure.  
Use "HL F-17-WP MARCH 17 - jad.xml" attached.

FROM: Krisha Kennelly DATE: 8/22/2012 9:52:09 AM Eastern Daylight Time  
Water on substructure problem fixed for 6.4 acceptance build. the attached "HL F-17-WP MARCH 17 - jad.xml" now runs to completion. Hand calcs verified the computed water on substructure loads.

FROM: Matt Kolis DATE: 8/29/2012 10:33:40 AM Eastern Daylight Time  
In VO64, Beta 4, Pier 2 runs to completion, however, Pier 3 takes way too long to run and then gives the attached error.

FROM: Bin Zhang DATE: 8/31/2012 1:27:38 PM Eastern Daylight Time  
Verified for the acceptance build. Pier 3 took 51 minutes to complete in my VM (Win7 64Bit).

|                                 |
|---------------------------------|
| Issue ID: 9713                  |
| Subject: Pile Pattern Templates |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Lee, Herman               | 4/7/2010 9:54:39 PM  |
| Modified By: jduray                     | 5/12/2010 6:34:13 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Herman Lee DATE: 4/7/2010 5:55:11 PM Eastern Daylight Time  
AI 2009-VO-088

More pile location patterns to select from, instead of using x-y coordinates.

FROM: Jim Duray DATE: 5/12/2010 2:34:13 PM Eastern Daylight Time

Consider something like the strand pattern window where pilse can be clicked on/off (within a predefined grid).

|                         |
|-------------------------|
| Issue ID: 9717          |
| Subject: Drilled Shafts |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Duray, Jim             |                       |
| Submitted By: Lee, Herman               | 4/9/2010 9:14:10 PM   |
| Modified By: hlee                       | 11/11/2012 9:24:42 PM |
| Priority: High                          |                       |



### Complete Issue Information

Category: Enhancement

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Kennelly, Krisha | New      | High     | Bug      |
|                  | Assigned |          |          |
|                  | Resolved |          |          |
|                  | Resubmit |          |          |
|                  | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier        | Description |
|------|----------------------------|-------------|
|      | Slenderness Calc Error.pdf |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Herman Lee DATE: 4/9/2010 5:15:10 PM Eastern Daylight Time  
AI 2009-VO-088: Opis Sub TAG enhancement survey

FROM: Herman Lee DATE: 6/9/2011 4:30:00 PM Eastern Daylight Time  
This is in the 6.4 Work Plan.

FROM: Herman Lee DATE: 11/11/2012 4:22:23 PM Eastern Standard Time  
Drilled shafts implemented for the 6.4 Service Pack (6.4.1).

Complete Issue Information

|                                                                                                     |
|-----------------------------------------------------------------------------------------------------|
| Issue ID: 9781                                                                                      |
| Subject: Solid Shaft Pier Transverse Moment of Inertia calculation in the Pier Alt:Stiffness window |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Schoedel, Rich            | 4/22/2010 4:47:23 PM |
| Modified By: hlee                       | 5/28/2010 6:33:14 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Rich Schoedel DATE: 4/22/2010 12:48:50 PM Eastern Daylight Time  
 The calucation of the moment of inertia about the pier transverse axis appears incorrectly in the "Stiffness" window. See attached markup. LRFD Substructure Example 4.

FROM: Krisha Kennelly DATE: 4/28/2010 12:38:02 PM Eastern Daylight Time  
 fixed for version 6.2

Transverse moment of inertia was computed incorrectly in the Pier Alt:Stiffness window for a solid shaft pier.

FROM: Jim Duray DATE: 5/4/2010 7:55:47 AM Eastern Daylight Time  
 Using the A4 with updates through this morning the window still shows 470 for the MOI. I think it should be 1396 ft^4 as shown in the FE model report (28,956,852 in^4)

FROM: Rich Schoedel DATE: 5/6/2010 10:00:03 AM Eastern Daylight Time

Complete Issue Information

Corrected in beta 1

|                                      |
|--------------------------------------|
| Issue ID: 9930                       |
| Subject: Database Import Error MSSQL |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ordoobadi, Mehrdad     |                      |
| Submitted By: Ruby, Jeff                | 5/11/2010 1:52:42 PM |
| Modified By: mordoobadi                 | 6/8/2011 6:29:01 PM  |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact    | Status    | Priority | Category |
|--------------------|-----------|----------|----------|
| Duray, Jim         | New       | High     | Bug      |
| Ordoobadi, Mehrdad | Assigned  |          |          |
|                    | Duplicate |          |          |
|                    | Resolved  |          |          |
|                    | Assigned  |          |          |
|                    | Resolved  |          |          |

Complete Issue Information

|                    |                  |      |         |
|--------------------|------------------|------|---------|
|                    | Assigned         |      |         |
|                    | Resolved         |      |         |
| Duray, Jim         | New              | High | Bug     |
| Ordoobadi, Mehrdad | Assigned         |      |         |
|                    | Not Reproducible |      |         |
|                    | Assigned         |      |         |
|                    | Resolved         |      |         |
|                    | Resubmit         |      |         |
|                    | On Hold          |      |         |
|                    | Assigned         |      | Unknown |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | 04453_-_081-070.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 5/11/2010 9:59:36 AM Eastern Daylight Time

When importing an xml file exported from the previous version, I got this error. See the attached log file. Also, I attached the xml file I tried to import.

FROM: George Colgrove DATE: 5/11/2010 10:19:22 AM Eastern Daylight Time

I was able to load into the debug build (fresh as of afternoon 5/10/10) but could not be saved. Gave this error:

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmBridgeSubLrfdDsVehicle (SaveOrder object 107).

Error updating database record set.

FROM: Mehrdad Ordoobadi DATE: 5/12/2010 1:57:35 PM Eastern Daylight Time

1/5/2016 11:11:26 AM

HRS AASHTO

134

Complete Issue Information

Duplicate of 9934.

FROM: George Colgrove DATE: 5/12/2010 3:47:00 PM Eastern Daylight Time  
This worked

FROM: Jeff Ruby DATE: 5/13/2010 2:20:00 PM Eastern Daylight Time  
Still doesn't work with attached bridge.

FROM: Mehrdad Ordoobadi DATE: 5/13/2010 2:32:01 PM Eastern Daylight Time  
Please follow the instructions provided in the issue 9334 that is repeated below:

The issue is due to not having the same vehicle that was referenced in the Substructure Design Settings in the 6.2 database Library vehicle. The vehicle existed in the original 6.1 database but it doesn't exist in the 6.2 database. That's the reason for not being able to save.

To resolve:

- 1 - Open the "Jeffs Substructure Settings" Design Setting.
- 2 - In the vehicle Tab, there is a vehicle under "Strength-II limit state" that does not have any label. Select that vehicle and then remove it from the vehicle summary tree.
- 3 - Then save. Save should be successful.

FROM: Jeff Ruby DATE: 9/7/2010 10:46:15 AM Eastern Daylight Time  
Ok, this is a "workaround" then. So what does "resolved" mean? Will this be listed on the website as a workaround? Or did you add better error handling? I don't see how this was "resolved" yet. We can do 2 things.

- 1) Better error handling (message) so the user can figure out what to do.
- 2) Enter how to solve this problem somewhere on the web site.

FROM: Jeff Ruby DATE: 9/7/2010 10:52:23 AM Eastern Daylight Time  
I see that 9934 states that there needs to be some discussion on how to "solve" this. It isn't going to be done for 6.2 So this cannot be resolved for 6.2 Remove it from the 6.2 list and add it to the 6.3 list or something.

FROM: Jim Duray DATE: 9/7/2010 2:15:33 PM Eastern Daylight Time  
I changed it to a 6.1 release bug since it existed in previous releases (not new to 6.2 beta). Special handling of vehicle-related data in an import/export is actually an enhancement to the process.

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 8:11:27 AM Eastern Standard Time  
Changed the domain code to ignore the vehicles that do not exist. The vehicles that are referenced in a bridge export file but do not exist (their IDs) will not be added to the LRFD Design Settings.

FROM: Mehrdad Ordoobadi DATE: 2/2/2011 8:33:14 AM Eastern Standard Time  
Fixed for 6.3

FROM: Xinmei Li DATE: 3/28/2011 4:31:16 PM Eastern Daylight Time  
Verified fixed for 6.3 Alpha6.

FROM: Jeff Ruby DATE: 4/12/2011 1:51:07 PM Eastern Daylight Time  
Accepted in Version 6.3 Beta 1

---

1/5/2016 11:11:27 AM

HRS AASHTO

135

### Complete Issue Information

|                                          |
|------------------------------------------|
| Issue ID: 9934                           |
| Subject: Can't save this imported bridge |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ordoobadi, Mehrdad     |                      |
| Submitted By: Teal, Dean                | 5/11/2010 2:36:23 PM |
| Modified By: hlee                       | 7/20/2011 3:12:18 PM |
| Priority: High                          |                      |
| Category: Unknown                       |                      |

### History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Suspended |          | Enhancement |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Dean Teal DATE: 5/11/2010 10:40:25 AM Eastern Daylight Time

I imported the attached 6.1 PS bridge

Was able to successfully run Opis LRFD with reasonable results

Was not able to save to the 6.2 SQL database

Got the following message:

Unable to save Bridge data!

Saving New and Modified objects failed while processing CDmBridgeSubLrfdDsVehicle (SaveOrder object 107).

Error updating database record set.

FROM: George Colgrove DATE: 5/11/2010 12:47:02 PM Eastern Daylight Time

Dean, Please post the bridge so I can give it a whirl.

FROM: Dean Teal DATE: 5/11/2010 1:02:54 PM Eastern Daylight Time

1/5/2016 11:11:27 AM

HRS AASHTO

136

Complete Issue Information

6.1 bridge added

FROM: Dean Teal DATE: 5/11/2010 1:03:51 PM Eastern Daylight Time  
By the way - Paul could import and save the bridge using Oracle 11 I think

FROM: George Colgrove DATE: 5/11/2010 1:18:48 PM Eastern Daylight Time  
I replicated this

FROM: Dean Teal DATE: 5/11/2010 2:25:31 PM Eastern Daylight Time  
Another by the way - I can import this and save it in my 6.1 sample database

FROM: Mehrdad Ordoobadi DATE: 5/12/2010 1:35:21 PM Eastern Daylight Time  
More Information - Debug Error Message:

Unable to save Bridge data!  
01:44:26 PM - Line 885 in source file .\UiBWSDoc.cpp.

Saving New and Modified objects failed while processing CDmBridgeSubLrfdDsVehicle (SaveOrder object 107).  
01:44:20 PM - Line 448 in source file c:\development\virtis\dev\data management\abmbche\dmbridgecache.cpp.

Error updating database record set.  
01:44:20 PM - Line 792 in source file c:\development\virtis\dev\data management\abmsubstr\dmbridgesublrfdsvvehicle.cpp.  
State:23000,Native:547,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]  
State:01000,Native:3621,Origin:[Microsoft][ODBC SQL Server Driver][SQL Server]

The INSERT statement conflicted with the FOREIGN KEY constraint "R\_4130". The conflict occurred in database "Virtis62s", table "dbo.abw\_lib\_vehicle", column 'vehicle\_id'. The statement has been terminated.

FROM: Mehrdad Ordoobadi DATE: 5/12/2010 1:47:30 PM Eastern Daylight Time  
The issue is due to not having the same vehicle that was referenced in the Substructure Design Settings in the 6.2 database Library vehicle. The vehicle existed in the original 6.1 database but it doesn't exist in the 6.2 database. That's the reason for not being able to save.  
To resolve, open the "Jeffer Substructure Settings" Design Setting. In the vehicle Tab, there is a vehicle under "Strength-II limit state" that does not have any label. Select that vehicle and then remove it from the vehicle summary tree. Then save. Save should be successful.

FROM: Mehrdad Ordoobadi DATE: 5/12/2010 1:58:53 PM Eastern Daylight Time  
Duplicate of 9930.

FROM: George Colgrove DATE: 5/12/2010 3:49:21 PM Eastern Daylight Time  
This worked

FROM: Dean Teal DATE: 6/8/2010 1:51:52 PM Eastern Daylight Time  
Yes this does work - but  
Should we have to do this  
If a bridge created by a consultant and delivered to an agency, this would prevent us from including this

1/5/2016 11:11:27 AM

HRS AASHTO

137

Complete Issue Information

in our database.

Or the same goes when sending this out to a consultant

Do we want to have this happen without a reasonable way for the agency or consultant to handle this? The failed save operation doesn't point the average user to a resolution.

FROM: Jim Duray DATE: 7/23/2010 11:20:12 AM Eastern Daylight Time

This is not new to 6.2 (although it was discovered while testing 6.2). It has been there since the first release of substructure. Mehrdad's description on 5/12 above explains the issue. We need to decide how best to handle this situation. It is too late in the testing of 6.2 to implement for the 6.2 release.

I think our choices are to either not export/import the design settings or export/import info about the vehicles so we can determine if the vehicle is the same in the target DB as in the source DB. We currently do not export vehicles with a bridge workspace. The only other time we store vehicle id's in the BWS is with analysis results and we do not export analysis results with the BWS.

|                      |
|----------------------|
| Issue ID: 10107      |
| Subject: Timber Pile |

|                                         |                     |
|-----------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis Sub |                     |
| Primary Contact: Duray, Jim             |                     |
| Submitted By: Teal, Dean                | 7/8/2010 1:19:41 PM |
| Modified By: hlee                       | 7/8/2010 2:13:42 PM |
| Priority: High                          |                     |
| Category: Enhancement                   |                     |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Dean Teal DATE: 7/8/2010 9:32:56 AM Eastern Daylight Time

Timber Pile needs to be added as a material type for substructure

1/5/2016 11:11:27 AM

HRS AASHTO

138



Complete Issue Information

Issue ID: 10128  
Subject: units (mm) should be (m)

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Li, Xinmei  
Submitted By: Warner, David 7/16/2010 2:57:06 PM  
Modified By: xli 4/3/2012 2:11:41 PM  
Priority: High  
Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
| Duray, Jim      | New    | High     | Unknown  |

Complete Issue Information

|            |           |      |             |
|------------|-----------|------|-------------|
|            | Assigned  |      | Bug         |
| Duray, Jim | New       | High | Unknown     |
|            | Suspended |      | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier               | Description |
|------|-----------------------------------|-------------|
|      | Column Reinforcement<br>Email.pdf |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: David Warner DATE: 7/16/2010 11:00:31 AM Eastern Daylight Time  
units in results for my column say (mm) when they need to say (m).

I doubt the axial load or moment change as dramatically as shown in the picture, over only 15mm,  
should be 15m.

see attached picture.

FROM: Xinmei Li DATE: 4/3/2012 10:11:19 AM Eastern Daylight Time  
Resolved for the next 6.4 Alpha build.

|                                      |
|--------------------------------------|
| Issue ID: 10371                      |
| Subject: Column Reinforcement Screen |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                                |                      |
|--------------------------------|----------------------|
| Primary Contact: Duray, Jim    |                      |
| Submitted By: Howells, Russell | 1/19/2011 2:59:59 PM |
| Modified By: hlee              | 1/19/2011 6:27:55 PM |
| Priority: High                 |                      |
| Category: Enhancement          |                      |

### History

| Primary Contact   | Status   | Priority | Category |
|-------------------|----------|----------|----------|
| Duray, Jim        | New      | High     | Unknown  |
| Kennelly, Krishna | Assigned |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      | spread footing.pdf  |             |
|      | Daves-Test.xml      |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Russell Howells DATE: 1/19/2011 10:02:15 AM Eastern Standard Time  
In the column reinforcement screen it would be helpful to be able to see the same information that is provided in the "Generate Pattern" screen. This information includes the following:

- Section selected for the reinforcement
- Reinforcement Bar Size
- Clear Cover

This information is required in the checking process and appears to only be verified by checking the geometry in a spreadsheet to verify these dimensions. The problem is that when the user clicks on the "Generate Pattern" button, the new window does not have any of the information that was used to generate the current pattern.

Please do one of the following to provide easier user interface:

1. When the "Generate Pattern" button is clicked, the information used to generate the existing

### Complete Issue Information

pattern is saved and displayed. The user can then modify that data as required to modify the existing pattern or to generate a new pattern.

2. Provide this information in the column reinforcement window.

|                           |
|---------------------------|
| Issue ID: 10807           |
| Subject: Soil Resistances |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krishna      |                      |
| Submitted By: Warner, David             | 4/28/2011 5:51:03 PM |
| Modified By: kkennelly                  | 6/2/2011 7:12:36 PM  |
| Priority: High                          |                      |
| Category: Unknown                       |                      |

### History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 4/28/2011 2:00:46 PM Eastern Daylight Time

Attached one page PDF.

Basically the Spread footing is doing everything right if build on Rock. But there's a radio button on the spread footing foundation alternative, under subsurface type, [soil or rock] which is a bit misleading as it's not doing soil correctly. Instead a uniform pressure on a reduced effective footing size is used on soils. If one doesn't go below the bottom of footing then the linearly varying pressure is whats needed for footing structural design. Good. Lastly since the values "e" "B" and "V" are already calculated and used correctly in the linearly varying footing pressures a uniform pressure column can be added very

Complete Issue Information

easily, and this is the correct Design Ratio (DR) to compare to soil resistances.

FROM: Krisha Kennelly DATE: 6/2/2011 2:27:38 PM Eastern Daylight Time  
Submitted as a beta incident but it actually applies to the released version. Folder changed to support and version changed to 6.2 release

Issue ID: 10837  
Subject: Opis Substructure is not using the user entered override live loads

Folder: /Virtis/Support Center/Opis Sub  
Primary Contact: Duray, Jim  
Submitted By: Kennelly, Krisha 5/10/2011 1:15:05 PM  
Modified By: xli 8/30/2012 7:38:44 PM  
Priority: Critical  
Category: Bug

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | Assigned | High     | Bug      |
|                 |          | Critical |          |
|                 | Resolved |          |          |
|                 | Resubmit |          |          |

Complete Issue Information

|          |
|----------|
| Verified |
|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | 16263 -<br>YOUKNOWWHATITIZ.xml |             |

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 5/10/2011 9:15:30 AM Eastern Daylight Time  
Submitted on behalf of Dave Warner, Montana DOT

attached bridge, pier 2. Has user entered override LL's and checked the box to use the override live loads.

But the live load analysis is not using these loads. I can change the user entered override LL drastically and the LL applied to the pier never changes.

FROM: Herman Lee DATE: 8/28/2012 8:45:40 AM Eastern Daylight Time  
Fixed by Jim Duray for the 6.4 release.

FROM: Xinmei Li DATE: 8/29/2012 7:55:46 PM Eastern Daylight Time  
Tested with Beta4, I think the live load reactions still don't change when override live load changes. I used attached bridge Pier2, I changed the live load distribution in superstructure loads window, I changed the axle load and uniform load and also checked the override checkbox. The live load reaction summary always reports the same live load reactions as if I selected computed in the live load distribution tab.

FROM: Xinmei Li DATE: 8/30/2012 3:35:33 PM Eastern Daylight Time  
Verified the fix for beta 4.  
I ran pier2 with computed LL and overridden LL, values are different. I also ran it by entering computed LL to the overrid LL tables, the LL reactions match the computed results.

|                                        |
|----------------------------------------|
| Issue ID: 11138                        |
| Subject: Substructure analysis freezes |

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
| Primary Contact: Duray, Jim             |

1/5/2016 11:11:29 AM

HRS AASHTO

144

### Complete Issue Information

|                             |                       |
|-----------------------------|-----------------------|
| Submitted By: Warner, David | 10/19/2011 6:27:14 PM |
| Modified By: dwarner        | 10/21/2011 5:19:23 PM |
| Priority: High              |                       |
| Category: Unknown           |                       |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Duray, Jim      | New      | High     | Unknown  |
| Trees, Geoffrey | Assigned |          |          |
| Ihnat, Joseph   | Resolved |          | Bug      |
|                 | Closed   |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                  | Description |
|------|--------------------------------------|-------------|
|      | 6.3.<br>1_release_ScreenShot_001.jpg |             |
|      | 6.3.<br>1_release_ScreenShot_002.jpg |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: David Warner DATE: 10/19/2011 2:34:07 PM Eastern Daylight Time

The superstructure analyzes without incident. It's a two span continuous prestressed girder. It has a wider than normal pier but my design work for the superstructure tells me the superstructure is working very well.

The substructure however seems to have a bug. The 3-d view looks good. It's a bit wider than most bridges. I've tried multiple live load settings below in the pier superstructure loading area. Each time the analysis pegs on Transverse live loader... and never comes out of it. I even ran it all night and this morning was a warning screen that virtis/opis had to close due to a fatal error.

Any help is much appreciated. I am confident the substructure has all dimensions and reinforcing

1/5/2016 11:11:29 AM

HRS AASHTO

145

Complete Issue Information

correctly defined.

Dave.

FROM: Krisha Kennelly DATE: 10/21/2011 10:07:01 AM Eastern Daylight Time  
Version was entered as 6.2 by Dave but that should be verified.

FROM: David Warner DATE: 10/21/2011 1:19:23 PM Eastern Daylight Time  
yes 6.2. Due to Paul Jensen's sudden departure this spring our installation of 6.3 is coming soon.

|                                             |
|---------------------------------------------|
| Issue ID: 11227                             |
| Subject: Bottom of Footing Elevation Hidden |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Ihnat, Joseph          |                      |
| Submitted By: Ruby, Jeff                | 1/31/2012 5:41:53 PM |
| Modified By: bzhang                     | 8/29/2012 1:45:34 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 1/31/2012 12:48:37 PM Eastern Standard Time  
The bottom of footing elevation key-in box in the Foundation Geometry window is hidden. There is no "Blue Text" that shows where you need to click. See Image 1. Image 2 shows what happens when you magically hit the right spot to enter your elevation.

FROM: Joseph Ihnat DATE: 2/17/2012 9:44:16 AM Eastern Standard Time  
Seemed to work OK on Windows XP but not on Windows 7. Fixed for version 6.4.



Complete Issue Information

FROM: Jeff Ruby DATE: 6/28/2012 11:26:39 AM Eastern Daylight Time  
Accepted 6.4 Beta 2

FROM: Bin Zhang DATE: 8/29/2012 9:39:44 AM Eastern Daylight Time  
Re-backcheck for the acceptance build on Win7.

|                                       |
|---------------------------------------|
| Issue ID: 11358                       |
| Subject: Pier Column Segment ordering |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Lee, Herman            |                      |
| Submitted By: Ihnat, Joseph             | 4/17/2012 1:44:27 PM |
| Modified By: hlee                       | 4/17/2012 2:09:07 PM |
| Priority: High                          |                      |
| Category: Support                       |                      |

History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Lee, Herman     | New      | High     | Unknown  |
|                 | Closed   |          |          |
|                 | Resolved |          | Support  |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

1/5/2016 11:11:30 AM

HRS AASHTO

147

## Complete Issue Information

---

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | Rt. 96 over Catatunk Creek.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Joseph Ihnat DATE: 4/17/2012 9:45:23 AM Eastern Daylight Time

Don't know if this is two problems or the same problem.

Using LRFD Substructure Example 1:

- 1) Open the Column1 Components window, create 4 segments, set cross section types 1-4 to Rectangular, Round, Round Nose, Wedge Nose.
- 2) Click OK. Reopen the window to verify segments are in the order we just entered.
- 3) Close the BWS to save the bridge, then reopen and open column components window again. Segments are now in reverse order.
- 4) If you just Save instead of closing BWS to save, segments are not reordered.

Also:

- 1) Perform step (1) as above.
- 2) Copy pier alt "3-column pier".
- 3) Under pier alt "Copy of 3-column pier", open Column1 Components window. Order of segments is reversed.

FROM: Joseph Ihnat DATE: 4/17/2012 10:03:21 AM Eastern Daylight Time

Disregard. Works OK if I enter the elevations.

Issue ID: 11661

Subject: Pier Analysis Terminates During Specification Check

Folder: /Virtis/Support Center/Opis Sub

Primary Contact: Ghosh, Subhadeep

Submitted By: Campisi, Paul

6/21/2012 4:01:07 PM

Modified By: hlee

5/11/2013 2:01:48 PM

Priority: High

1/5/2016 11:11:30 AM

HRS AASHTO

148

### Complete Issue Information

|               |
|---------------|
| Category: Bug |
|---------------|

### History

| Primary Contact   | Status             | Priority | Category |
|-------------------|--------------------|----------|----------|
| Duray, Jim        | New                | High     | Unknown  |
|                   | Information Needed |          |          |
| Kennelly, Krishna | Assigned           |          | Bug      |
|                   | Resolved           |          |          |
|                   | Verified           |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier            | Description |
|------|--------------------------------|-------------|
|      | error.bmp                      |             |
|      | Rt. 96 over Catatunk Creek.xml |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Paul Campisi DATE: 6/21/2012 12:07:40 PM Eastern Daylight Time

For the attached file, the pier analysis is successful, but terminates during the specification check with the following error: "Substructure specification check encountered errors and did not successfully complete!"

Paul Campisi  
NYSDOT

FROM: Paul Campisi DATE: 7/16/2012 12:08:12 PM Eastern Daylight Time

Please provide an update.

FROM: Subhadeep Ghosh DATE: 5/10/2013 2:10:14 PM Eastern Daylight Time

The issue seems to be solved for Bridge Design (Formerly Opis) 6.5 Beta 1. Hence, it should be resolved for 6.5 release.

1/5/2016 11:11:30 AM

HRS AASHTO

149

Complete Issue Information

|                                                   |
|---------------------------------------------------|
| Issue ID: 11662                                   |
| Subject: Pier model spec check encountered errors |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Kennelly, Krishna      |                       |
| Submitted By: Crudele, Brenda           | 6/22/2012 11:27:01 AM |
| Modified By: mmlynarski                 | 4/24/2013 6:27:14 PM  |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Brenda Crudele DATE: 6/22/2012 7:36:12 AM Eastern Daylight Time  
 User modeled a pier. The analysis was successful, but the code check encountered errors.

Please provide assistance as to what errors are found.

FROM: Jim Duray DATE: 6/22/2012 8:20:01 AM Eastern Daylight Time  
 What version of the software are you working with? The version name above is "6.2 Dev 1" is unsupported.

FROM: Brenda Crudele DATE: 6/22/2012 8:23:57 AM Eastern Daylight Time  
 We are using 6.2.0.

FROM: Jim Duray DATE: 8/28/2012 9:56:52 AM Eastern Daylight Time  
 The units for the wall cross section are not being initialized (which I fixed).  
 Now the spec-checking asserts in Specification.cs when adding spec articles. I don't know if the

1/5/2016 11:11:31 AM

HRS AASHTO

150

Complete Issue Information

assertions are ok or not.

FROM: Krisha Kennelly DATE: 4/9/2013 10:00:10 AM Eastern Daylight Time  
Fixed for 6.5.0. Pier analysis runs to completion now.

(Fixed some problems in the spec check for pile footings in ScMdPierStructure.)

FROM: Mark Mlynarski DATE: 4/24/2013 2:24:00 PM Eastern Daylight Time  
Verified in BrDR 6.5 (beta 1)

|                               |
|-------------------------------|
| Issue ID: 11831               |
| Subject: Drilled Shaft Issues |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Duray, Jim             |                      |
| Submitted By: Kemna, Aaron              | 8/10/2012 5:39:32 PM |
| Modified By: hlee                       | 10/9/2012 8:19:42 PM |
| Priority: High                          |                      |
| Category: Enhancement                   |                      |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
|                 | Assigned  |          |             |
|                 | Suspended |          | Enhancement |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier    | Description |
|------|------------------------|-------------|
|      | OPIS Drilled Shaft.xml |             |

Complete Issue Information

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Aaron Kemna DATE: 8/10/2012 1:55:23 PM Eastern Daylight Time  
I had someone take a quick look at the drilled shaft module and he reported the following issues. I am attaching an xml file. He thinks that some of the issues may be user error.

Chris:

I was unable to get the drilled shaft module to run in OPIS. I kept getting an error that the finite element model could not be created. I was also unable to save the file after copying and pasting a foundation definition. The program crashes after closing the 3D schematic of the substructure which only shows the schematic for the last column.

Some things that are missing from the program (Chris's opinion):

- No input for rock (weak or strong) soil-type for p-y curves.
- No input for web wall or collision wall plate elements.
- No input for tie beams.

Aaron:

Would it make sense to set up soil user definitions in the library since there are no default rock definitions for the p-y curves?

FROM: Jim Duray DATE: 8/10/2012 2:05:47 PM Eastern Daylight Time  
Drilled shaft is not included in the 6.4 release (actually only the UI is included). The analysis is (or should be) disabled. I see that the disabling of the analysis didn't make into the Beta 3 build. The next build will display the following message:

"Analysis of piers with a drilled shaft foundation is not currently supported by the software. Analysis will be supported beginning with version 6.4.1.

Analysis failed!"

FROM: Jim Duray DATE: 8/14/2012 10:49:21 AM Eastern Daylight Time  
The items above that are "missing" are enhancements.

FROM: Herman Lee DATE: 10/9/2012 4:17:13 PM Eastern Daylight Time  
Changed Folder from Beta Testing to Support Center/Opis Sub.

|                                                                          |
|--------------------------------------------------------------------------|
| Issue ID: 11837<br>Subject: Add default values of k and E50 to help file |
|--------------------------------------------------------------------------|

|                                         |
|-----------------------------------------|
| Folder: /Virtis/Support Center/Opis Sub |
|-----------------------------------------|

### Complete Issue Information

|                             |                      |
|-----------------------------|----------------------|
| Primary Contact: Duray, Jim |                      |
| Submitted By: Ruby, Jeff    | 8/13/2012 6:11:41 PM |
| Modified By: hlee           | 5/12/2013 7:40:34 PM |
| Priority: High              |                      |
| Category: Enhancement       |                      |

### History

| Primary Contact | Status   | Priority | Category |
|-----------------|----------|----------|----------|
| Mlynarski, Mark | Assigned | High     | Bug      |
|                 | Resolved |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jeff Ruby DATE: 8/13/2012 2:14:32 PM Eastern Daylight Time

It would be helpful to at least have some ball park number to enter for soil layers.

The following is taken from the COM624P dos program's help file:

p-y Curve Criteria  
Soil Modulus Parameter k  
Soil Strain Parameter E50

p-y Curve Criteria

These criteria are used by LPILE1 to calculate p-y curves internally

- Option 1 - Soft Clay (Matlock, 1970)
- Option 2 - Stiff Clay Below the Watertable (Reese et al., 1975)
- Option 3 - Stiff Clay Above the Watertable (Reese & Welch, 1975)
- Option 4 - Sand (Reese et al., 1974)

Complete Issue Information

Soil Modulus Parameter k for Clays

| Average Undrained Shear Strength                                           | Static                    | Cyclic                   |
|----------------------------------------------------------------------------|---------------------------|--------------------------|
| Soft Clay, c = 1.74 to 3.47 psi<br>250 to 500 psf<br>12 to 24 KPa          | 30 pci<br>8,140 KPa/m     | -<br>-                   |
| Medium Clay, c = 3.47 to 6.94 psi<br>500 to 1000 psf<br>24 to 48 KPa       | 100 pci<br>27,150 KPa/m   | -<br>-                   |
| Stiff Clay, c = 6.94 to 13.9 psi<br>1000 to 2000 psf<br>48 to 96 KPa       | 500 pci<br>136,000 KPa/m  | 200 pci<br>54,300 KPa/m  |
| Very Stiff Clay, c = 13.9 to 27.8 psi<br>2000 to 4000 psf<br>96 to 192 KPa | 1000 pci<br>271,000 KPa/m | 400 pci<br>108,500 KPa/m |
| Hard Clay, c = 27.8 to 55.6 psi<br>4000 to 8000 psf<br>192 to 383 KPa      | 2000 pci<br>543,000 KPa/m | 800 pci<br>217,000 KPa/m |

Soil Modulus Parameter k for Sands

| Relative Density        | Loose                                | Medium                                | Dense                                  |
|-------------------------|--------------------------------------|---------------------------------------|----------------------------------------|
| Submerged Sand<br>" " " | 20 lb/in <sup>3</sup><br>5,430 KPa/m | 60 lb/in <sup>3</sup><br>16,300 KPa/m | 125 lb/in <sup>3</sup><br>33,900 KPa/m |
| Sand Above WT<br>" " "  | 25 lb/in <sup>3</sup><br>6,790 KPa/m | 90 lb/in <sup>3</sup><br>24,430 KPa/m | 225 lb/in <sup>3</sup><br>61,000 KPa/m |

Soil Strain Parameter E50

|                                                                      |             |
|----------------------------------------------------------------------|-------------|
| Soft Clay, c = 1.74 to 3.47 psi<br>250 to 500 psf<br>12 to 24 KPa    | E50 = 0.02  |
| Medium Clay, c = 3.47 to 6.94 psi<br>500 to 1000 psf<br>24 to 48 KPa | E50 = 0.01  |
| Stiff Clay, c = 6.94 to 13.9 psi<br>1000 to 2000 psf<br>48 to 96 KPa | E50 = 0.007 |



Complete Issue Information

Very Stiff Clay, c = 13.9 to 27.8 psi E50 = 0.005  
 2000 to 4000 psf  
 96 to 192 KPa

Hard Clay, c = 27.8 to 55.6 psi E50 = 0.004  
 4000 to 8000 psf  
 192 to 383 KPa

FROM: Herman Lee DATE: 10/9/2012 4:19:52 PM Eastern Daylight Time  
 Changed Folder from Beta Testing to Support Center/Opis Sub.

FROM: Herman Lee DATE: 5/12/2013 3:36:54 PM Eastern Daylight Time  
 Need to check whether above p-y Curve Criteria is copyrighted.

Issue ID: 11991  
 Subject: Percent shear change in article 5.8.3.3 causes pier shear articles to fail

Folder: /Virtis/Support Center/Opis Sub  
 Primary Contact: Mlynarski, Mark  
 Submitted By: Kennelly, Krisha 10/26/2012 5:22:09 PM  
 Modified By: kkennelly 10/26/2012 6:01:56 PM  
 Priority: High  
 Category: Bug

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Krisha Kennelly DATE: 10/26/2012 1:22:41 PM Eastern Daylight Time  
 The change made for Issue 10579 causes pier columns to have Vc = 0.0 because

Complete Issue Information

m\_Section.PercentShear is null for pier components.

FROM: Krisha Kennelly DATE: 10/26/2012 2:01:27 PM Eastern Daylight Time  
I set the PercentShear in the controller articles so Vc is no longer 0.0.

|                                                                                 |
|---------------------------------------------------------------------------------|
| Issue ID: 12077                                                                 |
| Subject: 3D graphing of analysis results - scale factor is not working properly |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Ihnat, Joseph          |                       |
| Submitted By: Duray, Jim                | 11/29/2012 8:32:11 PM |
| Modified By: gtrees                     | 12/5/2012 6:02:34 PM  |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact    | Status   | Priority | Category |
|--------------------|----------|----------|----------|
| Bhanushali, Girish | Assigned | High     | Unknown  |

### Complete Issue Information

|               |          |      |         |
|---------------|----------|------|---------|
| Ihnat, Joseph | Resolved |      | Bug     |
| Duray, Jim    | New      | High | Unknown |
| Ihnat, Joseph | Assigned |      |         |
|               | Resolved |      | Bug     |
|               | Verified |      |         |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier                    | Description |
|------|----------------------------------------|-------------|
|      | 056-156_substructure_NoLoadPalette.xml |             |
|      | 6.4.1_beta2_ScreenShot_004.jpg         |             |

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Jim Duray DATE: 11/29/2012 3:33:03 PM Eastern Standard Time

I modified the scale factor for plotting results and got incorrect results:

For moment y:

Change the scale factor from 10 to 20 - worked, then change back to 10 - it seems like the 10 was added to the 20 to give a larger amplification.

Change the factor to zero - crash.

Use any pier.

FROM: Girish Bhanushali DATE: 11/30/2012 2:21:58 PM Eastern Standard Time

Resolution reached after co-investigation with Jim (on Jim's machine) that rest is working fine and only need to take care of the crash when result scale values are entered zero. (prevent zero and less than zero values entered by user)

FROM: Joseph Ihnat DATE: 11/30/2012 3:12:33 PM Eastern Standard Time

Probably always been like this. I was able to reproduce this crash in version 6.3

1/5/2016 11:11:32 AM

HRS AASHTO

157

Complete Issue Information

Changed folder to Support Center.  
Fixed for version 6.4.1 (Beta 2).

FROM: Geoffrey Trees DATE: 12/5/2012 12:57:47 PM Eastern Standard Time  
Verified

|                                             |
|---------------------------------------------|
| Issue ID: 12097                             |
| Subject: Choosing Load Palette doesn't work |

|                                         |                       |
|-----------------------------------------|-----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                       |
| Primary Contact: Ihnat, Joseph          |                       |
| Submitted By: Ruby, Jeff                | 12/10/2012 9:37:57 PM |
| Modified By: jruby                      | 12/19/2012 3:31:23 PM |
| Priority: High                          |                       |
| Category: Bug                           |                       |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Jeff Ruby DATE: 12/10/2012 4:43:50 PM Eastern Standard Time

While on a substructure Alternative, choosing "Load Palette" flashed the screen, but I get no window.

No picture or bridge required. So far all substructure I try exhibit this behavior. But, I attached a bridge just to be sure.

FROM: Jim Duray DATE: 12/11/2012 7:53:35 AM Eastern Standard Time

I'm not able to reproduce this behavior in a development build.

FROM: Joseph Ihnat DATE: 12/12/2012 3:05:59 PM Eastern Standard Time

Reproducible with Jeff's bridge, or create a new pier alt.

Fixed for next build.

1/5/2016 11:11:32 AM

HRS AASHTO

158

### Complete Issue Information

FROM: Joseph Ihnat DATE: 12/12/2012 3:25:25 PM Eastern Standard Time  
Changed folder to Support Center.

FROM: Srujana Thogaru DATE: 12/18/2012 2:06:10 PM Eastern Standard Time  
Verified in Virtis 6.4.1 Beta 3.

FROM: Jeff Ruby DATE: 12/19/2012 10:31:08 AM Eastern Standard Time  
Accepted 6.4.1 Beta 3

|                                                              |
|--------------------------------------------------------------|
| Issue ID: 12132                                              |
| Subject: Pier Analysis Terminates During Specification Check |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Lee, Herman            |                      |
| Submitted By: Patel, Shirish            | 1/10/2013 4:09:53 PM |
| Modified By: hlee                       | 4/1/2013 3:51:35 PM  |
| Priority: High                          |                      |
| Category: Support                       |                      |

### History

| Primary Contact | Status             | Priority | Category |
|-----------------|--------------------|----------|----------|
| Duray, Jim      | New                | High     | Unknown  |
| Lee, Herman     | Information Needed |          |          |
|                 | Resolved           |          | Support  |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

1/5/2016 11:11:33 AM

HRS AASHTO

159

Complete Issue Information

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Shirish Patel DATE: 1/10/2013 11:14:49 AM Eastern Standard Time  
Debug Message Detail: Unsupported Specification Version! Line 1972 in source file  
SCMdPierStructure.cpp  
Substructure Analysis Progress Window: Substructure specification check encountered errors and did not successfully complete!

FROM: Herman Lee DATE: 1/11/2013 3:53:55 PM Eastern Standard Time  
Please export the bridge to an XML file and attach to this incident. Thanks.

FROM: Herman Lee DATE: 4/1/2013 11:07:49 AM Eastern Daylight Time  
Supported LRFD specifications for pier analysis are:  
- LRFD 4th 2008i  
- LRFD 4th 2009i  
- LRFD 5th  
- LRFD 5th 2010i

|                                                     |
|-----------------------------------------------------|
| Issue ID: 12164                                     |
| Subject: Trouble getting model and loads from Super |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Kennelly, Krisha       |                      |
| Submitted By: Thompson, Todd            | 1/31/2013 2:57:46 PM |
| Modified By: sghosh                     | 5/9/2013 5:50:46 PM  |
| Priority: High                          |                      |
| Category: Bug                           |                      |

## Complete Issue Information

### History

| Primary Contact  | Status   | Priority | Category |
|------------------|----------|----------|----------|
| Thogaru, Srujana | Assigned | High     | Bug      |
|                  | Resolved |          |          |
|                  | Verified |          |          |

### Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

### Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Todd Thompson DATE: 1/31/2013 10:01:11 AM Eastern Standard Time  
Using Opus Sub 6.3.0

This is our first real design where we are trying to use Opus Substructure but we are having problems getting this to work. When the designer attempts to click on the substructure loads - he keeps getting this error message. The pier does validate ok. The superstructure does work ok.

Attached the bridge xml and a screen shot of the error message.

Not sure if we are missing something obvious or what?

FROM: Krisha Kennelly DATE: 2/1/2013 10:45:49 AM Eastern Standard Time  
There is a tolerance problem here. Code will be fixed for 6.5.

In the meantime you can use this workaround:

For the superstructure definition "BAF Design - Simple Final", change the structure length on the Superstructure Def window from 119.9583' to 119.9580'. (See attached screenshot). This window can then be opened and the pier can be analyzed and spec checked.

FROM: Krisha Kennelly DATE: 4/24/2013 2:51:02 PM Eastern Daylight Time  
Fixed for 6.5.0

FROM: Subhadeep Ghosh DATE: 5/9/2013 1:49:51 PM Eastern Daylight Time

1/5/2016 11:11:33 AM

HRS AASHTO

161

Complete Issue Information

Verified for 6.5 Beta 1.

|                                                                              |
|------------------------------------------------------------------------------|
| Issue ID: 12205                                                              |
| Subject: Missing Concentrated and Distributed Loads in substructure reports. |

|                                         |                      |
|-----------------------------------------|----------------------|
| Folder: /Virtis/Support Center/Opis Sub |                      |
| Primary Contact: Thogaru, Srujana       |                      |
| Submitted By: Thogaru, Srujana          | 2/21/2013 8:43:37 PM |
| Modified By: bzhang                     | 4/26/2013 1:26:34 PM |
| Priority: High                          |                      |
| Category: Bug                           |                      |

History

| Primary Contact | Status | Priority | Category |
|-----------------|--------|----------|----------|
|-----------------|--------|----------|----------|

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|------|---------|---------|---------|

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|------|---------------------|-------------|

Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

Description

FROM: Srujana Thogaru DATE: 2/21/2013 3:46:44 PM Eastern Standard Time  
 Concentrated and Distributed Loads are not reported in substructure reports.

FROM: Srujana Thogaru DATE: 2/25/2013 9:16:25 AM Eastern Standard Time  
 Concentrated and Distributed Loads are not reported in substructure reports due to incomplete code in Xslt files. SubDLReactions.Xslt file has been updated.  
 Fixed for 6.5 release. For internal testing fixed for 6.5 alpha 2.

FROM: Bin Zhang DATE: 4/26/2013 9:26:16 AM Eastern Daylight Time  
 Verified for version 6.5 beta 1.



Complete Issue Information

|                                |
|--------------------------------|
| Issue ID: 12469                |
| Subject: Cancel Analysis Event |

|                                         |                     |
|-----------------------------------------|---------------------|
| Folder: /Virtis/Support Center/Opis Sub |                     |
| Primary Contact: Lee, Herman            |                     |
| Submitted By: Wagner, Brad              | 5/7/2013 7:58:24 PM |
| Modified By: hlee                       | 8/2/2013 4:02:11 PM |
| Priority: High                          |                     |
| Category: Enhancement                   |                     |

History

| Primary Contact | Status    | Priority | Category    |
|-----------------|-----------|----------|-------------|
| Duray, Jim      | New       | High     | Unknown     |
| Lee, Herman     | Assigned  |          | Enhancement |
|                 | Suspended |          |             |

Contacts

| Name | Company | Email 1 | Phone 1 |
|------|---------|---------|---------|
|      |         |         |         |

Documents

| Name | Resource Identifier | Description |
|------|---------------------|-------------|
|      |                     |             |

## Complete Issue Information

### Tasks

| Name | Current State | Summary |
|------|---------------|---------|
|------|---------------|---------|

### Description

FROM: Brad Wagner DATE: 5/7/2013 4:00:06 PM Eastern Daylight Time

I've tested this enhancement in several places, and for some reason it will not work for LRFD Substructure Example 1. It seems to work for most other models except for models that run very quickly.

FROM: Herman Lee DATE: 7/8/2013 3:42:25 PM Eastern Daylight Time

The enhancement (Incident 9641) asked to add more checks for aborting the analysis of a single member alternative. The source code we modified are not shared between superstructure and substructure analyses. I'm changing this to an enhancement request for adding more checks for aborting substructure analysis.